

# **REPORT ON THE ETHIOPIAN ECONOMY**

**2017**

***Challenges of Sustaining  
Ethiopia's Foreign  
Exchange Earnings from  
Exports and Remittances***

**Ethiopian Economics Association (EEA)**

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# Foreword

Like before, the Ethiopian Economic Association is pleased to present the 2017 report on the Ethiopian Economy, whose thematic focus is “Challenges of Sustaining Ethiopia’s Foreign Exchange Earnings from Exports and Remittances”. As previous reports did, the current annual economic report has two parts: Part one focuses on a broader review of the macroeconomic situation and the performance of the economy at the sectoral levels for the period 2015/16 which is the first year of the GTP II and attempted to provide a more technical assessment of the existing policies and strategies and recommends new policy directions wherever appropriate. Part two of the Report discusses some of the issues related to the selected thematic focus area of the year titled “Challenges of Sustaining Ethiopia’s Foreign Exchange Earnings from Exports and Remittances” which will have significant implications to the development efforts the country is trying to pursue. As before, the publication of this report comes at timely moment when the country is faced with serious foreign currency shortages and provides valuable contributions to the understanding of Ethiopia’s challenges and recent efforts made to curb the problem.

Proponents of Export led growth theory argues that export oriented policies enhanced economic growth and can play a key role in the economic development of a country. Export trade expansion brings in technological advancement resulting from foreign competition and enhances factor productivity and better use of resources. Export trade also benefits economic growth through generating positive externalities on non-export sectors, increased scale economies, improved allocative efficiency and better ability to generate dynamic comparative advantages. Moreover, exports ease the foreign exchange earnings constraints, thereby allowing the

importation of intermediate inputs such as capital goods for domestic production of goods and services. In other words, revenue from exports can fill “the forging Exchange Gap” which is perceived to be a major barrier to growth.

The economic literature shows that countries with higher international trade involvement achieve a higher and faster economic growth than those that has less involvement in international trade. International trade significantly played a crucial role in the historical economic growth achievement of the East Asian Tiger economies (South Korea, Hong Kong, Singapore, and Taiwan).

Recent developments in the Ethiopian economy show a shift from the agriculture sector to the service sector. Ethiopia is now experiencing both new opportunities and new challenges. The Ethiopian government has been engaged in a major effort to transform the economy as reflected in the Growth and Transformation Plan (GTP I and II) and place the country on a trajectory to become a middle income economy by the year 2025.

Despite the shift from agriculture to services, Ethiopia’s export is still dominated by primary commodities from the agriculture sector. The Ethiopian export structure still remains undiversified as it depends on some primary agricultural products including coffee, oilseeds, chat, fruits and vegetable, pulses, and live animals. The reliance of export revenue generation on only a few commodities has made the country export performance highly volatile.

The volatile world price for primary commodities and the new global order that put a curb on the official development assistance and concessional loan has put a strain on the balance of payment position of the country over the last three years. The devaluation of

the Birr against the US dollar this year was part of an attempt to relieve the pressure on the balance of payment of the country.

The performance of the Ethiopian export sector, which declined by around 5 percent compared with the previous year, has been very weak in the year 2015/16 mainly due to adverse global price shocks for primary commodities, drought, and a slowdown in the global economy. Inflation pressure at home following the expansionary fiscal and monetary policies is thought to have reduced the competitiveness of Ethiopian export goods, which required devaluation in 2017. Poor quality of products and inefficient logistics system with delayed delivery and at times default of delivery to foreign customers worked against the foreign demand for Ethiopian commodities. The poor performance of the export sector affected the livelihood of many households in Ethiopia. Similarly, receipts from net service tumbled while the net private transfers have exhibited a significant growth.

On the other hand, total merchandize imports have increased significantly leading to an increase in the current account deficit, which reached to about 10 percent of the GDP in the review period though it improved slightly from previous year. This was caused by the large imbalance in the import and export of goods and services.

Ethiopia requires a significant amount of foreign exchange earnings to finance its ambitious industrialization strategy and infrastructure development under the growth and transformation plan (GTP). Despite the focus on export diversification, the export pattern is still dominated by traditional produces whose world price has been fluctuating. Ethiopia needs to strengthen and intensify the promotion and expansion of domestic industries, and at the same time, strengthen export capacity to promote diversification both in

the export and domestic industrialization sector to fully exploit the benefits of those sectors and achieve a sustainable growth. Designing export promotion strategies, policies and support services that could stimulate the competitiveness of the export sector would be helpful for achieving an accelerated economic growth.

In view of this, the Association has considered the timely issue of sustaining export earnings through exports and remittances as its main thematic issue in this year's Report with the aim of providing lessons that can be tailored to the country's endowments, constraints and opportunities and promote the performance of the external sector and support the transformation process. To better understand the issue attempts have been made to assess the structural problems constraining the export sector, Ethiopia's export and import trade balance and the factors aggravating the trade imbalances, the trends and challenges in manufactured goods exports and services as well as the trends in remittance inflows.

I hope that the Report would be useful to all readers including policy makers, private business people, civil society organizations, the academia, the media, the international communities and the general public.

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 production of this report is the result of a genuinely collaborative effort of many people. The Ethiopian Economics Association wishes to gratefully acknowledge the valuable contributions made by everyone who was involved in this team effort. The overall work has been led by Dr. Assefa Admassie, who is the Principal Research Fellow at the Ethiopian Economic Policy Research Institute. The chapter on the Macroeconomic Developments is written by Dr. Seid Nuru Senior Research Fellow, and Mr. Gashaw Desalegn, Mr, Yetsedaw Emagne and Mr. Simon Bayou while and the different chapters on the thematic issues **“Challenges of Sustaining Ethiopia’s Foreign Exchange Earnings from Exports and Remittances”** were written by a team of researchers including Dr. Seid Nuru and his macro team, Dr. Samuel G. Selassie, Mr. Amin Abdella and Dr. Degnet Abebaw. They deserve great appreciation and special recognition for their immense intellectual contribution and hard work.

The chapter on the Performance of the Ethiopian Agriculture has been written by Dr. Samuel Gebre-Selassie. Amin Abdella prepared the chapter on the Large and Medium Scale Manufacturing Industries. Their dedication and hard work made this report possible and their contribution is highly appreciated and recognized.

The report also benefited from many useful comments and suggestions received from the members of the EEA Executive Committee. The authors received indispensable guidance and support from members of the executive committee. We would like to acknowledge the contributions of Dr. Alemayehu Seyoum Taffesse, Dr. Gezahegn Ayele, Dr. Tadele Ferede, Dr. Fantu Guta, Dr. Amdissa Teshome, W/O Fanaye Taddesse, W/O Sindu Abebe,

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Many other people have also made very valuable contributions to this report, and we are grateful to them. A special thank goes to Dr. Animaw Anteneh, 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.

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# Chapter I

## Macroeconomic Performance

### I.1 Growth

The fiscal year 2015/16 witnessed multiple challenges to the Ethiopian economy: there was severe drought caused by El Niño, a decline in the global commodity prices, and a slowdown in the global economy. Despite these challenges, real GDP grew by 8.0 percent during the fiscal year. Even though this figure is the lowest growth rate compared to what had been recorded over the last ten years, it still makes the Ethiopian economy one of the fastest in the year 2016 (IMF, 2016).

During the reporting fiscal year, Ethiopian GDP measured at current market prices stood at 1.5 trillion *birr*. With an estimate of 91.2 million people, Ethiopia's per capita GDP was estimated to be 16,753.4 *birr*, which is equivalent to 794 USD at the official exchange rate<sup>1</sup>.

The largest contribution to the GDP growth in 2015/16 was mainly made by the service sector, accounting for almost 4.0 percentage points of the entire 8 percent growth. Value added in the industry sector grew by 20.6 percent. A major deceleration is observed in the agriculture sector as value added in the sector expanded only at a rate of 2.3 percent. This contrasts with the 6.6 percent growth

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<sup>1</sup> Average exchange rate in 2015/16, \$1= Br. 21.1

rate of value added in the sector during the GTP I period. The major drought that occurred during the fiscal year caused crop production to fall during the main (*meher*) season. The 2.3 per cent growth in the value added of the overall agriculture sector was mainly due to better harvests during the short (*belg*) season.

The contributions to the annual growth of the industry and agriculture sectors were 1.3 percent and 2.9 percent, respectively. The low share of the industrial sector in the GDP limits the contribution of the sector to the overall GDP growth despite the high growth in the value added in the sector.

**Table I.1: Growth Rates**

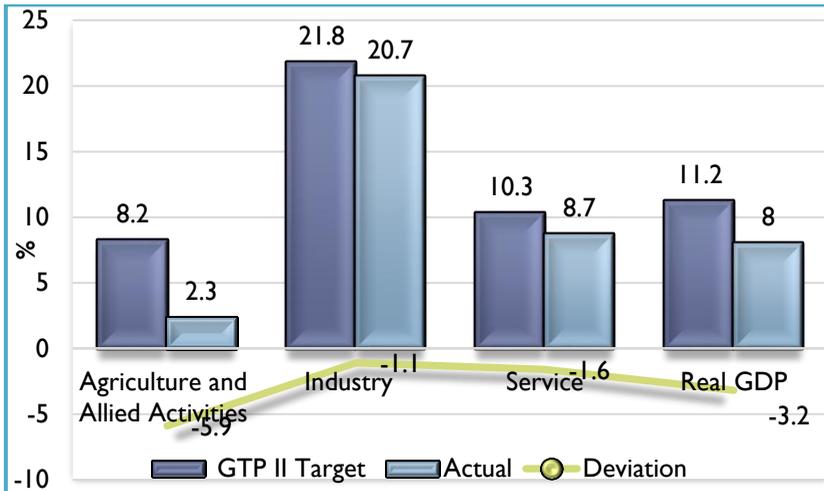
Period	Agriculture	Industry	Service	Real GDP
<b>1991/92-2015/16</b>	5.2	10.8	9.3	7.3
<b>Pre-SDPRP: 1992/93-1999/00</b>	2.4	6.3	7.5	4.2
<b>SDPRP: 2000/01-2004/05</b>	5.6	7.9	5.9	5.87
<b>PASDEP: 2005/06-2009/10</b>	8.3	10.1	14.1	10.86
<b>GTP-I: 2010/11-2014/15</b>	6.6	19.6	10.9	10.0
<b>2014/15</b>	6.4	15.7	12.3	10.5
<b>2015/16</b>	2.3	20.6	8.7	8.0

**Source:** NPC (2016) and EEA staff calculations

In the year under review (2015/16), the service sector has still held the lead accounting for 47.3 per cent of the GDP. This is followed by the agriculture sector with a static share of 36.7 percent. The decline in the share of the agriculture from 38.4 percent in the 2013/14 to 36.4 percent in 2015/16 is largely attributed to the weak

performance of the sector due to the drought rather than the normal structural change. These two sectors account for about 84 percent of the GDP. At the same time, the share of the industrial sector in the economy is limited at 16.7 percent of the GDP despite the rapid growth in the sector. This shows the historical low base of the sector for a longer period. The second phase of the growth and transformation plan (GTPII) that was launched in 2015/16 anticipated an annual growth rate of 11.2 in the GDP, and growth rates in value added of 8.6 per cent in the agriculture sector, 10.2 per cent in the service sector, and 21.4 percent in the industrial sector. The growth rate in the industrial sector showed a one-percentage-point margin above the targeted growth while the service and agriculture sectors showed a less-than-target performance in terms of growth.

**Figure 1.1: GTP Targeted Growth, by Sector and 2015/16 Actual Growth**

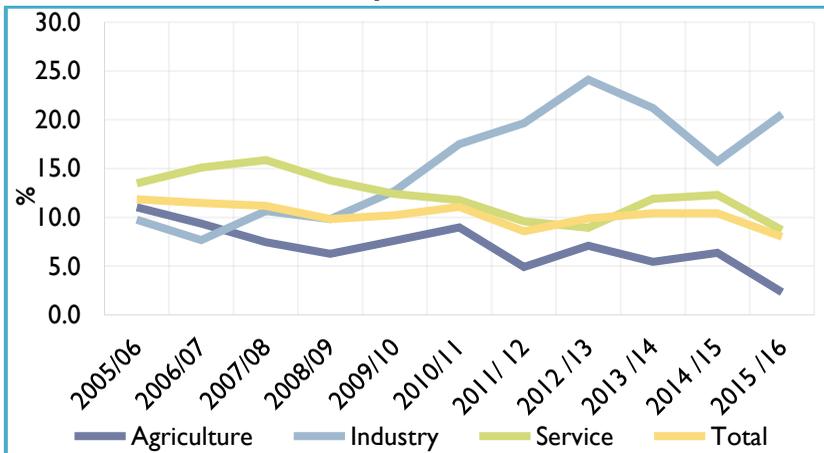


Source: NPC (2016) and EEA staff calculations.

The fast growth in the industry sector is consistent with the objectives of GTP II in that the sector, in particular the manufacturing sub-sector, should accelerate to lead the overall economy, ensuring durable structural change. GTP II targeted an improvement in the number and productivity of manufacturing industries with strong support from the government.

A slower growth in the economy during the fiscal year 2015/16 implies that there should be even a higher and more robust growth during the remaining years of GTP II to achieve the overall targeted level of growth. In particular, value added in the agriculture sector needs to expand at a rate higher than what is needed to maintain a recovery. This calls for agricultural transformation which focuses on overall agricultural capabilities such as harnessing water resources, introducing appropriate technologies, and expanding rural finance.

**Figure 1.2: Trends in Sectoral Real GDP Growth and Sectoral Component**



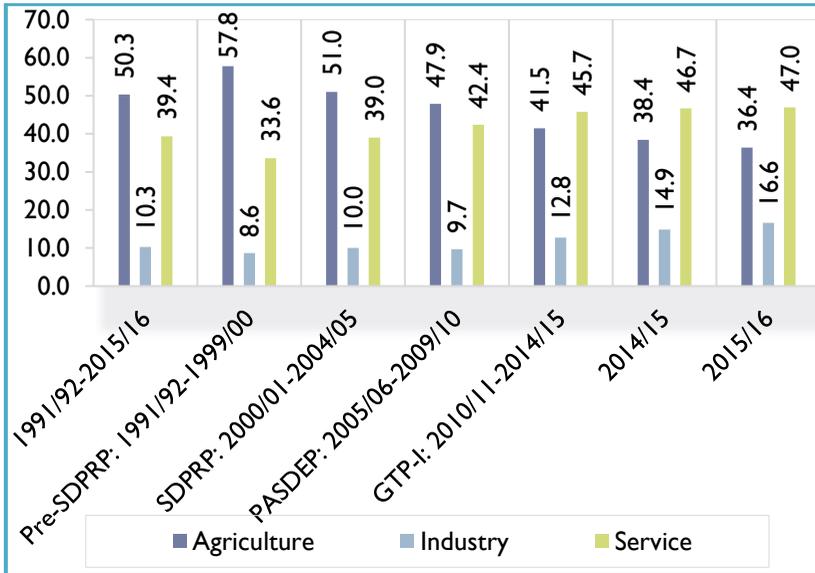
Source: NPC (2016) and EEA staff calculations.

As it has been shown in Figure 1.2, value added in the agricultural sector has been decelerating over the last 10 years since 2006/07. The service sector exhibited a high and stable growth rate. The industrial sector demonstrated a high growth rate mainly driven by high growth episodes in the construction sub-sector followed by the recent upsurge in the manufacturing sector. The transition from stable, crop-led agricultural growth to high-value cash crop and strategic industrial crops has yet to be deepened.

Three years after the launching of PASDEP, the industry sector started to grow at double-digits, which predominantly came from the construction industry. Industry sector grew at an average rate of 15.4 percent for the period 2005/06 - 2015/16. During the same period, value added in the service sector grew at 12.2 percent. Regardless of the relatively high growth rate episode, the economy has to witness key signs of structural transformation. Deepening structural change in the economy in the manner that the manufacturing sector takes a lead both in the dynamics of the overall economy and in the merchandise export is a crucial and yet challenging task to accomplish.

Ethiopian agriculture is predominantly crop agriculture. The share of crop production in the GDP showed 26.4 percent in 2015/16, which is lower than that of the preceding fiscal year. The contribution from forestry also declined in the last three national development plans, exhibiting negative growth (-1.5%) in 2015/16. Fish production currently accounts for less than 1 percent of the GDP.

**Figure 1.3: Structure of the Ethiopian Economy**



**Source:** NPC (2016) and EEA staff calculations

Within the industry sector, value added in the construction sub-sector increased by 25 percent. The sub-sector accounted for 59 percent of the total growth in the industry sector in 2015/16. The manufacturing industry grew by 18.4 per cent in the year under review. Among the sub-sectors in the service sector, wholesale and retail trades as well as real estate had significant contributions to the performance of the service sector.

Generally, the agriculture and service sectors have dominated the recent growth in the Ethiopian economy. Nevertheless, without a decent level of manufacturing base and globalized services, the apparent shift of the Ethiopian economy from the agricultural sector to the service sector in terms of both production and labor

distribution should not be considered as a standard sign of structural transformation. While the fundamentals that underline the Ethiopian economy - in particular in terms of high per capita income growth and high rate of accumulation - are good signs of laying the foundation for the prospect of structural transformation in the long run, challenges in the manufacturing sector and modern agriculture need to be overcome to get the fundamentals right for eventual structural transformation. While the fundamentals that underline the Ethiopian economy - in particular in terms of high per capita income growth and high rate of accumulation - are good signs of laying the foundation for the prospect of structural transformation in the long run, challenges in the manufacturing sector and modern agriculture need to be overcome to get the fundamentals right for eventual structural transformation.

**Table I.2: Growth Decomposition by Sector**

	SDPRP: 2000/01-2004/05			PASDEP: 2005/06-2009/10			GTP-I: 2010/11-2014/15			2014/15			2015/16		
	Share of GDP	Contribution to GDP Growth	Growth rate	Share of GDP	Contribution to GDP Growth	Growth rate	Share of GDP	Contribution to GDP Growth	Growth rate	Share of GDP	Contribution to GDP Growth	Growth rate	Share of GDP	Contribution to GDP Growth	Growth rate
Agriculture	51.2	3.0	5.6	48.2	5.3	8.3	41.7	0.7	6.6	38.7	0.6	6.4	36.7	2.9	<b>2.3</b>
Crop	31.1	1.8	8.0	32.4	3.5	9.8	29.2	0.8	7.5	27.5	0.7	7.2	26.4	2.1	<b>3.4</b>
Animal Farming and Hunting	13.0	0.8	2.6	10.6	1.2	6.7	8.8	0.5	5.0	7.8	0.5	4.7	7.1	0.6	<b>-1.5</b>
Forestry	7.0	0.4	2.7	5.1	0.6	3.2	3.7	0.3	3.4	3.3	0.4	3.5	3.1	0.2	<b>2.2</b>
Fishing	0.1	0.0	-7.7	0.0	0.0	12.3	0.1	2.2	21.9	0.1	3.1	30.6	0.1	0.0	<b>0.1</b>
Industry	10.0	0.6	7.9	9.8	1.1	10.1	12.9	2.0	19.6	15.0	1.6	15.7	16.7	1.3	<b>20.6</b>
Mining and Quarrying	1.0	0.1	5.2	0.8	0.1	14.0	1.3	1.0	9.6	0.8	-2.6	25.4	0.8	0.1	<b>-3.3</b>
Manufacturing	4.3	0.2	5.1	4.0	0.4	9.5	4.4	1.5	15.1	4.9	2.4	23.9	5.4	0.4	<b>18.4</b>
Large and Medium Scale Manufacturing	2.4	0.1	4.6	2.5	0.3	11.9	3.1	2.0	19.9	3.8	3.1	30.7	4.4	0.3	<b>22.9</b>
Small Scale and Cottage Industries	1.8	0.1	5.8	1.6	0.2	6.0	1.2	0.4	4.3	1.1	0.5	5.0	1.0	0.1	<b>2.5</b>
Electricity and Water	1.2	0.1	6.5	1.1	0.1	7.0	1.0	1.1	10.8	1.0	0.4	3.7	1.1	0.1	<b>15.0</b>
Construction	3.6	0.2	13.0	3.9	0.4	11.1	6.2	2.8	27.8	8.2	2.0	19.5	9.5	0.8	<b>25.0</b>
<b>Service</b>	<b>39.1</b>	<b>2.3</b>	<b>5.9</b>	<b>42.7</b>	<b>4.6</b>	<b>14.1</b>	<b>46.0</b>	<b>1.1</b>	<b>10.9</b>	<b>47.0</b>	<b>1.2</b>	<b>12.3</b>	<b>47.3</b>	<b>3.8</b>	<b>8.7</b>

**MACROECONOMIC PERFORMANCE**

	SDPRP: 2000/01-2004/05			PASDEP: 2005/06-2009/10			GTP-I: 2010/11-2014/15			2014/15			2015/16		
	Share of GDP	Contribution to GDP Growth	Growth rate	Share of GDP	Contribution to GDP Growth	Growth rate	Share of GDP	Contribution to GDP Growth	Growth rate	Share of GDP	Contribution to GDP Growth	Growth rate	Share of GDP	Contribution to GDP Growth	Growth rate
Whole Sale and Retail Trade	13.5	0.8	6.0	15.2	1.7	14.2	15.7	1.2	11.7	16.8	1.5	15.1	16.8	1.3	8.2
Hotels and Restaurants	1.8	0.1	7.4	2.6	0.3	23.7	4.2	2.2	22.0	5.3	3.0	29.8	5.7	0.5	15.6
Transport and Communications	4.0	0.2	11.7	4.1	0.5	10.0	4.5	1.3	13.0	4.8	1.4	13.6	5.1	0.4	13.7
Financial Intermediation	1.5	0.1	8.3	2.2	0.2	17.6	2.5	1.1	11.3	2.3	-0.1	-0.5	2.3	0.2	9.6
Real Estate, Renting and Business Activities	6.5	0.4	10.8	7.4	0.8	16.6	8.4	0.8	7.6	7.4	0.4	4.3	7.1	0.6	3.7
Public Administration and Defense	5.9	0.3	-2.4	5.3	0.6	11.6	5.0	0.8	7.5	4.9	1.3	13.3	4.8	0.4	7.4
Education	1.9	0.1	10.9	2.2	0.2	14.9	2.2	0.6	6.2	2.0	0.0	-0.2	2.0	0.2	8.8
Health and Social Work	0.7	0.0	7.7	0.8	0.1	15.1	0.9	1.2	12.2	1.0	2.6	25.9	1.0	0.1	10.8
Other Community, Social & Personal Services	2.8	0.2	4.7	2.6	0.3	8.8	2.4	0.9	8.6	2.3	0.4	4.0	2.2	0.2	3.0
Private Households with Employed Persons	0.4	0.0	4.9	0.3	0.0	4.9	0.2	0.8	7.6	0.2	0.4	4.4	0.2	0.0	4.3
<b>Total</b>	100	5.8	5.8	100	11	10.9	100	1.0	10.1	100	1.1	10.4	100	8.1	8.0

Source: NPC (2016) and EEA staff calculations

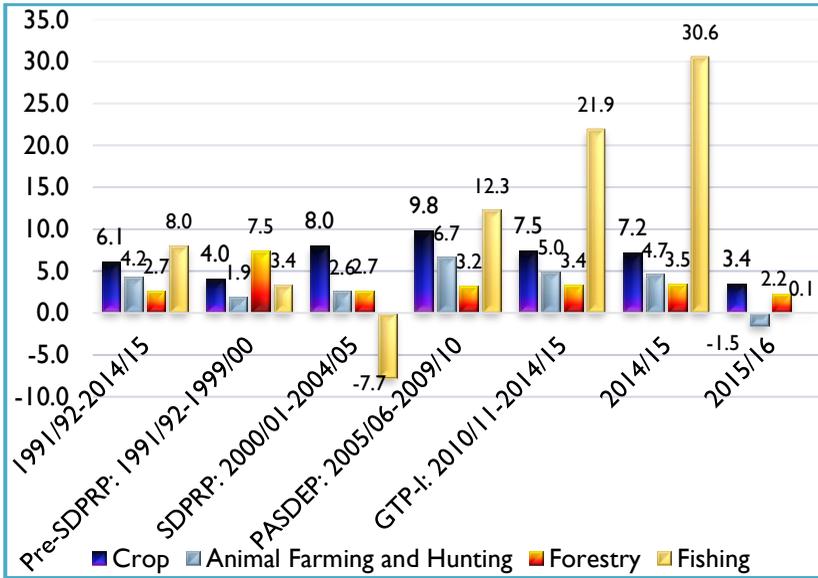
### **1.1.1 Agriculture**

Despite its persistently falling share in the GDP, agriculture is still a major source of employment, income and livelihood in Ethiopia. Efforts have been exerted by the government in the sector to address underlying poverty and food insecurity. In parallel with the efforts of fostering manufacturing industrial development, GTP II envisages modernizing and developing the agricultural sector. Increasing productivity and diversifying the sector are means of enabling the sector to continue as a major source of economic growth.

The agriculture sector was challenged by the El Nino phenomenon during the 2015/16 fiscal year to the extent that value added in the sector marginally expanded at a rate of 2.3 percent. The crop sub-sector in crop growing regions showed a decline during the *meher* season of 2015/16 compared to the level achieved in the preceding year. The drought also hit the livestock sector limiting its contribution to the overall growth in the agriculture and allied activities.

Crop production grew by 3.4 percent in 2015/16 - a deceleration from the 7.2 percent in 2014/15. Crop production still takes the lion's share of the total value added in the sector. It accounts for 72.4 percent of the total value added in the sector and 26.2 percent of the GDP. During the year under review, the crop sub-sector alone contributed 2.1 percentage points to the GDP growth owing to its large share in the GDP.

**Figure 1.4: Growth Rate of Sub-Sectors in Agriculture**



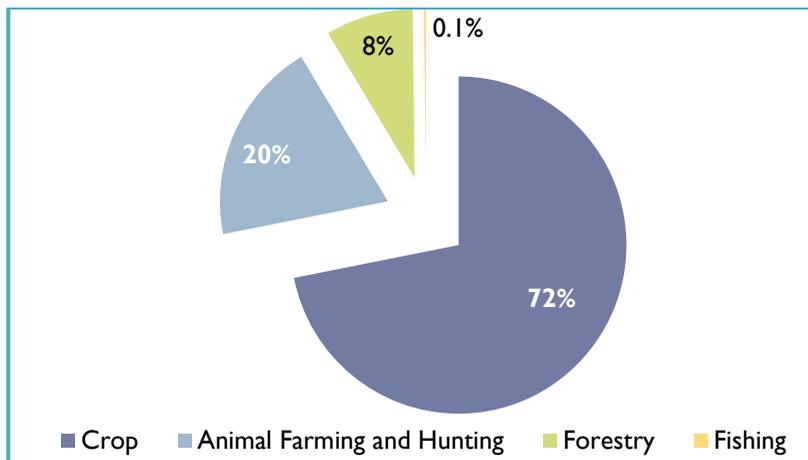
**Source:** NPC (2016) and EEA staff calculations.

Livestock is also an important sub-sector in the agriculture sector, accounting for 19.48 percent of the value added in the agriculture sector and 7.1 percent of the GDP in 2015/16. In the reporting period, the contribution of the livestock sub-sector to the GDP declined by 0.8 percent, which is even lower than the average performance of the sub-sector in GTP I, PASDEP and SDPRP. In addition, the growth of this sub-sector in 2015/16 declined by 1.5 percent against the growth of 4.7 percent in 2014/15.

Forestry contributed 8.42 percent to value addition to the overall agriculture sector and a mere 3.1 per cent to the GDP and grew by 2.2 percent in contrast to the 3.4 percent growth in 2014/15. Even though the dynamics of the growth of the Ethiopian economy is

largely led by the construction sector, it heavily relies on imported items for its major inputs including wood products. The forestry sector, which could play a pivotal role as an input to the construction and the manufacturing sectors, has relatively low linkage with the sectors. One of the primary uses of the forest sector in Ethiopia is energy in the form of firewood. It should be noted, however, that the indirect role of the conservation of forest resources to the economy through maintaining a sustainable ecosystem is by far greater than the value added recorded by the system of national accounts. Fish production currently accounts for less than one percent of the GDP. In 2015/16, the growth of the fishery sub-sector increased only by 0.1 percent. Even though Ethiopia is endowed with enormous water bodies known for their abundant fish resources, the sector is far from being exploited to its potential.

**Figure 1.5: Share of the Agricultural Sub-sectors in the Total GDP**



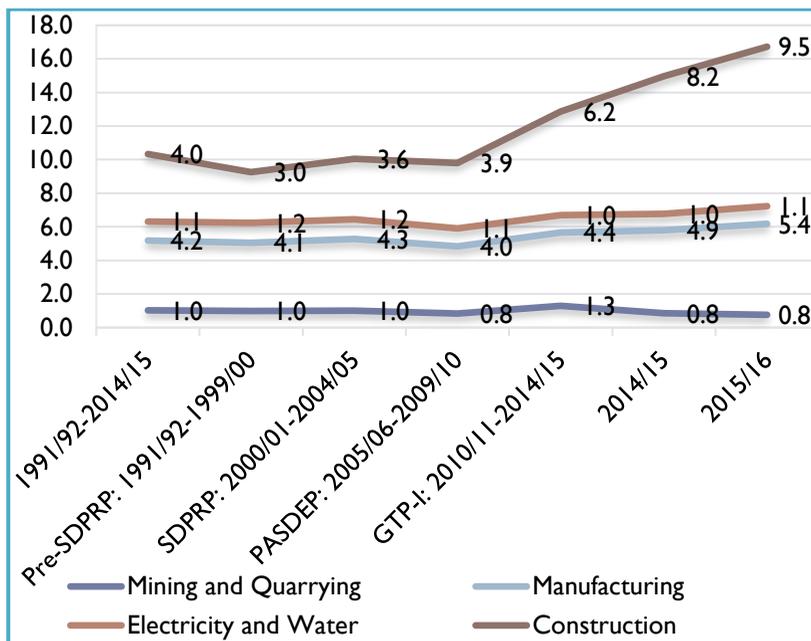
**Source:** NPC (2016) and EEA staff calculations.

While drought could be blamed for the relative slowdown in the growth rate of the value-added in the agriculture sector, more fundamental problems are associated with little transformation within the sector. Agricultural infrastructure, technology, rural finance, institutional change within agriculture, and integration of agriculture with the overall efforts of structural transformation need to be emphasized.

### **1.1.2 Industry**

In 2015/16, the industry sector exhibited better performance as value added in the sector grew at 20.7 per cent compared to that of the preceding year. This growth, though slightly lower than the target by GTP II (21.5 percent), is particularly robust as it was registered in the year of severe drought. The sector accounted for 16.7 percent of the GDP. This share is one of the lowest even by the sub-Saharan African standards. Another important aspect of the industrial sector is that it is largely dominated by the construction sub-sector. The recent fast growth in the manufacturing sector is encouraging despite some constraints in key infrastructural issues such as electric power, shortage of foreign exchange earnings to import raw materials and capital inputs, and limited technical and institutional capability.

**Figure 1.6: Average Share of Industrial Sub-sectors in the GDP**



Source: NPC (2016) and EEA staff calculations.

The construction sector is one of the most important sub-sectors in driving growth. It accounted for 56.8 percent of the value added in the overall industrial sector in 2015/16. Value added in the sub sector grew at a rate of 25

**Facts on manufacturing sector**

- Annual growth rate: 18.4 %
- Total GDP contribution: 5.4 %
- Industry GDP contribution: 32.4%
- End of GTP II targets;
  - Annual growth rate: 22 %
  - GDP contribution: 8 %

percent in 2015/16, showing an increase of 19.5 percent rate of growth from the preceding fiscal year. The increase in growth is mainly due to the rapid expansion of the condominium housing scheme, mega infrastructural developments by federal and regional governments, and investments by the private sector.

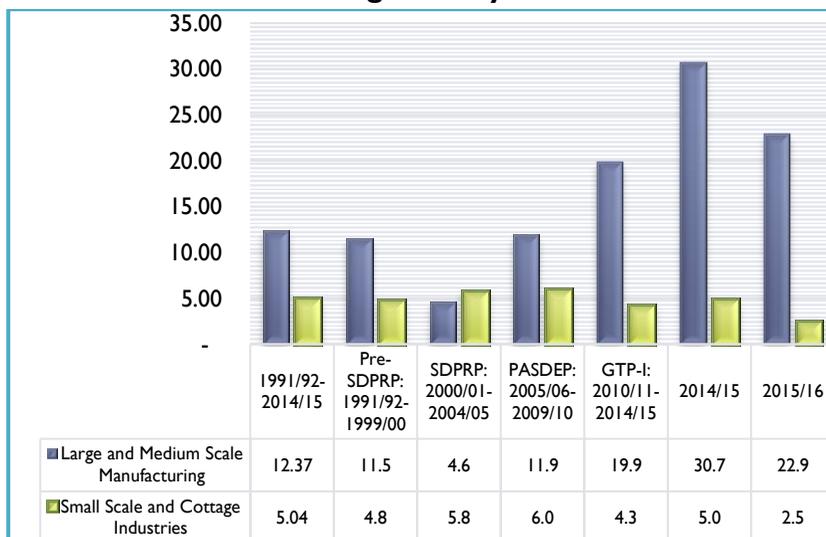
The manufacturing sector was not a priority sector until recently. The GTP that has been in place since 2010/11 gives emphasis to the sector. It accounts for 5.4 per cent of the GDP and 32.4 percent of the total value added in the industrial sector. In the reporting year, value added in the sector grew by 18.4 percent, which is lower than 23.9 percent growth recorded in the fiscal year 2014/15.

Even though the manufacturing sub-sector exhibited high growth, the low share of the sub-sector in the GDP (5.4 percent) limited its overall contribution to growth. The low base of the sub-sector calls for an even faster growth in diversified light manufacturing. The country needs to address the challenges of ensuring high quality investment in the manufacturing sector.

Manufacturing has two main sub-components, namely, the large- and medium-scale manufacturing, which accounts for 80.65 percent of the value added in the manufacturing sub-sector, and the small-scale and cottage manufacturing with a share of 19.35 percent in the total manufacturing output. Large- and medium-scale manufacturing production increased by 22.9 percent, partially due to the expansion of the industrial parks in different regions of the country, which is a considerable improvement. This, however, contrasts with even the higher growth of 30.7 percent recorded in 2014/15. The small-scale and cottage manufacturing industries grew by 2.5 percent during the

fiscal year under review. This also shows a deceleration compared to the 5 percent growth registered during the preceding fiscal year.

**Figure 1.7: Growth of the Sub-sectors in the Overall Manufacturing Industry**

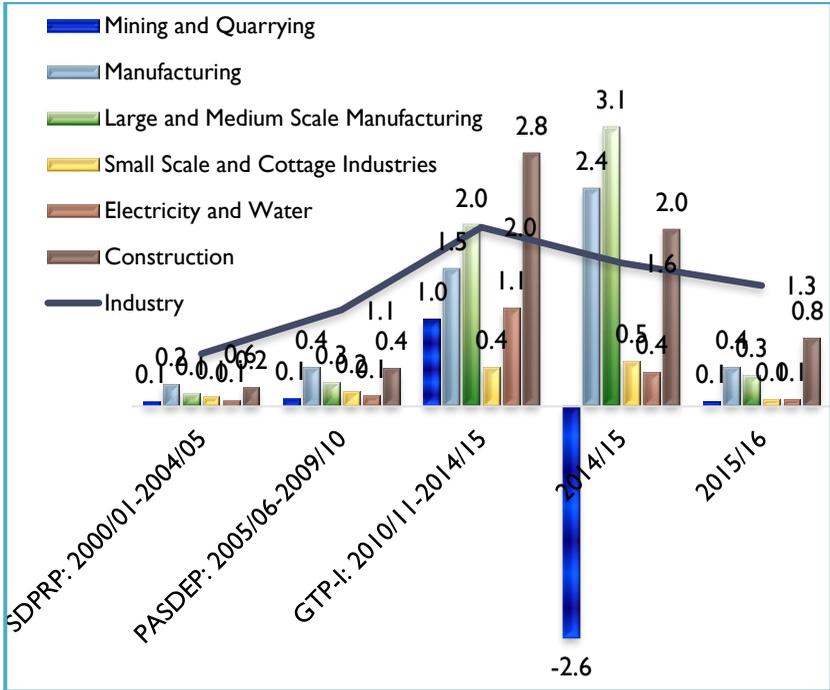


**Source:** NPC (2016) and EEA staff calculations.

An important sub-sector in the industrial sector is the mining and quarrying sub-sector. Ethiopia has a huge potential for the development of mining and quarrying. Value added in the sector showed a decline by 3.3 per cent in 2015/16, probably due to the decline of international price for mineral products, specifically gold. This is a typical pattern for primary exports as prices for such commodities tend to be volatile. Further, the electricity and water generation sub-sector had a relatively better performance with 15

percent of growth next to the manufacturing and construction industry.

**Figure 1.8: Sectoral Contribution to the Growth Rate of the GDP**



Source: NPC (2016) and EEA staff calculations.

### 1.1.3 Services

Value added in the service sector has been increasing at a faster rate than in other sectors of the economy in the last ten years. Since the sector has overtaken the agricultural sector in both static and dynamic contributions in the GDP since 2010/11, it has emerged as

the main driver of economic growth in the country. In 2015/16, the share of the services sector rose to 47.3 percent of the GDP. GTP II had a plan of slowing down the growth of the service sector to a rate believed to be fast enough to lubricate the industrial and agricultural sectors. Nevertheless, the sector is still dominating the economy with an increasing trend both in growth and share in the economy.

The high performance of the sector is mainly due to wholesale and retail trades, and real estate development. Wholesale and retail trades accounted for 35.6 percent of the value added in the service sector in 2015/16. This sub-sector is also the second largest contributor with a share of 16.8 percent in the GDP after crop production (36.7 percent).

Real estate, renting and business activities stood at second place in terms of its contribution to the value added in the sector. It grew by 3.7 percent in 2015/16 as compared to 4.1 percent in the preceding fiscal year. Value added in the hotel and restaurant sub-sector accelerated to a growth rate of 15.6 percent in 2015/16. This is by far the highest growth rate registered among the sub-sectors in the fiscal year. In addition, the share of this sub-sector in the overall GDP increased to 5.7 percent from 5.3 in 2014/15.

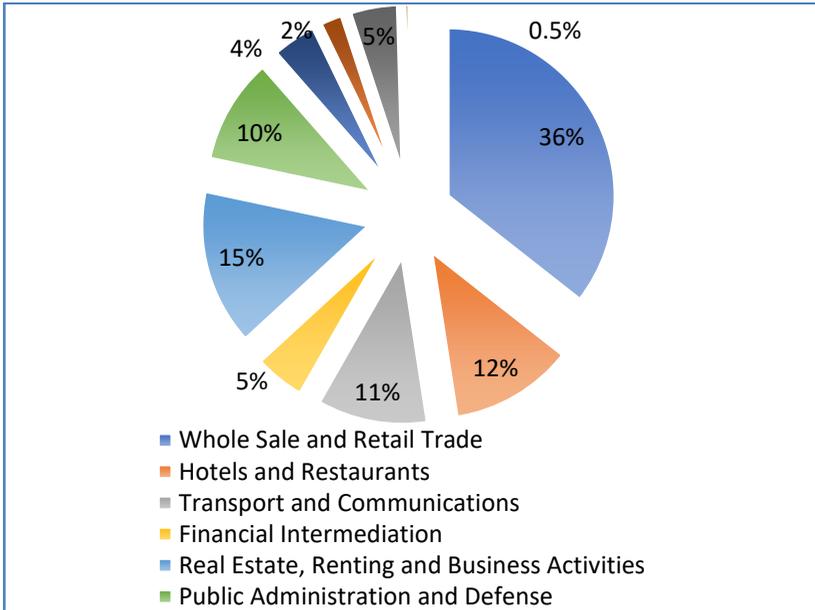
**Basic Facts of Service Sector  
Growth rate in 2015/16: 8.7%**

**Contribution to GDP: 47.3%**

**Key contributors of the sector:**

- Wholesale and retail trade: 35.5 %
- Real estate: 15%

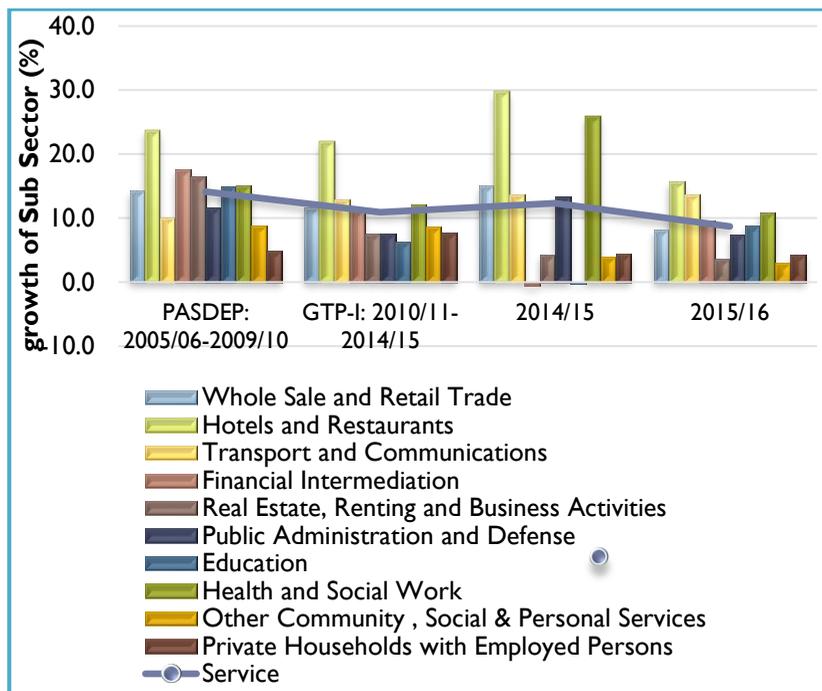
**Figure I.9. Share of Sub-sectors in the Service Sector in 2015/16**



**Source:** NPC (2016) and EEA staff calculations.

On the other hand, the financial intermediation sub-sector has accelerated from a rate of growth of 7.5 percent in 2014/15 to 9.6 percent in 2015/16. Value added in the transport and communications, health and social work, and education sub-sectors grew by 13.7, 10.8, and 8.8 percent, respectively.

