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# **THE EFFECT OF EXPORT TAX ON THE COMPETITIVENESS OF ETHIOPIA'S LEATHER INDUSTRY**

by

**Wegayehu Fitawek**

A dissertation in partial fulfilment of the requirements for the degree of

**MSc Agric (Agricultural Economics)**

in the

Department of Agricultural Economics, Extension and Rural Development

Faculty of Natural and Agricultural Sciences

University of Pretoria

Pretoria, South Africa

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## DECLARATION

I declare that this dissertation, which I hereby submit in partial fulfilment of the requirements for the degree Master of Science (Agricultural Economics) at the University of Pretoria, is my own work and has not been submitted by me for any other degree at any other institution.

Name Wegayehu Fitawek

Signature \_\_\_\_\_

Date \_\_\_\_\_

## **DEDICATION**

I dedicate this dissertation to all my families, to my mother Enat Mokennen, to my husband Mesfin Wondafrash, my beloved sons Yitbarek and Eyasu and for all my brothers and sisters for their unreserved encouragement during my study and for dedicated partnership in the success of my life.

## ACKNOWLEDGEMENTS

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I would like to express my sincere thanks to Prof. Johann F. Kirsten, Dr Lemma Zemedu, and Mr Molla Alemayehu for their tireless efforts and contributions that helped me to study at the University of Pretoria. I would like to thank my sponsors, the German Academic Exchange Service through the African Economic Research Consortium, and CMAAE staff for giving me this opportunity.

I appreciate all my friends and colleagues for providing different kinds of assistance at various stages of my research. Special thanks are also extended to Mr Abdissa Adugna, Secretary General of the Ethiopian Leather Industry Association (ELIA), for providing the necessary data, and my brother, Mr Eyuel Bogale, My friend Mrs Tigist Yifru and her husband Sisay, they assisted greatly in data collection.

Last but not the least, I am grateful to my husband, Mesfin Wondafrash, and my sons, Yitbarek and Eyasu, for their unfailing encouragement, unconditional support, and also for their sacrifices regardless of the little attention they received during this study. I would also like to extend my thanks to my beloved mother and all my brothers and sisters whose encouragement and love have sustained me not only during these studies but through my whole life.

## **ABSTRACT**

### **THE EFFECT OF EXPORT TAX ON THE COMPETITIVENESS OF ETHIOPIA'S LEATHER INDUSTRY**

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**Wegayehu Fitawek**

**Degree:** MSc Agric (Agricultural Economics)  
**Department:** Agricultural Economics, Extension and Rural Development  
**Supervisor:** Dr Mmatlou Kalaba

Most countries have implemented export-oriented development strategies with the objectives of improving their economic stability and improving resource allocation efficiency. Export tax, which has been an integral part of trade policies for centuries, has not been given adequate attention by the World Trade Organization (WTO) or the economic literature. Export taxes on primary commodities serve as indirect subsidies to manufacturing and processing industries by lowering the domestic price of inputs, and also have a positive effect on government revenue. Conversely, export taxes can have a negative impact on the producers of raw materials and externalities for trade partners. The government of Ethiopia applied a 150% export tax on raw hides and skins (RHS) and semi-finished leather products in 2008, and another 150% export tax on crust leather in 2012 in order to encourage the leather manufacturing industry. The aim of this study is to examine the export trends of Ethiopia's raw hides and skins and finished leather products, and to analyse the effect of export tax on Ethiopia's leather industry's export competitiveness.

A linear trend analysis model was used to analyse the export trends of raw hides and skins and finished leather products. This study evaluated export volume data from 1997 to 2014 in order to estimate the trend coefficients. The results of the model showed that Ethiopia's RHS and semi-processed leather products export had declined by -38.06% and significant at 1% significant level; this is due to the heavy export tax imposed by the government to increase the production and export of finished leather products. Meanwhile, finished leather products

and footwear have increased by 75.34% and 44.37% respectively, and significant at 1% significant level.