**Figure 1.10: The Growth Performance of the Sub-sectors in Service**



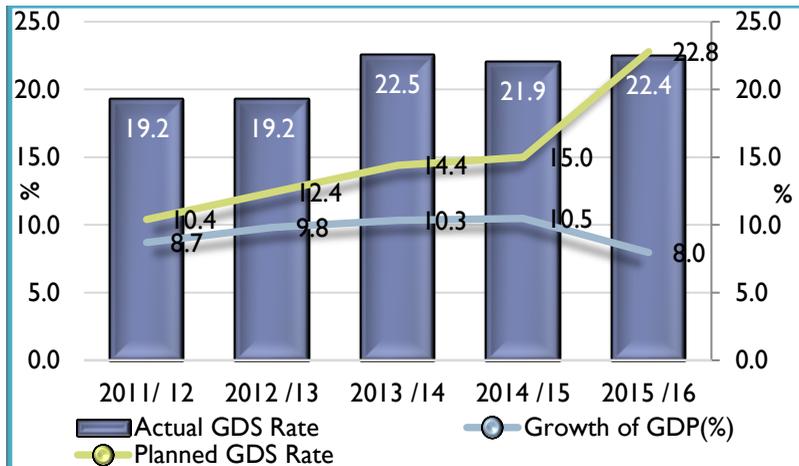
Source: NPC (2016) and EEA staff calculations.

## 1.2 Saving and Investment

Accumulation of a sizable capital is one of the prerequisites for structural transformation. Owing to the low level of income and traditional mode of consumption in the rural areas, the rate of gross domestic savings was in general low until 2009/10. The growth and transformation (GTP I and II) targeted a higher rate of savings as part of the efforts of domestic mobilization to meet the financial requirements of large infrastructural projects and investments in the

manufacturing sector. The rate of gross domestic savings (gross domestic savings in proportion to GDP) reached 22.4 percent in contrast to the 9.7 per cent in 2009/10. In parallel with the increase in domestic savings, the rate of gross national savings also reached 32.4 percent in 2015/16. The difference between the two rates was mostly covered by net current transfer from the rest of the world. In GTP II, resource mobilizations from the domestic private savings and government revenue have been identified as a core component of financing the development goal. In the last five years, savings have been mobilized mainly through the government housing scheme and the Grand Renaissance Dam Bond. Nevertheless, sustainable domestic resource mobilization requires replacing forced savings and savings mobilizations through social mobilization with behavioral savings which respond to a rise in income and changes in policy instruments such as interest rate.

**Figure 1.11: Rate of Gross Domestic Savings and Growth of GDP**



Source: NPC (2016) and EEA staff calculations.

Government final consumption expenditure accounted for about one-tenth of the GDP. In addition, it grew by 27.2 percent in the year 2015/16 due to the increment in capital investments of the mega projects. Meanwhile, private consumption expenditure accounted for the largest share (seven-tenth) of the GDP and grew by 15.7 percent. However, the share of private consumption declined from 69.0 percent in 2014/15 to 67.9 percent in 2015/2016 in total consumption. An increase in gross domestic savings may have a role to reduce the share of total consumption in GDP. Investment has a potential to play a major role in meeting the growth targets of the sectors. Significant levels of new investment are required in all sectors to meet the target share of the GDP. Total investment grew by 15.1 percent in 2015/16, which was much lower than the average growth in GTP I.

**Table 1.3: Expenditure on GDP (As percentage of GDP)**

Period	Absorption			Current Account Balance				
	Total	Consumption		Gross Capital Formation	Gross Domestic Saving	Resource Gap	Export	Import
		Government	Private					
2010/11	114.9	10.3	72.4	32.1	17.2	-14.9	16.7	31.5
2011/12	117.9	8.3	72.5	37.1	19.2	-17.9	13.8	31.6
2012/13	116.5	9.0	73.5	34.1	17.6	-16.5	12.5	29.0
2013/14	117.5	9.2	70.2	38.0	20.5	-17.5	11.6	29.1
2014/15	117.5	9.0	69.0	39.4	21.9	-20.9	9.4	30.3
2015/16	116.1	9.7	67.9	38.5	22.4	-19.8	8.0	27.8

Source: NPC (2016) and EEA staff calculations.

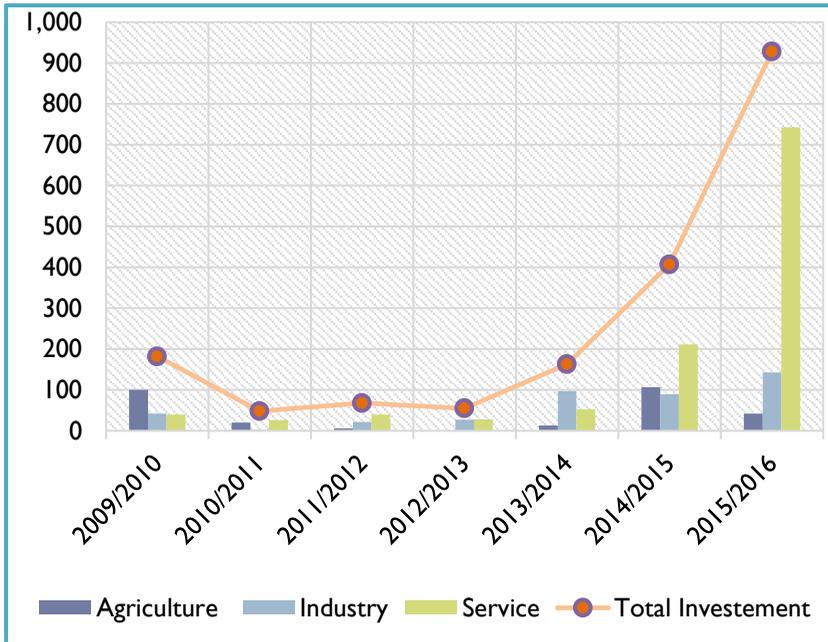
GTP II anticipated a 37.7 percent rate of gross fixed capital formation in 2015/16. In 2015/16, the rate reached 38.5 percent, a little higher than the target set by GTP II. Despite the improvement observed in gross domestic savings, the rate of capital formation is still relatively high. This led to a widening resource gap of 19.8 percent of the GDP. The high rate of gross fixed capital formation needs to be scrutinized for its quality, sustainability, and possibilities of dynamic inefficiency.

On the current account side, in 2015/16, GTP II targeted a 13.7 percent export as a percentage of the GDP. However, export of goods and services, net, stood at only 8 percent of the GDP in 2015/16. In contrast, the total import as a percentage of the GDP stood at 27.8 percent during the same year, thus witnessing a current account deficit of 19.8 percent of the GDP. The weak performance of the export sector over the last three years is the main reason for the widening current account balance. The new global order put stress on the official development assistance and loans which Ethiopia had relied on to finance its infrastructural projects in the social and economic sectors. Had it not been for the increasing trend in private transfers, including remittances and the decline in bills of oil imports due to a decline in world oil price, the current account deficit and the ensuing shortage of foreign exchange earnings (reserve) would have been even worse.

Investment in Ethiopia has been increasing, which may partially arise from private sector development and the increase in the foreign-direct investment following the establishment of industrial parks. Investment that was in operation increased from 1.9 billion *birr* in 2009/10 to USD 10.92 billion *birr* in 2015/16. In 2015/16, 998

projects started operation. The investment flow inclined more towards the service sector with investments amounting to 6.67 billion *birr*.

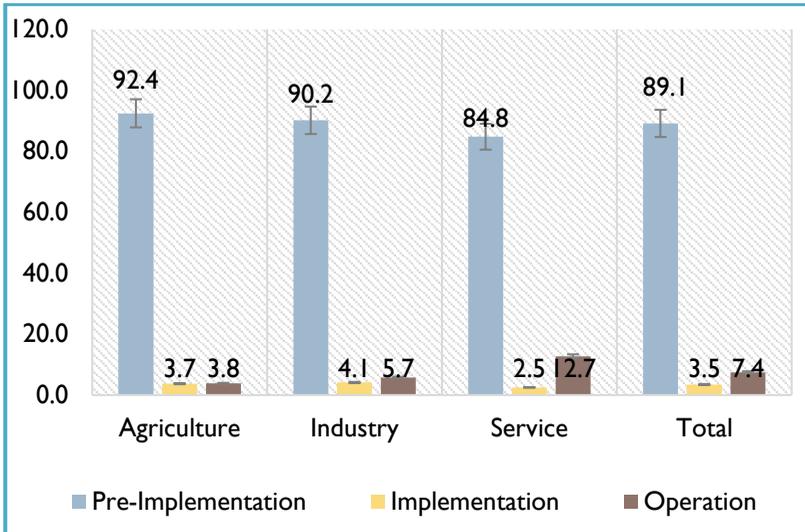
**Figure 1.12: Total Investment, by Economic Activity (Operation)**



**Source:** Ethiopian Investment Commission (7 July, 2015 to 8 July, 2016)

However, in terms of the capital investment, the industry sector took the lion’s share, accounting for 60.8 percent. This is followed by the service sector, which accounted for 37.9 percent of the total investment in 2015/16. On the other hand, the share of capital investment made by the agriculture sector for the review period was found to be only 1.2 percent.

**Figure 1.13: Investment, by Implementation Status**



**Source:** Ethiopian Investment Commission (7 July, 2015 to 8 July, 2016)

During the review period, the Ethiopian Investment Commission approved 9437 projects. Taking a license does not, by itself, mean getting in actual operation and creating job opportunities. Rather, the approved projects may be in three different stages, i.e. pre-implementation, implementation and operational. From the total number of projects approved by the Commission, 92.6 percent were under pre-implementation and implementation stages, which indicate a serious difficulty of conversion of proposed investment projects into an operational stage. This difficulty is more pronounced in the cases of agriculture and industry.

Among the total number of investment projects proposed in 2015/16, about 3.8 and 5.7 percent in agriculture and industry, respectively, were in an operational stage and had either partially or

fully completed their implementation phase and begun production or rendering services.

**Table 1.4: Investment Implementation Status by sub-Sectors, share in %**

	Pre-Implementation		Implementation		Operation	
	No Project	Capital	No Project	Capital	No Project	Capital
Agriculture, Hunting and Forestry	92.8	88.9	3.83	10.3	3.4	0.79
Construction	92.8	89.0	1.28	5.4	5.9	5.59
Education	92.2	98.8	1.96	0.2	5.9	1.05
Electricity, Gas, steam and Water supply	100.0	100.0	0.00	0.0	0.0	0.00
Fishing	100.0	100.0	0.00	0.0	0.0	0.00
Health and Social work	94.8	93.0	5.17	7.0	0.0	0.00
Hotels and Restaurants	86.4	78.0	12.91	22.0	0.7	0.05
Manufacturing	90.2	98.7	4.12	0.7	5.7	0.65
Mining and Quarrying	75.0	89.2	0.00	0.0	25.0	10.85
Other community, social and personal service activities	95.7	97.4	2.17	2.5	2.2	0.06
Real estate, Renting and Business activities	80.9	89.2	0.77	1.5	18.3	9.29
Transport, Storage and Communication	75.2	81.9	17.14	15.4	7.6	2.71
Wholesale, Retail trade & Repair service	92.5	96.7	5.00	2.8	2.5	0.48
<b>Total</b>	<b>87.1</b>	<b>97.6</b>	<b>3.1</b>	<b>1.5</b>	<b>9.8</b>	<b>0.9</b>

**Source:** Ethiopian Investment Commission (7 July, 2015 to 8 July, 2016)

Only 6 percent of all the projects approved in manufacturing had become operational. The real estate and renting businesses had a better performance compared with other sectors in terms of transition to the stage of operation. Almost 18.3 percent of the projects approved in this sub-sector had gone operational. Fishing, health & social work, and electricity sub-sectors had done too little to reach the implementation phase. Overall, 90.1 percent of the investors who took investment license had not started operation.

**Table 1.5: Percentage share of sub sectors Investment Implementation Status from the total projects**

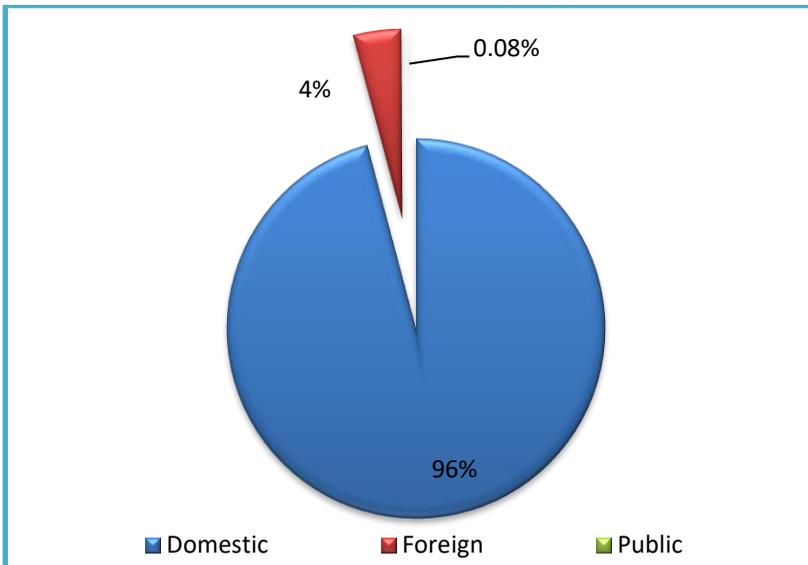
	Pre- Implementation	Implementation	Operation
Agriculture, Hunting and Forestry	12.1	14.1	3.9
Construction	15.9	6.2	8.9
Education	0.6	0.3	0.3
Electricity, Gas, steam and Water supply	0.0	0.0	0.0
Fishing	0.1	0.0	0.0
Health and Social work	0.7	1.0	0.0
Hotels and Restaurants	6.1	25.9	0.4
Manufacturing	27.4	35.5	15.4
Mining and Quarrying	0.2	0.0	0.6
Other community, social and personal service activities	1.1	0.7	0.2
Real estate, Renting and Business activities	34.5	9.3	69.2
Transport, Storage and Communication	1.0	6.2	0.9
Wholesale, Retail trade & Repair service	0.5	0.7	0.1
Grand Total	100.0	100.0	100.0

**Source:** Ethiopian Investment Commission (7 July, 2015 to 8 July, 2016)

As indicated in the above table, real estate took the lion's share (69.2%) and manufacturing accounted 15.4 percent from the total projects under operation. This indicates that the two sub sectors relatively performed well than other sub-sectors in completing the implementation phase.

In general, while the numbers of investment projects approved were relatively increasing, the rate of transition into a production stage was still limited. The rise in the number of investment licenses may indicate the level of investors' confidence in the economy. The reasons why the rate of investment projects going operational is low need to be investigated.

**Figure 1.14: Investment by Ownership Type**



**Source:** Ethiopian Investment Commission (7 July, 2015 to 8 July, 2016)

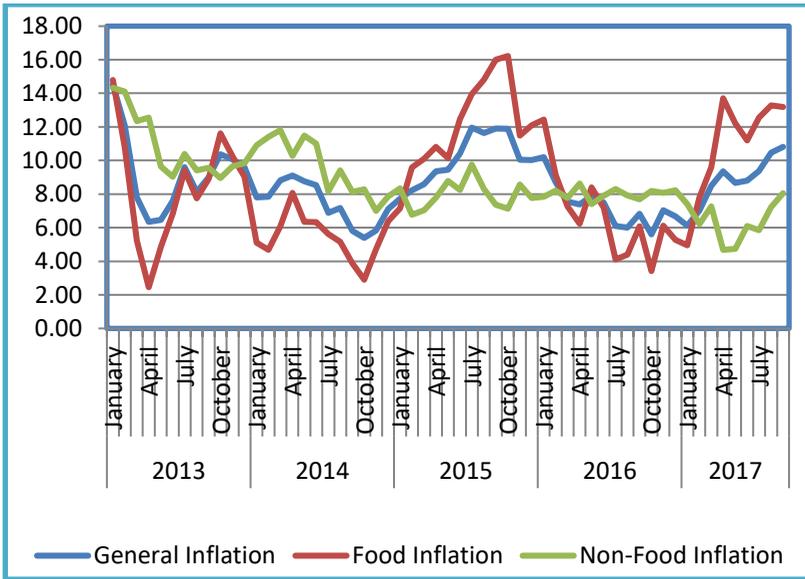
Of the total number of registered projects during 2015/16, domestic investment took the leading place, accounting for 96 percent of the total investment. Besides, foreign-owned enterprises were valued at 46.1 billion birr, which was 4.05 percent of the total number of projects registered. Public investment was significantly reduced, accounting only for less than 1 per cent of total number of investment projects valued at 42.9 million birr. The total jobs created by all the recorded operational investment projects were 1786.

### 1.3 Price Development

Macroeconomic stability is one of the key objectives of the Growth and Transformation Plan of Ethiopia. The demand-driven growth led by aggressive investments in social and economic infrastructure put pressure on general price level between 2007 and 2011/12. Macroeconomic policy measures that targeted limiting the rate of expansion of the money supply helped to tame inflation within a single digit until 2015/16, despite the severe supply shocks due to the incidence of drought in 2015/16. Imports of capital inputs and raw materials for the wave of investments in various projects in an attempt to lay the foundation for structural transformation put stress on the balance of payment position of the country in the face of the weak performance of the export sector due to unfavourable terms of trade for primary commodities in the international market. Devaluation of the *birr* against the US dollar by 15 per cent in October 2017 in an attempt to improve the balance of payment is poised to trigger price levels to soar. On the other hand, the expected bumper harvest during the major crop season of the fiscal

year 2017/18 is expected to dampen most of the rise in prices. Contrary to the situation in the period of 2007 to 2011/12, inflation over the last three years was more or less under the National Bank target. However, from February 2017, inflation is relapsing again and in September it went out of NBE’s single-digit target. Price expectation following the incidence of drought that affected agricultural production, and growth of money supply may explain part of the rising inflation. During August and September 2017, general inflation reached 10.5 per cent and 10.8 per cent, respectively.

**Figure 1.15: Annual Inflation (2013-2017)**



**Source:** EEA staff computations using data from CSA.

General inflation during the month of June 2016 was 7.5. General price level showed a slight acceleration with an inflation rate of 8.8

per cent by June 2017. While both food and non-food price levels showed an upsurge, food inflation accounted for much of the rise in the general price level. As of June, 2017, food and non-food inflation was 11.2 and 6.1 percent, respectively.

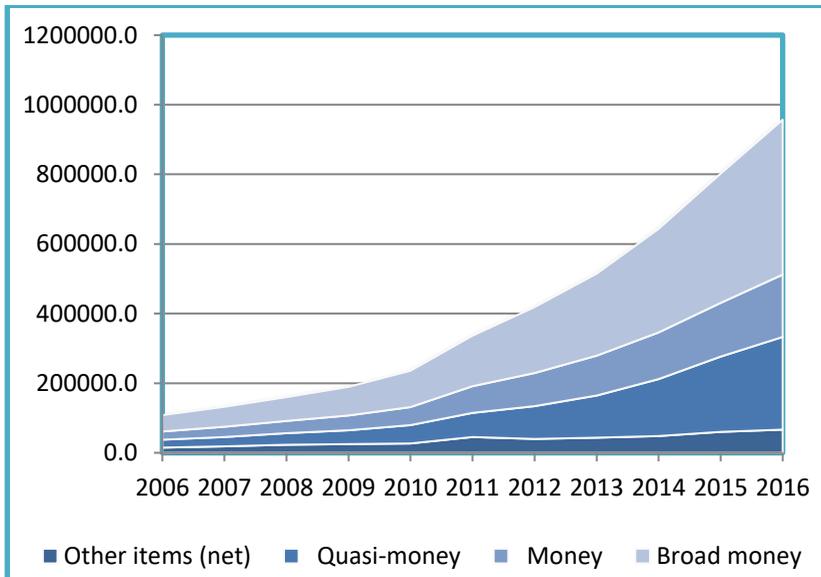
Inflation will remain a challenge for Ethiopian economy during the fiscal year 2017/18 and beyond. The current devaluation measure taken by the government will further aggravate the current inflationary situation. Ethiopia's imports are largely dominated by essential imports such as capital goods, raw material and inputs, and consumer durables. Little or no reduction in domestic demand for such imported goods is expected to have a limited effect in dampening the rising price. A reduction in capital imports can only happen at the expense of growth in the economy. In order for the devaluation to be effective in the short run, traded goods should be expensive for the domestic market while, at the same time, they become cheaper abroad in foreign currencies. This, by implication, may lead to a further rise in price levels. Besides market forces, and given the poor market regulatory capacity of the government, speculation, hoarding and other illegal activities may further escalate the current inflationary situation.

## **1.4 Monetary Developments**

The fiscal year 2015/16 witnessed more expansion in monetary aggregates. Liquidity in the same year, as measured by broad money supply, reached 445.3 billion *birr* reflecting a 20 percent increase mainly due to domestic credit, which itself expanded by 24.6 percent, relative to the previous fiscal year. Narrow money

increased by 15.5 percent due to the expansion of currency outside banks (10.2 percent) and demand deposit (19 percent). Quasi-money has also showed a moderate expansion due to the expansion of both savings and time deposit. The expansion of all types of deposit (savings) might be associated with the increasing branch networks of both private and government commercial banks. Banks opened 494 new branches in 2015/16 (of which 363 were private).

**Figure I.16: Trends in the Value of Monetary Aggregates (In millions of birr)**



**Source:** National Bank of Ethiopia.

**Table I.6: Monetary Survey**

Particulars	2007	2008	2009	2010	2006-2010	2011-2016	2011	2012	2013	2014	2015	2016
<b>Foreign assets (net)</b>	10.2	-12.6	54.1	51.2	18.1	5.1	104.2	-28.4	14.7	0.9	-18.5	-42.7
National Bank	8.8	-23.7	99.2	30.0	17.8	25.8	113.6	-35.3	16.0	8.8	-	-
Commercial Banks	12.1	3.1	7.3	92.2	26.1	19.7	92.1	-18.3	13.3	-8.3	-	-
<b>Domestic credit</b>	25.5	29.3	11.5	17.1	21.1	29.5	29.8	39.5	23.4	28.4	31.3	24.6
Claims on Government	20.1	9.0	-0.9	0.7	9.1	9.2	-13.2	-24.8	1.9	21.2	15.4	54.7
National Bank	30.2	42.4	6.8	4.0	16.2	13.3	15.2	0.0	22.1	16.0		
Commercial Banks	-11.2	-142.5	116.3	25.5	35.7	64.8	163.5	42.7	40.5	12.5	-	-
Claims on other sectors	31.1	48.8	20.3	26.6	31.1	36.1	49.7	56.7	26.2	29.2	32.8	22.0
<b>Broad money</b>	22.2	20.4	21.0	26.6	21.1	27.5	39.2	30.3	24.2	26.5	24.7	20.0
<b>Money</b>	24.4	19.4	19.1	24.5	19.8	23.1	45.3	24.5	21.0	16.8	15.3	15.5
Currency outside banks	20.0	28.8	11.7	22.8	19.4	18.6	34.6	18.3	18.5	16.4	13.8	10.2
Demand deposits	28.4	11.2	26.6	26.0	20.4	26.4	54.4	29.2	22.7	17.1	16.3	19.0
<b>Quasi-money</b>	19.8	21.4	23.0	28.7	22.5	31.4	33.1	36.6	27.5	35.8	32.3	23.1
Savings deposits	15.8	24.3	26.0	29.3	22.8	28.7	34.3	27.8	28.8	37.2	19.8	24.2
Time deposits	59.6	1.1	-3.2	21.8	21.7	62.1	18.0	158.5	18.5	25.1	134.3	18.5
Other items (net)	23.3	26.5	5.2	10.1	14.6	18.5	68.2	-13.7	10.8	9.9	24.5	11.1

Source: NBE

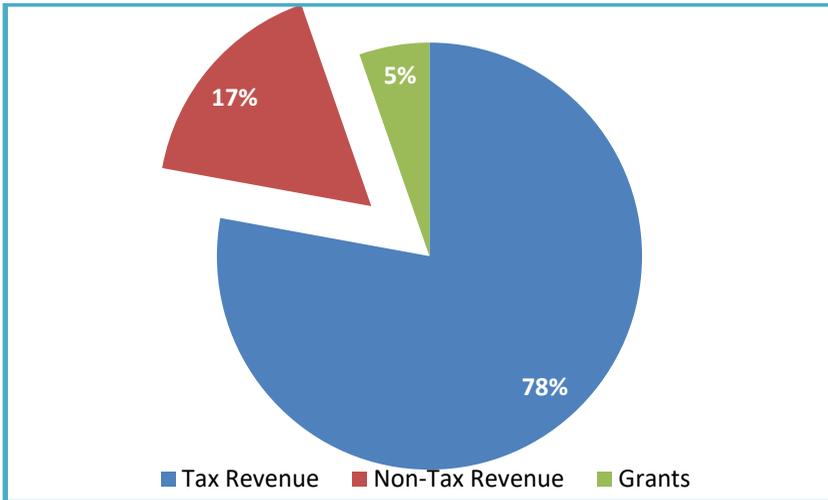
In the fiscal year 2015/16, foreign asset was eroded by 42.7 percent. The main factor for the drawdown of foreign asset was the continuous decline of Ethiopia's export earnings. The country's export is worsening from time to time and it is not in a position to cover the country's import demand. Low competitiveness in the global market, decline in international price for agricultural commodities, and supply bottlenecks are some of the reasons for the poor performance of the export sector.

Domestic credit increased by 24.6 percent and reached 490.2 billion *birr*. Claims on the government rose by 54.7 percent during the review period. Claims on other sectors also showed increment by 22.0 percent.

## **1.5 Fiscal Development**

In the fiscal year 2015/16, the government of Ethiopia collected 243.7 billion *birr* from tax revenue, non-tax revenue, and grants. The total revenue of the government increased by 22.1 percent due to the fact that tax revenue increased by 23.6 percent and non-tax revenue by 92.2 percent. The government raised almost the same amount of grants relative to the previous fiscal year. The implication is that the government has increased its capacity to collect its revenue from domestic sources.

During the review period, due to the fact that the revenue collected from the non-tax source has significantly increased, the share of the tax revenue and grants has decreased. Tax revenue has the highest share of the total government revenue (78%), followed by non-tax revenue (17%) and grants (5%).

**Figure I.17: Share of Sources of Revenues**

**Source:** Ministry of Finance and Economic Cooperation.

## Government Expenditure and Financing

Total expenditure also showed an increment in the fiscal year 2015/16. Both capital and current expenditure grew by 20.4 and 16.3 percent and this contributed to the overall government expenditure by 18.4. As to the structure of the expenditure, 51.7 percent of the total expenditure is capital expenditure while the balance is current expenditure.

As usual, government has financed its deficit from both domestic and external sources. Under the review year, external financing grew by 39 percent and domestic sources by 33.8 percent.

**Table I.7: Summary of government finance, in millions of *birr***

Ethiopian fiscal year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Fiscal year ending July 7	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
<b>Total Revenue and Grant</b>	<b>39705</b>	<b>54628</b>	<b>66237</b>	<b>85611.2</b>	<b>115659</b>	<b>137192.5</b>	<b>58076.52</b>	<b>199639.1</b>	<b>243671.6</b>
<b>Revenue (domestic revenue)</b>	<b>29794</b>	<b>40174</b>	<b>53861</b>	<b>69119.9</b>	<b>102864</b>	<b>124077.4</b>	<b>46172.77</b>	<b>186618.7</b>	<b>230657.3</b>
Tax Revenue	23801	28997	43315	58980.8	85739.9	107010.3	133118.26	165312.5	189717.2
Non-Tax Revenue	5993	11176	10546	10139.1	17123.8	17067.12	13054.51	21306.2	40940.1
<b>Grants</b>	<b>9911</b>	<b>14454</b>	<b>12376</b>	<b>16491.4</b>	<b>12794</b>	<b>13115.05</b>	<b>1903.747</b>	<b>13020.4</b>	<b>13014.3</b>
<b>Expenditure</b>	<b>46915</b>	<b>57775</b>	<b>71334</b>	<b>93831.4</b>	<b>124417</b>	<b>153928.7</b>	<b>85471.78</b>	<b>230521.2</b>	<b>272930.1</b>
<b>Current Expenditure</b>	<b>22794</b>	<b>27176</b>	<b>32012</b>	<b>40534.7</b>	<b>51445.5</b>	<b>62745.8</b>	<b>78086.9</b>	<b>113375.5</b>	<b>131902.8</b>
<b>Capital Expenditure</b>	<b>24121</b>	<b>30599</b>	<b>39322</b>	<b>53296.7</b>	<b>72971.3</b>	<b>91182.88</b>	<b>107384.88</b>	<b>117145.7</b>	<b>141027.3</b>
Overall balance including grants	-7210	-3147	-5097	-8220.2	-8758.2	-16736.2	-27395.26	-30882.1	-29258.5
Overall balance excluding grants	-17121	-17600	17474	-24712	-21553	-29851.2	-39299.01	-43902.5	-42272.8

Table I.7 cont'd

<b>Financing</b>	<b>7210</b>	<b>3147</b>	<b>5097</b>	<b>8220.19</b>	<b>8758.3</b>	<b>16736.2</b>	<b>27395.26</b>	<b>30882.1</b>	<b>29258.5</b>
<i>External(net)</i>	2396	3176	4131	7797.63	6529.7	16845.59	20493.3	18733.6	26033.5
<i>Domestic(net)</i>	6400	-417	1758	111.217	3793.1	1764.3	13510	18466.2	24704.0
Banking system	3879	-856	1382	-3039.5	-3825.5	-3245	2218.2	10738.6	9208.3
Non-Banking sources	2521	440	375.3	3150.72	7618.6	5009.3	11291.8	7727.6	15495.7
Privatization	1008	472	697.3	1457.61	2763.9	1200	0	485.0	500.0
Other and residual	-2594	-84	-1489	-1146.3	-4328.4	-3073.69	-6608.04	-6802.7	-21979.0

**Source:** Ministry of Finance and Economic Cooperation



# Chapter II

## Performance of the Agricultural Sector

### 2.1 Background

Agriculture in Ethiopia is largely a subsistence-oriented activity and plays a central role in the life and livelihood of most Ethiopians, where over 14 million smallholder farming households account for an estimated 95 percent of agricultural production and 80 percent of all employment (CSA, 2017). Recognizing these facts, Ethiopia has formulated a number of policies, strategies and programs to enhance the performance of the sector and its contribution to food security, poverty reduction and the production of exportable agricultural products.

The agricultural sector is considered as one of the major sectors driving growth in the government's second Growth and Transformation Plan (GTP II) for the period 2016-2020. The plan under this sector focuses on improving agricultural production and productivity and commercialization; reducing degradation of natural resources and improving its productivity; reducing vulnerability to disaster; and building disaster mitigation capacity via ensuring food security. All these are assumed to help Ethiopia realize its vision of becoming a middle-income country by 2025 (FAO, 2017).

Ethiopia's agriculture has been hit hard by the El Niño effect in 2015/16 and, to a lesser extent, in 2016/17. As a result, food insecurity increased and many farm households dependent on

agriculture have become indebted and dependent on external assistance, especially in some areas like the Somali region where the drought was severe. Close to 10 million Ethiopians are dependent on emergency food assistance (FAO, 2017). At national level, however, Ethiopia is reported to be food-secure at least referring to data from the National Statistical Agency (CSA). Ethiopia is reported to produce 290.4 million quintals of grain in 2016/17 crop year (CSA, 2017), indicating a production of 2.94 quintals per capita for an estimated population of 100 million), a level that is far higher than the 2500Kcal/person/year a person is reported to have to ensure his/her food security. Even after allowing for waste<sup>2</sup>, non-food use and animal food, data shows sufficient aggregate food/grain availability for every Ethiopian.

Despite such rosy pictures, Ethiopia is a country of over 15 million food-insecure people (in 2016/17)<sup>3</sup>, indicating the number of rural people suffering from the effect of the recent drought, landlessness, land shortages (having too little land to feed themselves), and/or lack of access to any other livelihood opportunities. The trend in Ethiopia's wheat import clearly shows the scale of the problem, the strategy Ethiopia follows to address its growing food insecurity problem (at least at household level), and the growing burden food insecurity puts on the nation's hard-earned foreign currency. FAO,

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<sup>2</sup> Waste implies loss only at farm level (harvest and post-harvest loss at field level) but excludes loss of grain (in one way or another) that could occur during the long supply/value chain as grain moves from producers until it reaches the consumer's table. Such losses are estimated to be substantial but considered here as 'data not available'.

<sup>3</sup> This represents over 7 million rural Ethiopians who are suffering from chronic food insecurity and are supported by the decade-old Rural Productive Safety Net and more than 8 million others assisted by the emergency food security program.

for instance, indicates that the country spent 640 million USD for importing 1.62 million tons of wheat in 2013<sup>4</sup>. This import level is not an isolated experience, as dependence on imported wheat has a consistent increasing pattern. International trade statistics on Ethiopia indicate that about 656,000 metric tons of wheat was imported every year between 2000 and 2009. This average annual import level, however, doubled (to 1,284,000 metric ton) in the decade that followed (between 2010 and 2017)<sup>5</sup>.

This chapter tries to update the reader on the performance of the Ethiopian agriculture, especially the performance of the grain sub-sector, in terms of production, productivity, use of modern farm inputs, and related agricultural activities in 2016/17, including food security and trade. Though publications from other sources are used mainly as supplementary sources, data for this report basically comes from the annual agricultural survey reports of the Central Statistical Agency (CSA).

## 2.2 Grain Production

Grain refers to the major crop category that included cereals, pulses and oilseeds, which constitute the major food crops for the majority of Ethiopians. During the last agricultural year (2016/17), Ethiopia reported to have produced close to 290.4 million quintals of grain from an estimated 12.6 million hectares of farmland, indicating an average productivity of 23.1 qt./ha. Compared to the

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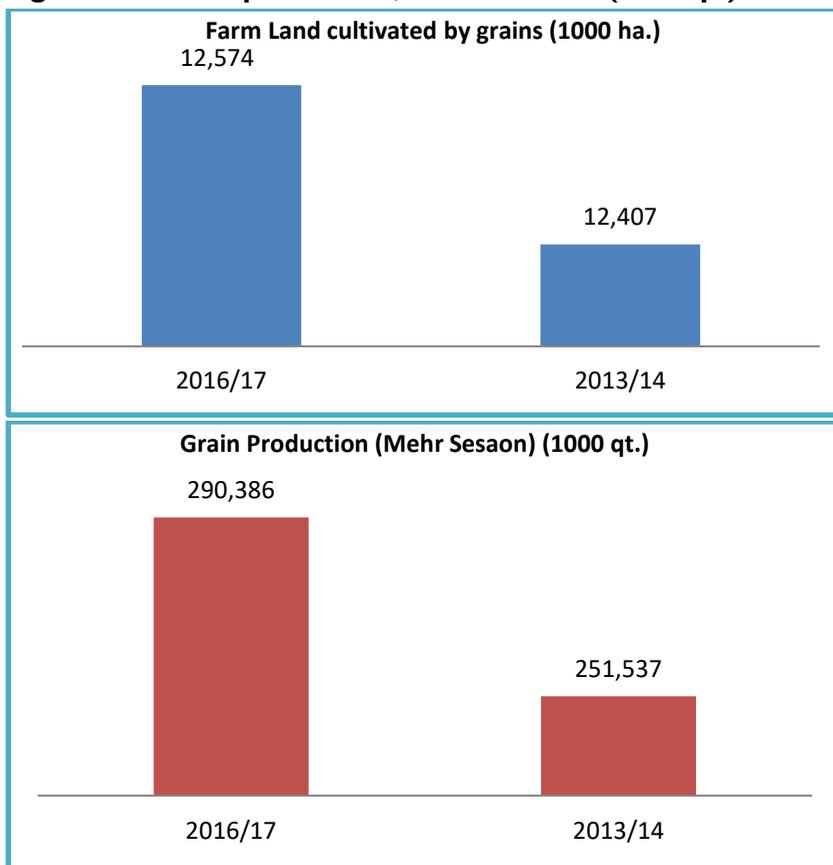
<sup>4</sup> Source: FAO database. <http://www.fao.org/faostat/en/#data/TP>

<sup>5</sup> <https://www.indexmundi.com/agriculture/?country=et> & commodity=wheat & graph=imports. Source: FAO database. <http://www.fao.org/faostat/en/#data/TP>

performance of the sector in 2013/14, grain production increased by 15.4 percent, while cultivated land increased by 1.3% during the same period of time, implying a relatively very large progress in yield/productivity compared to area expansion.

**Figure 2.1: Farm land allocated to grain production, Meher season (1000 ha)**

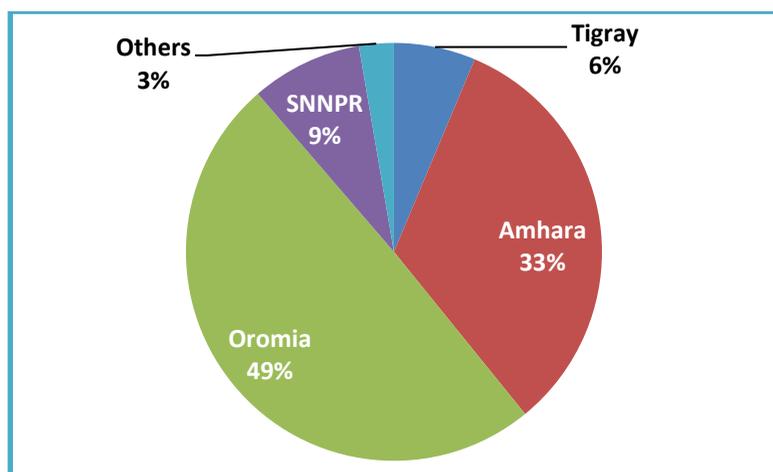
**Figure 2.2: Grain production, Meher season (1000 qt.)**



Source: CSA Annual Reports

Oromia and Amhara regions produced four quintals of grain for every five quintals produced in Ethiopia. Oromia alone produced close to half of the grain produced in 2016/17 and a third of all the grain (33%) produced in the Amhara region. The other 15% was produced in SNNPR (9%) and Tigray (6%), and the remaining five, largely lowland, regions of the country – Benishangul Gumuz, Afar, Somali, Harari, and Dire Dawa – accounted only for 3% of the grain produced.

**Figure 2.3: Percentage share of regions in grain production - 2016/17**

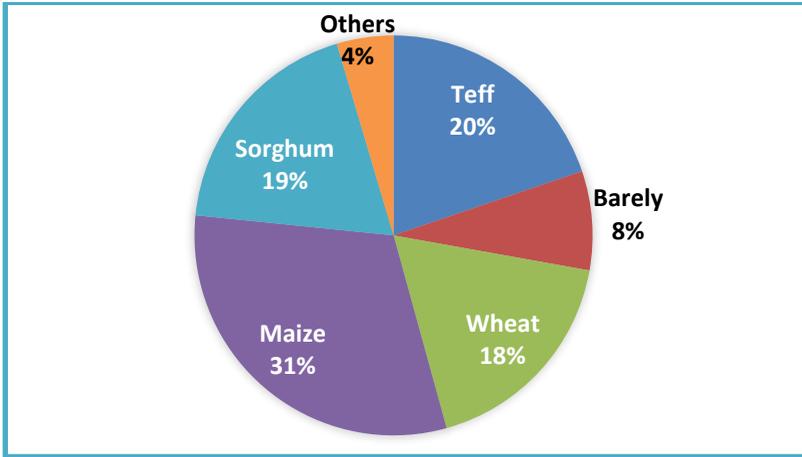


**Source:** Computed based on CSA (2017)

Cereals constituted a little over 87% of the grain produced in 2016/17. Out of the total 254 million quintals of cereal crops produced in 2016/17, maize accounted for 31%, and *tef*, sorghum and wheat accounted for 20%, 19%, and 18%, respectively. Barley is the fifth most popular crop in terms of its share of the total cereal

production (with 8% contribution). Finger millet, oats, and rice accounted for 3.6%, 0.3% and 0.6%, respectively.

**Figure 2.4: Percentage share of different crops in total cereal production**



**Source:** Computed based on CSA (2017)

About 17.4 million farmers were engaged in grain production in 2016/17. Of these, close to 66% (about 10.7 million) and 43% (7 million) engaged in the production of maize and *teff*, respectively. Then come sorghum, wheat, and barley as the third, fourth, and fifth most preferred cereal crops as they are produced by 37% (about 6 million), 31% (close to 5 million), and 26% (about 4.2 million) of grain farmers, respectively. Oats (*Aja*) and rice are the least preferred grain crops as they are produced by only 1.4% and 0.9% of the 17.4 million grain producers, respectively<sup>6</sup>.

<sup>6</sup> It is important to note that some crops like rice are only produced in specific agro-ecological areas suitable largely for that specific crop.

**Table 2.1: Operation size of grain producers**

	Farm size Cultivated land/holder <sup>7</sup> (ha/holder)	Production production/holder (qt/holder)
Tigray	1.0	19.8
Afar	0.1	1.2
Amhara	1.0	20.9
Oromia	0.7	18.3
Somali	0.7	13.7
B. Gumuz	1.1	23.8
SNNPR	0.3	7.2 <sup>8</sup>
Gambella	0.1	3.0
Harari	0.3	5.8
Dire Dawa	0.4	8.2
Ethiopia	0.7	

**Source:** Computed based on CSA data.

**Note:** Actual farm size owned by grain producers could be larger than these as lands utilized for other purposes have not been considered here.

In addition to cereal crops, which are produced in all regions with varying quantities, pulses and oilseeds are also produced in many regions of the country. Pulses accounted for 12.33% (1,549,911.86

<sup>7</sup> A holder is a person who exercises management control over the operation of the agricultural holding and makes the major decision regarding the utilization of the available resources. Under conditions of traditional agricultural holding the holder may be regarded as the person who with or without the help of others, operates land and/or raises livestock in his/her own right (CSA, 2017).

<sup>8</sup> The SNNPR is among the least grain producing regions, and this might not be surprising as this region is the home of millions of producers who have poor access to farmlands and engage in *Enset* and other types of root crop production which help to counter the negative effect of food insecurity associated with land shortage for grain production.

hectares) of the grain crop area and 9.69% (about 28,146,331.73 quintals) of the grain production. In terms of different types of pulse, faba beans, haricot beans (white), haricot beans (red), and chickpeas were planted on 3.40% (about 427,697 hectares), 0.63% (about 78,910 hectares), 1.68% (about 211,292 hectares) and 1.79% (about 225,608 hectares) of the grain crop area. The production obtained from faba beans, haricot beans (white), haricot beans (red), and chickpeas was 3.02% (about 8,780,108.79 quintals), 0.43% (about 1,259,801.75 quintals), 1.23% (3,579,424.75 quintals) and 1.53% (4,441,459.26 quintals) of the grain production, in that order (CSA, 2017).

Various oil crops are also produced in all the regions with differing quantities. Oilseeds added 6.40% (about 804,752 hectares) of the grain crop area and 2.89% (about 8,392,022 quintals) of the production to the national grain total. The most common oil crops produced in the country are *Neug*, sesame, and linseed, which accounted for 2.24% (about 281,206.42 hectares), 2.69% (about 337,926.82 hectares), and 0.64% (about 80,353.74 hectares) of the grain crop area and 1.04% (about 3,024,319.84 quintals), 0.92% (about 2.7 million quintals), and 0.30% (about 879,117 quintals) of grain, respectively.

## **2.2.1 Land and Operation Size of Grain Producers**

Ethiopian grain producers operate on tiny farm sizes, which indicate that most farmers survive on subsistence farming. In terms of farm size, the largest area a given farmer works on is around one hectare (Benishangul Gumuz, Amhara and Tigray regions). In the largest

agricultural region of the country, Oromia, the average grain producer cultivated only 0.7 hectare. Similarly, the average grain producer harvested only 17 quintals of cereals in the 2016/17 crop year. In Amhara and Tigray regions, the average grain producer harvested close to 21 qt. and 20 qt. of grain produced, respectively, whereas in Oromia (the largest grain producing region), an average grain farmer produced only about 18 quintals of grain.

The subsistence nature of Ethiopian farmers is manifested not only in their operation size (small farmland and production) but also in their market engagement. As they produce small amounts, only 15% of the 17 quintals of grain produced by the average farmer was sold in 2016/17.

**Table 2.2: Participation in farmland rental market by holding size**

<b>Holding size</b>	<b>Percent of farmers</b>	<b>Percent of rented land</b>
<=0.5 ha	15.8%	3.3%
0.51 - 1.0	21.4%	11.6%
1.01 - 2.0	35.6%	33.3%
2.01 - 5.0	24.9%	43.0%
5.01 - 10.0	2.1%	7.8%
> 10 ha	0.2%	1.1%
<b>N</b>	<b>4,157,463 farmers</b>	<b>2,676,036 ha</b>

**Source:** CSA (2015)

The shortage of farmlands forced a significant number of smallholders to engage in land rental markets and expand their

operational sizes. Data from CSA 2014/15 survey on land utilization shows that a little more than 4 million farmers or close to 26% of the reported 15 million smallholder farmers took part in land rental markets, largely in share-cropping arrangements. In terms of farmland, the land rental market accounted for 15% of the total cultivated land in the 2014/15 crop year. In other words, about 2.68 million hectares of land cultivated in the 2014/15 crop year comes from the land rental market.

Most farmers rented farms greater than a hectare but less than 5 hectares. As shown in Table 2.2 above, about 36% of the 4.1 million land market participants rented-in farms that varied between a hectare and two. Similarly, this holding size accounted for 33% of the 2.7 million farmlands that changed hands for temporary use by other farmers. On the other hand, farmers who rented-in farms greater than 5 ha accounted for 2.3% (in terms of their number) and 8.9% (in terms of size of land transferred through the land rental market).

### **2.2.2 Grain Productivity**

Productivity of crops directly determines the volume of the total agricultural crop production. The role of productivity is crucial in facilitating the structural transformation of the Ethiopian economy as it helps the sustainable growth of manufacturing and urban/service sectors. The manufacturing and urban sectors could pull vital resources (land/capita and labor) out of agriculture when agricultural productivity in general and producers' labor productivity in particular increase, initially faster than the manufacturing sector.

As Norton (2004) noted, increases in agricultural productivity have constituted a principal source of improvements in overall economic well-being in modern societies<sup>9</sup>. This study, however, doesn't look at total factor productivity and labor productivity; it focuses on productivity on farmlands, as data on the former indicators, which would have served as a source of data for this report, are not available in CSA reports.

In terms of crop yield, however, CSA reports indicate a promising increment in recent years. In 2015/16, the average grain production was 21.4 quintals per hectare, which is reported to increase into 23.1 qt./ha in 2016/17 crop year, indicating a 7.9% growth. Land used to cultivate Tef, barley and wheat is reported to give 6.7%, 7.4% and 5.5% higher yields when compared to the level in the preceding year. The highest performance was reported for oats

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<sup>9</sup> Generally speaking, labor productivity growth in agriculture has been greater than in other sectors of the economies in the industrial countries. From 1967–68 to 1983–84, for 17 of 18 industrial countries for which there were [adequate] data. The unweighted average annual growth rate for agriculture was 4.3 percent compared to 2.6 percent for other sectors. The sector's productivity has increased more rapidly than that of manufacturing both in terms of output per unit of labor and in terms of output per unit of all factors. This has not only put more food on tables in cities as well as country sides but, as will be shown, it has contributed to more rapid economic growth and employment creation overall.

As in other economies, agricultural sectors in the high-performing Asian economies were a source of capital and labor for the manufacturing sector. But in East Asia these resources were generally *pulled into manufacturing* by rising wages and returns, rather than *squeezed out of agriculture* by high taxes and stagnant or declining relative incomes. As a result, urban–rural income differentials were smaller in the high-performing Asian economies than in most other developing economies (Norton, 2004).

(Aja), finger millet, maize and sorghum crops as the average producer is reported to harvest 12.3%, 10.4% , 8.5% and 8.3% more production for every hectare of land he/she allocated to the respective crops.

**Table 2.3: Farm land productivity in production of cereal crops - Qt./ha (national level)**

<b>Crop</b>	<b>2016/17</b>	<b>2015/16</b>	<b>Growth rate</b>
Tef	15.6	16.64	6.67
Barley	19.66	21.11	7.38
Wheat	25.35	26.75	5.52
Maize	33.87	36.75	8.50
Sorghum	23.31	25.25	8.32
Finger millet	20.2	22.3	10.4
Oats/'Aja'	18.22	20.46	12.29
Rice	27.9	28.09	0.68

**Source:** CSA 2015 and 2017

Despite the overall trend of improvement in productivity of grain over time, the performance among different regions varies. In comparison to the national average yield of 23.1 quintal/ha, productivity in many regions except for Oromia is below the national average. In the Oromia region where close to 50% farmland was used to cultivate grain, the average yield was 25.2 qt./ha, which is 9% higher than the national average. Grain yield, however, increased in all regions, except for the Somali region, in 2016/17 crop year. The CSA report indicates that average grain yield (largely for sorghum) declined by 20%, reflecting the impact of the drought

that hit the region in the reporting period. Concerning the four major agricultural regions, grain yield increased by 6% to 8% in Amhara, Oromia and SNNPR regions, and a 16% hike was reported for the Tigray region where grain accounted for 7.5% of the total cultivated land.

**Table 2.4: Regional differences in grain productivity**

	2015/16(q t./ha)	2016/17 (qt./ha)	Percentage change
Tigray	16.9	19.7	116.2
Amhara	19.8	21.4	108.5
Oromia	23.5	25.2	107.3
SNNPR	21.1	22.5	106.6
Benishangul Gumuz	19.4	21.6	111.6
Somali	24.0	19.2	79.8
Others (Gambella, Harari& Dire Dawa)	14.4	19.8	137.6
All/Ethiopia	21.4	23.1	108.1

**Source:** Computed based on CSA (2017)

▪ **Production and Productivity of Tef**

*Tef* is a staple food for the majority of Ethiopians but accounted only for one-fifth of the nation’s grain production. Close to 90% of *Tef* production is limited to the two major agricultural regions of the country. Oromia produced 49% of the total *Tef* produced in 2016/17 crop year, whereas the Amhara region accounted for 39% of the national production. The other two major regions, SNNPR and Tigray, produce close to 7% and 5% of *Tef* production, respectively.

*Tef* yield is also high in the two major *Tef* producing regions (Oromia and Amhara) where the average *Tef* producer harvested about 17 qt. on a hectare of land. *Tef* yield in Tigray, SNNPR and Benishangul Gumuz regions was 13%, 25% and 16% lower than the national average of 16.6 quintals per hectare. Apart from agro-ecological factors, the regional disparity in *Tef* yield may be attributed to other factors like differences in the use of inputs and farm management skills among *Tef* producers of the different regions.

#### ▪ **Production and Productivity of Maize**

Maize is the most popular crop among Ethiopian small farmers as it accounted for 31% of farmlands allocated for the production of food crops. Close to 11 million farmers were reported to have produced maize in the 2016/17 crop year, which indicates that every two of three cereal farmers cultivate maize. In the 2016/17 crop year, Ethiopia produced close to 78.5 million quintals of maize from the reported 2.14 million hectares of farmlands allocated for the crop. On yield 36.8 quintals per hectare which is 20% higher than the 30.6 quintals produced on a hectare in 2012/13.

In terms of regional differences, Oromia and Amhara are the major performers both in terms of production and productivity of maize. Oromia alone accounted for 56% of the nation's production, while another 25% of was produced in the Amhara region. The national average for maize yield in 2016/17 was 36.7 qt./ha. The average yield in Amhara, Oromia and Benishangul Gumuz regions was around 38 qt./ha. Among the four major agricultural regions, maize in Tigray

was the lowest (25.6 qt./ha), which is only 70% of the national average yield.

▪ **Production and Productivity of Wheat**

Wheat produced in the four major agricultural regions of the country (Tigray, Amhara, Oromia and SNNP) accounted for 99% of the country's wheat production in 2016/17. The bulk of this is, however, produced in two of the four regions - Oromia (59%) and Amhara (29%).

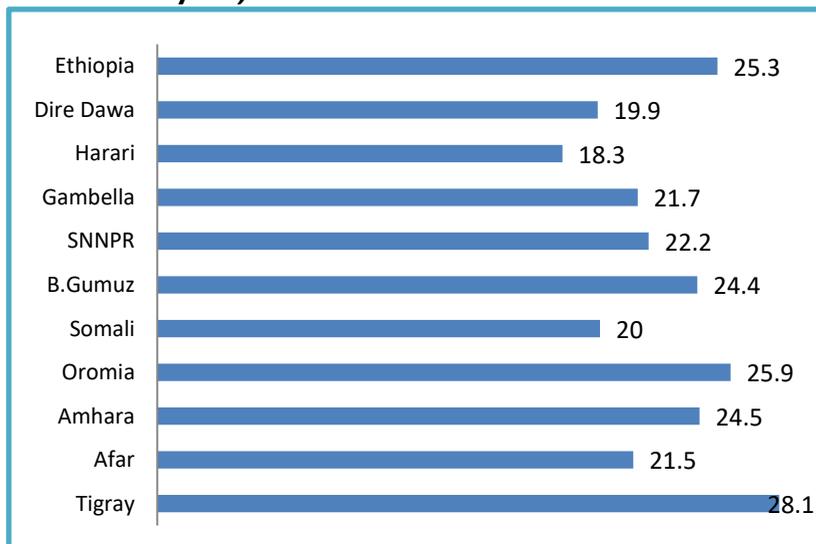
According to the CSA survey report, the national average yield of wheat in the 2016/17 agricultural year was 26.8 qt./ha, which was more than 25% higher than the 21.1 qt./ha the nation reported to have harvested in 2012/13 from a hectare of farmland. The average wheat producer in the Oromia region reported to have harvested close to 30 quintals of wheat from a hectare of farmland, which is about 11% higher than the national average. The lowest wheat yield was reported for the Tigray region where an average wheat producer collected close to 20 quintals from a hectare of farmland.

▪ **Production and Productivity of Sorghum**

Sorghum, like maize, is produced in most regions. As a long-season, relatively drought-resistant crop, sorghum is very important for farmers and pastoralists in the lowland parts of the country. Corresponding to their geographic size and agro-ecological suitability, Oromia and Amhara are still the major sorghum producing regions of the country where close to 75% of the nation's sorghum was produced in 2016/17. In terms of productivity,

however, Tigray is the leading region as the average sorghum producers reported to have harvested 28 quintals from a hectare of land, which is 3 quintals more than the national average of 25.3 quintals per hectare.

**Figure 2.5: Yield of sorghum (qt./ha) (2016/17 agricultural year)**



**Source:** Computed based on CSA

### **2.2.3 Production of Vegetables, Fruits and Root Crops**

Vegetables are largely produced by farmers living near urban centers. Most vegetables are not commonly grown by rural private peasant holders. As indicated by CSA survey results, vegetables took up about 1.69% of the area used by all crops at national level in

2016/17. However, of the total estimated area under vegetables, the lion's share, which is about 75.41% and 15.06%, was under red pepper and Ethiopian cabbage, respectively. The production of vegetables constitutes 2.17% of the total crop production. Red pepper and Ethiopian cabbage are the most widely grown vegetables, i.e. about 40.59% and 43.43%, in that order (CSA, 2016/17).

**Root Crops** – Some root crops like onion and garlic are indispensable to improve the taste and scent of Ethiopians dishes. Others like potatoes, sweet, potatoes and taro/Godere are among the major food crops that are consumed across the country. These, as well as other factors of economic importance, prompt the peasant holders to grow different types of root crops.

**Table 2.5: Root crops production in 2016/17**

Crop	No. of farmers/ growers	Area cultivated		Production		Yield (qt./ha)
		Ha.	Share (Percent)	Qt.	Share (percent)	
All root crops	6,830,975	229,079	100.00	46,305,690	100.00	
Beetroot	449,579	2,886	1.26	253,503	0.55	87.84
Carrot	168,252	2,578	1.13	90,339	0.20	35.04
Onion	862,937	33,603	14.67	3,274,752	7.07	97.45
Potatoes	1,197,018	66,923	29.21	9,214,031	19.90	137.68
Yam	440,025	5,603	2.45	509,643	1.10	90.95
Garlic	1,920,901	15,381	6.71	1,386,643	2.99	90.15
Taro/Godere	2,250,912	48,087	20.99	12,179,164	26.30	253.27
Sweet potato	1,911,161	54,017	23.58	19,397,612	41.89	359.10

Source: CSA report

**Fruit Crops** – The CSA report shows that small farmers grow fruit crops. In the 2016/17 crop year, only 107,890.60 hectares of land was under fruit crops in Ethiopia. Bananas covered about 58.59% of the fruit crop area, followed by avocados, which covered 16.53% of the area. More than 7,923,665.02 quintals of fruits were produced in the country. Bananas, mangoes avocados, papayas, and oranges took up 67.94%, 13.21%, 8.20% ,6.36% and 2.61% of the fruit production, respectively.

## **2.3 Agricultural Input Use**

In addition to the well-known weather conditions associated with the amount, distribution and timeliness of the rain, farmers' participation in the government extension program/package; use of irrigation, improved seeds and fertilizers; as well as efficiency of output markets in transmitting the bulk of consumers' price are key factors in enhancing the productivity of grain producers. In the following section, each of these variables is discussed briefly.

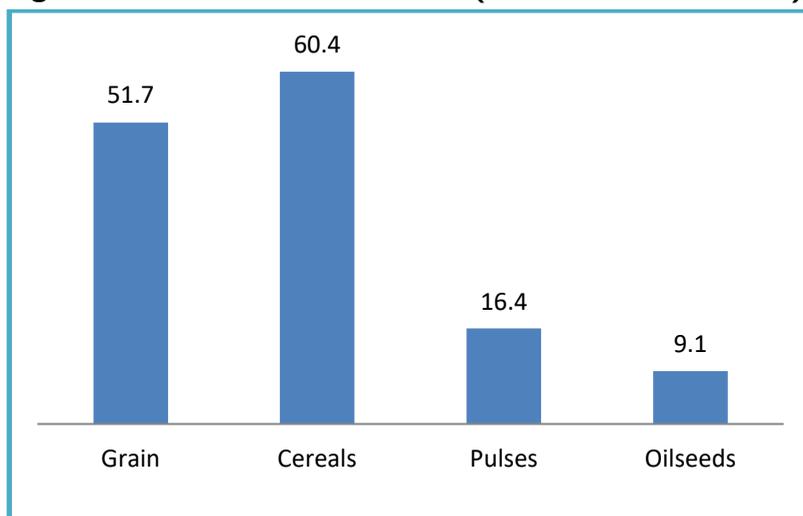
### **2.3.1 Fertilizer Use**

Fertilizer is one of the major agricultural inputs that help farmers to increase their yield/land productivity. The use of fertilizer and other yield augmenting practices and inputs like improved seeds has increased over time as suitable farmland has increasingly become scarce due to population pressure and other factors like land degradation.

About 52% of the total land used to cultivate grain crops was fertilized in the 2016/17 agricultural year. There is, however, a notable difference among the different grain crops. On average, about 60% of farmland used for cereal crops (notably *Tef*, wheat, maize and barley) was treated by fertilizers, whereas only close to 16% and 9% for pulses and oil crops was treated by fertilizers (Figure 2.6).

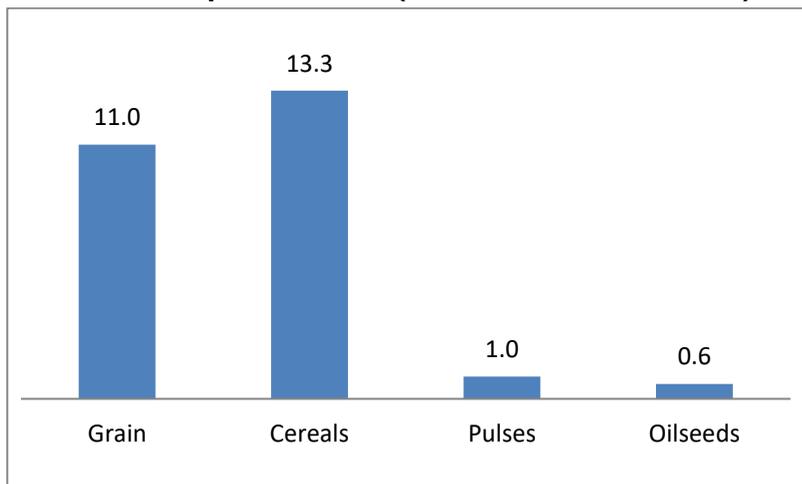
The total volume of fertilizer applied to areas under grain crops was estimated to be 7.9 million quintals and the extent of the area to which fertilizer was applied is estimated to be about 6.5 million hectares (Table 2.5). Most of the fertilizer used was applied to cereal crops. About 6.2 million quintals of the fertilizer was used for cereal crops (93%), and the remaining 7% was applied for pulses and oil crops.

**Figure 2.6: Fertilized farmland (% of cultivated land)**



**Source:** Computed based on CSA data

**Figure 2.7: Cultivated land on which farmers applied improved seeds (% of total cultivated land)**



**Source:** Computed based on CSA data

In terms of intensity, on average 1.21 quintals of fertilizer per hectare was applied on lands cultivated for grain crops. The application rate for pulses and oil seeds was high as 1.5 and 1.9 quintals of fertilizer was applied on a hectare of land cultivated for pulse and oilseeds, respectively. While these application rates are computed based only on treated farmlands, the intensity of fertilizer use will be much lower if we consider the total cultivated land by the respective crops. If we consider the total cultivated land of 12.6 million hectare, the average application rate was 0.63 kilograms per hectare. Similarly, only about 45 kilograms of fertilizer was used by a given farmer.

**Table 2.6: Fertilizer use in grain production (2016/17)**

	Fertilizer Use		Intensity of fertilizer use		
	Amount (qt.)	Fertilized land (ha)	Quantity applied		Quantity per farmer (qt./farmer)
			Qt./applied land	Qt./total cultivated land	
Grain	7,863,182	6,504,022	1.21	0.63	0.45
Cereals	7,340,362	6,177,352	1.19	0.72	0.45
Pulses	388,172	253,751	1.53	0.25	0.04
Oilseeds	134,648	72,919	1.85	0.17	0.04

**Source:** Computed based on data from CSA (2016/17)

**Note:** All kinds of fertilizers - DAP, Urea, NPS and their combination/mixture/ except natural fertilizers are considered.

Of all the quantity of fertilizer used, 2.7 million quintals was Urea and DAP, 6 million quintals was NPS & Urea, about 1.6 million quintals was NPS, 719 thousand quintals was DAP, and about 282 thousand quintals was Urea (CSA, 2016)<sup>10</sup>.

### 2.3.2 Improved Seed Use

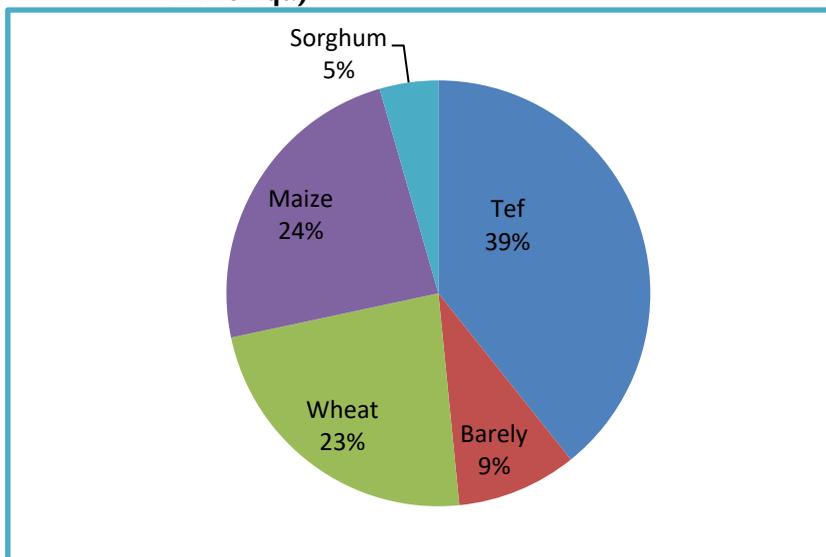
The use of improved seeds is another factor that contributes to an increase in agricultural productivity. CSA reports indicate that the amount of improved seeds used, as well as the extent of the area under application, is increasing from year to year. However, its rate of growth has not been as expected. The use of these improved

<sup>10</sup> Please note that these amounts will not add up to the amount mentioned above as these fertiliser quantities include fertilizer applied to non-grain crops.

seeds still remains very low and has not been widely practiced by smallholder farmers.

Only 4.45% of cereal producers (representing about a quarter of grain producers) applied improved seeds on their farms, which is very unfavorably compared to the over 50% of fertilizer users. In terms of coverage, only 13%, 1% and 0.6% of land cultivated for cereals, pulses and oil crops was cultivated using improved seeds, which is again unfavorably compared to the 60%, 16% and 9% coverage for use of fertilizers, respectively.

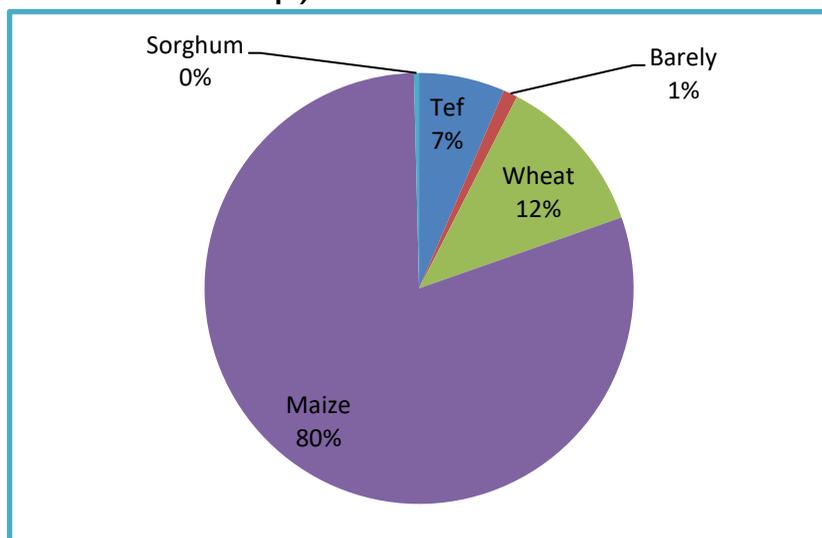
**Figure 2.8: Share of different cereal crops in total quantity of fertilizer applied on cereal crops (N=7.3 million qt.)**



Source: CSA (2016).

In terms of farmers' crop preference for use of improved seeds, maize is the most preferred. CSA (2016) indicates that, of the total area under improved seeds allocated to cereals, about 80% was covered by maize. The share for wheat, *Tef* and barley was 12%, 6% and 1.1%, respectively. There is, however, a wide disparity in the use of these two important farm inputs. While 80% of maize-cultivated land benefited from improved seeds, only 24% of the land was fertilized, which indicates that at least 56% of land cultivated using improved seeds was unfertilized. On the other hand, about 39% of *Tef* land was fertilized but only 7% of it was cultivated using improved seeds.

**Figure 2.9: Share of different cereal crops in total quantity of fertilizer applied on cereal crops (N=1.4 million qt.)**



**Source:** CSA (2016).

### 2.3.3 Irrigation and pesticide use

- **Pesticide use**

In areas where crop damage caused by pests and weeds was high but difficult to counteract by human labor, the application of pesticides is indispensable. The total pesticide applied area for 2016/17 was estimated to be more than 3.6 million hectares, indicating a 12.5% increase when compared to the 2014/15 crop year. The number of holders who applied it was about 5.6 million. Most of the crop area to which pesticide was applied was under *Tef* (1.5 million hectares) and wheat (945 thousand hectares) (CSA, 2016/17).

- **Irrigation use**

The use of irrigation is very important as it enables farmers to employ agricultural lands multiple times a given agricultural year. In times of drought like the 2015/16 crop year, it helps to alleviate water shortages caused by poor rain/dry seasons. Ethiopia, however, irrigated an insignificant portion of the area cultivated for grain crops. A CSA report indicates that only 195 thousand hectares of land was irrigated by smallholder farmers, which accounts for 1.5% of the estimated 12.6 million hectares of land cultivated for different grain crops.

The farmers who practice irrigation were estimated at 2.1 million. Most of the area irrigated was under maize, sorghum, and *Tef* estimated at 28,943 hectares for maize, 15,106 hectares for sorghum, and 10,269 hectares for *Tef* (CSA, 2016/17).

- **Agricultural Extension Package**

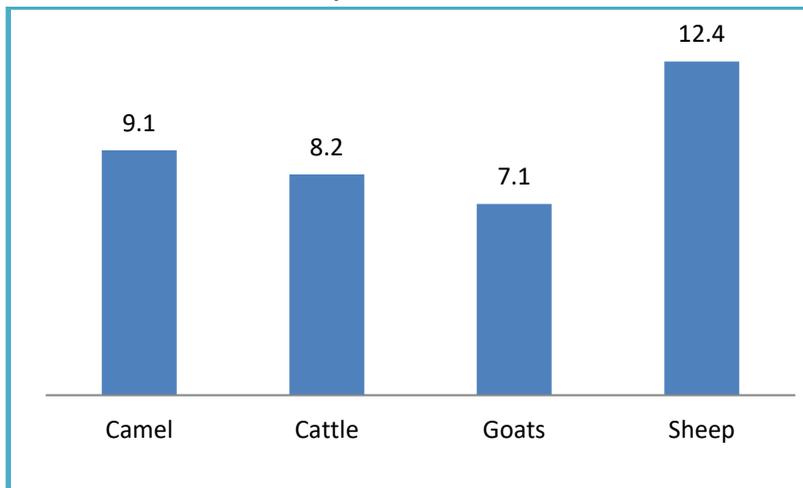
Close to half of the grain producers (about 8.4 million) were reported to have participated in the various crop extension packages in the 2016/17 crop year.

Most of the area under the extension program was reported to be under maize, *Tef* and wheat estimated to be more than 1.2 million hectares, 1 million hectares and more than 822 thousand hectares, respectively. The extension package embraced about 4.7 million maize growers, about 2.6 million *Tef* growers and about 2.3 million wheat growers. Credit and advisory service users numbered about 3.2 million and 12.7 million holders, respectively (CSA, 2016).

## **2.4 Livestock Production**

Ethiopia is believed to have the largest livestock population in Africa. Based on its 2016/17 annual Livestock Sample Survey, which covered the rural agricultural population in all the regions of the country, except for the non-sedentary population of three zones of the Afar and six zones of the Somali regions, CSA estimates that the country has about 59.5 million cattle, a little over 30 million sheep and goats each, as well as close to 10.6 million donkeys, horses, mules and camels, and about 1.2 million camels (CSA, 2017b). As indicated in Figure 2.10 below, Ethiopia's stock of camels, cattle, goats and sheep grew by 9.1%, 8.2%, 7.1% and 12.4%, respectively, over the three-year period between 2013/14 and 2016/17.

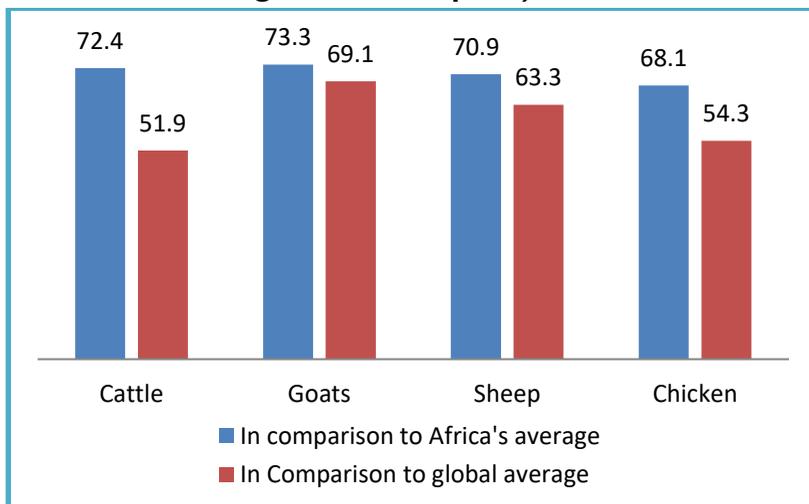
**Figure 2.10: Growth rate in livestock population percentage change between 2013/14 and 2016/17).**



**Source:** Computed based on CSA data.

Despite Ethiopia’s high livestock population and the relatively high growth rate, Ethiopia lags very far behind in the most important criteria of livestock performance assessment: the Carcass weight of a given livestock. Compared to their African and global counterparts, the average Ethiopian cattle yield 72% and 52% of meat, respectively. Similarly, an average Ethiopian goat, sheep and chicken give 27%, 29% and 32% less meat when compared to meat produced by their African counterparts.

**Figure 2.11: Meat Carcass weight of Ethiopia’s livestock in comparison to their African and global counterparts (percentage of their African and global counterparts)**



**Source:** computed based on data from FAO stat.

Despite its low productivity, the livestock sector has been contributing much to the economic development of the country. It is the source of animal protein and fat (in the form of meat, milk, honey, eggs, cheese, and butter) and contributes to the improvement of the nutritional status of the people. The country also generates scarce foreign exchange earnings by exporting live animals, meat and leather products. On the other hand, draught animals provide power for the cultivation of the smallholdings and for crop threshing virtually all over the country and are also essential modes of transport to take holders and their family long distances, to convey their agricultural products to the market

places, and bring back their domestic necessities. Livestock can also offer a certain degree of security in times of crop failure, as they are a “near-cash” capital stock. Furthermore, livestock provides farmyard manure that is commonly applied to improve soil fertility. It can also be used as a source of energy.

As Ethiopian livestock producers keep their livestock for many of these reasons, these multiple purposes, coupled with shortage of feeds due to diminished grazing land and other factors, push everyone to keep as many as they can, which in turn contributes to the very low livestock productivity in Ethiopia. In other words, lack of specialization could hurt the performance of the sector and its contribution to the economy.

### **2.4.1 Livestock Products**

The livestock sector is important in terms of its contribution to the improvement of the nutritional status of the people as it supplies a range of livestock products and by-products in the form of meat, milk, honey, eggs, cheese, and butter. CSA’s annual agricultural sample surveys generate important data on the production of these products, and this report has looked at the trend in the production of these products over the past five years.

According to the 2016/17 CSA report, the total cow milk production for the rural sedentary areas of the country was about 3.1 billion liters (for the 2016/17 agricultural year). On the other hand, the estimate for camel milk for the same areas of the country was about 180 million liters. Compared to the amount five years ago (2011/12), cow milk production declined by 6.2%, whereas the

production of camel milk increased slightly by 2.3% during the same period. However, camel milk production in 2016/17 was significantly lower than the 234 million liters produced in the 2014/15 production year. The drought of the 2015/16 agricultural year might have contributed to the decline of milk production in the reporting period.

**Table 2.7: Estimated Milk, Egg and Honey Produced by Small Farmers**

Livestock Products	Amount produced from the smallholder sector			
	2016/17	2014/15	2012/13	2011/12
Cow milk (million liters)	3,134	3,072	3,805	3,330
Camel milk (million liters)	180	234	165	176
Honey (million kg.)	48	49	46	40
Egg (million)	128	107	93	95

**Source:** CSA Annual Survey Reports.

The trend in honey and egg production is completely different. Using various techniques, CSA estimates that the country produced 48 million kilograms of honey and 128 million eggs (from the smallholder sector) in the 2016/17 agricultural year. As shown in Table 2.7 above, honey and egg production in 2016/17 was about 20% and 35% higher than the quantity five years ago.

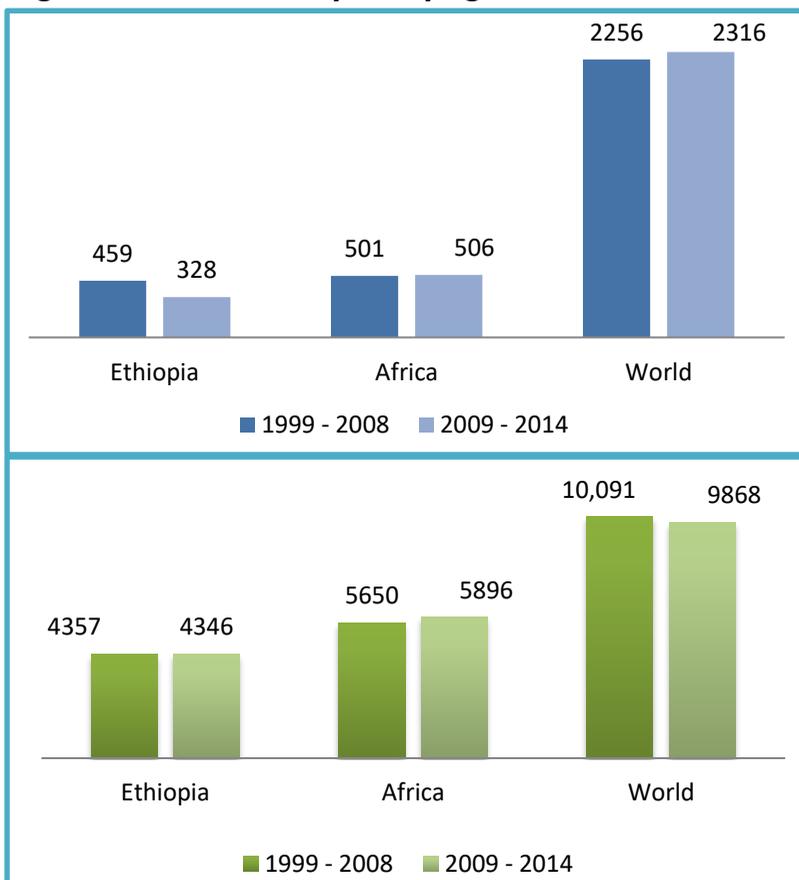
While the stagnation in milk production is a worrisome trend, the relative better performance in the production of eggs and honey is encouraging. But the overall performance was both low and not sufficient in view of the potential the country has and the high rise in population and rapid economic growth the country achieved over the

past decade, all of which contributed to the rapid growth in the demand of food items from the livestock sector.

In terms of productivity, the dairy and poultry sectors perform poorly. Data obtained from FAO database indicate that a dairy cow produced, on average, 328 kilograms of milk per annum (over the six-year period between 2009 and 2014), which is far lower than the 506 liters and 2,316 liters for the African and global averages. Similarly, the performance in poultry egg production (measured in terms of gram/head/year) in Ethiopia was about 26% and 66% lower than the African and global averages, respectively. As indicated in Figure 2.13 below, the average laying hen in Ethiopia produces eggs weighing 4,346 grams per annum (during the 2009 to 2014 period), whereas the average figure for the world and African countries was 9,868 grams and 5,896 grams, respectively.

**Figure 2.12: Productivity of Dairying Cow**

**Figure 2.13: Productivity of Laying Hens**



**Source:** FAO database. (Data beyond 2014 was not available)

**Note:** Dairying cow milk productivity indicates the production of whole fresh milk measured in Kg./cow/year, while the productivity of egg-laying hens is measured in eggs produced in gram/head/year.

The wide gap in productivity between Ethiopia’s and global/African dairy and poultry sectors could be explained by a range of factors

including disparity in breeds and availability of feeds (both in quantity and quality terms). Moreover, differences in the objectives of livestock production and management could have contributed to these significant differences in productivity of Ethiopia's dairy and poultry sectors.

Lack of specialization and the multifaceted roles of livestock production in Ethiopia, including their value as a means of economic security (since they are 'near liquid asset') for producers who are predominantly small farmers struggling to feed their family, have an important implication for the dairy and poultry enterprises under their management.

## **2.5 Food Security and Import**

Food production is the base for food security in a country like Ethiopia where the livelihood of over 80% of the population depends on agriculture. As indicated earlier, Ethiopia produced 29.04 million metric tons of grain in the 2016/17 agricultural year, which was 8.8% higher than the reported 26.7 million metric tons produced in the preceding year (CSA, 2016/17)<sup>11</sup>. The net production available for domestic consumption and/or export after deducting the 14.4% of the total grain production that is estimated to be utilized either for seeds (by producers themselves for their next crop season) or animal feed will be 24.9 million metric tons<sup>12</sup>. After deducting 4.5 million quintals (of oilseeds and pulses), which is

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<sup>11</sup>Production data comes only from *Meher* production of small farmers, and production from the little *Belg*-season is not considered in this estimation. Similarly, any production from large farmers/investors is not considered.

<sup>12</sup>This allowance for seeds and animal feed comes from CSA data on crop utilization by smallholders (CSA, 2016b).

estimated to be exported this year (assuming it as par to the level exported last year), the net amount available for domestic consumption will be 24.4 million metric tons, indicating a per capita grain production of at least 2.4 quintals, which is still above a food/grain self-sufficiency level at national level<sup>13</sup>.

As food security is defined as a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (Alexandratos, N. and J. Bruinsma, 2012), any national-level production statistics (even if we consider them to be true and unbiased) could not indicate the status of food security at household levels.

Ethiopia is a home of over 7 million rural people who are chronically food-insecure and have received support to meet their food requirements annually through the rural productive-safety net program (RPSNP) for over a decade now. This is in addition to the millions of people who are suffering from drought-related food insecurity as in the case of the 2015/16 agricultural year. In late 2015, a government-led multi-agency *meher* assessment found that 10.2 million people were food-insecure, while 2 million required agricultural input support to resume food production. Malnutrition rates are staggering, with over one-third of Ethiopia's *woreda's* now officially classified as facing a food-security and nutrition crisis. These figures are increasing as the effects of drought continue to grip the country (FAO, 2016).

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<sup>13</sup> Though CSA's production estimate is made for post-harvest period, which could consider loss of grain during harvest (on field and may be on producers' store), loss of grain that could occur produce (or their products) reach on the table of consumers is not considered in such estimation.