The comparative advantage analysis was used to examine the revealed comparative advantage (RCA) of Ethiopia by comparing selected countries. The results indicated that Ethiopia was a RCA of raw hides and skins and semi-processed leather products more than one ( $RCA > 1$ ) before 2008; after the export tax implementation in 2008, the RCA became decreased, conversely, the RCA of Ethiopia's finished product more than one for the period 2006 to 2014 and increased more after 2008. South Africa has comparative advantage only on the export of raw hides skins and semi-processed leather product ( $RCA > 1$ ). Nigeria was not stable RCA for both raw hides and skins and finished leather products and in most year revealed comparative advantage greater than one ( $RCA > 1$ ). The RCA indexes of footwear for all three countries were less than one except Ethiopia in (2007, 2008 and 2012). The RCA provides information on advantage to exports, such as product comparisons with other competitive countries. However, the RCA does not show the sources of advantage (growth), therefore the constant market share (CMS) model was used to indicate the source of advantage.

The CMS model has been used to evaluate the competitiveness of Ethiopia's leather products. The export value data of 2007 were used as the base year, whereas data in 2013 were considered as the year after the export tax implementation and increase. The results indicate that the implementation of the export tax has reduced the competitiveness of raw hides and skins and semi-processed leather products, but increased the competitiveness of the finished leather products in the world markets. The overall results showed positive export growth (2.55), which is most likely achieved by an increase in the export competitiveness of the leather industry of 2.25. The positive competitiveness value indicates that Ethiopian finished leather products are competitive with other exporters in selected markets (Italy, China and Hong Kong). Conversely, Ethiopia's leather products have negative commodity composition effects and market composition effects (-0.132 and -0.262, respectively). The negative commodity composition effect shows that, because of the export tax, the export of Ethiopian raw hides and skins and semi-processed leather products have decreased, while the imports of these products have grown faster in selected markets. The same is true for negative market composition effects; because of the export tax, the demand for raw hides and skins and semi-finished products decreased in selected markets.

Even though the government imposed the export tax to reduce the export of raw hides and skins and semi-processed leather products to encourage the finished-product manufacturing industry, there is a shortage in the supply of raw materials. This need highly improved the supply of raw hides and skins and the quality of the leather-processing enterprises by constructing a new policy on livestock management and hides and skins collections. In the short run, the export tax may enhance the competitiveness of the leather industry. However, in the long run, it may lead to efficiency losses, lower welfare, and lower growth, because a temporary measure can have long-lasting effects. The Ethiopian government should consider reducing the export tax in the long run to make the industry as competitive as South Africa and other exporting countries.



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## **ACRONYMS AND ABBREVIATIONS**

ADLI	Agricultural Development Led Industrialization
AoA	Agreement on Agriculture
AusAID	Australian Agency for International Development
CLRI	Central Leather Research Institute
CMS	Constant Market Share
CSA	Central Statistical Agency
EC	European Communities
EIA	Ethiopian Investment Agency
ETA	Ethiopian Tannery Association
ELIA	Ethiopian Leather Industries Association
ELLPTDI	Ethiopian Leather and Leather Products Training Development Institution
ERCA	Ethiopia Revenue and Custom Authority
FAO	Food and Agricultural Organization
FAOSTAT	Food and Agricultural Organization Statistics
FDDI	Footwear Design and Development Institute
FDRE	Federal Democratic Republic of Ethiopia
FDI	Foreign Direct Investment
FLH	Finished Leather Products
FNG	Federal Negarit Gazet
FW	Footwear
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GDS	Global Development Solutions
H-O	Heckscher-Ohlin
“HS”	Harmonised System
ICPALD	IGAD Center for Pastoral Areas & Livestock Development
IDS	Industrial Development Strategy
IMF	International Monetary Fund
ITC	International Trade Centre
LIDI	Leather Industry Development Institute

LLPI	Leather and Leather Product Industry
LMA	Livestock Marketing Authority
LMB	Livestock and Meat Board
MoFED	Ministry of Finance and Economic Development
MoTI	Ministry of Trade and Industry
NAMA	Non-Agriculture Market Access
NLSC	National Leather and Shoe Corporation
NBE	National Bank of Ethiopia
OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Square
RCA	Revealed Comparative Advantage
RHS	Raw Hides and Skins
SLDP	Second Livestock Development Project
SSA	Sub-Saharan Africa
TPR	Trade Policy Reviews
UNCOMTRADE	United Nations Commodity Trade Statistics Database
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development
WTO	World Trade Organization