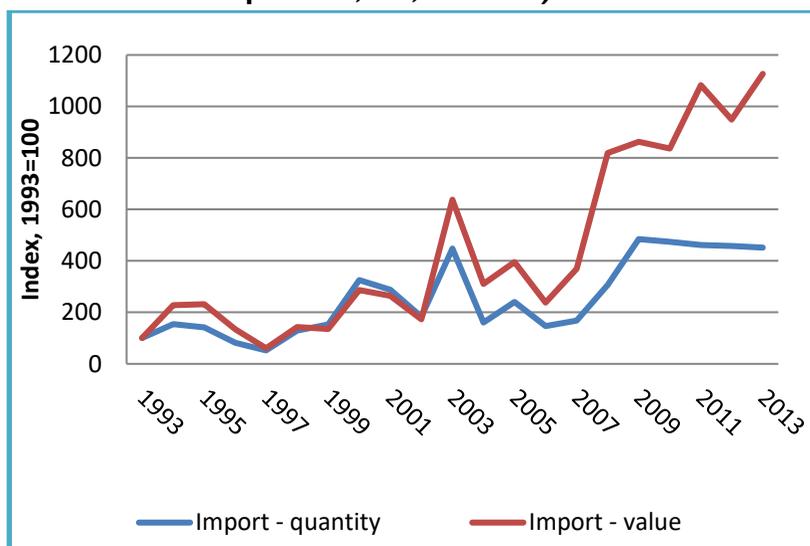
**Table 2.8: Wheat import by Ethiopia (trends over the past 20 years)**

	Quantity		Value	
	Tons	Annual growth rate	1000 USD	Annual growth rate
1993	358100	--	56800	--
1994	553583	54.6	129613	128.2
1995	509500	-8.0	132000	1.8
1996	295000	-42.1	76000	-42.4
1997	187200	-36.5	34400	-54.7
1998	463000	147.3	81000	135.5
1999	550000	18.8	77000	-4.9
2000	1164000	111.6	163000	111.7
2001	1031000	-11.4	150000	-8.0
2002	657000	-36.3	98500	-34.3
2003	1603103	144.0	362391	267.9
2004	575020	-64.1	176643	-51.3
2005	862146	49.9	224444	27.1
2006	526206	-39.0	135000	-39.9
2007	600238	14.1	210000	55.6
2008	1100050	83.3	465194	121.5
2009	1735594	57.8	490000	5.3
2010	1698234	-2.2	475000	-3.1
2011	1654282	-2.6	615000	29.5
2012	1639039	-0.9	539244	-12.3
2013	1618382	-1.3	640000	18.7
<b>Average</b>		<b>21.9</b>		<b>32.6</b>

Source: FAO database. <http://www.fao.org/faostat/en/#data/TP>

Ethiopia’s food security problem, at least as reflected by its wheat import level, is as chronic as it is a growing problem. Wheat import grew on average by 21.9% (in quantity terms) and 32.6% (in value) annually between 1993 and 2013 (see Table 2.8). In 2013, Ethiopia imported 1.62 million tons of wheat worth 640 million USD<sup>14</sup>. Two decades ago (in 1993), the level of import was only 358,100 tons that forced the country to spend only 56.8 million USD.

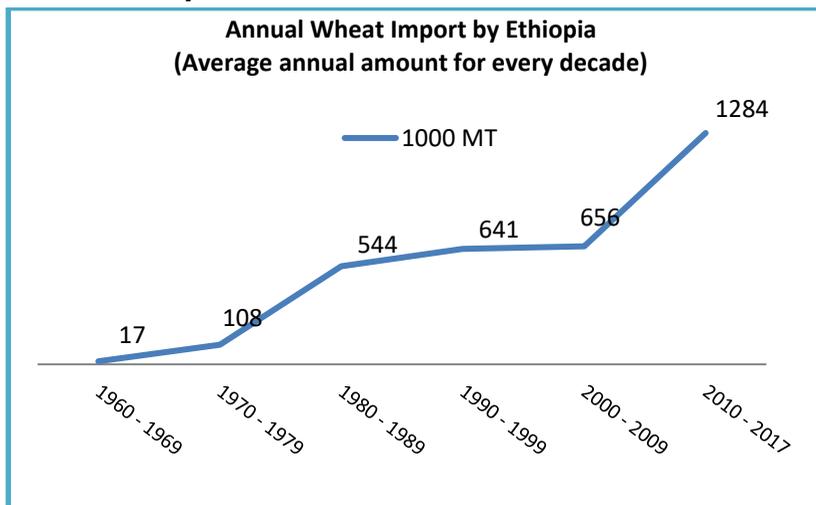
**Figure 2.14: Wheat import index (1993=100, quantity imported=358,100 tons, Value import=56,800,000 USD)**



**Source:** Computed based on data from FAO database.

<sup>14</sup>Money spent for wheat import is largely expected to originate from government treasury, but FAO trade statistics on money spent for wheat import doesn’t indicate specifically the source of the money.

**Figure 2.15: Wheat import by Ethiopia over the past fifty years**



**Source:** <https://www.indexmundi.com/agriculture/?country=et&commodity=wheat&graph=imports>

In parallel with its fast wheat import growth, the CSA report indicates that Ethiopia has increased its grain production significantly over the past decades. Wheat production alone reached 4.23 million tons in 2013 from 895,520 tons in 1993, indicating 472% growth over the two-decade span of time (i.e. doubling its wheat production almost every five years). A fast growth in import with a corresponding fast growth in production is an unprecedented event.

Cereals are the most important source of total food consumption in Ethiopia. Ethiopia has also great potential in producing sufficient grain at least for domestic consumption. Ethiopia's reported capacity to double its wheat production every five years also shows

the domestic potential to increase wheat production further. On the other hand, the willingness of Ethiopian policy makers to spend more than half a billion USD per annum for wheat import seems a puzzle, at least under such demonstrated capacity to increase domestic wheat production.

It is not only the growing wheat import that drains the nation's limited foreign currency; the country also pays a large sum of its foreign currency to import a range of processed foods that appear in the country's growing supermarkets.

In general, the growing trend of wheat import has become a chronic problem and seems to have reached a level where one would be forced to question the country's food security and development strategy.



## **Chapter III**

# **The Performance of Large and Medium Scale Manufacturing Industries**

### **3.1 Introduction**

This chapter deals with the developments in the performances of the Large and Medium Scale Manufacturing Industries (LMSMI) of Ethiopia during the first Growth and Transformation Plan (GTP) period.

### **3.2 Share of the Manufacturing Industry in GDP**

Over the period (2010/11-2014/15), the contribution of agriculture, industry and service sectors to the GDP averaged at about 41.4 percent, 12.7 percent, and 45.9 percent, respectively. Compared to the base year (2009/10), the share of the agriculture sector in the GDP declined, while that of industry and service sectors increased in 2014/15. One of the sub-sectors within the industry sector is the manufacturing sub-sector, which, in turn, is divided into Large- and Medium-Scale Manufacturing (LMSM), and Small and Cottage industries. The share of the total manufacturing industry, large and medium scale industries, and small and cottage industries in the GDP averaged at about 4.4 percent, 3.1 percent, and 1.2 percent respectively in the same period. While the share of the total manufacturing and LMSM industries have slightly increased at the

end of the plan period compared to the base year figure, the share of small scale and cottage industries depicted a decline. This trend is contrary to the target set to be achieved in relation to small scale and cottage industries in terms of addressing the problem of youth unemployment in the country. With regards to growth, the manufacturing sector has witnessed an average growth of 16 percent per annum over the period (2011/12-2014/15) (Table 3.1).

**Table 3.1: Value Added of Major Sectors, Share in GDP and Growth in%**

Sectors	Base year		GTP I implementation period			
	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
<b>GDP in Billion Birr, at constant basic price</b>						
Agriculture & allied activities	212.25	222.66	238.44	251.34	267.27	
<b>Industry</b>	<b>49.80</b>	<b>59.60</b>	<b>73.90</b>	<b>86.50</b>	<b>103.70</b>	
<b>Manufacturing</b>	<b>18.97</b>	<b>21.2</b>	<b>24.8</b>	<b>28.9</b>	<b>34.2</b>	
<b>Large and Medium scale</b>	<b>12.32</b>	<b>14.28</b>	<b>17.74</b>	<b>21.57</b>	<b>26.56</b>	
<b>Small and Cottage</b>	<b>6.64</b>	<b>6.92</b>	<b>7.06</b>	<b>7.36</b>	<b>7.64</b>	
Service	217.00	237.00	259.00	292.00	325.00	
<b>Total GDP</b>	<b>479.05</b>	<b>519.26</b>	<b>571.34</b>	<b>629.84</b>	<b>695.97</b>	
<b>Share in %</b>						
Agriculture & allied activities	45.2	44.3	42.9	41.7	39.9	38.4
<b>Industry</b>	<b>9.8</b>	<b>10.4</b>	<b>11.5</b>	<b>12.9</b>	<b>13.7</b>	<b>14.9</b>
<b>Manufacturing</b>	<b>3.9</b>	<b>4.0</b>	<b>4.1</b>	<b>4.3</b>	<b>4.6</b>	<b>4.9</b>
<b>Large and Medium scale</b>	<b>2.5</b>	<b>2.6</b>	<b>2.8</b>	<b>3.1</b>	<b>3.4</b>	<b>3.8</b>
<b>Small and Cottage</b>	<b>1.4</b>	<b>1.4</b>	<b>1.3</b>	<b>1.2</b>	<b>1.2</b>	<b>1.1</b>
Service	45	45.3	45.6	45.3	46.4	46.7

	growth in %			
Agriculture & allied activities	4.9	7.1	5.4	6.3
<b>Industry</b>	<b>19.7</b>	<b>24.0</b>	<b>17.1</b>	<b>19.9</b>
<b>Manufacturing</b>	<b>11.8</b>	<b>16.9</b>	<b>16.6</b>	<b>18.2</b>
<b>Large and Medium scale</b>	<b>15.9</b>	<b>24.2</b>	<b>21.6</b>	<b>23.1</b>
<b>Small and Cottage</b>	<b>4.2</b>	<b>2.0</b>	<b>4.2</b>	<b>3.8</b>
Service	9.2	9.3	12.7	11.3

**Source:** National Planning Commission of Ethiopia (NPC)

### **3.3 Performances of the Large and Medium Scale Manufacturing Industries (LMSMI)**

#### **i) Number of Enterprises**

The trend in the number of LMSM industries shows that there has been a net increase in the number of enterprises joining the sector every year over the period (2010/11-2014/15). The number of enterprises has been growing, on average, by 8 percent per annum over the same period. In general, fluctuations have been observed in the number of enterprises operating in each sub-sector during the same period, indicating the presence of exiting firms from and entering new firms into the sub-sectors. Except for the food and leather sub-sectors, the number of enterprises in the other sub-sectors has declined in 2010/11 compared with the base year (2009/10). Despite being a priority sub-sector, the number of textile industries as at 2014/15 is found to be far lower than the base year (Table 3.2). The low performance of the textile sector has something to do with increased smuggling of clothing into the economy, shortage of raw materials and the channelling of textile

products by exporting industries into the domestic market. In order for the priority manufacturing sector to play its role in the economy, the government has to address the basic problem constraining its development and introduce sufficiently attractive incentive scheme so that investors will find the required sub-sector relatively attractive and invest in them (Table 3.2).

**Table 3.2: Trends in the number of enterprises, growth in %**

Sub-Sectors	Base Year		GTP I Implementation years			
	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
	<b>Number of Enterprises</b>					
Food & Beverages	572	686	640	687	753	928
Tobacco	1	1	1	1	1	1
Textiles	40	37	65	88	69	81
Wearing Apparel, Except Fur Apparel	51	40	39	23	31	85
Leather	114	141	131	145	140	103
Wood & Products Of Wood	54	86	70	89	96	96
Paper & Printing	123	122	122	125	147	182
Chemicals	96	77	104	153	126	131
Rubber & Plastic	139	106	135	154	153	236
Other Non-Metallic Mineral Products	482	409	531	559	669	596
Basic Iron & Steel	39	39	27	38	38	67
Fabricated Metal Except Machinery & Equipment	154	141	208	182	173	204
Machinery And Equipment N.E.C.	15	6	2	12	21	43
Motor Vehicles, Trailers & Semi-Trailer	11	8	8	11	9	14
Furniture; Manufacturing N.E.C.	281	271	369	388	332	383
<b>Total</b>	<b>2172</b>	<b>2170</b>	<b>2452</b>	<b>2655</b>	<b>2758</b>	<b>3150</b>

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	growth in %				
Food & Beverages	19.9	-6.7	7.3	9.6	23.2
Tobacco	0.0	0.0	0.0	0.0	0.0
Textiles	-7.5	75.7	35.4	-21.6	17.4
Wearing Apparel, Except Fur Apparel	-21.6	-2.5	-41.0	34.8	174.2
Leather	23.7	-7.1	10.7	-3.4	-26.4
Wood & Products Of Wood	59.3	-18.6	27.1	7.9	0.0
Paper & Printing	-0.8	0.0	2.5	17.6	23.8
Chemicals	-19.8	35.1	47.1	-17.6	4.0
Rubber & Plastic	-23.7	27.4	14.1	-0.6	54.2
Other Non-Metallic Mineral Products	-15.1	29.8	5.3	19.7	-10.9
Basic Iron & Steel	0.0	-30.8	40.7	0.0	76.3
Fabricated Metal Except Machinery & Equipment	-8.4	47.5	-12.5	-4.9	17.9
Machinery And Equipment N.E.C.	-60.0	-66.7	500.0	75.0	104.8
Motor Vehicles, Trailers& Semi-Trailer	-27.3	0.0	37.5	-18.2	55.6
Furniture; Manufacturing N.E.C.	-3.6	36.2	5.1	-14.4	15.4
Total	-0.1	13.0	8.3	3.9	14.2

**Source:** CSA, Various Issues

## ii) Scale of Enterprises

Firm size is one of the most important determinants of competitiveness since it enjoys advantage of economies of scale-where a firm can decrease the average cost per unit by increasing the total output. In 2009/10, of the total LMSM Industries, those engaging 10-19 workers, 20- 49 workers, and 50 & above workers accounted for about 38.8 percent, 27.2 percent and 34 percent of the total manufacturing industries, respectively, indicating the concentration of manufacturing industries in those engaging below 50 workers. In 2014/15, however, the manufacturing industries which engage 10-19 workers, 20- 49 workers and 50 & above workers accounted for about 47.2 percent, 23.4 percent and 29.3 percent, respectively. Compared to 2009/10, the concentration of manufacturing industries in those firms engaging below 50 workers has increased in 2014/15, thereby indicating the reduction in the size of manufacturing industries over the period. Of the sub-sectors, while tobacco and textile sub-sectors are mainly large scale, furniture and other non-metallic mineral sub-sectors are found to be mainly small scale enterprises (Table 3.3).

**Table 3.3: Trends in the scale of manufacturing industries**

Sub-sectors	2009/10							2014/15						
	Number			share in total				Number			share in total			
	10 - 19	20 - 49	50 & Over	Total	10 - 19	20 - 49	50 & Over	10 - 19	20 - 49	50 & Over	Total	10 - 19	20 - 49	50 & Over
Food & Beverages	169	173	230	572	29.5	30.2	40.2	444	222	262	928	47.8	23.9	28.2
Tobacco			1	1	0.0	0.0	100.0	-	-	1	1			100.0
Textiles	2	2	36	40	5.0	5.0	90.0	18	12	51	81	22.2	14.8	63.0
Wearing Apparel, Except Fur Apparel	13	14	24	51	25.5	27.5	47.1	45	13	27	85	52.9	15.3	31.8
Leather	17	39	58	114	14.9	34.2	50.9	22	25	56	103	21.4	24.3	54.4
Wood & Products of Wood	23	11	20	54	42.6	20.4	37.0	49	22	25	96	51.0	22.9	26.0
Paper & Printing	27	44	52	123	22.0	35.8	42.3	79	48	55	182	43.4	26.4	30.2
Chemicals	17	24	55	96	17.7	25.0	57.3	20	26	67	113	17.7	23.0	59.3
Rubber & Plastic	29	42	68	139	20.9	30.2	48.9	62	63	111	236	26.3	26.7	47.0
Other Non-Metallic Mineral Products	290	113	79	482	60.2	23.4	16.4	322	169	105	596	54.0	28.4	17.6
Basic Iron & Steel	12	10	17	39	30.8	25.6	43.6	8	23	36	67	11.9	34.3	53.7
Fabricated Metal Except Machinery & Equipment	70	38	46	154	45.5	24.7	29.9	120	32	52	204	58.8	15.7	25.5
Machinery And Equipment N.E.C.	3	5	7	15	20.0	33.3	46.7	15	17	11	43	34.9	39.5	25.6
Motor Vehicles, Trailers & Semi-Trailer	3	1	7	11	27.3	9.1	63.6	-	1	13	14		7.1	92.9
Furniture; Manufacturing N.E.C.	168	74	39	281	59.8	26.3	13.9	284	65	52	401	70.8	16.2	13.0
<b>TOTAL</b>	<b>843</b>	<b>590</b>	<b>739</b>	<b>2,172</b>	<b>38.8</b>	<b>27.2</b>	<b>34.0</b>	<b>1488</b>	<b>738</b>	<b>924</b>	<b>3150</b>	<b>47.2</b>	<b>23.4</b>	<b>29.3</b>

Source: CSA, Various Issues

**III) Investment in LMSM Industries**

Investment in LMSM industries normally goes either to finance the repair and maintenance of existing firms or establish new industries. The size of investment in the sector has increased from Birr 3.7 billion in 2009/10 to Birr 18.3 billion in 2014/15. Given the double digit inflation registered during this period, the growth in real investment can be estimated as very minimal. Trends in the growth of investment show the occurrence of significant year-to-year fluctuations in the size of the flow into the various sub-sectors. Of all the sub-sectors, the investment finding its ways into the priority sub-sectors has declined significantly over the plan implementation period. For instance, of the total investment in LMSM industries in 2009/10, the share of the textile sub-sector, which was about 25.3 percent, has significantly plummeted to only 4.1 percent in 2014/15. On the other hand, the biggest share of investment (39.1 percent) went to a non-metallic mineral sub-sector in the same year (Table 3.4).

**Table 3.4: Trends in Investment Flow in LSM Industries**

	Base Year		GTP I Implementation years			
	Investment , in 000 Birr					
	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Food & Beverages	1,118,903	1606349	1333200	2881132	2475925	5942986
Tobacco	33,166	27546		98650	98650	91502
Textiles	939,969	110636	770031	1286516	732614	746626
Wearing Apparel, Except Fur Apparel	45,807	37751	118501	158064	98093	56747
Leather	233,054	259138	229273	211520	304201	372338
Wood & Products Of Wood	87,221	12991	53440	30823	17662	24157
Paper & Printing	131,447	162390	178102	425123	283486	417843
Chemicals	152,607	252168	363000	560694	670215	498683
Rubber & Plastic	137,010	206487	458427	413775	420253	798985
Other Non-Metallic Mineral Products	562,616	624620	4484457	771779	862461	7157614
Basic Iron & Steel	70,679	141546	304048	174339	291120	494611
Fabricated Metal Except Machinery & Equipment	155,545	134260	223386	732102	411993	182048
Machinery And Equipment N.E.C.	27,534	12390	7676	6452	70272	195815
Motor Vehicles, Trailers & Semi-Trailer	5,975	15844	68362	187439	126542	1081941
Furniture; N.E.C.	18,574	53618	72128	113370	149326	258845
<b>Total</b>	<b>3,720,106</b>	<b>3657733</b>	<b>8664030</b>	<b>8051779</b>	<b>7012812</b>	<b>18320741</b>

Table 3.4 cont'd

	growth in %				
Food & Beverages	43.6	-17.0	116.1	-14.1	140.0
Tobacco	-16.9	-100.0		0.0	-7.2
Textiles	-88.2	596.0	67.1	-43.1	1.9
Wearing Apparel, Except Fur Apparel	-17.6	213.9	33.4	-37.9	-42.1
Leather	11.2	-11.5	-7.7	43.8	22.4
Wood & Products Of Wood	-85.1	311.4	-42.3	-42.7	36.8
Paper & Printing	23.5	9.7	138.7	-33.3	47.4
Chemicals	65.2	44.0	54.5	19.5	-25.6
Rubber & Plastic	50.7	122.0	-9.7	1.6	90.1
Other Non-Metallic Mineral Products	11.0	617.9	-82.8	11.7	729.9
Basic Iron & Steel	100.3	114.8	-42.7	67.0	69.9
Fabricated Metal Except Machinery & Equipment	-13.7	66.4	227.7	-43.7	-55.8
Machinery And Equipment N.E.C.	-55.0	-38.0	-15.9	989.2	178.7
Motor Vehicles, Trailers & Semi-Trailer	165.2	331.5	174.2	-32.5	755.0
Furniture; N.E.C.	188.7	34.5	57.2	31.7	73.3
Total	-1.7	136.9	-7.1	-12.9	161.2

Table 3.4 cont'

	share in %					
Food & Beverages	30.1	43.9	15.4	35.8	35.3	32.4
Tobacco	0.9	0.8	0.0	1.2	1.4	0.5
Textiles	25.3	3.0	8.9	16.0	10.4	4.1
Wearing Apparel, Except Fur Apparel	1.2	1.0	1.4	2.0	1.4	0.3
Leather	6.3	7.1	2.6	2.6	4.3	2.0
Wood & Products Of Wood	2.3	0.4	0.6	0.4	0.3	0.1
Paper & Printing	3.5	4.4	2.1	5.3	4.0	2.3
Chemicals	4.1	6.9	4.2	7.0	9.6	2.7
Rubber & Plastic	3.7	5.6	5.3	5.1	6.0	4.4
Other Non-Metallic Mineral Products	15.1	17.1	51.8	9.6	12.3	39.1
Basic Iron & Steel	1.9	3.9	3.5	2.2	4.2	2.7
Fabricated Metal Except Machinery & Equipment	4.2	3.7	2.6	9.1	5.9	1.0
Machinery And Equipment N.E.C.	0.7	0.3	0.1	0.1	1.0	1.1
Motor Vehicles, Trailers & Semi-Trailer	0.2	0.4	0.8	2.3	1.8	5.9
Furniture; N.E.C.	0.5	1.5	0.8	1.4	2.1	1.4

Source: CSA, Various Issues

#### **IV) Employment**

In LMSM Industries, the most relevant types of employment are permanent employees since industrial capabilities such as skills; technology transfer, etc. can only pass through permanent rather than temporary/ casual labourers. According to the data, the number of permanent employees in the sector has not increased as planned for the GTP I implementation period. The number of employees in 2014/15 was higher compared with the base year figure (2009/10) but lower compared with the year 2012/13. The decline in the number of permanent employees was observed largely in the priority exporting sub- sectors, including food and beverage, textile and garment, and leather. This is a bit discouraging in the face of the attention and incentives given to the development of these sub-sectors and given the expectation that these sub-sectors would spearhead and transform the manufacturing and other sectors of the economy (Table 3.5).

**Table 3.5: Trends in the number of permanent employees**

Sub Sectors	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2010/11- 2014/15, period average
							Number of Permanent Employees
Food & Beverages	49,453	55,194	50,148	51,174	48,131	52,359	44,195
Tobacco	572	1,338	1,338	976	976	996	946
Textiles	20,366	11,029	29,806	33,741	30,586	28,626	23,202
Wearing Apparel, Except Fur Apparel	9,743	5,655	11,347	8,817	6,856	5,902	6,354
Leather	9,102	12,014	14,178	17,202	15,939	16,570	13,210
Wood & Products Of Wood	2,718	3,082	3,305	4,711	2,459	3,108	2,825
Paper & Printing	8,862	8,817	8,343	9,311	9,957	8,729	7,698
Chemicals	9,318	9,235	10,905	14,967	14,365	11,950	10,482
Rubber & Plastic	12,776	10,634	12,860	15,123	17,923	18,867	13,468
Other Non-Metallic Mineral Products	14,939	12,620	20,718	17,640	20,281	20,331	15,989
Basic Iron & Steel	2,641	4,136	2,792	3,130	2,680	7,640	4,003
Fabricated Metal Except Machinery & Equipment	9,240	5,408	7,572	12,126	11,628	7,577	7,413
Machinery And Equipment N.E.C.	795	542	40	380	1,750	1,654	860

**THE PERFORMANCE OF LARGE AND MEDIUM SCALE...**

**Table 3.5 cont'd**

Motor Vehicles, Trailers & Semi-Trailer	1,747	1,525	1,672	4,734	4,514	4,542	3,076
Furniture; Manufacturing N.E.C.	6,951	5,460	7,013	9,348	8,282	10,554	7,316
<b>Total</b>	<b>159,223</b>	<b>146,689</b>	<b>182,037</b>	<b>203,380</b>	<b>196,327</b>	<b>199,405</b>	<b>161,035</b>
				<b>growth in %</b>			
Food & Beverages		11.6	-9.1	2.0	-5.9	8.8	1.5
Tobacco		133.9	0.0	-27.1	0.0	2.0	21.8
Textiles		-45.8	170.3	13.2	-9.4	-6.4	24.4
Wearing Apparel, Except Fur Apparel		-42.0	100.7	-22.3	-22.2	-13.9	0.0
Leather		32.0	18.0	21.3	-7.3	4.0	13.6
Wood & Products Of Wood		13.4	7.2	42.5	-47.8	26.4	8.4
Paper & Printing		-0.5	-5.4	11.6	6.9	-12.3	0.1
Chemicals		-0.9	18.1	37.2	-4.0	-16.8	6.7
Rubber & Plastic		-16.8	20.9	17.6	18.5	5.3	9.1
Other Non-Metallic Mineral Products		-15.5	64.2	-14.9	15.0	0.2	9.8
Basic Iron & Steel		56.6	-32.5	12.1	-14.4	185.1	41.4
Fabricated Metal Except Machinery & Equipment		-41.5	40.0	60.1	-4.1	-34.8	3.9
Machinery And Equipment N.E.C.		-31.8	-92.6	850.0	360.5	-5.5	216.1
Motor Vehicles, Trailers & Semi-Trailer		-12.7	9.6	183.1	-4.6	0.6	35.2

**Table 3.5 cont'd**

Furniture; Manufacturing N.E.C.	-21.5	28.4	33.3	-11.4	27.4	11.3
<b>Total</b>	<b>-7.9</b>	<b>24.1</b>	<b>11.7</b>	<b>-3.5</b>	<b>8.8</b>	<b>6.7</b>
	<b>Share in %</b>					
Food & Beverages	31.1	37.6	27.5	25.2	24.5	28.5
Tobacco	0.4	0.9	0.7	0.5	0.5	0.6
Textiles	12.8	7.5	16.4	16.6	15.6	13.6
Wearing Apparel, Except Fur Apparel	6.1	3.9	6.2	4.3	3.5	3.7
Leather	5.7	8.2	7.8	8.5	8.1	7.9
Wood & Products Of Wood	1.7	2.1	1.8	2.3	1.3	1.8
Paper, & Printing	5.6	6.0	4.6	4.6	5.1	4.8
Chemicals	5.9	6.3	6.0	7.4	7.3	6.5
Rubber & Plastic	8.0	7.2	7.1	7.4	9.1	8.1
Other Non-Metallic Mineral Products	9.4	8.6	11.4	8.7	10.3	10.1
Basic Iron & Steel	1.7	2.8	1.5	1.5	1.4	2.7
Fabricated Metal Except Machinery & Equipment	5.8	3.7	4.2	6.0	5.9	4.5
Machinery And Equipment N.E.C.	0.5	0.4	0.0	0.2	0.9	0.6
Motor Vehicles, Trailers & Semi-Trailer	1.1	1.0	0.9	2.3	2.3	1.9
Furniture; N.E.C.	4.4	3.7	3.9	4.6	4.2	4.6

**Source:** CSA, Various issues

**V) Wages and Salaries**

Wage rate, though not the only factor, would play a crucial role in both retaining existing experienced workers and attracting skilled new workers into the sector. Thus, fixing a relatively attractive pay would encourage workers to increase their productivity and efficiency. However, evidence shows that the pay scale in the manufacturing sector has been extremely low. Table 3.6 shows that the lowest wage rate of a worker per month in the LMSM Industries, the modern urban sector, was estimated at about US 10 dollars in 2013/14. In the face of a rising cost of living, this monthly income falls short of the basic necessities of life in the major urban areas of the country. In an attempt to address workers' problems, some manufacturing industries, especially those foreign-owned ones, have been witnessed providing daily meals for their workers at their premises and also give transport services. Yet, the workers still struggle to cover their dinner and house rent, which has been rising at an alarming rate from year to year. This situation has compelled the workers to using manufacturing sector job as a transit one towards other better paying jobs in other sectors thereby exposing the sector to high workers turn over and loss in its experienced workers.

**Table 3.6: Number of permanent employees and their salaries, 2013/14**

Monthly salary, in Birr	Monthly salary, in USD	< 200	[200-400)	[400-600)	[600-800)	[800 - 1200)	[1200 - 1600)	[1600 - 2000)	[2000 & Above)	TOTAL
		<10	[10 -20)	[20-30)	[30- 40)	[40 - 60)	[60- 80)	[80- 100)	[100 & above)	
Number of employees		422	2712	11834	37892	44150	31159	21557	46601	196327
Share of employees ( in % )		0.21	1.38	6.03	19.30	22.49	15.87	10.98	23.74	100.00
Cummulative (Share in %)			1.60	7.62	26.92	49.41	65.28	76.26	100.00	

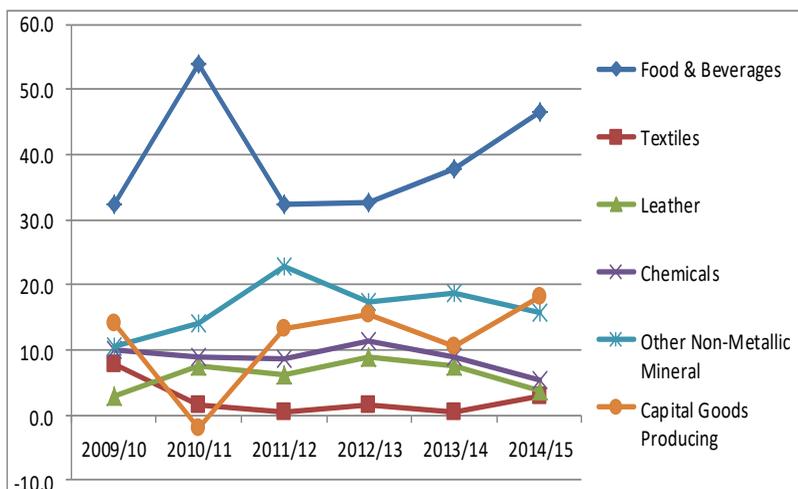
**Source:** CSA, Various issues

NB: USD 1 = Birr 20, annual average exchange rate for the year 2013/14

### VI) Structure of the LMSM Industries

The data show that the structure of the manufacturing industry has remained more or less the same for a long period of time, dominated by consumer goods producing sub-sectors. The share of value added of sub-sectors like food, textile, leather, chemical, other non-metallic minerals and capital goods in the total value added of the sector has averaged at about 40.7 percent, 1.4 percent, 6.8 percent, 8.7 percent, 17.7 percent and 11.1 percent per annum, respectively, over the period (2010/11-2014/15). Compared to 2009/10, food, leather and other non-metallic sub-sectors registered higher performances while textile, chemical and capital goods producing sectors witnessed lower performances. The overall assessment shows mixed results: success in some and failure in other priority manufacturing industries (Figure 3.1).

**Figure 3.1: The distribution of value added, by major sub-sectors, in %**

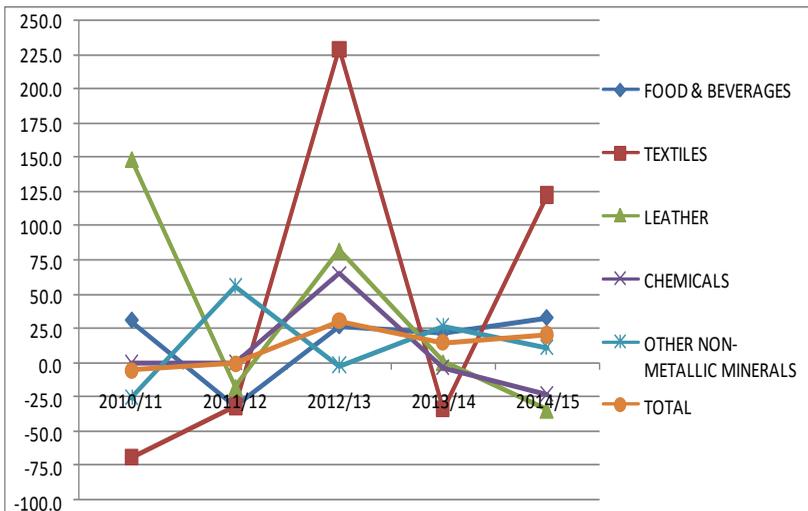


Source: CSA, Various issues

**VII) Value Added**

The overall real value added of the LMSM Industries has been growing, on average, by 12.3 percent over the period (2010/11-2014/15). Fluctuations in the growth of real value added have been witnessed from year to year by different sub-sectors, including the priority sub-sectors. On the average, food, textile, leather, chemicals and other non-metallic mineral sub sectors have registered 16.5 percent, 43.7 percent, 36 percent, 7.9 percent, and 13.5 percent, respectively. Similar to the other performance indicators, no consistent growth was observed during the first GTP implementation period, particularly for the priority sub-sectors (Figure 3.2).

**Figure 3.2: Trends in real value added of the manufacturing industry, growth in %**



Source: CSA, Various issues

## VII) Import Intensity

Import intensity of a sector shows the sector's dependence on import for its raw materials. Import intensity, which had started to decline during the first years of the GTP I implementation period (compared to the base year), started picking up during the last years. This decline was due to the manufacturing industries' weak linkages within themselves and with the agriculture sector, as well as the fact that new manufacturing industries had relatively higher import dependence than older ones. The import intensity of the overall sector was estimated at 0.5 at the end of the plan period (2014/15), which is more or less the same rate as the intensity registered during the base year (2009/10), indicating lack of strong inter- and intra-sectoral linkages between the sector and the domestic economy during the period under review. While the wood and furniture sub-sectors were the least import-dependent, machinery & equipment and rubber & plastic sub-sectors were the most import-dependent ones. Of the priority sub-sectors, the import intensity of the textile sub-sector has increased from 0.37 in 2009/10 to 0.64 in 2014/15, mainly due to increased importing of raw cotton from the rest of the world during the period (Table 3.7).

**Table 3.7: Import intensity in raw materials**

Sub-Sectors	Base Year		GTP I Implementation years			
	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Food & Beverages	0.248	0.181	0.206	0.304	0.297	0.311
Tobacco	0.055	0.533	0.533	0.780	0.780	0.470
Textiles	0.370	0.388	0.244	0.277	0.457	0.642
Wearing Apparel, Except Fur Apparel	0.503	-0.092	0.166	0.341	0.719	0.516
Leather	0.344	0.206	0.186	0.248	0.338	0.276
Wood & Products Of Wood	0.211	0.434	0.061	0.152	0.352	0.207
Paper & Printing	0.595	0.733	0.584	0.563	0.722	0.655
Chemicals	0.705	0.749	0.822	0.705	0.778	0.697
Rubber & Plastic	0.923	0.930	0.870	0.849	0.777	0.834
Other Non-Metallic Mineral Products	0.581	0.255	0.297	0.322	0.158	0.249
Basic Iron & Steel	0.791	0.786	0.778	0.805	0.976	0.638
Fabricated Metal Except Machinery & Equipment	0.846	0.524	0.571	0.591	0.520	0.623
Machinery And Equipment N.E.C.	0.851	0.870	0.109	0.668	0.827	0.958
Motor Vehicles, Trailers & Semi-Trailer	0.985	0.866	0.766	0.409	0.490	0.480
Furniture; Manufacturing N.E.C.	0.501	0.360	0.435	0.511	0.795	0.208
<b>Total</b>	<b>0.510</b>	<b>0.441</b>	<b>0.372</b>	<b>0.443</b>	<b>0.509</b>	<b>0.490</b>

Source: CSA, Various issues

**IX) Capacity Utilization**

Capacity utilization is another most important indicator of the performance of manufacturing industries. Capacity underutilization could result from a variety of factors, including shortage of raw materials, lack of market, power interruption, breakage of machinery, etc. The overall capacity utilization of the sector has declined from 68.4 percent in 2009/10 to 60.9 percent at the end of the GTP I implementation period (2014/15). This is contrary to the target set for capacity utilization rate for the manufacturing industry by the end of the GTP period. Of the priority sub-sectors, only leather and chemicals have shown significant increases in capacity utilization at the end of the plan period compared to the base year figure while food, textile, and non-metallic sub-sectors have depicted lower rates. The significant drop in the capacity utilization by textile and non-metallic mineral industries requires further investigation (Table 3.8).

**Table 3.8: Trends in the capacity utilization of manufacturing industries, in %**

Sub-sectors	Base Year		GTP I Implementation years			
	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Food & Beverages	76.6	69.6	69.6	71.1	72.6	75.3
Tobacco	100.0	100.0	99.9	100.0	100.0	94.7
Textiles	78.6	60.9	51.6	73.3	70.4	55.9
Wearing Apparel, Except Fur Apparel	88.4	41.3	47.5	50.5	79.4	81.7
Leather	52.7	69.0	72.7	76.8	75.1	75.1
Wood & Products Of Wood	48.9	56.0	79.5	65.2	73.6	48.6
Paper & Printing	65.5	71.4	75.1	79.0	81.9	82.8
Chemicals	56.2	70.1	62.8	66.9	72.3	62.7
Rubber & Plastic	57.1	66.9	66.7	69.2	66.3	62.7
Other Non-Metallic Mineral Products	79.0	69.6	65.0	61.5	36.4	53.8
Basic Iron & Steel	36.4	53.5	46.6	64.2	64.1	57.3
Fabricated Metal Except Machinery & Equipment	66.4	59.9	63.5	56.2	79.0	27.7
Machinery and Equipment N.E.C.	74.8	53.9	54.1	69.9	76.7	62.1
Motor Vehicles, Trailers & Semi-Trailer	96.8	45.9	69.8	43.1	71.0	82.4
Furniture; N.E.C.	87.2	65.8	77.6	53.6	71.3	40.3
Total	68.4	66.9	65.9	65.9	65.6	60.9

**Source:** Computed based on CSA various issues

### **X) Concluding Remarks**

Ethiopia, as an agrarian economy, is believed to have comparative advantage in agro-processing manufacturing industries. The country has started promoting industrial development, especially since 2010/11, which marks the beginning of the implementation of the Growth Transformation Plan (GTP). However, the performances registered during the first GTP have not been encouraging in terms of industrial value added share in the economy, structural change within the manufacturing industry, generation of employment, export earnings, productivity and competitiveness, etc. Moreover, reports show that the giant foreign owned textile industries, which were considered as leading industries, have started going bankrupt after a short span of life indicating the existence of crucial hurdles hampering the development of exporting manufacturing industries. Therefore; a comprehensive and in-depth study aimed at identifying the core problem of the manufacturing industry sector, in general, and the exporting manufacturing sub-sectors in particular has to be conducted and the problem has to be addressed if the sector has to make meaningful contribution to the development of the country.



## **PART II**

# **Challenges of Sustaining Ethiopia's Foreign Exchange Earnings from Exports and Remittances**



# Chapter IV

## Structure of Ethiopia's Foreign Trade

### 4.1 Introduction

The Ethiopian economy exhibited a shift from the agriculture sector to the service sector as the share of the service sector reached 47 percent while that of the agriculture sector declined to 36.4 in 2015/16. Even though the service sector took the lead contributing the highest share to the economy, Ethiopia's export is still dominated by primary commodities from the agriculture sector. Ethiopia requires a significant amount of foreign exchange earnings to finance its ambitious industrialization strategy and infrastructure development under the growth and transformation plan (GTP). The volatile world price for primary commodities and the new global order that put a curb on the official development assistance and sensational loan has put a strain on the balance of payment position of the country over the last three years. The devaluation of the Birr against the US dollar in the month of October 2017 was part of the attempt to relieve the pressure on the balance of payment of the country.

The Ethiopian export sector has had a weak performance in the year 2015/16 mainly due to adverse global price shocks for primary commodities, drought, and a slowdown in the global economy. Inflation pressure at home following the expansionary fiscal and monetary policies tended to reduce the competitiveness of

Ethiopian goods, which required devaluation in 2010 and 2017. Exporters had incentives to sell in the domestic market. Poor quality of products and poor logistics with delayed delivery and at times default of delivery to foreign customers worked against the foreign demand for Ethiopian commodities.

The poor performance of the export sector, which declined by 5 percent over the previous year because of low international commodity price for the main products such as coffee, oilseed, gold, *chat*, and leather and leather products, affects the livelihood of many households in Ethiopia. Similarly, receipts from net service tumbled by 108.8 percent because of the increased outflow of construction service. In contrast, the net private transfers exhibited a 23.2 percent growth while the net official transfer also showed a 68.4 percent increase compared to the same period of the previous fiscal year.

Total merchandise import increased by 1.6 percent. The chronic current account deficit continued to deteriorate in the year under review. The deficit reached 10 percent of the GDP in 2015/16 though it improved slightly from 12.8 percent in 2014/15. This was caused by the large imbalance in the import and export of goods and services, which has reached 19.1 percent of the GDP. The performance of merchandise exports was disappointing due to both volume and price effects in 2014/15 but there was a slight pick-up in volumes again in 2015/16 specifically for coffee, oilseeds, pulses, fruits and vegetables, and flower. The downward trend in exports continued and dropped by 4.71 percent in 2015/16 compared with the preceding fiscal year. On the other hand, the import of the

country continued to expand by 1.6 percent and stood at 16.72 billion USD.

## **4.2 Balance of Payments**

The balance of payment deficit widened from USD 521.4 million in 2014/15 to USD 830.9 million in 2015/16. That is, the deficit during the fiscal year of 2015/16 widened by 59.4 percent over 2014/15. The deterioration is attributed to the capital as well as the current account. The usually positive capital account balance declined by 11.2 percent relative to the previous fiscal year. The deterioration in the current account balance was mainly due to a high growth in merchandise imports of 16.725 billion USD and low performance exports of 2.86 billion USD. The trade deficit stood at 13.86 billion USD, which is a 3.1 percentage growth relative to the deficit in the preceding year. Unusually, the service sector did show a negative balance (712.7 million USD) in the review year, which declined by 108.8 percent (-341.4 millions USD) relative to the year 2014/15. The Ethiopian Airlines still continues to be a net exporter of service. Its current efforts of expanding its destination and improving ways of service delivery, including online system ticket issuance and flight reservation internationally, are good signs of progress.

**Table 4.1: Balance of Payments in (Millions of USD)**

S/N	Particulars	2012/13	2013/14	2014/15	2015/16	B/A	C/B	D/C
		A	B	C	D			
1	Exports, f.o.b.	3,081.2	3,254.8	3,019.30	2,867.70	5.6	-7.2	-5.0
	Coffee	746.6	714.4	780.5	722	-4.3	9.3	-7.5
	Other	2,334.6	2,540.4	2,238.80	2,145.00	8.8	-11.9	-4.2
2	Imports	11,467.3	13,721.9	16,458.0	16,725.20	19.7	19.9	1.6
	Fuel	2,163.8	2,543.2	2,040.90	1,339.00	17.5	-19.8	-34.4
	Cereals	560.8	351.7	601.6	1032.7	-37.3	71.1	71.7
	Aircraft	7.7	35.4	190.6	162.9	359.7	438.4	-14.5
	Imports excl. fuel, cereals, aircraft	8,735.1	10,791.6	13,625.0	14,190.60	23.5	26.3	4.1
3	Trade Balance (1-2)	-8,386.1	-10,467.2	13,439.0	-13,857.50	24.8	28.4	3.1
4	Services, net	459.1	559.5	-341.4	-712.7	21.9	161.0	108.8
	Non-Factor services, net	571.7	712.2	-78.9	-459.1	24.6	111.1	481.9
	Exports of non-factor services	2,852.9	3,174.2	3,028.40	2,930.00	11.3	-4.6	-3.2
	Imports of non-factor services	2,281.2	2,461.9	3,107.30	3,389.00	7.9	26.2	9.1
	Income, net	-112.6	-152.8	-262.5	-253.6	35.6	71.8	-3.4
	O/w Gross office. int. payment	120.7	143.5	249.2	255.9	18.9	73.7	2.7

**STRUCTURE OF ETHIOPIA'S FOREIGN TRADE**
**Table 4.1 cont'd**

	Dividend	-1.7	-17.9	-23.7	-10.9	952.9	32.4	-54.0
5	Private transfers	3,577.5	4,042.5	4,881.60	6,013.00	13.0	20.8	23.2
	O/w: Private Individuals	2,491.3	2,971.4	3,796.70	4,006.20	19.3	27.8	5.5
6	Current account balance excluding official transfers (3+4+5)	-4,349.4	-5,865.2	-8,899.10	-8,557.24	34.9	51.7	-3.8
7	Official transfers, net	1,529.9	1,161.6	886.5	1493	-24.1	-23.7	68.4
8	Current account balance including official transfers (6+7)	-2,819.5	-4,703.7	-8,012.60	-7,064.20	66.8	70.3	-11.8
9	Capital account	3,226.4	3,901.6	7,030.60	6,245.40	20.9	80.2	-11.2
	Off. Long-term Cap., net	1,687.5	1,287.4	2,566.00	1,510.10	-23.7	99.3	-41.1
	Disbursements	1,743.3	1,374.1	2,653.70	1,599.80	-21.2	93.1	-39.7
	Amortization	55.8	86.7	87.7	89.7	55.4	1.2	2.3
	Other pub. Long-term cap.	398.9	1,082.9	2,228.00	1,146.20	171.5	105.7	-48.6
	Foreign Direct Investment(net)	1,231.6	1,467.0	2,202.20	3,028.18	19.1	50.1	37.5
	Short-term Capital	-91.6	64.3	34.3	110	-170.2	-46.7	220.7
10	Errors and omissions	-413.4	710.7	460.6	-12	-271.9	-35.2	-102.6
11	Overall balance (8+9+10)	-6.5	-91.4	-521.4	-830.9	130.2	470.5	59.4

**Table 4.1 cont'd**

12	Financing	6.5	91.4	521.4	830.9	130.2	470.5	59.4
13	Reserves [Increase (-), Decrease (+)]	15.5	94.9	521.4	830.9	512.3	449.4	59.4
14	Central Bank (NFA)	-57.2	-48.0	-92.9	975.6	-16.1	93.5	-1150.2
	Asset	-127.2	-95.2	-663.1	-152.6	-25.2	596.5	-77.0
	Liabilities	70.0	47.2	570.2	1128.2	-32.6	110.1	97.9
15	Commercial banks (NFA)	72.7	142.9	614.3	-144.7	96.6	329.9	-123.6
16	Debt Relief	-9.0	-3.5			-61.1	-100.0	
	Principal	7.1	2.9			-59.2	-100.0	
	Interest	2.0	0.6			-70.0	-100.0	

The private transfers have registered a 23.2 percentage increase relative to the 2014/15 fiscal year, which showed a surplus of 6,013 million USD. Transfer from private individuals has escalated from 3796.70 million USD to 4006.20 million in the period under review. The surplus of the private transfer account, thus, increased by 5.5 percent. The surplus in the capital account declined by 11.2 percent, relative to the fiscal year 2014/15. The capital account surplus for the period stood at 6,245.40 million USD. Most of its components, official long-term capital, disbursements and other public long-term capital have contributed for the decline. Foreign-direct investment and short-term capital have increased by 37.5 percent and 220.7 percent, respectively.

### **4.3 Exports**

The Ethiopian export structure still remains undiversified as it depends on some primary agricultural products including coffee, oilseeds, *chat*, fruits and vegetable, pulses, and live animals. The reliance of export revenue generation on only a few commodities has made the country export performance highly volatile.

In spite of the fact that coffee export volume increased by 8 percent, revenue generated from coffee export dropped by 7.4 percent due to the 14.3 percent decline in international price. The decline in the value of coffee export by 13.1 percent happened despite the fact that the export volume of coffee increased by 7.7 percent.

As a result, the share of coffee in the total export was 25.2 percent, which is slightly lower than that of 25.8 percent registered a year before. Similarly, export earnings from oilseeds dropped by 6.4 percent and stood at USD 477.2 million because of the fall in world oilseed price by 31.5 percent relative to the previous year. The increase in the volume of oilseeds by 36.7 percent, though robust, could not offset the decline in dollar receipts as a result of the decline in price. Revenue from oilseeds during 2015/16 had a share of 16.8 percent of the total merchandise export.

The total foreign exchange earnings from export in 2015/16 showed a deterioration of 6.1 percent relative to the performance in the fiscal year 2014/15. While the fast growth in GDP and high rates of accumulations registered were documented to be major macroeconomic achievements of GTP I, performances in the export sector were not encouraging. Despite the emphasis given to the sector for a better performance in the second phase of GTP (GTP II), targets set for the sector proved to be elusive as export proceeds tended to decline during the first two years of GTP II. The attempt to establish and expand the manufacturing sector to diversify the Ethiopian export is mainly constrained by the delay of strategic agro-processing manufacturing industries such as the sugar factories.

The share of gold in the total merchandise export is also exhibiting a declining trend due mainly to the decline in the international price of gold. Oilseeds are overtaking the share of gold in the total export. This clearly contradicts the objective of GTP II to diversify the Ethiopian export. In fact, only seven major commodities of

Ethiopian export contributed close to 85 percent of export proceedings.

As it is well known, prices of primary commodities in the global market are more volatile than other commodities. The last three years witnessed lower global prices for primary commodities including agricultural products and minerals which Ethiopia relies on for its foreign exchange earnings. The decline in commodity prices can be attributed to the slowdown in the global economy, increased global conflicts and associated uncertainties. The year 2015/16 also witnessed El Niño-induced drought in some parts of Ethiopia, which hampered the production of tradable goods.

Trade logistics do matter to the Ethiopian export. There are problems of timely delivery according to the contract agreement between the buyer and the exporter. Besides, problems of competitiveness are observed in pulse and leather and leather products. According to the Ministry of Trade, the main problem of most of the agricultural products in 2015/16, especially oilseed and pulse, was that exporters of those commodities committed a default after the contract agreement was made.

**Table 4.2: Values of Major Export Items (In Millions of USD)**

Particulars	2011/12	2012/13	2014/14	2014/15	2015/16	Percentage change			
	A	B	C	D	E	B/A	C/B	D/C	E/D
Coffee	833.1	746.6	714.4	780.5	722.7	-10.4	-4.3	9.3	-7.4
Oilseeds	472.3	443.5	651.9	510.1	477.2	-6.1	47	-21.8	-6.4
Leather & Leather products	109.9	121.1	129.8	131.6	115.3	10.2	7.2	1.4	-12.4
Pulses	159.7	233.3	250.7	219.9	232.4	46.1	7.5	-12.3	5.7
Meat & Meat Products	78.8	74.3	74.6	92.8	96.4	-5.7	0.4	24.4	3.9
Fruits & Vegetables	44.9	43.9	45.9	47.6	53.7	-2.2	4.6	3.7	12.8
Live Animals	207.1	166.4	186.7	148.51	147.8	-19.7	12.2	-20.5	-0.5
Chat	240.3	271.3	297.3	272.42	262.45	12.9	9.6	-8.4	-3.7
Gold	602.4	578.8	456.2	318.7	290.7	-3.9	-21.2	-30.1	-8.8
Flower	197	186.7	199.7	203.1	225.3	-5.2	7	1.7	10.9
Others	207.1	215.4	247.4	294.2	212.3	4	14.9	18.9	-27.8
Total	3,152.7	3,081.20	3,254.80	3,019.43	2,836.25	-2.3	5.6	-7.2	-6.1

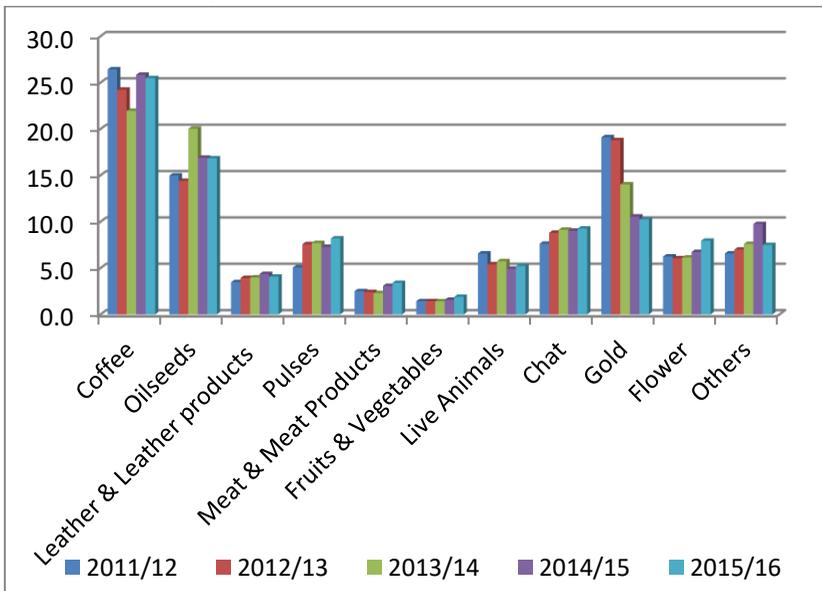
Oilseeds have been the second most important product next to coffee to generate foreign currency since 2013/14 and, currently, they have a share of 16.82 percent in the total merchandise export. However, the value of oilseeds export declined by 6.4 percent in the fiscal year under review. Similarly, gold continued to be the third highest contributor to the total export earnings with a share of 10.23 percent. During 2015/16, the mineral fetched 290.7 million USD in export earnings.

The deterioration of the overall export is not only due to the reduction in volume but also because of the international price drop for most of the commodities. The price of coffee decreased by 13.1 percent. Oilseed price dropped by 1.1 percent, and gold price declined by 4 percent. The value of export for some of the products, including meat and meat products, fruits and vegetables, and flower grew by 3.9%, 12.3%, 10.9%, respectively, during the fiscal year under review. *Chat* export revenue decreased by 3.7 percent as the volume of *chat* export dropped by 4.5 percent despite the fact that international *chat* price increased by 9.2 percent. However, its share from the total merchandise export earnings went up to 9.2 percent.

Fruits and vegetables and flower were the two top performing items in terms of growth of receipts of foreign exchange earnings. The increase in both international prices and volume has contributed to the good performance of the fruits and vegetables in fetching foreign exchange earnings. The price of fruits and vegetables increased by 7.7 percent in the world market, and the volume of export of the item in Ethiopia increased by 11.3 percent. Similarly, flower export increased both in volume and international price in the fiscal year.

Receipts from meat and meat products grew by 3.9 percent compared to the same period of the previous year even though the volume decreased by 0.4 percent. The price for meat and meat products in the international market increased by 4.3 percent. The share of meat and meat product in the total merchandise export revenue was 3.4 percent.

**Figure 4.1: The Share of Export Items from the Total Export**



The entire commodity export sector is dominated by coffee, oilseeds, gold chat and pulse. These five commodities on their own constitute 70 percent of the total export. In the review year, coffee had a share of 25.5 percent; oilseeds, gold, and *chat* followed coffee

in terms of share in the value of the total merchandise export with a respective share of 16.8, 10.2, 9.3, and 8.2 percent.

### ***Export by destination***

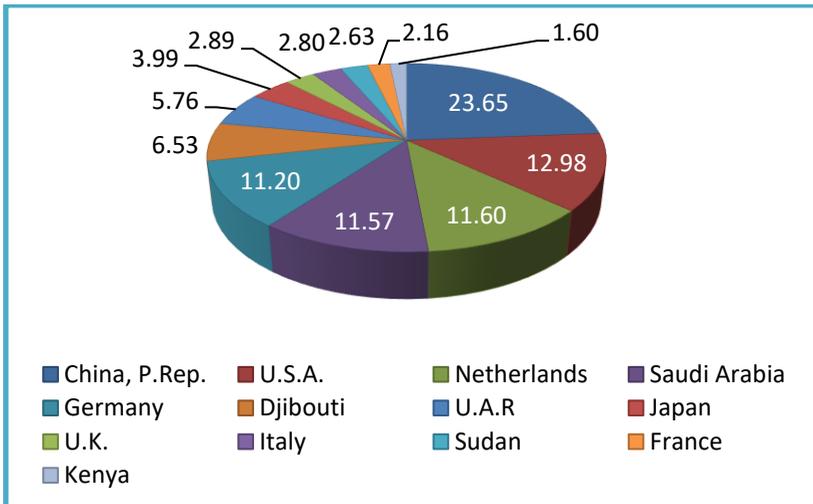
According to the data from the National Bank of Ethiopia, and based on the share of values that the country gets from main export items, Asia is the leading continent by receiving 37.2 percent of the total export. Europe is the second top destination of Ethiopian export by taking 34 percent of the export commodity while Africa takes the third place by buying 20 percent of the commodity as a destination for Ethiopian commodities. The USA has continued to be a trade partner of Ethiopia by importing 6.2 percent from the total export.

From among the top countries that are destinations of Ethiopian export, China has the lead by importing 23.65 percent of the Ethiopian export, and the main products exported to China comprise oilseeds, leather & leather products, mineral products, coffee, textile materials and natural gums. Ethiopia's exports to the US were 6.2 percent of the total exports, registering a 1% increase from the previous year of the same period. Ethiopia primarily exports coffee, oilseeds, leather & leather products, food, textile and garment, and flower was the major export commodity to the United States. The reason for the 1 percent increase in the Ethiopian export to the USA was due to increment in volume compared to the previous year.

The Netherlands continues to be a trade partner of Ethiopia by importing 11.6 percent of the total export. The major commodities

exported to the Netherlands include pulses and vegetables. Saudi Arabia, Germany and Djibouti<sup>15</sup> are partners of Ethiopia by importing 11.57 percent, 11.20 percent and 6.53 percent, respectively. Likewise, the items exported to Saudi Arabia largely contain coffee, meat, spices and cereal products. While Germany imports coffee, vegetables, textile & garment, Djibouti imports *chat*, live animals, electricity, vegetables and fruits. Somalia is the top trade partner of Ethiopia by importing 20 percent of the Ethiopian export. The major exports to Somalia were *chat*, live animals, fruits and vegetables.

**Figure 4.2: Value Share of the Destination Countries**



**Source:** Own computation based on data from the National Bank of Ethiopia.

<sup>15</sup> According to the annual report of the Ministry of Trade, Somalia takes the lead to be Ethiopia’s partner by importing 58 percent of the total export of the country to Africa. But the data from NBE does not include Somalia.

## 4.4 Imports

Under the review year, the total import bill has increased from 16.4 billion dollars to 16.7 billion dollars, which has a 1.6 percentage increase, compared to the same period of the previous year. The total share of the country's imports to the GDP reached 23.1 percent due to higher import bills of consumer goods and semi-finished goods. From the import commodity Import of raw materials fell by 12.4 percent, which is a substantial decline compared to the same period in the previous year. Among the components of capital goods, agricultural products trekked by 16.5 percent and industrial products by 1.9 percent. However, transport, which is one of the components of the import of capital goods, dropped by 9.6 percent. Thus, the share of capital goods from the total import bill dropped by 1 percent - from 41.8 percent to 40.8 percent. The import value of consumer goods was 5.3 billion USD, which registers a 16.7 percent growth because of the higher import bill of non-durable consumer goods (27.4 percent), while that of durable goods declined by 2.5 percent compared to the same period in the previous year. Therefore, the contribution of consumer goods to the total import bill grew by 31.5 percent from 27.4 percent of the same period in the preceding year.

**Table 4.3: Value of Imports, by end use**

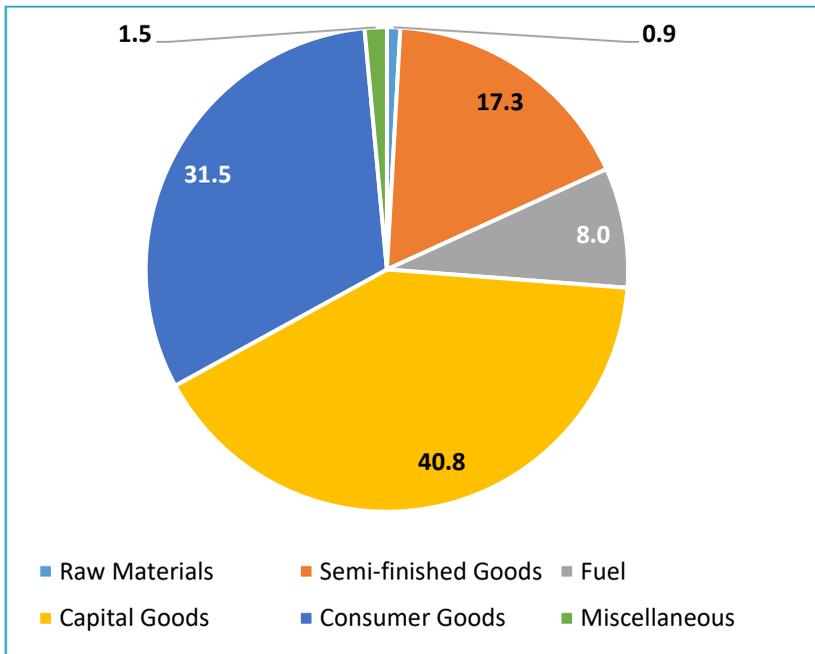
Particulars	2011/12	2012/13	2013/14	2014/15	2015/16	(In Millions of USD)		
	A	B	C	D	E	Percentage change		
						C/B	D/C	E/D
Raw Materials	199.7	145.6	165.2	170.5	149.3	13.5	3.2	-12.4
Semi-finished goods	1957.2	1753.9	2098.1	2578.4	2895.5	19.6	22.9	12.3
Fertilizers	604.6	291.8	398.9	502.9	430.0	36.7	26.1	-14.5
Fuel	2124.8	2163.9	2543.2	2040.9	1339.0	17.5	-19.8	-34.4
Petroleum products	2078.3	2128.2	2494.9	1966.7	1280.1	17.2	-21.2	-34.9
Others	46.4	1236.1	48.4	55.9	58.9	-96.1	15.5	5.4
Capital goods	2961.7	3572.6	4500.3	6882.3	6829.4	26.0	52.9	-0.8
Transport	809.7	903.1	1084.3	1699.1	1535.6	20.1	56.7	-9.6
Agricultural	119.5	129.9	166.8	71.6	83.4	28.4	-57.1	16.5
Industrial	2032.5	2539.6	3249.2	5111.6	5210.4	27.9	57.3	1.9
Consumer goods	3531.7	3452.4	3834.1	4510.9	5264.3	11.1	17.7	16.7
Durables	1105.3	1089.8	1501.1	1608.0	1567.3	37.7	7.1	-2.5
Non-durables	2426.4	2362.6	2333.0	2902.9	3697.0	-1.3	24.4	27.4
Miscellaneous	286.3	378.9	581.0	275.6	247.8	53.3	-52.6	-10.1
Total Imports	11061.4	11467.3	13721.9	16458.6	16725.3	19.7	19.9	1.6

**Source:** National Bank of Ethiopia

## STRUCTURE OF ETHIOPIA'S FOREIGN TRADE

Ethiopia's import was dominated by capital goods (40.8 percent), consumer goods (31.5 percent), semi-finished goods (17.3 percent) and fuel (8 percent) in the fiscal year 2015/16. The category 'industrial goods' had the highest contribution to capital goods, which constituted 76.3 percent.

**Figure 4.3: Share of Major Imported Commodities from Total Imports**



**Source:** Own computation using NBE data.

## **4.5 The Impact of Volatile Global Prices on the Ethiopian Export**

Exports are expected to promote economic growth through increased earnings of foreign exchange (thus relaxing constraints of balance of payments), economies of scale, and access to new technologies and knowledge (Helpman and Krugman, 1985). Though the export sector of Ethiopia is expected to compensate for the import bill, the deficit is still huge. The sector suffers from logistics problems and lack of quality of products (for example, the coffee quality problem that happened with the Japanese market some years ago and the meat and meat products quality problem with the United Arab Emirates a year before. The sector is also struggling with default cases. According to the Ministry of Trade in the year 2015/16, there were more than 50 cases which the Ministry tried to solve only amicably but no legal action was taken on the local exporters.

Likewise, the export revenue is affected by different factors. Here, we attempted to show the relative effect of quantity and price to the change in total value in order to know the approximate changes in trade values by adjusting quantities of goods traded in a respective dollar terms to account for a relative contribution due to fluctuations of volume and prices. The change of trade in value is accounted for whether by relative volume change or relative price change or by the interaction effect of both volume and price variation, which has been assessed below.

Assumption: V = Export Trade Value Volume = Q

Price = P

The general linear formula for the trade value is Export Trade Value = Volume multiplied by Price (V=Q.P) **(1)**

The logarithmic form of the above equation becomes  $\ln V = \ln Q + \ln P$  **(2)**

The absolute contribution of volume and price for the trade value has been computed by the following formula:

$$\frac{dV}{V} = \frac{dQ}{Q} + \frac{dP}{P} + \left( \frac{dQ}{Q} \frac{dP}{P} \right) \quad \text{(3)}$$

The relative contribution of volume and price for the trade value has been computed by dividing natural logarithm of the respective values to the total trade value/revenue/using the following formula as:

$$\frac{d \ln V}{d \ln V} = \frac{d \ln Q}{d \ln V} + \frac{d \ln P}{d \ln V} \quad \text{(4)}$$

The comparison between the relative contributions of volume and price was made to see the relative share of international price and the quantity of products exported to the total export. The source of growth in the performance of trade value is different in the given sub-periods. It also depicts that the major exportable products contributed on average more than 70 percent of the total export earnings. Therefore, what contributes more to the trend of value of the overall export earnings, volume or price on the performance of export trend is determined.

**Average growth rate of coffee export value from 2001 to 2016 and the relative effect of volume and price**

Particulars	V	Q	P	dlnV	dlnQ	dlnP	$\frac{dlnQ^*}{dlnP}$
2001-2005	213.97	130.62	1.63	18.99	13.15	5.92	-0.08
2006-2010	444.66	160.22	2.77	12.72	2.99	9.15	0.58
2011-2016	775.02	185.39	4.21	7.21	2.63	5.53	-0.95

**Source:** NBE and own computation

The trend of coffee export value shows an average growth throughout the sub-periods. During the sub-period of 2001-2005, the export performance of coffee grew, on average, by 18.99 percent annually. The relative contribution of quantity exported was higher than that of price; the former registered 13.15 percent growth while the latter brought about a 5.92 percent increase. The interaction effect of the quantity of coffee exported and the international price of coffee export is -0.08 percentages. On the other hand, the price effect was higher than the volume effect in the year 2006-2010. During these years of interval, the average growth rate of export value was 12.75 percent compared to the previous period; it declined by 33 percent on average within the periods. Likewise, the contribution of international price was 9.15 percent whereas the quantity effect was 2.99 percent on average. Also, their cumulative effect to the export earnings was 0.58 percent. Price continued to have an effect of 5.53 percent while the effect of quantity was 2.63 percent on the total average export revenue growth of 7.21 in the year 2011-2016.

**Average growth rates of the export value of oilseeds from 2001 to 2016 and the relative effect of volume and price**

Particulars	V	Q	P	dlnV	dlnQ	dlnP	dlnQ* dlnP
2001-2005	63.7	98.24	0.62	43.18	34.10	9.29	
2006-2010	269.76	247.74	1.11	28.06	20.32	14.65	
2011-2016	481.32	329.18	1.49	7.91	9.30	1.01	

**Source:** NBE own computation

Oilseeds - one of the biggest sources of foreign exchange earnings - have become the most important cash crops for Ethiopia contributing 16.8 percent of the total export revenue next to coffee. In a similar fashion, the average export revenue generated from oilseeds fell from 43.18 percent during the period 2001-2005 to 7.91 percent growth rate during the period 2011-2016. The relative contribution of volume to the total export growth was 34.1 and 20.32 percent in the consecutive sub-periods. Though the relative contribution of volume to the total export revenue generation was higher, the relative contribution of international price was more prominent, accounting for 9.29, 14.65 and 1 percent during the period 2001 to 2016 because the global demand for oilseeds was increasing in a broad range of oil products, not only for the food industry but also for cosmetics and industrial purposes. The interaction effect of both international price and quantity of export is (-0.21, -6.91 and -2.41) in the respective periods.

**Average growth rates of the export value of gold from 2001 to 2016 and the relative effect of volume and price**

Particulars	V	Q	P	dlnV	dlnQ	dlnP	dlnQ* dlnP
2001-2005	42.71	5.02	8.47	20.48	6.88	14.89	-1.28
2006-2010	125.91	5.64	20.80	51.30	14.75	28.42	8.12
2011-2016	452.90	23.92	31.74	4.57	58.26	-10.26	-43.43

During the sub-period of 2001–2005, growth in the trade value of gold resulted from a balanced contribution of price and quantities. On average, a 20.4 per cent increase in value terms was due to a 6.88 percent contribution of volume and 14.89 percent of price. In the 2006-2010 sub-period, the highest average growth rate for oilseed export value was registered as 51.3 percent with an Average contribution of 8.12 percent. The relative contribution of price was larger than that of volume, which was a 28.42 percent and 14.75 percent change due to the international price increase during the economic crises. Likewise, during the period 2011-2016, growth in trade value declined compared to the pervious sub-periods, accounting for an average growth of 4.57 percent. Volume growth contributed more than price change, resulting in a 58.26 per cent contribution in volume and the price change was -10.26 per cent. The combined contribution of both price and volume was negative – -43.43 percent.

**Average growth rate of pulse export value from 2001 to 2016 and the relative contribution of quantity and price**

Particulars	V	Q	P	dlnV	dlnQ	dlnP	dlnQ* dlnP
2001-2005	23.93	79.44	0.31	76.88	86.00	-2.65	-6.47
2006-2010	94.54	173.17	0.53	41.17	20.82	16.19	4.17
2011-2016	205.96	312.88	0.66	11.45	10.62	1.59	-0.77

**Source:** NBE and own computation

In the sub-period of 2001-2005, growth in the total gold trade value resulting from volume had a crucial contribution of 86.00 percent while price declined to 2.65 percentage change. The growth rate in trade value of gold during the sub-period 2006-2010 resulted from a balanced contribution of price and quantities. On average, a 41.17 percent increase in value terms was due to a 20.82 percent contribution of volume change and a 16.19 percent change in price. The combined effect of volume and price was also positive and 4.17 percent change. During the sub-period of 2011-2016, the growth rate of trade volume of pulse had dropped on average by 72.2 percent due to the global financial crisis, which was, in value terms, 11.45 percent. That is, volume changes accounted for 10.62 percent and the relative contribution of price was 1.59 percent change. The combined effect of both volume and price was -0.77 percent.

**Average growth rate of *chat* export value from 2001 to 2016 and the relative contribution of quantity and price**

Particulars	V	Q	P	dlnV	dlnQ	dlnP	dlnQ* dlnP
2001-2005	71.31	13.06	5.96	15.97	37.93	10.55	-32.51
2006-2010	127.89	25.76	4.85	17.88	14.18	3.50	0.20
2011-2016	263.7	46.2	5.7	4.1	4.8	-0.7	0.0

**Source:** NBE and own computation

*Chat* has contributed 9.3 percent of the total export and continues being the fourth largest export commodity of the country in generating foreign currency. During the sub-period of 2001-2005, trade in terms of value increased, on average, by 15.97 percent, which resulted from an average volume of 37.93 percent change and a relative contribution of price of 10.55 percent increase. The combined effect of volume and price to the growth of trade value of *chat* was a decline of 32.51 percent. During the sub-period of 2006-2010, trade value of *chat* increased on average by 11.97 percent relative to the previous sub-periods. The trade value was 17.88 percent change and it was mainly because of the relative contribution of volume by 14.18 percent change and an average of 3.5 percent change in price. In the 2011-2016 sub-periods, the value of *chat* export dropped by 77 percent on average and price was responsible for the downward growth of 119 percent change decrease. The value of *chat* in these sub-periods registered a 4.1 percent average growth. Volume has a relative positive effect of 4.8 percent while price has a declining impact of -0.7 percent change. The combined effect of both volume and price was zero.

In conclusion, the Ethiopian export trend is determined by both price and volume based on the product types. In the case of coffee, for the average trade value growth, price has a relatively higher contribution than volume<sup>16</sup> for the period of 2001-2016 since the Ethiopian coffee has a premium in the international market. On the contrary, for the rest of the products, i.e., oilseeds, *chat* and pulse products, the volume effect had a relatively bigger effect than price. In the case of gold, the price effect was higher before the global crisis, but after the crisis, the relatively higher contribution was made by volume. Therefore, the supply side of the sector should strengthen its production capacity and productivity, working on the quality issue and value addition, especially on oilseed products.

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<sup>16</sup> Domestic consumption of coffee is on average more than 50 percent of the total production.



# Chapter V

## Agricultural Export: Trends and Competitiveness

### 5.1 Background

Ethiopia's foreign exchange earnings are led by the services sector - primarily remittances sent by Ethiopians working overseas and the state-run Ethiopian Airlines - followed by exports of several commodities. The contribution of the export sector to the economy (GDP) is still low, as it accounts, on average, for around 10% to the country's GDP.

As the export sector has been stagnating or declining over the past few years in view of rapid growing import bill, an emerging policy concern in Ethiopia is how to narrow the widening current account deficit by increasing the country's export. As significant player in Ethiopia's export sector, the stagnation in export revenue reflects the weakness of the agricultural sector.

The export growth depends not only on domestic production, productivity and distribution situation, but also on a number of external factors like the world economic scenario, the quality and prices of Ethiopian exports in relation to world prices/qualities, exchange rates, inflation rates in competing countries, and taxes and

subsidies on exports. Based on data from various secondary sources, this study analyses the trend and competitiveness of Ethiopian agricultural export for major commodities: coffee, livestock and meat, and horticulture and floriculture. It then draws some conclusions on how to enhance the production and export of these commodities.

## **5.2 Ethiopia's Competitiveness in Global Coffee Production and Trade**

### **5.2.1 Coffee Production**

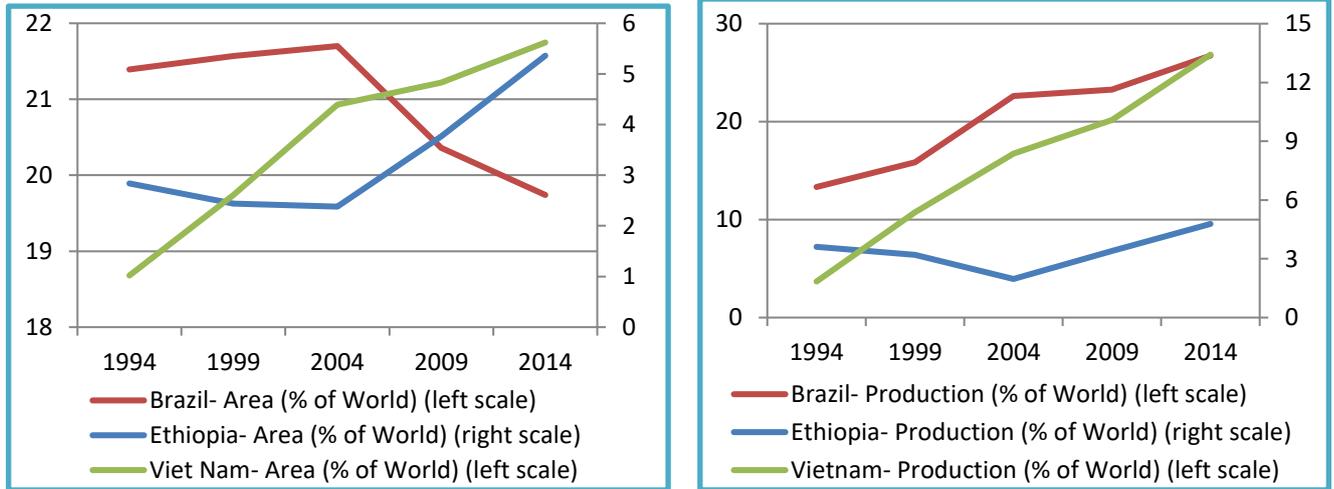
Coffee has been the dominant export commodity for the last five decades constituting on average 55-60% of all exports (Daniel, 2013). Generally, the coffee export sector shows an increasing trend both in volume and value. Ethiopian coffee types, which are organic by default, have very unique aroma and taste. Most of the giant buyers use Ethiopian coffee to make blends with the Colombian and Brazilian coffee types. Coffee production in Ethiopia doubled over the past two decades. The growth is even faster than the global trend. Data from the international coffee organization show that coffee production in Ethiopia grew from 2,909 tons in 1990/91 to 6,600 tons in 2016/17, whereas globally it grew from 93,102 tons to 151,624 tons during the same period (IOC statistics), indicating a 227% and 163% growth in Ethiopia and globally, respectively, over the past two and half decades.

Ethiopia's recent progress in coffee production is still lagging behind when compared to other major global coffee growing countries. Vietnam, for instance, increased its coffee plantations over five-fold

and its coffee production over ten-fold during the same period of time. The trend is a bit different in Brazil where over a quarter of a million hectares of coffee land has been brought out of coffee production over the past two decades. This attributes to a decline of 1.5% in Brazil's share of the global coffee land. But due to a phenomenal growth in coffee productivity, coffee production increased by 300% during the same period of time, and this raised Brazil's share in global coffee production from 13.3% to 26.7% (see Figure 5.1).

In addition to these variations in coffee production trends, there is another difference in terms of coffee productivity between Ethiopia and these two-major coffee producing countries. Unlike the situation in Ethiopia, the increase in coffee production in Vietnam and Brazil is mainly attributed to significant progress in coffee land productivity.

**Figure 5.1: Coffee production trends in the major producing countries**



**Source:** Computed based on FAO data

## **5.2.2 Coffee Export<sup>17</sup>**

Coffee is the major export commodity for Ethiopia as it accounted for about 25% in total value of merchandise export in 2015/16 (NBE, 2015/16). In terms of value, coffee fetched 723 million USD in the reported year, which indicates a 16.4% decline when compared to the 842 million USD earnings five years earlier (in 2010/11). In terms of quantity, however, Ethiopia exported more coffee in 2015/16 than it did in 2010/11, indicating the decline in global price for green coffee. This also emphasizes the importance of engaging in processing and value addition in primary commodities like green coffee<sup>18</sup>.

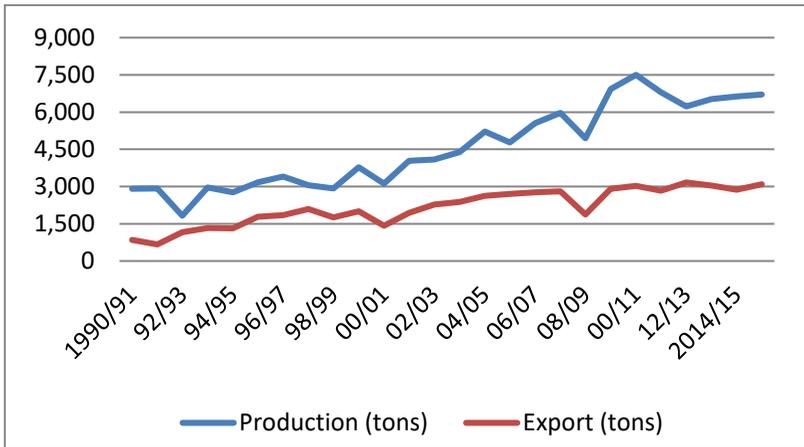
There is a positive correlation between the volume of domestic coffee production and export. The correlation index of coffee production and export supply was found to be strong (0.89), indicating that increasing coffee production is a major way to increase the country's green coffee export. Coffee producers, therefore, should be encouraged to increase coffee production and productivity by providing support in the form of ensuring timely supply of production, enhancing inputs, and providing incentives.

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<sup>17</sup> Coffee is a general name and is known as decaf, green, roasted, substitutes, husks, skins internationally. The focus of this study is in general on green coffee though issues related to roasted coffee are occasionally discussed. Green coffee means all coffee in the naked bean form before roasting.

<sup>18</sup> Despite 16% declines in export earnings, the country exported 198.7 million kilograms of coffee in 2015/16, which exceeds the 2010/11 export quantity by 1.3%.

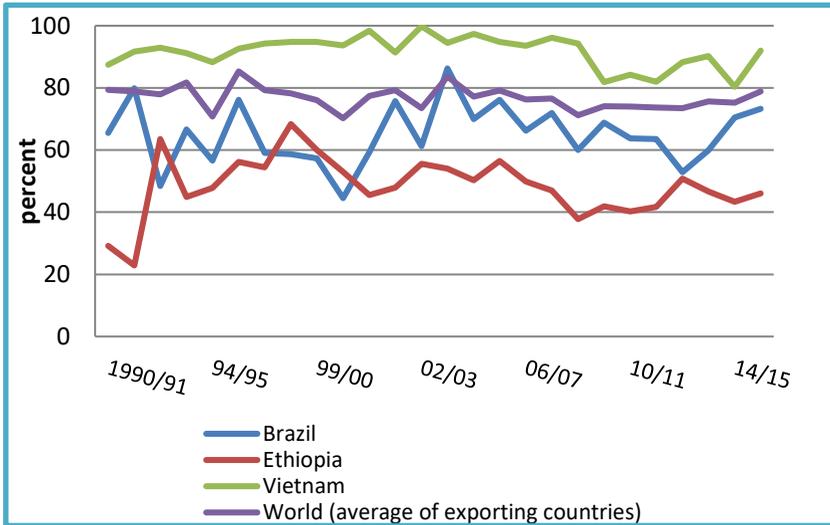
**Figure 5.2: Ethiopia: Coffee production and export**



**Source:** Computed based on IOC data

Ethiopia is also a major global coffee consumer. According to data from the International Coffee Organization (IOC), about 220 million kilograms of coffee, which is more than half of the estimated 420 million kilograms produced in the country, is consumed in the country, indicating a relatively large domestic consumption compared to its major peer coffee exporting countries. Data from IOC indicates that over the past two and a half decades, Ethiopia exported, on average, 48% of the coffee it produced, whereas the global average for coffee exporting countries was 77%. Countries like Brazil and Vietnam have exported, on average, 61% and 91%, respectively, of their production every year since 1990/91 (see Figure 5.3).

**Figure 5.3: Coffee Export (in Ethiopia and other major producing countries) (percent of total production)**



**Source:** Computed based on data of IOC (International Coffee Organization).

### **5.2.3 Coffee export: Global trend and Ethiopia’s status**

Coffee is a major commodity for global trade. Along with Ethiopia, coffee is the top export commodity for Honduras, Uganda, Burundi and the Pitcairn Islands. The top exporters of coffee, however, are Brazil (\$5.87B), Colombia (\$2.72B), Vietnam (\$2.6B), Germany (\$1.94B) and Switzerland (\$1.58B) (IOC). The top importing countries are the United States (\$5.65B, Germany (\$3.46B), France (\$1.76B), Italy (\$1.74) and Japan (\$1.49B)<sup>19</sup>.

<sup>19</sup> Data obtained from IOC website (visited in August, 2017).

Globally 119,440 thousand bags of 60 kilogram (green) coffee were exported in 2015/16, which is 62% higher than the amount exported in 1990/91. Ethiopia contributed 1.15% and 2.59% to the global green coffee export trade in 1990/91 and 2015/16, respectively, doubling up its share in global coffee export (in quantity) over the past two and a half decades. Similarly, Ethiopia has increased its share in the value of global green coffee trade. FAO data indicates that global trade in green export increased from 5.8 billion USD in 1993 to close to 19 billion USD in 2013; and Ethiopia's share in the value of global coffee export rose from 2.1% to 4.2% during the same period of time, an increase similar to the rate of its growth in the global green coffee trade.

All in all, Ethiopia's share in the export of green coffee has grown faster than the world average – both in quantity and value/income terms. However, the picture is completely different in terms of the roasted coffee, which is given more value. Global trade in roasted coffee has grown phenomenally over the past decades. Between 1975 and 2013, world trade in roasted coffee grew from 51,928 tons to 914,453 tons in quantity terms, and from 115 million USD to 9.4 billion USD in value during the same period of time. In other words, world roasted coffee increased close to 18 times in quantity terms and 82 times in terms of revenue over the same period of time (Table 5.1 and Figure 5.4). Ethiopia's share in global roasted trade is negligible. FAO data indicates the country exported 14 tons of roasted coffee, which generated 119,000 USD in 2013. The demand for Ethiopia's roasted coffee is also very low as it fetched

13% lower than the global average price of 10,251 USD for a ton of roasted coffee (in 2013)<sup>20</sup>.

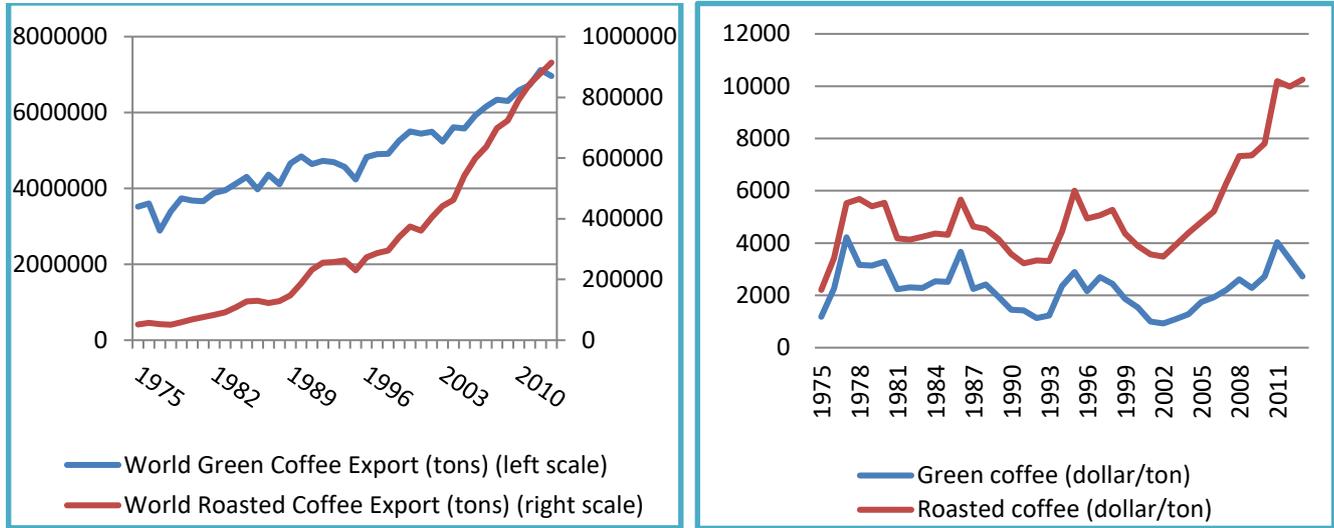
**Table 5.1: Global trend and Ethiopia’s status in export of roasted coffee**

		Quantity (tons)	Value (1000 USD)
1975	World	51,929	114,584
	Ethiopia	0	0
2013	World	914,453	9,374,010
	Ethiopia	14	119

**Source:** Computed based on FAO data.

<sup>20</sup> Actually under-invoicing (by exporters) could also potentially explain this problem.

Figure 5.4: Global trend in coffee trade



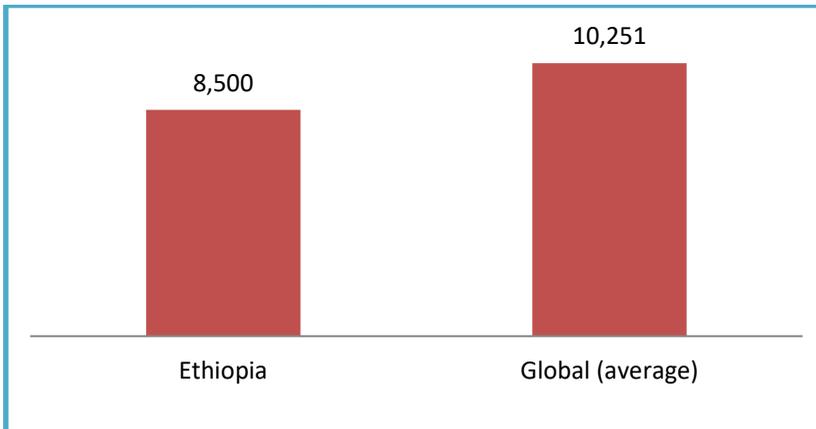
Source: Computed based on FAO Stat.

## **5.2.4 Competitiveness of Ethiopia’s Coffee Export**

### **5.2.4.1 Productivity of Coffee Farms**

Ethiopia is reported to be a producer of the most preferred Arabica coffee largely in an organic production environment. There are, however, a number of factors that affect its capacity to optimize its benefit from its coffee. Quality, price, and productivity are major internal factors in terms of affecting the competitiveness of coffee export. In terms of external factors, global demand and consumer preferences and Ethiopia’s capacity to align its export with such changing demands are also important factors in terms of the competitiveness of Ethiopia’s coffee export sector. In this section, the study briefly looks into issues like relative productivity, price (especially producers price), and trends in exchange and inflation rates, which affect domestic prices vis-à-vis other exporting countries.

**Figure 5.5: Average Price of roasted coffee in 2013 (USD/ton)**



**Source:** Computed based on FAO Stat.

Ethiopian coffee growers produce, on average, about 715 kilograms of coffee on a hectare of coffee land, which is very close to the global average (Table 5.2). When compared to the major coffee exporters such as Brazil and Vietnam, Ethiopia’s productivity is low. Coffee land productivity in Ethiopia is only 73% and 36% of the productivity of coffee farms in Brazil and Vietnam, respectively.

**Table 5.2: Coffee productivity in Ethiopia and other major coffee producers (Kg./ha) (average for 1993–2013)**

	<b>Mean</b>	<b>Std.Dev.</b>	<b>Min.</b>	<b>Max.</b>
World (average)	717.0	92.5	548.7	850.2
Ethiopia	715.0	92.1	521.3	919.9
Brazil	975.6	296.2	497.4	1,432.7
Vietnam	2,003.0	292.7	1,420.3	2,558.8

**Source:** Computed based on FAO stat.

This gap in coffee productivity might imply the difference in the genetic potential of coffee cultivars<sup>21</sup>, intensity in input use, and/or management skills of coffee growers in the respective countries. But, unless and otherwise compensated for by other factors like price and cost of production, the wide gap in coffee productivity indicates the relative advantage of exporting coffee at lower prices enjoyed by coffee growers in Brazil or Vietnam<sup>22</sup>. In other words,

<sup>21</sup> Differences in the type of coffee produced in these countries (e.g. Robusta coffee in Brazil) and Ethiopia, which produces largely Arabica coffee.

<sup>22</sup> Unfortunately, data obtained from IOC indicates that coffee growers in Ethiopia get a relatively lower price for the same amount of coffee (see Table 5.3), indicating that the type of coffee and the production environment (largely organic environment) don’t help Ethiopian coffee growers much.

coffee export from Brazil or Vietnam has competitive advantages over Ethiopia, unless Ethiopia offsets this drawback by exporting quality coffee (which would fetch premium price) or producing coffee at a much lower cost. In any case, the lower coffee productivity shows the need for research and extension agencies to find ways to enhance the productivity of coffee lands in Ethiopia.

**5.2.4.2. Coffee Price: Trends in World Price and Producers’ Share**

Data from IOC shows that Ethiopian coffee growers received, on average, 73 US cents for a pound (0.454 kilograms) of coffee exported over the past 25 years. During the same period, Brazilian and Kenyan coffee growers received 92 cents for the same amount of coffee exported. Coffee growers in Vietnam received the lowest price of 55 cents for a pound of exported coffee. The data shows coffee producers in Brazil and Kenya received 26% more, while Vietnamese coffee growers received 25% less than the price paid to Ethiopian coffee growers.

**Table 5.3: Prices paid to coffee growers in coffee exporting countries (US cents/lb)**

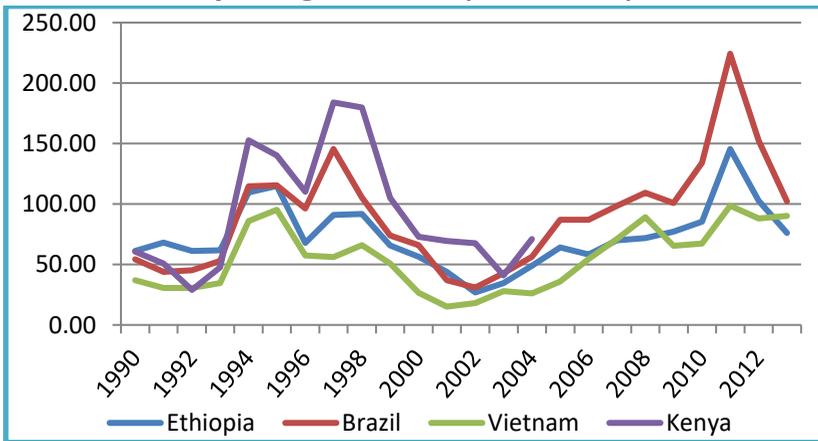
<b>Country</b>	<b>Obs.</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Ethiopia	24	73.1	26.6	26.9	145.5
Brazil	26	92.9	44.0	30.9	224.3
Vietnam	24	54.9	26.6	15.1	98.6
Kenya	15	92.1	50.6	28.9	184.0

**Source:** Computed based on IOC data.

**Note:** Obs. implies number of years for which the data was computed. Data for Kenya is for years from 1990 to 2004, for Brazil and Uganda from 1990 to 2015, and for Ethiopia and Vietnam, from 1990 to 2013.

Producers’ share in global coffee price is another important variable in terms of affecting coffee growers’ incentives and Ethiopia’s long-term competitiveness in the global coffee market. This is more important in countries like Ethiopia where inflation is in general high when compared to other coffee exporting countries. Inflation, in general, and the gap between inflation rates in exporting countries, in particular, is an important factor in terms of widening the effect associated to the gap in domestic and international coffee prices in exporting countries. The relative purchasing power of the revenue coffee growers generate from their coffee export is greatly compromised if these macro-level variables work against their interest. Such imbalances are critical factors for the expansion of illegal/contraband coffee trade and/or encourage the replacement of coffee farms by other crops like Chat in some coffee growing areas in Eastern Ethiopia.

**Figure 5.6: Trends in producers’ price in major coffee exporting countries (US cents/lb)**



**Source:** Computed based on IOC data. Data for Kenya is only available until 2004.

When compared to their Brazilian and Kenyan counterparts, Ethiopian coffee growers receive the least incentive for expanding their coffee production. Even Vietnamese coffee growers can comfortably compensate for their price disadvantage, which is 25% lower than Ethiopian producers, by their very high coffee productivity, which is about 3-times the amount in Ethiopia.

**Table 5.4: Producers coffee price index for Ethiopia and major coffee producing countries (2004-2006=100)**

Country	Obs.(number of years).	Mean	Std. Dev.	Min	Max
Ethiopia	22	113.4	89.9	28.9	309.9
Brazil	24	131.8	120.4	12.6	395.9
Vietnam	24	270.6	247.7	35.5	753.7
Kenya	24	128.4	82.5	26.9	385.1

**Source:** Computed based on FAO stat.

**Note:** Obs. implies number of years for which the average data was computed. Data computed for period between 1991 and 2014.

As the absolute price Ethiopia received for its coffee export, producers' coffee price index, which measures the trend in coffee price paid to producers in the respective coffee exporting countries, is important in terms of affecting producers' incentives to expand their production and supply coffee to export market. Taking the 2004-to-2006 average producers' price as base, producers' price (measured in USD) has increased by 113 percentage points over the past two decades in Ethiopia, and by 128%, 132% and 171% in Kenya, Brazil and Vietnam, respectively, which again indicates the

less competitiveness of Ethiopian coffee export market compared to its competing coffee exporting countries.

One of the key jobs of policy makers is to keep its export market competitive against other competing exporting countries. Ethiopian policy makers should, therefore, work hard to make the coffee export competitive and increase coffee growers' incentives. Otherwise, the country could lose its long-term comparative advantage in coffee export. One intervention area could be the coffee trade and supply chains, where a range of actors work to their own advantages. The goal should be to make the trade system more competitive (at least to the level of other major exporting countries) and transparent. This will enhance the relative competitiveness and benefit of important actors like coffee producers as well and traders/industrialists. Another possible intervention area should be the quality and the form of coffee the country prepares for the export market. It is possible to enhance the value of green coffee through roasting and other value addition activities.

#### **5.2.4.3 Exchange and Inflation Rates in Ethiopia and Other Major Coffee Exporting Countries**

The purchasing power of the local currency, which is greatly affected by domestic inflation rates, and its exchange rate against international currencies like USD are very important. What is more important is the trend in the gap of these rates among major exporting countries.

Ethiopia depreciated its national currency (Birr) in 1994 by 241%, which lowered the 2.07 Birr required to purchase a US dollar to 5 Birr. Since then, Ethiopian policy makers have followed a managed floating exchange rate, and its exchange rate against a USD reached 21.83 Birr in 2016 (as indicated in FAO statistics)<sup>23</sup>.

**Table 5.5: Changes in exchange and inflation rates in major coffee exporting countries**

<b>Country</b>	<b>Depreciation rates (of local currencies against USD)</b>	<b>Consumer price index in 2016 (2010=100)</b>
Ethiopia	399.3	224.3
Brazil	524.9	150.5
Kenya	181.1	159.6
Uganda	349.2	160.8
Vietnam	203.8	149.6

**Source:** Exchange rates – FAO data base; consumer price index – World Bank data base.

**Note:** Changes in exchange rates indicate percentage change in the value of the local currency in the respective countries over the 1994 – 2016 periods.

In most of the coffee exporting countries, the value of the local currency declined between 181% (in Kenya) and 525% (in Brazil). Ethiopia comes second after Brazil as its currency was devalued by close to 400% between 1994 and 2016. In nominal terms, the fact that the local currency (Birr) depreciated at a level higher than the average of many coffee exporting countries indicates the relative

<sup>23</sup>Ethiopia’s policy makers lowered the value of Ethiopian Birr by 15% (against US dollar) in October 2017 which could enhance the export sector and incentive of coffee producers. The potential effect of this recent depreciation, however, is not considered in this paper.

advantages Ethiopian coffee growers and exporters have got when compared to their counterparts in most of the coffee exporting countries, with the exception of Brazil.

This is, however, one side of the story. The main issue is the real purchasing power of the local currency which is paid to coffee growers and exporters. In other words, the general inflation in the respective coffee exporting countries is equally important in learning the dynamics of the competitiveness of the coffee sector vis-à-vis other coffee exporting countries. The general inflation, as measured by the consumer price index, reflects the annual percentage change in the cost (to the average consumer) of acquiring a basket of goods and services. While a falling exchange rate helps to make an economy (export sector) competitive, a relatively high inflation rate has an opposite effect. Compared to the level in 2010, inflation rate grew by 224% in Ethiopia in 2016 whereas it didn't exceed 160% in any of the sample coffee exporting countries. This indicates the degree of competitive advantages coffee growers and exporters secured in the other coffee exporting countries, other factors remaining constant.

In general, exchange rate depreciation that assumes to stimulate exports (and curtail imports) should not neglect the negative effect of domestic inflation (that is partly associated with the increase in domestic exchange rate appreciation) and the dynamic effects of productivity improvements in competing exporting countries.

### **5.3. Structural Problems in the Ethiopia's Coffee Export**

Structurally, Ethiopia is distinguished as the birth place of coffee Arabica and determined as the only African coffee producing country with the potential to become the second largest producer and exporter of Arabica coffee worldwide. The country is known for its varieties of coffee, and coffee remains to be a driving force of the economy. It also plays a crucial role in the socio-cultural and ecological life of most of the people in the country. It accounts for more than 5% of the GDP and 25% of export earnings, absorbing 25% of employment opportunities for both rural and urban dwellers.

Ethiopia is the place for varieties of coffee types including the world-known Yirgacheffe, Sidamo, Harar, Limu, Nekemte, Jimma, Illubabor, Tepi and Bebeke, which are grown in different agro-climatic conditions at the different respective regions of the country. Coffee is processed mainly using dry and wet methods, and from the total coffee produced, 70% is sun-dried, 29% is washed, and 1% is semi-washed. Ethiopia ranked 5th in terms of volume of coffee production in the world (in 2016) - and 1<sup>st</sup> in Africa, and it produces, on average, 6.6 million bags of coffee per year. Ethiopia's coffee production showed a growth rate of 1.34 percent compared to the year before (2015), and production capacity improved compared to other neighbouring African countries. The country has four main production systems: forest, accounting for 8-10 percent of the total production, semi-forest (30-35 percent), plantation (5-8 percent), and garden (50-55 percent). Compared with the giant

coffee producing and exporting countries, i.e. Brazil and Vietnam, Ethiopia has high productivity. The country is supplying organic coffee to the world. Ethiopia produces 4.3 percent of the world's supply of coffee, which is very small in volume compared to 35.7 percent that Brazil produces and 16.57 percent Vietnam supplies to the world.

The main reason for Vietnam to benefit from coffee is a combination of productivity gains and area expansion. The production of coffee in Vietnam is also dominated by smallholder coffee farms as is the case in Ethiopia. Unlike in Ethiopia, however, agronomical technical knowhow is well disseminated in Vietnam. Advanced yield-maximising techniques such as pruning (including grafting) are well communicated and applied everywhere. There is a well-established government support system based on research and high yielding varieties developed and distributed. Also, the planted coffee area has increased every year in the last 20 years to reach above 700,000 ha and their further expansion is dependent on water for irrigation purposes. The country's production increased by 8.4 percent from the year 2014/15 and had a share of 18.96 % of the world's total production.

The structure of production in Brazil is dominated by medium- to large-scale production patterns and technological transfer is available everywhere compared to Ethiopia. Most of Brazil's coffee production is agro- industrial. The total coffee production area of Brazil is 2.3 million ha compared with the Ethiopian 1 million ha of total area used for coffee production. Even though Brazil takes the lead by producing 33.24 percent of the world's total coffee

produced, production declined by 3.65% relative to the 2014/15 fiscal year.

## **The Market Structure**

The value chain of coffee in Ethiopia is very monotonous and long. It incorporates many dealers and brokers from the farm gate to the destination. The price of coffee given to producers is decided by the broker and does not encourage increasing the productivity and quality of the coffee. Other countries such as Brazil, Vietnam, and Costa Rica that produce and export coffee in bulk have created an efficient, effective and transparent marketing system in line with their national interest. This enables them to meet the needs of producers, satisfy the national demand with low and high quality domestic consumption, and react according to the demand of the international markets in both mainstream and specialty coffees. In the case of Ethiopia, even though the country is known as the origin of coffee, the productivity is low – just 6 to 10 quintals per hectare – compared to that of Brazil and Vietnam, which have a productivity rate of 15 to 20 quintals per hectare. The marketing system of Ethiopian coffee is receiving inadequate support and incentive for the producers to encourage quality coffee production. The brokers and local suppliers do not care about the quality issue if they get a profit. In this regard, the government should intervene to maintain the quality of coffee in the supply chain and encourage the farmers. The linkage between production/extension and research and development sectors is very weak. Also, the communication and information system is not efficient. Lack of financial support for the farmers and lack of awareness about the quality issue are the most important factors for Ethiopia not to benefit from the sector as much as it should.

## **Inconsistent supply of traceable coffee**

The supply of coffee is not consistent. Working on the supply side of coffee is a very important determinant for big coffee buyers to stay as trade partners with any supplier. The traceability issue is one of the main determining factors for those big coffee buyers. Brazil and Vietnam can supply the same quality of coffee from a single farm as per the demand of the buyers, who provide incentives for the producers to maintain quality of the product. But in the case of Ethiopia, coffee production is at a subsistence level, and there is no adequate support and incentive to encourage quality coffee production. The coffee marketing system of Ethiopia by itself has also aggravated the supply of quality coffee because of the fact that end buyers were not allowed to buy coffee directly from the farm. Ethiopian coffee growers have for years been forced to sell their crops to middle-men at whatever price the middle-men were willing to pay. Even after the establishment of ECX, there are suppliers who have licence mandates to collect coffee from producers and supply it to the exporter under the control of the Ethiopian Commodity Exchange. But the problem has not yet been solved.

## **High Domestic Coffee Consumption**

According to the International Coffee Organization, Ethiopia is the leading country by consuming 56 percent of the total production at home. Brazil and Vietnam, who produce the lion's share of the world's coffee, consume 41 percent and 8 percent of their total production, respectively.

In general, there are different structural reasons why Ethiopia is not benefiting from coffee compared to the world's leading coffee

producing and exporting countries though it is the birth place of coffee. The first and foremost reason is low production and productivity of the Ethiopian coffee compared to that of Brazil and Vietnam. A few other reasons that led to this problem include traceability issues, lack of supportive and transparent marketing systems, lack of improved processing technologies on the basis of agro-ecologies, and lack modern coffee marketing practices.

## **5.4 Livestock Sector: Export and Export Competitiveness**

### **5.4.1 Ethiopia's Livestock Master Plan (LMP): An Overview<sup>24</sup>**

In an ambitious bid to achieve the status of a middle-income country by 2025, the government has developed an extensive blueprint for progress - its Growth and Transformation Plan 2015-2020 (GTP-II) - which has prioritized the development of agriculture. More specifically, the plan identifies the role of the livestock sector in helping to achieve some of the most critical sustainable development goals: reducing poverty by almost 20 per cent, raising national incomes, increasing exports and greatly improving the food and nutritional security of rural and urban people. Based on the GTP, the government has developed its Livestock Master Plan (LMP). The plan intends to transform this sector and increase production and export of meat in order to generate foreign

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<sup>24</sup> This section is drawn from an article written on Ethiopia's Livestock Plan by Barry Shapiro on Financial Times. Readers can access the article at: <https://www.ft.com/content/796e4fe4-6554-11e7-9a66-93fb352ba1fe?mhq5j=e3>

exchange. The LMP also calls for increases in dairy, chicken (i.e. broiler), and egg production to satisfy increasing consumer demands for affordable livestock proteins.

The Ethiopia livestock master plan is a comprehensive assessment of the investment opportunities to increase meat, milk and egg production, respectively, by 58, 83 and a massive 828 per cent over 2012 levels by 2020. It projects that such greater productivity and the resulting higher income levels would end poverty for more than 2.3m of Ethiopia's 11m livestock-keeping households. Achieving this would cost just over \$760m over a five-year period, with interventions in three key areas: animal genetics, feed and health. While most livestock in Ethiopia are local breeds, research shows that crossbred cattle, if adequately fed, can produce 10 times more milk than their local counterparts. Putting into action a livestock breeding strategy to raise the number of crossbreds could pave the way for improved cattle breeds that could, with health and feeding improvements, nearly double the dairy production of Ethiopia's small-scale farmers and herders. Genetic livestock improvement is not enough on its own. Genetically improved crossbred animals need to be given better feeds if they are to produce higher yields of milk, meat and eggs. To accomplish this, Ethiopia will need to overcome chronic shortages of animal forage and processed feeds and increase its investment in new, improved feeds. Finally, realizing the potential of the country's livestock sector will also need improvements to its animal health services to tackle high calf mortality rates, inadequate veterinary supplies and inefficient veterinary services. To this end, the master plan calls for more and better public and private animal health services and a more effective regulatory body at federal and regional levels.

The bounty for attracting sufficient private and public investment, and adopting new policies to enact the livestock master plan, would be the transition of millions of Ethiopia's family farmers and herders from subsistence to market-based livestock producers. This would have the dual benefit of feeding Ethiopia's growing population and helping to drive the country's GDP growth to even higher levels<sup>25</sup>. Not only would this provide the country with greater food and nutritional security, but it would also create new opportunities for Ethiopian businesses to process the country's fresh milk into products for domestic and export markets. The plan also outlines how improved rural livestock livelihoods will benefit people in towns and cities through lower prices for milk, meat and eggs and the opening of new job opportunities.

The Ethiopian government has set up four agro-industry parks to attract private sector investment in agro-processing, to help speed up the transformation of the livestock sector. In general, the Ethiopia livestock master plan makes the case for targeted investments in livestock both clear and compelling. What remains is to find the best ways for the plan to be realized to help give this African tiger its roar.

#### **5.4.2 Ethiopia's Livestock Population: Size and Growth**

*Ethiopia* is home to one of the largest *livestock* populations in Africa. According to CSA's Livestock Sample Survey for 2015-16, there are

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<sup>25</sup> For example, the plan forecasts achieving a surplus of 2.5bn liters of fresh milk by 2020.

approximately 58 million cattle, 57 million goats and sheep, 1.23 million camels plus an assortment of horses, donkeys, camels and chickens.

**Table 5.6: Estimated Livestock population in Ethiopia (in millions)**

Year and population	Livestock types				
	Camel	Cattle	Goats	Sheep	
Stock	1993	0.32	29.5	8.4	10.9
	2003	0.44	39.0	12.0	16.0
	2013	1.10	55.0	28.2	27.3
Average annual growth rate (%)	1993-2003	3.6%	3.2%	4.4%	4.7%
	2003-2013	15.2%	4.1%	13.5%	7.1%
	1993-2013	12.2%	4.3%	11.9%	7.5%

**Source:** Computed based on FAO stat. Please note that there is little difference in CSA and FAO data.

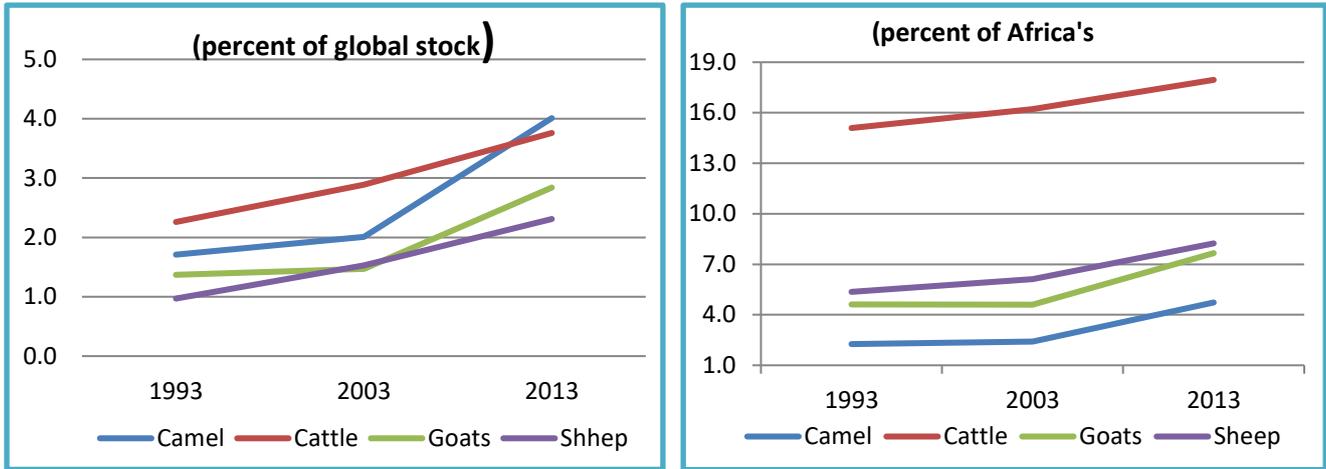
Livestock population has also grown significantly over the past two decades. As indicated above, Ethiopia's camel and cattle population grew by 12.2% and 4.3% annually between 1993 and 2013. The annual growth rate for goats and sheep was 11.9% and 7.5%. Though this is a remarkable growth especially in view of reported decline in grazing land and feeds availability in the country, the pattern of the growth itself has its own peculiar feature as the pattern of the growth in the first ten years (1993 – 2003) and the second ten years (2003 – 2013) is completely different, especially for camels and goats, and to some extent to sheep too.

The population of camels, goats and sheep grew by 3.6%, 4.4% and 4.7% annually during the first decade, whereas this annual growth rate increased astonishingly to 15.2%, 13.5% and 7.1%, respectively, in the second decade (between 2003 and 2013). In general, the big differences in the annual growth rate between the first and the second decades warrants further analysis as it helps to identify the factors and conditions that contributed to the amazing growth in the latter period. Any such analysis will also help to draw lessons for future development interventions in the livestock sector.

Overall, some positive developments in rural areas that include the expansion of marketing facilities/activities, including the expansion of road infrastructure and mobile networks, and enhanced access to cash/credit, among others, through productivity safety nets, and the expansion of micro-credit activities have contributed to the increase in Ethiopia's livestock population over the past two decades. Moreover, improved access to agricultural extension systems has also played a positive role.

Ethiopia has also contributed substantially to the global livestock population. In 2013, Ethiopia's camel, cattle, goat and sheep population represented 4%, 3.8%, 2.8% and 2.3% of the global population of the respective livestock. During the same year, Ethiopia's livestock population accounted for 4.7%, 18%, 7.7% and 8.2% to Africa's camel, cattle, goat and sheep population, respectively.

Figure 5.7: Ethiopia's Livestock population and its global share



Source: Computed based on FAO stat.

### **5.4.3 Livestock Export**

#### **5.4.3.1 Export of Live Animals**

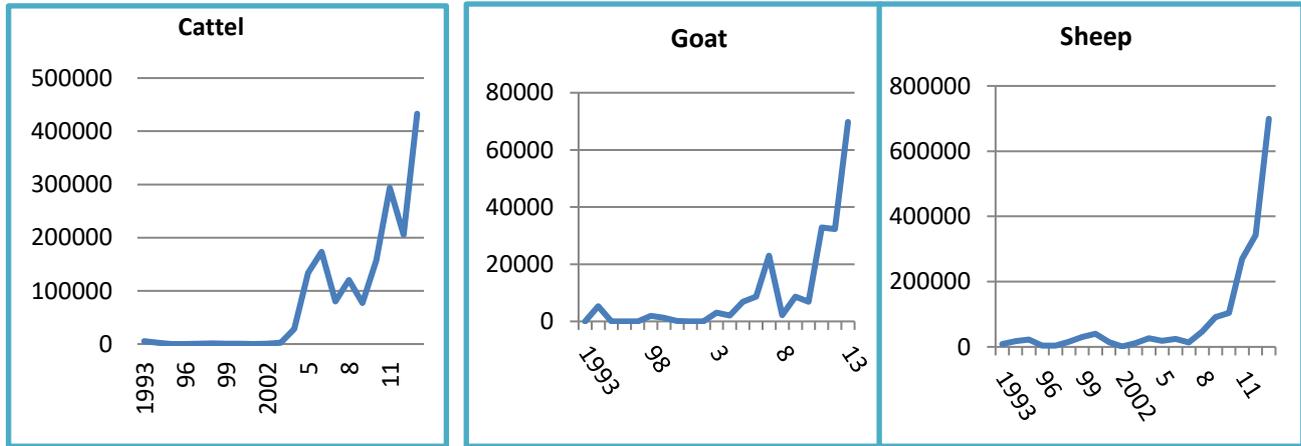
The export of live animals has been growing significantly over the past decade. The export of live cattle has been growing from just under 6,000 heads in 1993 to 28,329 in 2003 and then to over 433,000 in 2013, which indicates an annual growth rate of 763%. Similarly, the export of sheep grew by 785% annually between 1993 and 2013. In 2013, Ethiopia exported close to 700,000 sheep, mainly to the Gulf and Arab countries.

Goat export has also grown by 333% between 2003 and 2013 (see Figure 5.8). The country earned 224,474, 49,606 and 4,733 USD from the export of cattle, sheep and goats in 2013, respectively<sup>26</sup>.

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<sup>26</sup> Data on earnings of livestock comes from FAO stat. Data from National Bank of Ethiopia, however, is a bit lower than FAO data. NBE indicates that the country generated only 187 million USD from the export of live animals in 2013/14.

Figure 5.8: Trends in export of live animals



**Source:** Computed based on FAO stat.

**Note:** FAO uses official data sources for trade data on Ethiopia livestock trade. See <http://www.fao.org/faostat/en/#country>

sources for trade data on Ethiopia livestock trade. See

A number of factors contributed to the rapid growth in the export of live animals. As indicated in the government's five-year development plan, live cattle and livestock product export promotion and diversification are key policy priorities for the government. Development programs that help the expansion of marketing and communication infrastructures (roads, market places and mobiles), the liberalization of livestock trade, and the improvement of extension support to livestock producers have also contributed to the reported growth. Ethiopia's geographic location vis-à-vis the Middle East is also an important comparative advantage for its export of live animals.

The high growth in the export of live animals indicates a corresponding high potential the country has in terms of livestock numbers. However, the export of live animals and meat still remains small in volume and value, constrained by inefficiencies in purchasing, poor animal handling and health requirements, and inadequate facilities at the feeding lot level (FAO, 2015). The study also indicates that a large portion of livestock is exported through informal cross-border trade<sup>27</sup>.

On the other hand, the reported high growth in the export of live animals over the past two decades has not impacted livestock

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<sup>27</sup> Studies indicate various but large numbers of livestock to cross the country through the informal channels every year. A study conducted by Gebremariam, Amare, Baker & Solomon (2010) put the number to 375,000 (for 2010), whereas a study by Belachew and Gemberu (2002) estimated 325,000 for 2001. Similarly MEDaC and World Bank estimated 260,000 and 225,000 livestock cross the country illegally in 1998 and 1987, respectively (see FAO, 2015).

production (i.e. the stock of livestock). Official data shows that Ethiopia's livestock population has been growing on average by about 10% annually during the same period, which is far lower than the rate of growth in export. As Ethiopia is reported to have a large livestock population beyond the carrying capacity of its livestock resources in key producing areas, the rapid growth in export relative to production might be beneficial from short-term perspective as it might contribute to enhancing feed availability and livestock quality.

#### **5.4.3.2 Export of Meat**

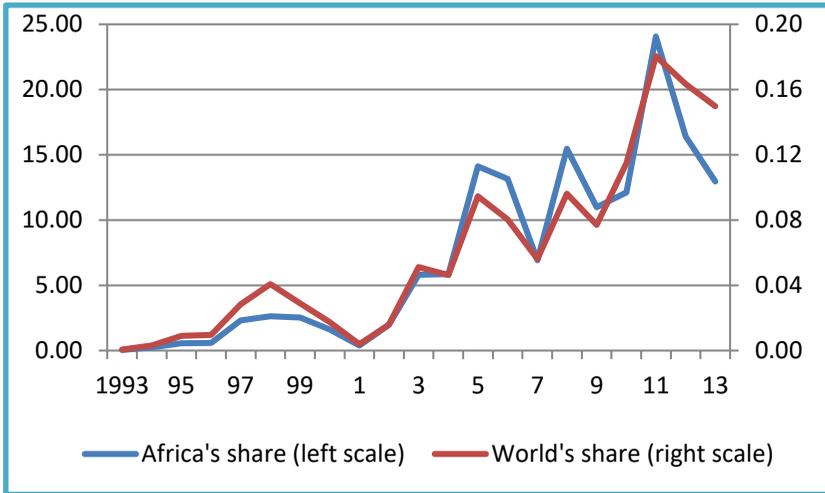
Ethiopia's commercial red meat (beef, mutton and goat) industry has made a remarkable progress to date and shows considerable growth potential for the future. Ethiopia encourages investments in meat processing, especially those that are focused on exporting value-added products. A couple of U.S. companies have already invested in the red meat sector and others have expressed interest.

A large chunk of this commercially-produced red meat, most of which is currently mutton and goat meat is largely going to the Middle East in order to generate foreign exchange. Beef exports are also growing, with additional market opportunities on the horizon<sup>28</sup>.

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<sup>28</sup> <https://www.export.gov/article?id=Ethiopia-Livestock>.

**Figure 5.9: Ethiopia's share in global and Africa's export of livestock meats**



**Source:** Computed based on FAO stat.

**Note:** All kinds of meat (from cattle, goats and sheep and both processed and unprocessed) are considered.

As it has done with its coffee, Ethiopia has expanded its share in global meat export, especially since early 2000. Meat export peaked in 2011 when the country exported 17,445 tons of meat to generate 76.1 million USD, indicating a 0.18% share to the global meat export. During the same year, its share in Africa's meat export was about 24%, which indicates good performance when compared to its 11% share in Africa's livestock population. The trend, however, declined since 2011 (see Figure 5.9).

Despite the relative growth in the export of meat over the past decade, most of the export abattoirs are reported to operate far below their capacity due to supply shortage of quality animals

(Hailemariam *et al.*, 2009)<sup>29</sup>. As sustaining and increasing the growing trend of livestock export is difficult, it is essential to expand the operation and efficiency of livestock market as well as modernizing the production system. All these indicate the need for a comprehensive approach to address problems along the whole value chain. Any interventions should focus on systemic bottlenecks, especially at pre-production and production stages of the sector, which include genetical factors, animal diseases, and feed availability and quality. Similarly, as an export of a primary product, making Ethiopian meat export more competitive in terms of quality, global standards and trends is crucial and demands to the improvement of the subsistence based animal husbandry, poor market infrastructures, weak institutional arrangements, and the seasonality of both the demand and supply of meat (FAO, 2015).

## **5.4.4 Competitiveness of Ethiopia's Livestock and Meat Export Sector**

### **5.4.4.1 Livestock Productivity**

Along with quality, which demands exportable products to meet specific standards set by importing countries or other international standards, productivity is a key factor in affecting Ethiopia's global competitiveness and the sustainability of its export of livestock and livestock products. Existing livestock productivity in Ethiopia, however, is one of the lowest in the world, as shown in Table 5.7, which shows the livestock productivity levels

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<sup>29</sup> The study partly associated this shortage of quality animals to low market penetration into production areas to collect export quality animals (Hailemariam *et al.*, 2009).

of Ethiopia vis-à-vis the global and African average levels. The carcass weights in Ethiopia are 108kg/head for cattle, 10kg/head for sheep, 8.5 kg/head for goats, and 800 g/head for chickens, all of which are well below the global average productivity level, as well as the average productivity level for African countries. This productivity gap has also remained unchanged over the past decades when exports of livestock and meat have been growing very fast (Table 5.7).

**Table 5.7: Livestock productivity in Ethiopia versus its competitors (Average meat Caracas weight per animal**

Year and population		Livestock types			
		Cattle	Goats	Sheep	Chicken
1999 - 2008	Ethiopia	108.6	8.5	10.0	800.0
	East Africa	133.3	11.2	11.7	983.6
	Africa	149.9	11.6	14.1	1174.9
	World	209.3	12.3	15.8	1474.4
1999 - 2008	Ethiopia	108.6	8.5	10.1	800.0
	East Africa	138.6	11.2	11.6	1063.8
	Africa	156.9	11.1	14.3	1218.4
	World	213.8	12.3	16.1	1568.8

**Source:** FAO database

**Note:** Meat Caracas weight measured in Kg/head for Cattle, sheep and goat; and in gm./head for chicken.

The surge in the supply of livestock for the export market indicates the strong response producers gave to improve marketing infrastructures and the support the sector received in terms of finance and other incentives from the government. While this could be reported as a success, developments in the export market have

little impact on livestock production in general and livestock productivity in particular.

The stagnation in the productivity of livestock implies the weak link between livestock market/export and production activities. On the contrary, Ethiopia's stagnant livestock productivity indicates the lack of development interventions (or their poor impact) to address major problems on the production side of the sector – genetic factors, feeds and water, and other institutional and technical factors relevant for the semi-subsistence nature of Ethiopia's livestock sector.

Livestock production and marketing in Ethiopia is largely non-commercial and follows traditional ways. Livestock production and marketing support services (veterinary services, clean water supply, nutritious food supply, better transport services and access to livestock marketing information), which are intrinsic parts of livestock marketing, are inadequate. Lack of such services and weak policy backing are seen as some of the major barricades to exploit the livestock resource potential of Ethiopia (Abdurrahman *et al.*, 2006).

#### **5.4.4.2 Livestock Market and Price**

Ethiopia exports live animals and animal products. Export earnings from the sector through official routes have grown from merely 0.3 million to 181.6 million USD between 2005 and 2012, contributing 12 percent to the total export earnings. However, only 20 percent of live animal exports go through official channels, while the remaining 80 percent are informally traded (USAID, 2013; quoted

by FAO, 2015). This might also have contributed to the very low net commercial off-take rate of livestock in Ethiopia<sup>30</sup>.

Ethiopia's limited export of meat was often sold to very few countries in the Middle East and North African countries, mainly Saudi Arabia, the United Arab Emirates, Bahrain, Egypt, Yemen and Congo. The same situation is also observed on exports of live animals where the vast majority of this produce is destined for Egypt, Saudi Arabia, Djibouti, Sudan, Somaliland, Jordan, the UAE and Yemen, where live animals are demanded due to religious and cultural practices.

Ethiopia's livestock production system is not adequately market-oriented. Small- and medium-scale operators and smallholder producers that supply them find it difficult to penetrate into these markets because of failure to meet the quantity and quality of products demanded (Hailemariam *et al.*, 2009). In general, many actors are involved in livestock product marketing, broadly classified as: livestock producers, traders, processors, retailers, food service providers, and consumers (Asfaw *et al.*, 2011).

There are several marketing channels through which cattle, sheep, and goats flow to final consumers in both the domestic and export markets. The livestock marketing channels, which start with the smallholder livestock producers from the mixed crop-livestock farming system, mainly cater to the domestic market, while those

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<sup>30</sup> In 2004/05, the average net commercial off-take rate of cattle, sheep and goats for smallholder farmers in the highland and lowland areas of Ethiopia, for instance, was 7%, 7% and 8% respectively (Asfaw *et al.*, 2011).

starting with the pastoralists is intended for both domestic and export markets.

The marketing channels are lengthy, without significant value-adding activities. The supply comes in small numbers from highly dispersed small producers that supply non-homogenous products to the markets. Due to the low productivity of the animals and the absence of market-oriented production systems, the volume of marketed surplus is very low. Along the market value chain, exporters face inadequate supply of livestock while intermediaries encounter high market risk and cash flow problems. Apart from this, low quality and lack of sustainable supply of standardized market-preferred product has stifled the country's potential to access existing and emerging live animal and meat export market opportunities (Hailemariam *et al.*, 2009).

#### **5.4.4.3 Producers' Price and Traders' Margin**

Empirical analysis based on time series data collected from the Borena pastoral markets suggests the responsiveness of livestock supply from the rangelands to an increase in market price which is attributed to positive supply response of livestock from the area (Hailemariam *et al.*, 2009). The study, however, indicates that shortage of export-quality livestock (goats and sheep) forced the existing export abattoirs to operate at less than 50% of their installed capacity.

Despite its role in terms of creating incentives for producers to supply their livestock to main/export markets, the level and variability of price, in general, and producers' share in final

consumer price, in particular, is an important factor in terms of gauging the competitiveness of livestock market. Though price margin varies along the different channels of the marketing system (which reflects disparity in the number and type of actors involved, and the length/distance of marketing channels), the study conducted by Hailemariam *et al.* (2009) indicates that producers' (in Negelle and Genalle markets) shares in the final price for exported cattle vary from 51% (in cases of channels where collectors and big traders are involved in linking producers and exporters) to 61% (where producers and exporters are linked only through big traders). For small livestock like sheep and goats, the same study indicates producers' shares in exported sheep and goats vary from 46% to 60% of the final price paid by exporters. Despite the high margins of wholesalers over livestock producers, a study by FAO (2015) also indicates that the disincentive effect of Ethiopia's livestock export market is also reflected on livestock wholesalers (when compared to exporters).

An overvalued exchange rate, high feed and transport costs facing the feed lot operators/wholesalers, and high margins of traders overproducers are reported as the major causes for low shares of producers in the final price (paid by exporters) (Hailemariam *et al.*, 2009). In general, the future of the sector in general and export of livestock and its products demand actions on these problems, among other factors on the production side of the sector. It is also important to establish a system for the collection of relevant data (on production, productivity, price, inputs, etc.), which are vital for periodical sector performance assessment and analysis of the sector, which consequently help for regular and timely revision of policies

and actions affecting livestock producers and others working along the whole value chain.

#### **5.4.5 Enterprise/Herd Size at the Household Level**

The role of livestock and the potential for its commercialization is largely determined by ownership patterns and herd sizes at the household level. The key question is: Do livestock producers have surplus live animals or livestock products that can be tapped through changing market incentives and opportunities?

Over the last five years there have been few changes in terms of livestock ownership and the size of livestock holdings (Asfaw *et al.*, 2011). As given in Table 5.8, the livestock ownership and size of holdings for smallholder sedentary producers and pastoralists remains unchanged in recent years. It is of note that significant proportions of households do not own certain types of livestock. A little over 20 percent of smallholder sedentary farmers do not own cattle<sup>31</sup>, while more than 60 percent do not own sheep, and more than 70 percent do not own goats. For those who own livestock, the size of livestock holdings also remains very small. As shown in Table 5.8, only 21% of households own 5 or more cattle, while less than 5% of them reported to own above 10 cattle. Similarly, only 12.5% and 11.7% of households own sheep or goats more than 5.

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<sup>31</sup> The proportion of households with no oxen was 20% in the study Asfaw *et al.* (2011) conducted some five years ago.

**Table 5.8: Herd Size of Livestock among Ethiopian smallholder farmers**

Herd size	Livestock types and ownership (% of all livestock owners)		
	Cattle	Sheep	Goats
0 head	22.6%	66.0%	73.0%
1 – 2 heads (up to 4 for shoats)	25.8%	21.5%	15.3%
3 – 4 heads	25.6%	--	--
5 – 9 heads	20.5%	8.9%	7.4%
10 – 19 heads (10 – 49 for shoats)	4.7%	3.4%	4.2%
>= 20 heads (50 – 99 for shoats)	0.8%	0.1%	0.2%
>=100	--	0.1	0.3%

Source: CSA-2015/16 Livestock Survey Report

While the Livestock Survey Report of CSA (2015/16) doesn't report for the pastoral regions separately, the study by Asfaw (2011) accounts for the livestock statistics for Borana pastoralists, a major source of export for Ethiopia's livestock sector. They indicate that a significant proportion of Borana pastoralists do not own certain classes of livestock. About 22 percent of pastoralists do not own any cattle at all; 80 percent do not own sheep, and 58 percent do not own goats. However, pastoralists have larger herd sizes than smallholder sedentary farmers, owning on average 13 heads of cattle and five heads of goats, compared to four heads of cattle and two heads of goats for smallholder farmers. In both systems, the average owning is of two heads of sheep<sup>32</sup>. In general, herd size is a

<sup>32</sup> Please note that these statistics were computed for households owning livestock (by excluding households with no livestock).

very important factor in herd accumulation in pastoral production systems as it is an effective way of reducing risk (Getachew and McPeak, 2004, see Asfaw *et al.*, 2011). The cattle holdings of herders with larger herd sizes, for instance, was reported to recover more quickly in the face of climatic shocks.

In general, the livestock production systems observed in Ethiopia are low-input and small-scale, which limits the potential the country has to exploit livestock production and export. The growth of livestock export, however, depends not only on domestic production and distribution, but also on a number of external factors like world economic scenarios, prices of Ethiopian exports in relation to world prices, exchange rates, and inflation rates in competing countries, and taxes and subsidies on exports.

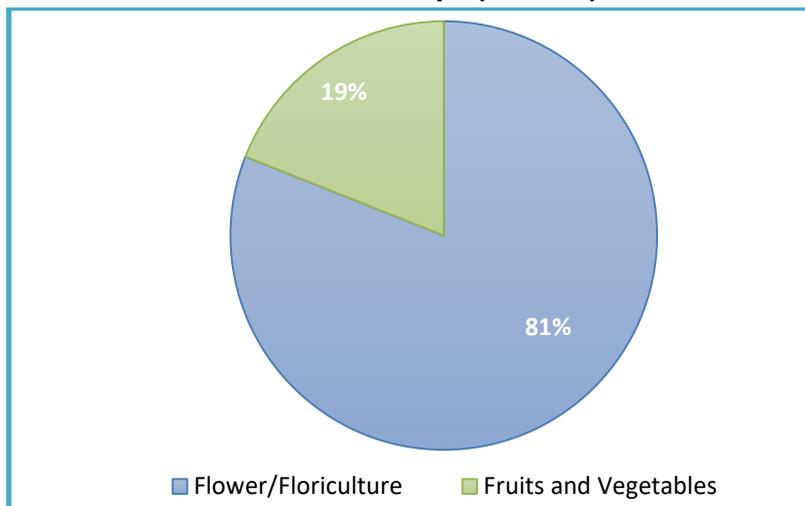
## **5.5 Horticulture and Floriculture: Status and Trends**

Given the existence of diverse agro-climatic zones, long growing seasons, and availability of water for irrigation, Ethiopia has ideal conditions for growing a wide array of fruits, vegetables, flowers and spices. Despite some problems in the supply and administration of land for investment, the Ethiopian Investment Commission reported that the total land area available for horticulture is about 12,552 hectares, with only 11% of this land being developed for horticulture (EIC, 2013)<sup>33</sup>.

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<sup>33</sup> EIC (2013). Horticulture. <http://www.investethiopia.gov.et/investment-opportunities/strategic-sectors/horticulture>.

**Figure 5.10: The Composition of export of Ethiopian horticultural crops (2014/15)**



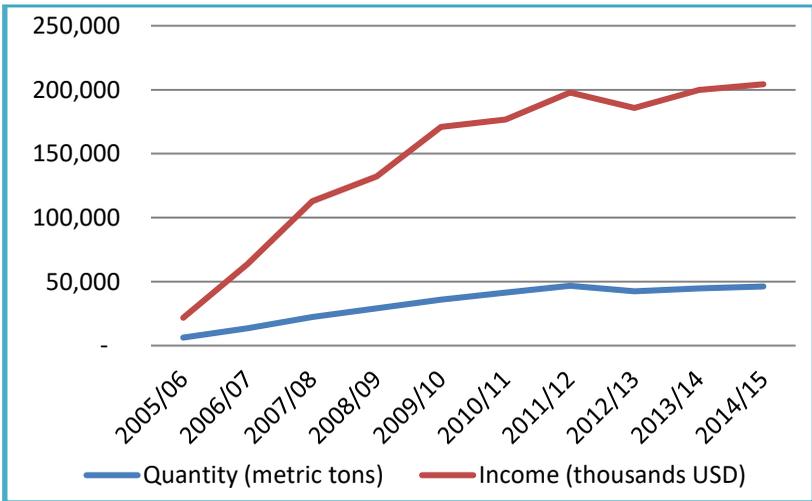
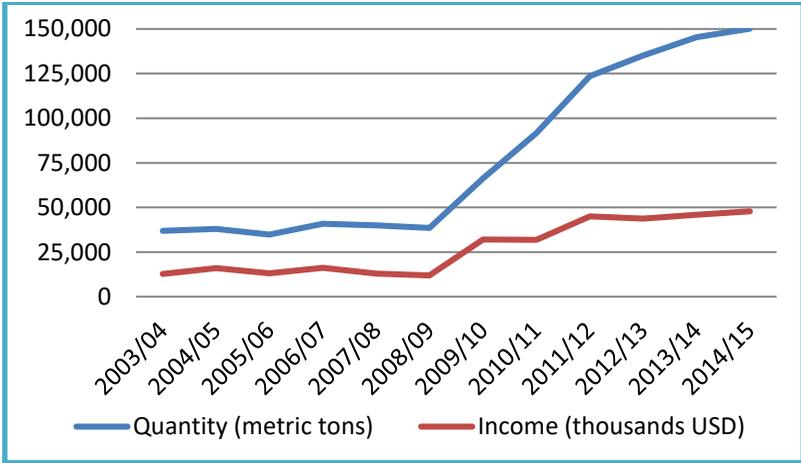
**Source:** NBE, 2015/16

**Note:** Composition measured in terms of value.

Ethiopia exported 167,077 and 50,629 metric tons of fruits and vegetables and flower, respectively, in 2015/16. This was four (for fruits and vegetables) and eight times (for flower) the country exported a decade ago, indicating an impressive growth. In terms of revenue, Ethiopia generated a little over 252 million USD from export of flower, fruits and vegetables in 2014/15, indicating an exponential growth as the sector generated only 28.5 million USD a decade ago in 2004/15. According to the *Ethiopian Horticulture Producers & Exporters Association (EHPEA)*, about 130 international investors were operating in Ethiopia's horticulture sector (in 2013), exporting to the Netherlands, Germany, Saudi Arabia, Norway, Belgium, the UAE, France, Japan, Italy and the United States, among others. Flower accounted for the bulk (81% in 2014/15) of export

revenue from horticultural crops, while different fruits and vegetables generated the remaining 19% of the export revenue.

**Figure 5.11. Trends in Export of Fruits and Vegetables, and cut flower over the past decade**



**Source:** Computed from NBE 2015/16 Annual Report

**Box 5.1: Government offers horticulturalists with more incentives**

The investment board, chaired by the Prime Minister, lowered the equity contribution of local horticultural investors to 15% from 25% to get loans from the Development Bank of Ethiopia. The package also includes extended tax holiday periods and duty-free privileges for both local and international investors.

The new impetus pushed the three-year tax-holiday-period privilege given to investors who export 80% of their products for three consecutive years to eight years. It also raised the five-year tax holiday to 10 years for investors who export all of their products for three consecutive years. Duty-free privileges for importing spare parts and vehicles as input for their farms are also guaranteed for horticulture developers.

The packages also lowered the land fee that investors are expected to pay for land they acquire, in addition to extending the lease period. The new directive lowered the land lease fee from 42 Birr per square meter (in rural areas) and 69 Birr per square meter (if the land is located in urban areas) to one Birr and two Birr, respectively. Similarly, the lease period has been extended for 30 years from the previous 30 and 15 years for farms in rural and urban areas, respectively.

The benefit package is intended to attract investors to the new 3,000 ha of horticulture cluster outfitted by the Federal Government in Zeway, Hawassa, and Bahir Dar areas.

**Source:** Addis Fortune, Weekly Newspaper, Vol. 18. No. 910. October 8, 2017.

As shown in Figure 5.12 below, the rapid growth in flower export stabilized around 2011/12, as the export increased by more than 3,600 metric tons every year between 2007/8 and 2010/11, while it remained virtually stagnant in the four years period since 2011/12 when the country exported close to 47,000 metric tons of cut flower. In general, the period between 2006/7 and 2011/12 could be considered as the golden period for Ethiopian flower export. The same was true for the export of fruits and vegetables, although the trend was less pronounced. The export of fruits and vegetables grew in aggregate by more than 64,000 metric tons (or threefold) between 2007/8 and 2011/12, but only grew by 25,924 metric tons in the four years between 2012/13 and 2015/16, indicating a decline of 9,634 metric tons every year since 2011/12.

In general, the relative declining trend in the export of Ethiopian horticultural and floricultural export warrants a more in-depth study as a consistent rapid growth, followed by another consistent decline (or stagnation in the case of flower export), is very unusual. However, as indicated in Box 5.1 above, the government responded with another round of very generous incentives for investors engaged in the horticultural export sector. These new incentives could attract some new domestic and international investors or encourage those already in the sector to expand their production activity, but the real question should be whether or not it was the shortage of incentives that led to the premature decline of investment into the sector/export of horticultural products. If we do not know the answer to this question, the whole exercise will lead to the benefit of opportunistic investors who might be attracted by the generous incentives that bear almost no risk to them. Ethiopian policy makers should do more work on how to

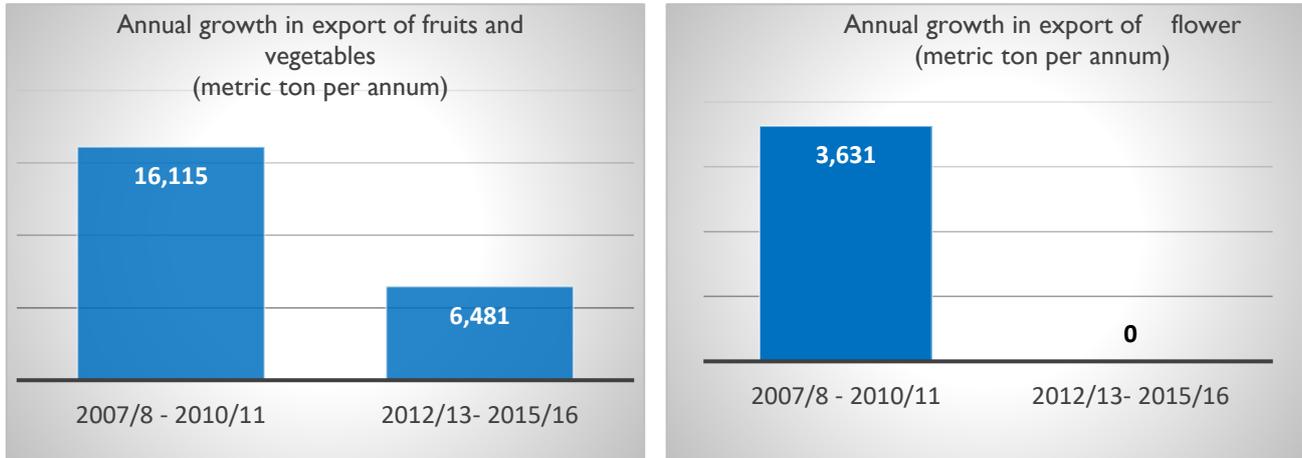
attract committed investors who devote their resources and time for long-term benefits, while capitalizing on the incentive package offered to them and Ethiopia's ideal agro-ecological conditions for growing a wide array of fruits, vegetables, flowers and spices.

The country is reported to have abundant and suitable land for horticultural production. According to the *Ethiopian Horticulture Producers & Exporters Association (EHPEA)*, the total land area available for horticulture is about 12,552 hectares, with only 11% of this land being developed for horticulture. Given the existence of diverse agro-climatic zones, long growing seasons, and availability of water for irrigation, as well as large available workforce, the country sufficiently fulfills the material conditions required for any committed investors in the sector.

Ethiopia's policy makers should widen their emphasis and effort of attracting investors and investment in the horticultural sector beyond financial incentives to institutional factors that affect the security and profitability of investment in the long-term.

Similarly, the global competitiveness of Ethiopia's export, which affects the incentive (for investment) and profitability of domestic production and/or export of these crops, is very important as both (domestic producers and their counterparts in other exporting countries) share the same market for their product.

**Figure 5.12. Trends and changes in export of horticultural crops (annual growth in four years period time)**



**Source:** Computed from NBE 2015/16 Annual Report

- **Conclusion and Recommendations**

Rising exports have contributed to Ethiopia's double-digit economic growth over the past decade. Exports appeared as drivers for economic development in Ethiopia over the past decade - but the export engine is sputtering as Ethiopian exports are exhibiting their worst performance in a decade. Even if outside factors (e.g. declining prices) are partly to blame, it is important to introduce policies now that can improve competitiveness and boost future export and growth performance (World Bank, 2014).

This study tried to look at the trend and competitiveness of Ethiopia's export of coffee, livestock and meat, and horticultural crops – vegetables, fruits, and cut flower.

- **Coffee**

Ethiopia has increased its share in global coffee production over the past two decades, albeit far less than some major global coffee producing countries like Brazil and Vietnam.

Ethiopia exports only 44% of its coffee production, while the global average for coffee exporting countries is 77%. Another feature of Ethiopia's coffee export is its low capacity in terms of value addition through roasting green coffee for export. Globally, export of roasted coffee increased by over 18 times (over the past four decades) to reach 914,453 tons in 2013. Ethiopia's share in this growing trend is almost non-existent – as the country exported only 119 tons in 2013, which is still eight times the level the country exported four decades ago, but far less than the global trend.

A number of internal and external factors affect the competitiveness of Ethiopia's coffee export. The study, however, mainly focused on productivity of coffee farms and producers' price. In terms of productivity, coffee farms in Ethiopia produce about the global average of 717 kilograms per hectare of coffee farm. But this is only one-third of the level of Vietnam's and 25% less than the average amount produced on Brazilian coffee farms. Compared to their counterparts in other coffee growing countries, Ethiopian coffee growers are also not doing very well in terms of the share of the global coffee price that is actually paid to them. According to IOC producers' price index for the last 25 years (which is measured against the average of the 2004, 2005 and 2006), the producers' coffee price index for Ethiopia was only 113%, which is far lower than Vietnam's 271%, Brazil's 132% and Kenya's 128%. In other words, compared to the average for 2004-2006, producers' price index grew by only 13% as compared to the 171%, 32% and 28% of growth in Vietnam, Brazil and Kenya, respectively. This is in addition to the negative effect of any overvalued exchange rate in Ethiopia relative to the countries mentioned above. In general, Ethiopian coffee growers are far less competitive, especially in price but also in productivity, when compared to their counterparts in other major coffee exporting countries.

To sustain its comparative advantage in coffee production and export, Ethiopia should work to make its coffee sector globally competitive. In addition to issues discussed above, the anticipated adverse impact of climate change<sup>34</sup> on coffee production in Ethiopia

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<sup>34</sup> Moat, J., Williams, J., Baena, S., Wilkinson, T., Demissew, S., Challa, Z. K., Gole, T. W. & Davis, A. P. (2017). *Coffee Farming and Climate Change in Ethiopia: Impacts, Forecasts, Resilience and Opportunities*. – Summary. The Strategic Climate Institutions Program (SCIP). Royal Botanic Gardens, Kew (UK). Pp. 37.

demands an urgent and comprehensive support to Ethiopian coffee growers and traders, especially to those who add value to green coffee destined for export. Ethiopian research and extension institutions should work to generate new coffee varieties/seeds/ that help coffee producers to enhance their productivity and minimize the adverse effect of climate change. Similarly, policy makers should work to make the coffee market more competitive (so that producers get a fair share of the global coffee price). Value addition through roasting green coffee, among others, should be another area for Ethiopian coffee authorities to work on.

- **Livestock and Meat**

Ethiopia has also great comparative advantage in the export of livestock and livestock products because of its large and growing livestock population and its geographic proximity to major livestock importing countries. As in the case of coffee productivity, livestock productivity in Ethiopia is low when compared to its competitors. The average meat carcass weight for cattle, goat, sheep and chicken in Ethiopia is 109 kg., 8.5 kg., 10 kg., and 800 grams, respectively. This is far lower than the global average as well as the average for Africa and East African countries.

In terms of producers' shares in export price, the share of Ethiopian livestock producers is low and fluctuates widely. Livestock producers in Negelle and Genalle areas are reported to receive 50% to 60% of export price of livestock coming from these areas, indicating the high disincentive effect of Ethiopia's livestock export market.

In addition to such market-related factors, the Ethiopian livestock production system is characterized by its low enterprise/herd size and low input activity, which affect the potential the country has in livestock production and export.

Though the surge in livestock supply over the past decade could be attributed to producers' response to improved marketing infrastructures or government support for the livestock export sector, sustaining and improving this trend is very difficult under the production and marketing environment discussed above. The government's current hands-off approach that enables the sector to expand from a small trade to an extensive one that delivers products to overseas markets seems inadequate.

The sector demands a range of interventions to make it a competitive and dependable source for the quality and quantity of products demanded by major global importers of livestock and livestock products. Potential interventions should be comprehensive and address critical factors at pre-production (especially feed, water and genetic factors), production (enterprise size, management, and input supply), and post-production (marketing, transport and processing). They should also focus on potential areas and to scale up through a gradual learning approach. Albeit at different levels of emphasis, any intervention should aim to target the whole value chain and actors working at pre-production, production, and post-production stages.

- **Horticultural Products**

Despite its recent stagnation, Ethiopia's horticultural sector has grown very fast since mid-2000. In 2015/16, the sector generated a

little over 290 million USD, making it the fourth largest foreign currency earning product after coffee, oilseeds and gold. The performance of the sector is very low and has languished especially over recent years. As data from the Ethiopian Investment office indicates, Ethiopia utilizes only 11% of potential land suitable for horticultural crops. Compared to Kenya, where the horticultural sector generated a record revenue of close to a billion USD in 2016, Ethiopia's earning in the same year was far less than a third of Kenya's. The structure of Kenya's horticultural sector is also a bit different from Ethiopia's both in terms of the relatively large contribution of vegetables and fruits and also in terms of the amount of revenue small farmers earn from the sector. Fruits and vegetables contributed less than 10% of the revenue from horticultural crops in Ethiopia, whereas the share in Kenya was close to 31%. Similarly, smallholder farmers have relatively greater participation in the Kenyan horticultural sector.

The horticultural sector in general and the production and export of cut flower in particular have very unique roles in terms of employment generation and enhancing the real value of agricultural lands, issues which have become important in many rural areas of Ethiopia. A study by Daniel (2013), for instance, indicates that the production of high value export products, such as flowers, supports the employment of many people: approximately 25 employees per ha. Furthermore, the export value of 1 hectare of roses is also reported to generate USD150,000, which is equivalent to 1000 tons of wheat or to 600 to 700 ha of wheat land in Ethiopia (Daniel, 2013). In general, Ethiopia should revisit its policies and institutions to reverse the recently prematurely stagnated horticultural sector, and to put back the sector into a sustainable dynamic path.

## 5.6 Recommendations

Ethiopian agriculture has received a great deal of attention over the past two decades. This has also contributed to the rapid growth of exports, albeit its recent stagnation that has exposed underlying vulnerabilities in the country's export structure (World Bank, 2014). The major factor behind this vulnerability is the limited number of export commodities that are dominated by unprocessed and undifferentiated agricultural products. Ethiopia, therefore, needs to diversify its export, both in terms of type of commodities and their form, which indicates the need to add value (to existing commodities) through processing and other value-addition activities.

More than “what” is being exported, it is the “how” that is hindering potential. “There is scope for improving the quality of existing commodity exports, through basic value addition, such as coffee wet processing or roasting green coffee machine flaying of animal skins.” Even in products with a revealed comparative advantage, little upgrading or branding has occurred to earn higher value per unit over time. “By starting to compete for the quality of existing commodity exports (and not just on price), Ethiopia can reduce sensitivity to volatile international prices, thereby supporting the gradual shift of production and exports into agro-processing and light manufacturing<sup>35</sup>.

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<sup>35</sup> Quoted from Guang Zhe Chen, World Bank Country Director for Ethiopia, introductory remark to the World Bank 3<sup>rd</sup> Economic Update to Ethiopia (World Bank, 2014).

Along with the need to increase value-addition, quality, and branding of exports, the study by the World Bank provides a number of recommendations that range from easing constraints related to reliable power supply, credit, and foreign exchange to redressing trade logistics and improving regulatory quality, including the implementation of a pro-competition legal framework. While all these are important, a range of issues related to policies, institutions and support.

While quality, diversification and trade logistics are important, stable and efficient institutions that have whole-heartedly devoted their resources and expertise to these issues are more important, and to some, these institutions are the greatest chronic challenges for Ethiopia's export as well as development. Ethiopian policy makers, for instance, reinstated the coffee and tea Ministry/Authority after 2 decades of undermining the need for an independent establishment for this sector. Similarly, the issue of land – access, land rental, market, and property rights – and the politics around it is very important but yet to be resolved fully, as the recent instability and destruction to some private flower and other horticultural crop farms demonstrates. The issue of land (the clarity of the land law to all, enforcement of rights, privileges, and obligations of all parties including third parties like citizens in the surrounding areas, and institutional capacity to resolve any potential disputes fairly and quickly) is very important as it affects entry of firms (domestic as well as

foreign), their investment pattern (e.g. long term or not), capital intensity, as well as competition among potential investors<sup>36</sup>.

Along with other types of concrete and strategic support in terms of credit, technology, and marketing, agricultural land (access, modality of getting access etc.) is also important in terms of motivating 'model' farmers (who are recognized and prized by Ethiopian policy makers over the past few years) to think and invest on long-term ventures and put their recent reported success on a sustainable and dynamic path, which, in turn, could contribute to structural transformation of the rural economy.

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<sup>36</sup> For example, Sher Ethiopia Plc., one of the largest commercial farms engaged in the production and export of horticultural products, is reported to engage in 400 million Birr worth of land-related tax disputes with the Revenue Authority of the Oromia regional government. The regional government claims that the company didn't pay tax for the land the company leased from the regional government but rented it out to third parties/other companies engaged in horticulture development. The report claims that the regional government is generous as passing use right to a third party is not allowed. The report, however, reported that the parties (the company and the regional government) are close to resolving the issue.

**Source:** Addis Fortune, Weekly Newspaper, Vol. 18. No. 910.

# Chapter VI

## Manufactured Export: Strategies, Performances and Constraints

### 6.1 Introduction

The economic development stage of a country, its resource endowments, and policies and development strategies pursued are important determinants of the export structure of the country. As an underdeveloped economy, the structure of the Ethiopian export has been dominated by primary commodities with little manufactured exports. Although efforts have been made to adding value to primary commodities exports, no significant shift has been witnessed in the export structure of the country. This section tries to review Ethiopia's manufactured export development strategies, performances, and constraints.

### 6.2 Manufactured Export Development Strategy

#### 6.2.1 Historical Account

It would seem appropriate to give a brief historical account of the export-led strategy before discussing the Ethiopian strategy. According to the literature, the export-led growth strategy was pioneered by Germany and Japan in the 1950s and 1960s. In the 1970s and 1980s, it was adopted by the East Asian 'tigers' (South Korea, Taiwan, Hong Kong, and Singapore). In 1990, Thailand,

Malaysia, and Indonesia employed it. In the 2000s, China exemplified the paradigm. However, the model has evolved from time to time adjusting to the changing global circumstances and the specific context of a country.

In the case of Germany and Japan, both countries had their own indigenous industrial base, and export growth was driven by an under-valued exchange rate. They also benefited from U.S aid made available after World War II as part of reconstruction and the Cold War. The East Asian countries relied on an under-valued exchange rate and acquisition of foreign technology and this was done via strategic planning. Then other approach ( terms as Mexico's Model), is different from the Asian one in such a way that countries started turning themselves into export production platforms for multinationals rather than developing their own indigenous industrial capacity. This approach represents the beginning of the emergence of a modern era of corporate globalization. As a result, export-led growth came no more as a purely national strategy. Instead, it happened in partnership with developing countries, multinational corporations, and developed economies. The other strategy is the Chinese model, which made three major adjustments to Mexico's model. These include, asymmetric global engagement maintaining high tariffs on import; managed under valuation exchange rate with capital control, and a strategy of building an indigenous technological base via forced technology sharing, joint ventures in which MNCs may be minority shareholders. (Thomas I Palley, 2012)<sup>37</sup>.

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<sup>37</sup> Thomas I Palley, (2012).The Rise and Fall of Export-led Growth, *investigación económica*, Vol. LXXI, 280, abril-junio de 2012, pp. 141-161

## **6.2.2 Ethiopian Manufactured Export Development Strategies**

Having learned from the countries experience, most developing countries have shifted towards adapting export promotion strategy from Import Substitution Industrialization (ISI). It is argued that export expansion leads to better resource allocation, has economies of scale advantage and generates huge employment, improves production efficiency through technological development, and eventually brings about economic growth.

Following the downfall of the regime in May 1991, the then Transitional Government of Ethiopia (TGE) has implemented various liberalization and structural adjustment programs so as to address the internal and external imbalances witnessed during the transition. The overriding development strategy of the country has since been Agriculture Development Led Industrialization (ADLI) and export-led growth. Over the last 15 years, a number of medium term development plans, including the Sustainable Development and Poverty Reduction Program (SDPRP), the Plan for Accelerated and Sustainable Development to End Poverty (PASDEP), and the Growth and Transformation Plan (GTP), have been issued by the country. During this period, export sector has also been given top priority; particular emphasis was being given to exporting manufacturing industries.

Of the major categories, the export development strategy has focused on exporting high-value agricultural products and manufactured goods that are grounded on the country's

comparative advantage, i.e., natural resource and abundant and cheap labour. Of the different manufacturing industries, the focus has been given to labour intensive ones such as food, clothing, textile, leather, and leather products.

The major goal of the export strategy has been diversifying the export base, i.e., diversification into the export of non-traditional commodities and manufactured/processed goods, which otherwise have been exported in raw or semi processed forms, by adding value to them. In this connection, targets were set to shift from the export of raw and semi-processed leather products towards finished leather goods such as shoes, which would fetch hard currency many times higher than if exported in raw or semi processed forms.

### **Export Promotion Tools**

In order to encourage the development of the export sector of the country and attract local and foreign investors into the priority export sectors, the government has been issuing investment policies, laws, proclamations, and directives. These laws have been amended and new ones have been added to them, of course with some time lag, over the last two decades. Moreover, generous incentive packages have been designed and provided. Of the various export promotion tools, the key ones include:

- **Tariff and duty exemption:** All export products are exempt from any taxes as well as export duty payments;

- Duty Drawback, Voucher and Bonded Manufacturing Warehouses incentive scheme;
- With respect to export financing, the following supports were provided:
  - a. Export Credit Guarantee Scheme
  - b. External Loan and Suppliers or Foreign Partners Credit
  - c. Franco Valuta Scheme for Importing of Raw Materials for Export Processing; and
  - d. Retention and Utilization of Export Earnings and Inward Remittances.

In addition, the country has engaged in expanding the socio-economic infrastructure (roads, ICT, energy, etc.) which are required for the development of the competitiveness of the export sector; built industrial parks; and established various industrial development institutions, including textile, leather, etc.

## **6.3 The Performance of Exporting Manufacturing Industries**

### **6.3.1 The Structure of Exporting Manufacturing Industries**

Despite the various supports, the structure of export manufacturing industries has remained more or less the same for a long period of time. The sector has remained dominated by very few manufactured export items. Of the sub-sectors, food, textile, and leather accounted for about 82.1 percent and 84.3 percent of the total manufactured export receipts in 2009/10 and 2014/15, respectively. Export earnings from other sub-sectors have been small and have

shown significant fluctuations during the period. In other words, sub-sectors that have been in the list of exporting enterprises in 2009/10 were non-existent in 2014/15 while those with no history of exporting in noticeable amounts in 2009/10 started exporting in 2014/15, indicating the absence of well engineered export performance during the period.

**Food and Beverage:** The share of food and beverage export earnings from the total manufactured earnings has increased from 23.4 percent in 2009/10 to 32.6 percent in 2014/15. In 2009/10, the most important export items within the sub-sector were dairy products, accounting for about 43.9 percent, whereas in 2014/15 the most important export products were food products n.e.c, accounting for about 41.1 percent. The observed shifts in the importance of one export item to another entail the lack of unwavering and steady promotion of export items already in the market.

**Wearing Apparel:** The share of export receipts from wearing apparel in the total manufactured export declined from 7.4 percent in 2009/10 to 0.3 percent in 2014/15. Of the total wearing apparel sub-sector revenue, the share of export has declined from 12.9 percent in 2009/10 to 2.9 percent in 2014/15, indicating the existence of a possible channelling of exports into the domestic market.

**Textile:** The share of textile in the total manufactured export has declined from 15.8 percent in 2009/10 to 9.4 percent in 2014/15. This is contrary to the overall target for GTP implementation period, the size of FDI flow into the sub-sector, and the overall

expectation from the sub-sector. Of the total textile revenue in 2009/10 and 2014/5, about 9.2 percent and 8.2 percent were exported, respectively. This indicates that the share of export in the total textile declined significantly due to a variety of reasons, of which the relatively high local price of textile products in Ethiopia, which, in turn, is due to high inflation, can be considered as the major one.

**Leather:** The share of leather export in the total manufactured export remained at more or less the same ratio at about 42 percent during the period. Within the leather sub-sector, footwear has started gaining importance. For instance, of the total leather export receipts, the share of footwear has increased from 16.7 percent in 2009/10 to 24 percent in 2014/15, mainly because globally renowned shoe factories joined the local shoe producing sector and the government's policy of restricting the exporting of semi-processed leather products.

**Chemicals:** Of the chemical products, pharmaceuticals, medicinal chemicals, soaps and detergents for cleaning and polishing, perfumes, and toilet preparations have started generating export earnings. In 2009/10, about 96.4 percent of the export of the sub-sector emanated from these products. In 2014/15, these items accounted for almost 100 percent of the export from the sub-sector, indicating the worsening of the concentration of export in the sub-sector.

**Non-metal minerals:** The share of export from non-metallic minerals has increased from 0.23 percent in 2009/10 to 3.5 percent in 2014/15. Of the total export receipts from the non-metallic

mineral sub-sector, about 95.4 percent emanated from cement, lime and plastering products. Export receipts from cement, lime and plastering products have increased from about 0.2 percent of the total export in 2009/10 to 3.3 percent in 2014/15.

**Furniture:** The share of receipts from furniture export was almost nil in 2009/10 but it grew to about 7.1 percent in 2014/15. Likewise, export of furniture had almost no contribution to the sub-sector's revenue in 2009/10, but in 2014/15 it accounted for 5.7 percent of the export revenue.

Table 6.1: Total and export revenues, by sub-sector, for the years 2009/10 and 2014/15

Sub-sectors	2009/10					2014/15				
	Export, in 000 birr	Total revenue, in 000 birr	Export/total revenue, (in %)	Share in total export of the sector	Export share within each sub-sector	Export, in 000 birr	Total revenue, in 000 birr	Export/ total revenue, (in %)	Share in total export of the sector	Export share within each sub-sector
<b>FOOD AND BEVERAGES</b>	<b>277,901</b>	<b>15,578,046</b>	<b>1.78</b>	<b>23.41</b>		<b>1,754,387</b>	<b>49,537,589</b>	<b>3.54</b>	<b>32.59</b>	<b>100.00</b>
Processing and preserving of meat, fruit and vegetables	55,434	419,668	13.21	4.67	19.95	630,435	1,550,063	40.67	11.71	35.93
Grain mill products	56,933	2,783,708	2.05	4.80	20.49	242,275	8,528,847	2.84	4.50	13.81
Dairy products	122,107	623,223	19.59	10.28	43.94	1,050	722,148	0.15	0.02	0.17
Bakery products	378	981,878	0.04	0.03	0.14	7,134	2,114,785	0.34	0.13	0.41
Sugar and sugar confectionery	16,457	3,640,078	0.45	1.39	5.92	770	8,513,952	0.01	0.01	0.04
Food products n.e.c.	11,876	217,121	5.47	1.00	4.27	719,911	1,555,538	46.28	13.37	41.03
Distilling, rectifying and blending of spirits	3,886	416,685	0.93	0.33	1.40	28,288	1,003,540	2.82	0.53	1.61
Malt liquors and malt	3514	3,266,570	0.11	0.30	1.26	122,790	14,251,733	0.86	2.28	7.00
<b>TOBACCO</b>	<b>4,316</b>	<b>960,936</b>	<b>0.45</b>	<b>0.36</b>		<b>1,566</b>	<b>1,762,630</b>	<b>0.09</b>	<b>0.03</b>	

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Page 6.1 cont'd										
<b>TEXTILES</b>	<b>187,697</b>	<b>2,042,851</b>	<b>9.19</b>	<b>15.81</b>		<b>507,590</b>	<b>6,162,591</b>	<b>8.24</b>	<b>9.43</b>	
Spinning, weaving and finishing of textiles	187,697	1,909,427	9.83	15.81	100.00	490,086	5,573,000	8.79	9.11	96.55
<b>WEARING APPAREL</b>	<b>87,568</b>	<b>677,998</b>	<b>12.92</b>	<b>7.38</b>		<b>17,525</b>	<b>599,591</b>	<b>2.92</b>	<b>0.33</b>	
<b>LEATHER</b>	<b>497,046</b>	<b>1,370,306</b>	<b>36.27</b>	<b>41.86</b>		<b>1,274,136</b>	<b>5,327,906</b>	<b>42.68</b>	<b>42.25</b>	
Tanning and dressing of leather, luggage and handbags	413,856	859,383	48.16	34.86	83.26	1,728,816	2,978,656	58.04	32.12	<b>76.02</b>
Footwear	83,190	510,923	16.28	7.01	16.74	545,320	2,349,250	23.21	10.13	23.98
<b>WOOD</b>	<b>84</b>	<b>173,824</b>	<b>0.05</b>	<b>0.01</b>		<b>15,432</b>	<b>559,983</b>	<b>2.76</b>	<b>0.29</b>	
<b>PAPER &amp; PRINTING</b>	<b>0</b>	<b>1573595</b>	<b>0.00</b>	<b>0.00</b>		<b>8,576</b>	<b>3,897,254</b>	<b>0.22</b>	<b>0.16</b>	
<b>CHEMICALS &amp; CHEMICAL PRODUCTS</b>	<b>36,044</b>	<b>3,536,071</b>	<b>1.02</b>	<b>3.04</b>		<b>127,851</b>	<b>8,996,521</b>	<b>1.42</b>	<b>2.38</b>	
Pharmaceuticals, medicinal chemicals	9,128	651,216	1.40	0.77	25.32	91,151	908,925	10.03	1.69	<b>71.29</b>
Soap and detergents cleaning and polishing, perfumes and toilet preparations	25,608	1,518,949	1.69	2.16	71.05	36,636	4,660,863	0.79	0.68	28.66
<b>RUBBER AND PLASTIC</b>	<b>3,543</b>	<b>2,737,547</b>	<b>0.13</b>	<b>0.30</b>		<b>26,564</b>	<b>8,840,883</b>	<b>0.30</b>	<b>0.49</b>	
Plastic products	3,543	2,590,118	0.14	0.30	100.00	26,564	8,178,007	0.32	0.49	100.00
<b>OTHER NON-METALLIC MINERALS</b>	<b>2,714</b>	<b>4,147,507</b>	<b>0.07</b>	<b>0.23</b>		<b>185,836</b>	<b>15,338,180</b>	<b>1.21</b>	<b>3.45</b>	

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Cement, lime and plaster	2,399	3,456,962	0.07	0.20	88.39	177,245	8,761,830	2.02	3.29	<b>95.38</b>
<b>BASIC IRON &amp; STEEL</b>	38,076	1,572,004	2.42	3.21		757	12,457,746	0.01	0.01	
<b>FABRICATED METALS</b>	47,885	3,137,086	1.53	4.03		55,081	6,313,770	0.87	1.02	
Structural metal products, tanks, reservoirs and containers of metal	12,118	2,251,579	0.54	1.02	7.34	53,134	6,183,610	0.86	0.99	96.47
other fabricated metal products	35,767	672,699	5.32	3.01	74.69	1,947	111,811	1.74	0.04	3.66
<b>MACHINERY &amp; EQUIPMENT N.E.C.</b>	4,400	216,040	2.04	0.37		27,397	2,202,168	1.24	0.51	
Accumulators, primary cells and primary batteries	0	2725	0.00	0.00	0.00	27,397	118,441	23.13	0.51	100.00
Other general purpose machinery	4400	213,315	2.06	0.37			784,056	0.00	0.00	0.00
<b>MOTOR VEHICLES, TRAILERS</b>	0	751,648	0.00	0.00			7,571,902	0.00	0.00	0.00
<b>FURNITURE; N.E.C.</b>	19	772,099	0.00	0.00		379,847	6,696,640	5.67	7.06	
<b>TOTAL</b>	1,187,292	39,247,557	3.03	100.00		5,382,546	136,265,352	3.95	100.00	

### **6.3.2 Manufactured Exports Coverage of Raw Materials Imports<sup>1</sup>**

Here an attempt is made to what extent the receipt from manufactured exports covers the cost of raw materials imported for the sector. As can be seen from Table 6.2, the total manufactured export receipts have covered, on average, only about 25 percent per annum of its import bill for raw materials during the first GTP implementation period. This is higher than the base case (12 percent), indicating some improvement during the implementation period. The overall assessment shows that about two-thirds of the import bill of raw materials for manufacturing industries has been financed by export receipts from other sectors or other types of financings.

The coverage for importing raw materials, however, vary from one sub-sector to the other. During the implementation period, the priority sub-sectors, i.e., food, textile and leather, have registered, on average, a ratio of about 30.5 percent, 60.2 percent and 204.9 percent per annum, respectively. The three sub-sectors have registered better performance compared with the base year (2009/10) figure of 16.3 percent, 47.3 percent and 172.9 percent, respectively.

**Table 6.2: Manufacturing export receipts and cost of imported raw materials**

Sub-sectors	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
<b>Export receipts, in '000 Birr</b>						
Food & Beverages	277,901	1,219,662	2,048,481	1,630,395	1,535,136	1,754,387
Tobacco	4,316	4,316	4,316	4,585	4,585	1,566
Textiles	187,697	189,853	1,331,654	1,630,024	1,837,914	507,590
Wearing Apparel	87,568	13,040	229,041	189,457	37,010	17,525
Leather	497,046	1,601,477	2,793,780	4,308,245	3,758,091	2,274,136
Wood & Products of Wood	84	0	0	527	527	15432
Paper & Printing	0	0	100662	55964	420	8576
Chemicals	36,044	127,750	130,427	90,673	70,207	127,851
Rubber & Plastic	3,543	358,023	5,768	611,540	175,590	26,564
Other Non-Metallic Minerals	2,714	29,232	9,689	18,966	95,161	185,836
Basic Iron & Steel	38,076	32,463	0			757
Fabricated Metal, Except Machinery & Equipment	47,885	2,963	10,775	24,242	104,280	55,081
Machinery & Equipment N.E.C.	4,400	0	0		98,358	27,397
Motor Vehicles, Trailers & Semi-Trailer		0	0			
Furniture; N.E.C.	19	0	231	36666	534	379847
<b>Total</b>	<b>1,187,292</b>	<b>3,578,779</b>	<b>6,664,824</b>	<b>8,601,284</b>	<b>7,717,813</b>	<b>5,382,546</b>

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Sub-sectors	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
<b>Cost of imported raw materials, in '000 Birr</b>						
Food & Beverages	1705870	2399428	7915132	6,855,773	7,178,680	5,933,667
Tobacco	34771	305123	305123	786,413	786,413	377,401
Textiles	394357	356288	4342325	3,638,833	1,640,681	2,312,305
Wearing Apparel	158930	55347	1153537	106,043	196,977	142,856
Leather	287535	474210	4085459	3,410,118	1,309,624	900,989
Wood & Products of Wood	21269	77772	1072983	1,159,981	68,129	66,916
Paper & Printing	465594	709327	724473	1,003,598	1,704,328	1,320,742
Chemicals	1568031	1712053	3547375	3,626,732	3,982,971	3,804,265
Rubber & Plastic	1307171	1474239	2655037	3,448,832	3,569,340	5,617,702
Other Non-Metallic Minerals	1032658	300659	774804	881,283	410,761	1,229,941
Basic Iron & Steel	896116	1206458	1434977	2,047,036	3,886,549	6,589,203
Fabricated Metal, Except Machinery & Equipment	1642633	1733716	3795074	3,876,975	4,913,745	1,847,582
Machinery & Equipment N.E.C.	103483	90039	800	65,896	315,120	1,260,531
Motor Vehicles, Trailers & Semi-Trailer	390778	408925	265637	2,404,877	2,799,210	3,090,729
Furniture; N.E.C.	181081	120776	351477	513,824	1,829,003	2,518,959
<b>Total</b>	<b>10190277</b>	<b>11424360</b>	<b>32424212</b>	<b>33,826,214</b>	<b>34,591,531</b>	<b>37,013,787</b>

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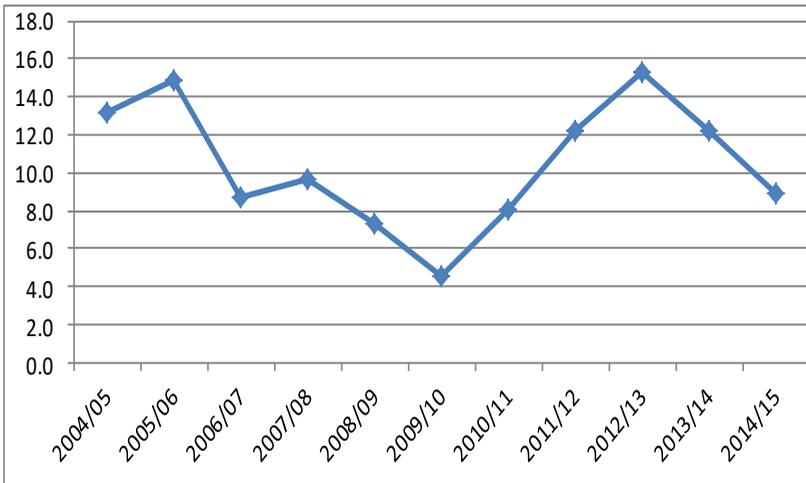
<b>Sub-sectors</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>
<b>Export receipt to import bill for raw materials, in %</b>						
Food & Beverages	16.29	50.83	25.88	23.78	21.38	29.57
Tobacco	12.41	1.41	1.41	0.58	0.58	0.41
Textiles	47.60	53.29	30.67	44.80	112.02	21.95
Wearing Apparel	55.10	23.56	19.86	178.66	18.79	12.27
Leather	172.86	337.71	68.38	126.34	286.96	252.40
Wood & Products of Wood	0.39	0.00	0.00	0.05	0.77	23.06
Paper & Printing	0.00	0.00	13.89	5.58	0.02	0.65
Chemicals	2.30	7.46	3.68	2.50	1.76	3.36
Rubber & Plastic	0.27	24.29	0.22	17.73	4.92	0.47
Other Non-Metallic Minerals	0.26	9.72	1.25	2.15	23.17	15.11
Basic Iron & Steel	4.25	2.69	0.00	0.00	0.00	0.01
Fabricated Metal, Except Machinery & Equipment	2.92	0.17	0.28	0.63	2.12	2.98
Machinery & Equipment N.E.C.	4.25	0.00	0.00	0.00	31.21	2.17
Motor Vehicles, Trailers & Semi-Trailer	0.00	0.00	0.00	0.00	0.00	0.00
Furniture; N.E.C.	0.01	0.00	0.07	7.14	0.03	15.08
Total	11.65	31.33	20.56	25.43	22.31	14.54

**Source:** CSA

### 6.3.3 Trends in Value-Added

Figure 6.1 below shows the trend in the share of manufactured export receipts (value added/processed exports) in the total merchandize export receipts of the country. As shown, the share of manufactured export receipts, which was about 13.1 percent in 2004/05, has been fluctuating over the period (2004/05 - 2014/15) and reached 8.9 percent at the end of the GTP implementation period. This shows the relative decline in the share of export receipts from manufactured goods in the total export earning of the country. This goes contrary to the target of diversifying the primary export into processed products. However, significant improvements have been registered regarding the increase in volume and value of exports of finished leather products.

**Figure 6.1: Trends in the share of manufactured exports to total merchandize exports, in %**



**Source:** NBE for total merchandize export and CSA for LMSMI exports

### **6.3.4 Constraints to the Development of Manufactured Exports**

Although efforts have been made in promoting exports of the country so that it could shift to value-added exports through the use of different promotion tools, satisfactory results have not been registered during the first GTP implementation period owing to a variety of constraints. These include the following:

- Supply side bottleneck: the country's export has continued suffering from supply side constraints. It has not been able to produce quality products in large volume; unable to diversify into high value end; is dependent on primary agricultural commodities which, in turn, are produced at the mercy of nature ;
- on the demand side –the country exports goods which have a low income elasticity, continued decline in the prices for its exports, and limited geographic destinations for its exports;
- Technology: lack of acquiring up-to-date technology thereby constraining quality finishing by local industries as required by global standards;
- Weak technological capabilities at firm, sector, and national levels;
- economies of scale: low volume of production, which denies the sector the advantage of economies of scale from mass production and export and low competitiveness in the world market place;

- lack of industrial raw materials at the required quantity, quality, and time, and fluctuation in the price of industrial raw material;
- high import dependence and shortage of hard currency to import raw materials and technologies;
- poor linkage of the manufacturing sector with the agriculture sector;
- poor logistics service and trade facilitation;
- insufficient transport infrastructure, communication, and energy supply ;
- high domestic price of products compared with export price thereby leading to the channelling of export products into the local market; hence reducing export receipts.
- policy implementing capacity problems and coordination failure at various levels of governments;
- limited industrial management capability of the private sector to bring about effective production processes and technological progress in order to be competitive in the international market place;
- information gaps on technology, market, raw material, foreign trade opportunities, etc.;
- Lack of export marketing skills and market promotion schemes; and inadequately trained manpower in international marketing intelligence; and
- insufficient incentive scheme and lack of dynamisms in the reviewing of the incentive in place and introducing new supports that is able attract investors into the sector

### **6.3.5 Recommendations**

In order to address the various constraints hampering the development of the exporting manufacturing industries of the country, the study put forward the following recommendations to be considered by the concerned stakeholders:

- The country has to address the constraints facing the development of the sector, discussed above;
- Review export development policy, check what has worked and what not and update it so that it could take the current local and global dynamism into account;
- Revise the export incentives package of the country in such a way that relatively better incentives be given to exporting manufacturing industries;
- The country has to issue FDI policy for the sector. The policy has to ensure that FDI plays its expected role in developing the sector, addressing the problem of lack of access to foreign capital and transferring technologies to the domestic economy;
- Undertake a rigorous study and identify the country's position in the global value chain in different production activities and join the global , and
- Expand coverage of the various infrastructures and improve their quality from time to time.



## **Chapter VII**

# **International Migration from and Remittance Flows to Ethiopia: Recent Trends and Patterns**

### **7.1 Introduction**

#### **7.1.1 Overview of Global Migration and Remittance Flows**

By mid-2015, the number of documented international migrants was estimated to be about 244 million (UNPD, 2015). The United States was the top migrant destination, followed by Saudi Arabia, and Germany in that order. Emigrants could contribute to the growth and development of economies of their home-countries through several channels including, for instance, remittance inflows, sharing knowledge and experiences, trade, and so forth. According to World Bank's Migration and Remittances Factbook 2016 (World Bank, 2016), worldwide remittance flows were estimated to have surpassed US dollars 601 billion in 2015, out of which developing countries received about US dollars 441 billion. In the same year, the top-five recipients of recorded remittances were India, China, the Philippines, Mexico and France (World Bank, 2016).

Over the past years, the size of emigrants' private remittance transfers has rapidly increased and become an important source of external finance for many developing countries (Irving *et al.*, 2010).

Migrants' remittance inflows to developing countries have consistently surpassed official development aid (ODA) over the last two decades and can even exceed the value of foreign direct investment (FDI) if China is excluded (World Bank, 2016). It is also more stable than other sources of external flows in developing countries.

### **7.1.2 Global Initiatives for International Migration and Remittance Flows**

Although recorded international remittance is large, the remittance market is still not efficiently working for migrants and remittance recipients. Among others, the global remittance market is characterized by high remittance transaction costs, limited competition among remittance service providers, limited use of information and communication technologies for remittance transfers, and wide-spread use of informal remittances. Recognizing this challenge, recent years have seen a growing global attention to international migration and remittance flows to developing countries (see e.g. UN, 2015). For instance, according to UN's Sustainable Development Goals (SDGs), Target No. 10.7, member countries have agreed to “facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies.” In order to increase flows of remittances across-borders, Target No. 10.7c of the UN's SDGs further stipulates to “... reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent” by 2030.

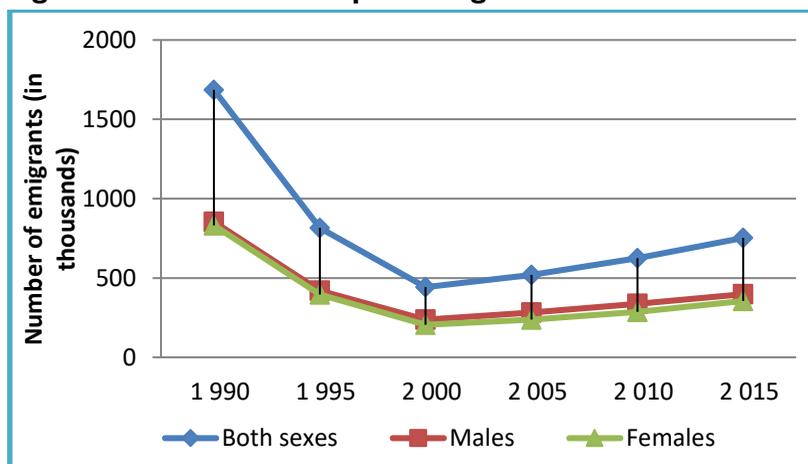
In 2009, at the L'Aquila summit, the G8 countries endorsed the target of decreasing the global average cost of sending remittances from 10% to 5% in five years (5X5 Objective). In 2010, the G20 countries also showed further commitment to reduce remittance transfer costs (World Bank, undated).

## 7.2 Size of Ethiopia's Emigrants and their Destinations

### 7.2.1 Size of Ethiopian Emigrants

As of mid-2015, Ethiopia had close to eight hundred thousand documented or formal emigrants around the world (UNPD, 2015). The true number of Ethiopian emigrants is believed to be much larger than this estimate due to the presence of large numbers of undocumented Ethiopian migrants living abroad, especially in the Gulf States including Saudi Arabia.

**Figure 7.1: Stock of Ethiopian emigrant**

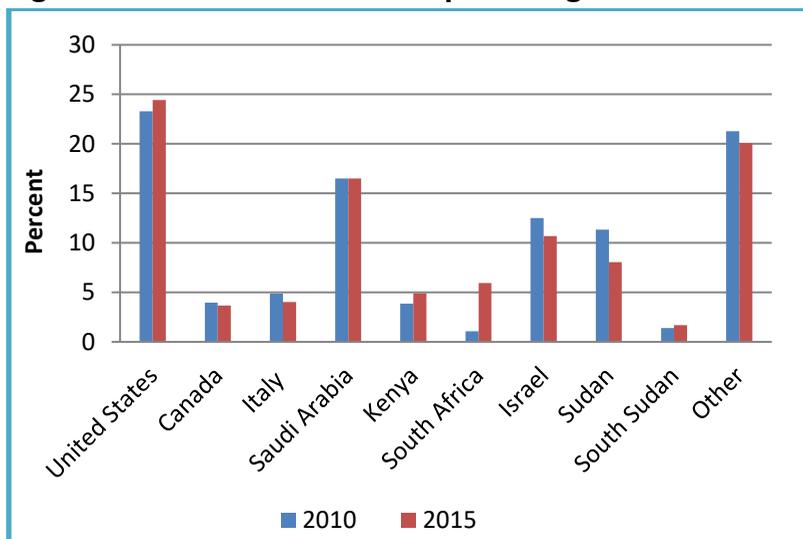


Source: UNDP

Figure 7.1 presents trends in the number of Ethiopian emigrants. As the Figure shows, the number of recorded Ethiopian emigrants has followed a U-shaped growth over the last three decades. More specifically, the number of Ethiopian emigrants had reached its peak toward the end of the military regime (early 1990s) and continued to decrease thereafter until around the mid-2000s when the trend started to reverse. In terms of gender composition, females constitute nearly one-half of all Ethiopian emigrants living abroad.

## **7.2.2 Destinations of Ethiopian Emigrants**

Figure 7.2 shows the main destination countries for Ethiopian emigrants. With a few exceptions, the major destination countries for Ethiopian emigrants remained to be largely similar. For instance, the United States, Saudi Arabia, Israel, Sudan and Italy were the top five destinations of Ethiopian emigrants in both 2010 and 2015. However, as can be observed in the figure, over the same period, the share of Ethiopian emigrants who moved to destinations within Africa has rapidly increased. More specifically, Kenya and South Africa have increasingly hosted larger shares of Ethiopian emigrants in 2015 than in 2010.

**Figure 7.2: Destinations of Ethiopian Emigrants**

Source: UNPD.

### 7.3 International Remittances from Private Individuals to Ethiopia

According to the World Bank's Migration and Remittances Factbook 2016 (World Bank, 2016), in 2015, Ethiopia was one of the top ten remittance receiving countries in sub-Saharan Africa.<sup>38</sup> As in other developing countries, international remittance plays a key role in the country's economy (World Bank, 2016; NBE, 2017). However, the estimated value of private remittance inflows to Ethiopia varies by source. For instance, the World Bank and the

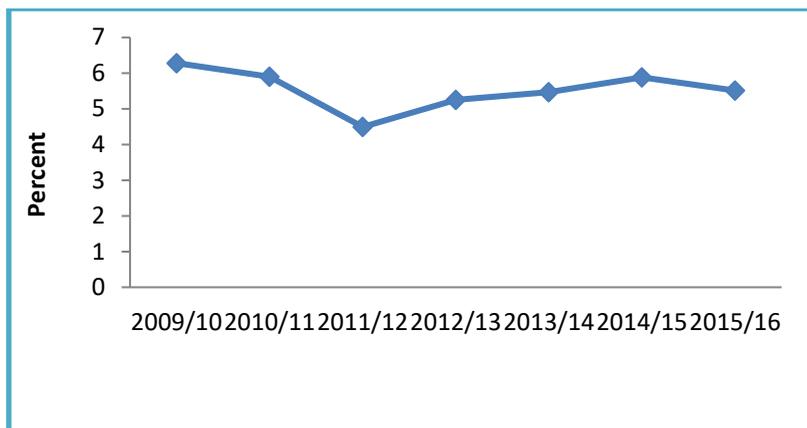
<sup>38</sup> More specifically, these countries included Nigeria (\$20.8bn), Ghana (\$2.0bn), Senegal (\$1.6bn), Kenya (\$1.6bn), South Africa (\$1.0bn), Uganda (\$0.9bn), Ethiopia (\$0.6bn), Liberia (\$0.5bn), and Sudan (\$0.5bn).

National Bank of Ethiopia have different estimates of remittances private individuals send to Ethiopia. According to official data from the National Bank of Ethiopia (NBE, 2016), the amount of private international remittance inflows into the country reached close to 4 billion US dollars in 2015/16. However, the World Bank's estimate of migrant remittances to the country for a similar period is only about 772 US dollars. The divergence between the two estimates might be due to the methods employed by the two sources.

### **7.3.1 Role of Private Individuals' International Remittances for Ethiopia's Economy**

As stated earlier, international remittance in Ethiopia has a significant role in the country's economy (see Figure 7.3). According to data from the National Bank of Ethiopia, remittances sent to Ethiopia each year between 2019/10 and 2015/16 amounted to about 4 to 6 percent of the country's gross domestic product (GDP).

**Figure 7.3: Remittance Transfers from Private Individuals as a Share of the GDP.**



**Source:** Own analysis based on data from the National Bank of Ethiopia.

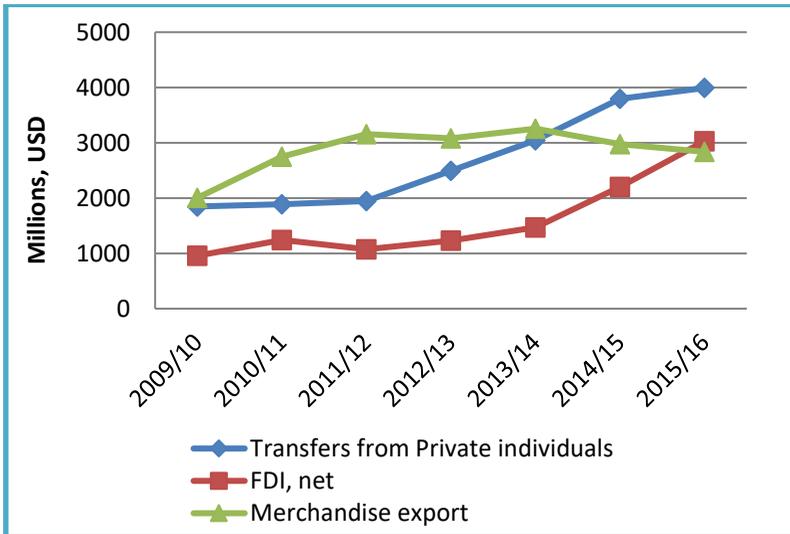
Figure 7.4 shows trends in distributions of the values of net foreign direct investment, merchandise exports and remittances sent from private individuals to Ethiopia. As can be noticed from the figure, international remittances sent home by Ethiopian emigrants is an increasingly important source of foreign exchange for the country. For instance, whereas the value of remittance inflows more than doubled during the period 2009/10 to 2015/16, the value of merchandise exports rose only by about 42% over the same time period.

A closer look into the data also reveals that the recorded value of total merchandise exports in 2015/16 was lower as compared to the value of merchandise exports in 2011/12. In contrast, private individuals' remittances to Ethiopia show a consistent rise during this period and had actually surpassed the value of merchandise exports since 2014/15. In 2015/16, remittances from private

individuals brought about 40% more foreign exchange earnings than did the export of merchandise from the country (Figure 7.4). The observed rapid increment in remittance inflows to the country in recent years might be due to a combination of global measures taken to reduce remittance transaction costs and also the commitment shown by the Ethiopian government to reduce transaction costs in the country.

The value remittances sent to Ethiopia by private individuals had also been consistently higher than the value of net foreign direct investment (FDI) in the country. In 2015/16, private remittance inflows brought to the country around 32% more foreign exchange than did FDI.

**Figure 7.4: Trends in size of remittance inflows as compared to other external sources**

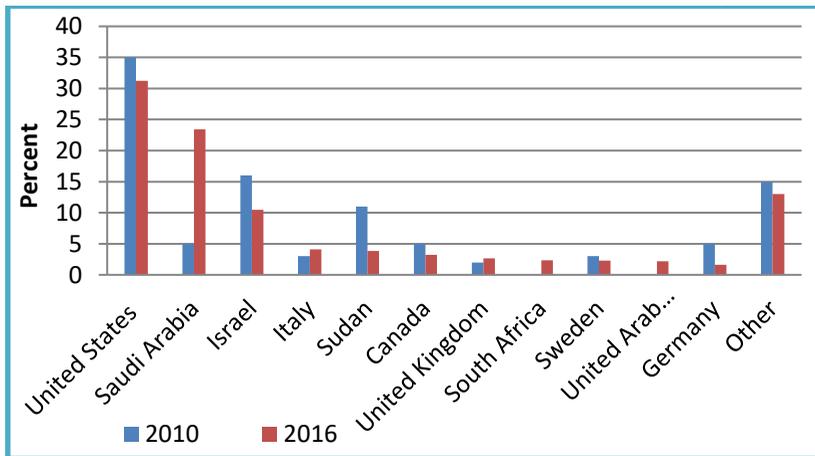


**Source:** National Bank of Ethiopia.

### 7.3.2 International Remittance Sending Countries to Ethiopia

Published data of the National Bank of Ethiopia on private remittances does not show which country has sent the remittances to the country. Therefore, we resorted to using data from the World Bank in order to understand trends in relative contributions of different countries which send remittances to Ethiopia. Figure 7.5 shows the results. As would be expected, there is a strong positive correlation between the number of documented Ethiopian emigrants found in a given country and the share of documented emigrants’ remittance transfers sent home from that country. As already described, in 2015, the largest stock of documented Ethiopian emigrants was found in the United States followed by Saudi Arabia and Israel.

**Figure 7.5: Relative composition and trend of personal international remittance flows to Ethiopia**



Source: World Bank

Likewise, in 2016, close to 60% of remittance inflows to Ethiopia were sent from these three countries. However, as can be seen in the Figure, the trend in the relative importance of countries as a source of remittances from emigrants has rapidly changed in recent years.

## **7.4 Channels and Costs of International Remittance Transfers**

### **(a) Remittance Channels**

International remittances reach their recipients through official (formal) or informal channels. Formal remittance service providers or channels are officially registered or licensed entities and could include banks, money transfer operators and post offices. Any other remittance service providers are regarded as informal channels (Kosse and Vermuelen, 2014). Informal or unregistered remittances are transferred through business people, friends and relatives, or oneself.

A migrant's decision to use a formal or informal remittance channel can be influenced by several factors from both the sending and receiving end. According to a recent finding of the global survey of Central Banks of several developing countries, including Ethiopia (Irving *et al.*, 2010), high cost was cited as the single most important factor hindering the use of formal remittance channels for remittance transfers. Other factors inhibiting the use of formal remittance channels included sender's/recipient's lack of access to a bank account, absence of a bank branch near the beneficiary, mistrust or lack of information on electronic transfers, sender's/recipients lack of valid ID, mistrust of formal financial

institutions, and exchange controls (Irving *et al.*, 2010). The same study also shows that these variables were limiting factors more in sub-Saharan Africa than in the rest of the world. According to Freund and Spatafora (2005), remittances are mis-recorded in the balance of payments (BOPs) as “errors and omissions”.

Informal remittance channels are believed to transfer a large but unknown amount of remittance into developing countries, including Ethiopia. Globally, estimates on the relative value of remittances flowing through informal channels are highly variable. For instance, according to Freund and Spatafora (2005), the value of informal remittance to developing countries is about 35-75 percent of the value of official remittances to these countries. According to IOM (2017), the size of informal remittance from Ethiopian emigrants is estimated to be about 78% of formal remittances to the country.

### **(b) Costs of International Remittance Transfers**

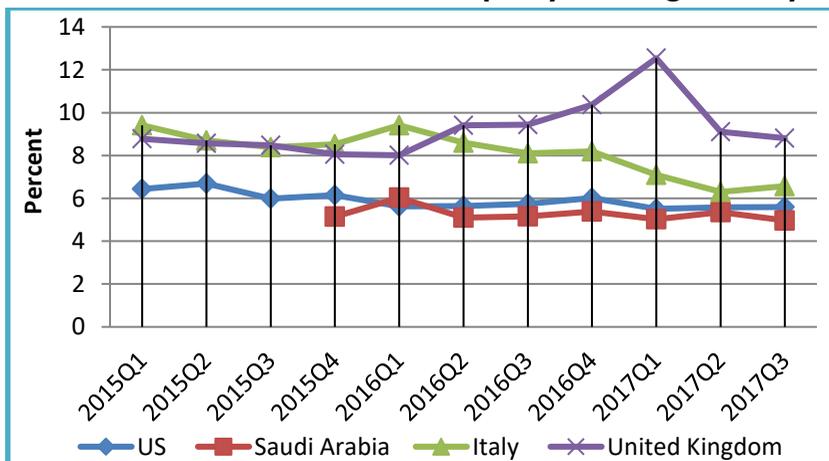
Although it still remains high, global average cost of remittance transfers through official channels has rapidly declined. For instance, according to IFAD (2017) estimates, the cost of transferring US dollars 200 decreased from around US dollars 40 twenty years ago to about US dollars 15 around June 2017. An increase in the size of remittance flows, a growing competition among remittance service providers, and the use of advanced technologies for remittance transfers were among the main drivers of reduced costs of remittance transfers in recent years (IFAD, 2017).

Figure 7.6 presents the trends in costs of remittance from main remittance-corridors to Ethiopia. As the Figure shows, as of the third quarter of 2017 (2017Q3), remittance costs in the United

Kingdom-Ethiopia and Italy-Ethiopia remittance corridors were higher than the average cost of sending money to other countries from Italy (6.57% vs. 5.98%) and the United Kingdom (8.8% vs. 7.01%) (World Bank, 2017). The costs of remittance transfers from Saudi Arabia and the United States to Ethiopia were relatively cheaper and also less than the costs of transferring remittances to other countries from Saudi Arabia (4.97% vs. 5.1%) and from the United States (5.6% vs. 5.71%). As described earlier, both the United Kingdom and Italy are small volume remittance corridors to Ethiopia. As a consequence, RSPs do not compete for customers on price (DMA Global, 2017).

On average, in third quarter of 2017, costs of remitting US dollars 200 to Ethiopia were about 5% and 6% of the amount sent, respectively, from Saudi Arabia and from the United States.

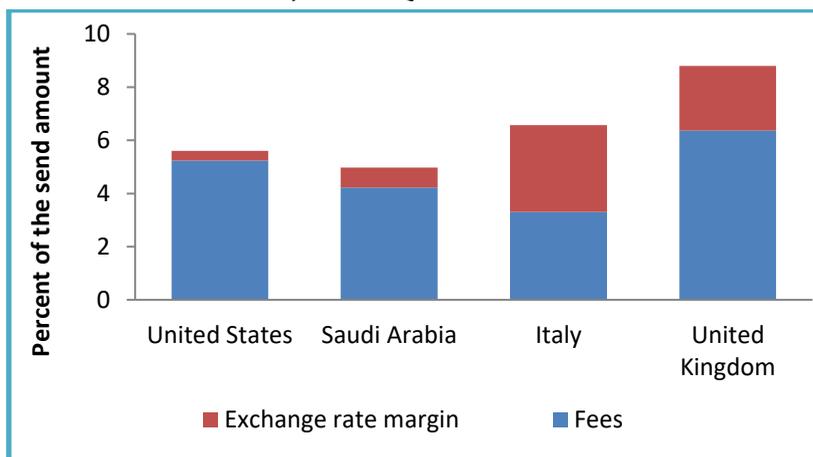
**Figure 7.6: Average Cost of Transferring USD 200 in Remittances to Ethiopia by Sending Country.**



Source: Own analysis based on World Bank’s Remittance Prices database.

Figure 7.7 shows the composition of the total costs of sending money in the third quarter of 2017 from four main remittance sending countries to Ethiopia. Despite their relative size, both fees and foreign exchange rate margins constitute the total cost of remittance transfers. As can be observed in the Figure, fees paid by the remitter constituted the bulk of the total cost of sending money to Ethiopia especially from the United States and Saudi Arabia. However, costs of sending remittance from Italy to Ethiopia and from the United Kingdom to Ethiopia were significantly influenced by exchange rate margins, caused by Euro-Ethiopian Birr and UK Pound-Ethiopian Birr exchange rate volatility during the transaction period.

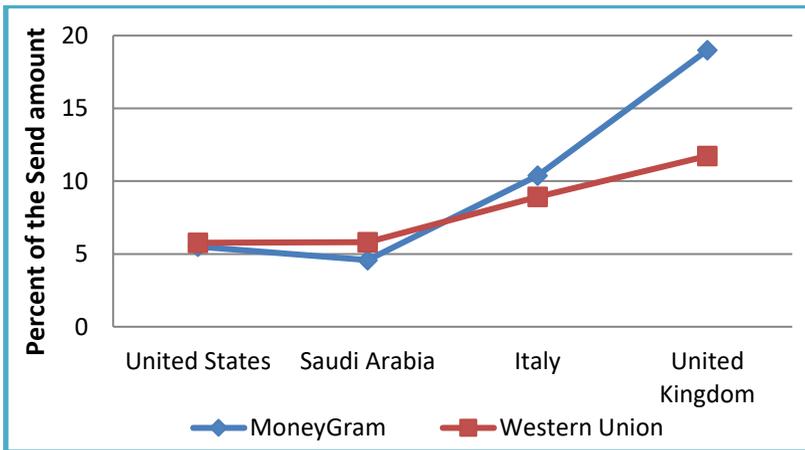
**Figure 7.7: Average Cost of Transferring USD 200 in remittances to Ethiopia by Sending Country in 2017, Third Quarter.**



**Source:** Own analysis based on World Bank's Remittance Prices Worldwide database, 2017, third quarter.

The cost of sending remittances to Ethiopia also varies by the type of remittance service providers (RSPs). For instance, in the third quarter of 2017, the cost of sending remittance from the United States, Saudi Arabia, Italy and the United Kingdom to Ethiopia showed considerable variation between Western Union and MoneyGram. However, as can be seen in the Figure, the cost variations between the two RSPs were the lowest in the United States and the highest in the United Kingdom.

**Figure 7.8: Costs of Sending Remittances by Type of RSP and Country.**



**Source:** Own Analysis based on World Bank’s Remittance Prices Worldwide database, 2017, third quarter.

### 7.5 Summary

International migration from Ethiopia has followed a U-shaped growth rate over the past two-three decades. The number of

documented Ethiopians living abroad rapidly decreased and reached its lowest level around the mid-2000s. Then, this trend started to reverse and as of the mid-2015, the country had over one million documented emigrants living abroad. At the national level, remittances generated by Ethiopian emigrants abroad has become an important source of income for Ethiopia. As of 2015/16, remittance transfers by private individuals were estimated to be around 5% of the country's GDP. Moreover, the value of remittances from private individuals to Ethiopia was larger than both the value of the total merchandise exports from the country and that of net FDI in the country.

However, there are several factors that limit untapped potentials of remittances from international migrants for Ethiopia's economic growth and development. First, little is known regarding the management and use of remittances at the individual and household level. Second, it is perceived that a larger share of remittances flows through unofficial or informal means to Ethiopia. Previous empirical studies have shown that widespread use of informal remittance channels is associated with several factors. Among others, these factors include the high number of undocumented Ethiopian emigrants living abroad, the high transaction costs of formal channels owing to limited competition among RSPs, and inadequate use of information and communication technologies, and recipients' limited access to formal financial institutions (e.g. banks). It is, therefore, necessary to exert continued efforts to overcome these and other related challenges from both sides- remittance senders and remittance recipients- in order to improve inflows of international remittances to Ethiopia.

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**Annex Table 2.1: Regional disparity in grain production and productivity**

	Grain	Grain	Grain	Grain
	2016/17	2016/17	2016/17	2016/17
	Area (ha)	Production (qt.)	Area (% share)	Production (% share)
Tigray	936,908	18,448,000	7.5	6.4
Afar	8,215	183,745	0.1	0.1
Amhara	4,443,390	95,282,956	35.3	32.8
Oromia	5,712,960	143,893,654	45.4	49.6
Somali	75,906	1,453,703	0.6	0.5
B. Gumuz	250,337	5,409,168	2.0	1.9
SNNPR	1,116,029	25,134,237	8.9	8.7
Gambella	7,271	157,997	0.1	0.1
Harari	11,487	195,291	0.1	0.1
Dire Dawa	11,601	226,862	0.1	0.1
Ethiopia	12,574,104	290,385,613	100	100

**Source:** Computed based on CSA (2017)

**Annex Table 2.2: Regional disparity in Tef production and productivity**

	<i>Tef</i>	<i>Tef</i>	<i>Tef</i>	<i>Tef</i>
	2016/17	2016/17	2016/17	2016/17
	Area (ha)	Production (qt.)	Productivity and productivity disparity (qt./ha)	Production (% share)
Tigray	167,584	2,410,117	14.4	4.8
Afar	0	0		
Amhara	1,137,844	19,328,574	17.0	38.5
Oromia	1,441,030	24,737,964	17.2	49.3
Somali	0	0		
B. Gumuz	24,433	303,184	12.4	0.6
SNNPR	246,099	3,412,548	13.9	6.8
Gambella	0			
Harari				
Dire Dawa				
Ethiopia	3,017,914	50,204,400	16.6	100.0

**Source:** Computed based on CSA (2017)

**Annex Table 2.3: Regional disparity in Maize Production and Productivity**

	Maize 2016/17	Maize 2016/17	Maize 2016/17	Maize 2016/17
	Area (ha)	Production (qt.)	Productivity and productivity disparity (qt./ha)	Production (% share)
Tigray	66,452	1,698,014	25.6	2.16
Afar	4,665	135,533	29.1	0.17
Amhara	519,496	19,629,372	37.8	25.01
Oromia	1,142,654	43,620,969	38.2	55.59
Somali	24,767	515,943	20.8	0.66
B. Gumuz	49,115	1,884,816	38.4	2.40
SNNPR	322,714	10,857,256	33.6	13.84
Gambella	4,062	91,449	22.5	0.12
Harari	1,408	33,402	23.7	0.04
Dire Dawa	240	4,991	20.8	0.01
Ethiopia	2,135,572	78,471,747	36.7	100.00

**Source:** Computed based on CSA (2017)

**Annex Table 2.4: Regional disparity in wheat production and productivity**

	Wheat 2016/17	Wheat 2016/17	Wheat 2016/17	Wheat 2016/17
	Area (ha)	Production (qt.)	Productivity and productivity disparity (qt./ha)	Production (% share)
Tigray	107,724	2,128,673	19.8	4.69
Afar				
Amhara	554,284	13,190,620	23.8	29.07
Oromia	898,456	26,640,244	29.7	58.71
Somali	0	0		
B. Gumuz	2,081	*		
SNNPR	127,212	3,287,592	25.8	7.24
Gambella				
Harari				
Dire Dawa				
Ethiopia	1,696,083	45,378,523	26.8	99.71

**Source:** Computed based on CSA (2017)

**Annex Table 2.5: Regional disparity in sorghum production and productivity**

	Sorghum 2016/17	Sorghum 2016/17	Sorghum 2016/17	Sorghum 2016/17
	Area (ha)	Production (qt.)	Productivity and productivity disparity (qt./ha)	Production (% share)
Tigray	253,757	7,120,054	28.1	15.0
Afar	1,556	33,383	21.5	0.1
Amhara	670,114	16,402,994	24.5	34.5
Oromia	739,782	19,166,012	25.9	40.3
Somali	40,388	806,741	20.0	1.7
B. Gumuz	58,378	1,421,725	24.4	3.0
SNNPR	97,489	2,168,942	22.2	4.6
Gambella	2,847	61,687	21.7	0.1
Harari	7,152	130,527	18.3	0.3
Dire Dawa	10,508	208,890	19.9	0.4
Ethiopia	1,881,971	47,520,956	25.3	100.0

**Source:** Computed based on CSA (2017)

**Annex Table 2.6: Crop production and utilization (2016/17 crop year)**

Crop type	Total production (million qts.)	Percent Utilized for					
		Household consumption	Seed	Sale	Wages in kind	Animal feed	Others
Grain Crops	266,828,807	61.73	12.41	22.18	0.87	0.48	2.33
Cereals	231,287,971	66.79	12.13	16.88	0.96	0.65	2.59
Pulses	27,692,743	57.67	13.68	26.04	0.59	0.14	1.89
Oilseeds	7,848,093	33.34	11.26	52.94	0.96	0.05	1.45
Vegetables	7,444,468	74.04	0.98	22.99	0.36	0.06	1.57
Root Crops	39,985,663	70.26	7.96	19.6	0.31	0.84	1.04
Permanent Crops	27,111,795	52.38	0.45	43.43	0.56	0.83	2.34
<i>Enset</i>	53,101,368	80.00	0.49	13.64	1.19	2.65	2.04

**Source:** CSA (2016b)

**Annex Table 2.7: Wheat production and import over the past two decades**

	Production and import of wheat			Index (1993=100)		
	Wheat import		Production - tons	Import		Production
	tons	100 USD		Quantity	Value	
1993	358100	56800	895520	100	100	100.0
1994	553583	129613	802747	154.6	228.2	89.6
1995	509500	132000	1083680	142.3	232.4	121.0
1996	295000	76000	1162310	82.4	133.8	129.8
1997	187200	34400	1092820	52.3	60.6	122.0
1998	463000	81000	1142710	129.3	142.6	127.6
1999	550000	77000	1149670	153.6	135.6	128.4
2000	1164000	163000	1235270	325.0	287.0	137.9
2001	1031000	150000	1596020	287.9	264.1	178.2
2002	657000	98500	1444434	183.5	173.4	161.3
2003	1603103	362391	1618093	447.7	638.0	180.7
2004	575020	176643	1614441	160.6	311.0	180.3
2005	862146	224444	2176603	240.8	395.1	243.1
2006	526206	135000	2219075	146.9	237.7	247.8
2007	600238	210000	2463064	167.6	369.7	275.0
2008	1100050	465194	2314489	307.2	819.0	258.5
2009	1735594	490000	3075644	484.7	862.7	343.4
2010	1698234	475000	2855682	474.2	836.3	318.9
2011	1654282	615000	2916334	462.0	1082.7	325.7
2012	1639039	539244	3434706	457.7	949.4	383.5
2013	1618382	640000	3925174	451.9	1126.8	438.3

**Source:** FAO databases