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 BACKGROUND**

Increased participation in international trade and investment can serve as the engine for economic growth and development. Joined to international trade is the principle of comparative advantage that generally provides that states should trade with one another because they are better off by maximising their production potential for some products and, through trade, can obtain products they do not have or that they produce with less efficiency (Holmes and Schmitz, 2001). International trade has increased dramatically in recent decades. The flow of goods and services is crucial for achieving sustained growth in developing countries (Goldberg & Pavcnik, 2007).

Developed and developing countries use trade as the main component of viable development. Owing to this, most countries have implemented export-oriented development strategies with the objectives of reinstating their economic stability, both internally and externally, and improving resource allocation efficiency (Nishimizu and Robinson, 1984). Trade liberalisation plays a role in securing economies of scale, accessing markets, and expansion of trade through its effect on industrialisation and modernisation (DeJong and Rippol, 2006).

Export taxes, which has been an integral part of trade policies for centuries, has not been given adequate attention by the World Trade Organization (WTO) or in economic literature (Solleder, 2013). The WTO generally prohibits quantitative export restrictions, does not specifically prohibit differential export taxes (Piermartini 2004). The focus of most export taxes is on raw products (hides, cocoa, and seed cotton), processed oilseeds, semi-processed aluminium, and iron, minerals, timber products, etc. (Piermartini, 2004).

In the case of large export countries, restricting exports of a particular commodity can lead to an increase in the world price of the restricted commodity. This often leads to an improvement in the country's terms of trade. According to Bickerdike (1906), the arguments on export tax measures and those on optimum tariffs are similar. Export taxes on primary commodities (unprocessed raw materials) serve as indirect subsidies to manufacturing and



processing industries by lowering the domestic price of inputs, as compared to their world non-distorted price.

An export tax can have a positive effect on government revenue and it may also affect income redistribution. Conversely, export taxes can impose serious negative impacts on the producers of raw materials and negative externalities for trade partners. Some of the negative impacts are: welfare effect for the importing country (“beggar-thy-neighbour”), distortion on production and consumption of exporting country and reduction in world production and consumption efficiency (Piermartini 2004).

The 2008/2009 economic crises have led to the special examination of policies affecting trade. As a consequence, export taxes and other export restrictions have ranked as ninth after bailouts, trade remedies, tariffs, and non-tariff barriers (Evenett, 2009) and fifth top measures against foreign commercial interests in 2009 and 2012 respectively. Except in some cases, Article XI of the General Agreement on Tariffs and Trade (GATT) generally prohibits quantitative restrictions on the importation or the exportation of any product by stating that “No prohibitions or restrictions other than duties, taxes or other charges shall be instituted or maintained by any Member ” One reason for this prohibition is that quantitative restrictions are considered to have a greater protective effect than do tariff measures, and are more likely to distort the free flow of trade. So far there is no specification made by GATT that obliges the maximum level of export taxes. Most member countries of the WTO have imposed certain types of export taxes at some stage. Among 155 WTO member countries, the number of countries that have applied export tax has increased from 39 in 2004 to 93 in 2013, which has affected 178 importing countries (Solleder, 2013).

According to Haberler (1964), trade can lead to the full utilisation of scarce and underutilised domestic resources. In developing nations like Ethiopia, international trade can play an important role in economic growth. Trade helps a developing country move from inefficient resource utilisation to efficient utilisation. It serves as a channel for agricultural commodities and a raw material produced by a particular country, and thereby links the country to international markets (Helpman and Krugman, 1985). This in turn stimulates domestic producers to strive for global competition and hence meet world standards in their products. According to McMillan and Rodrik (2011), productivity growth comes from labour moving

from agriculture to manufacturing or from a low-productivity sector to a high-productivity sector.

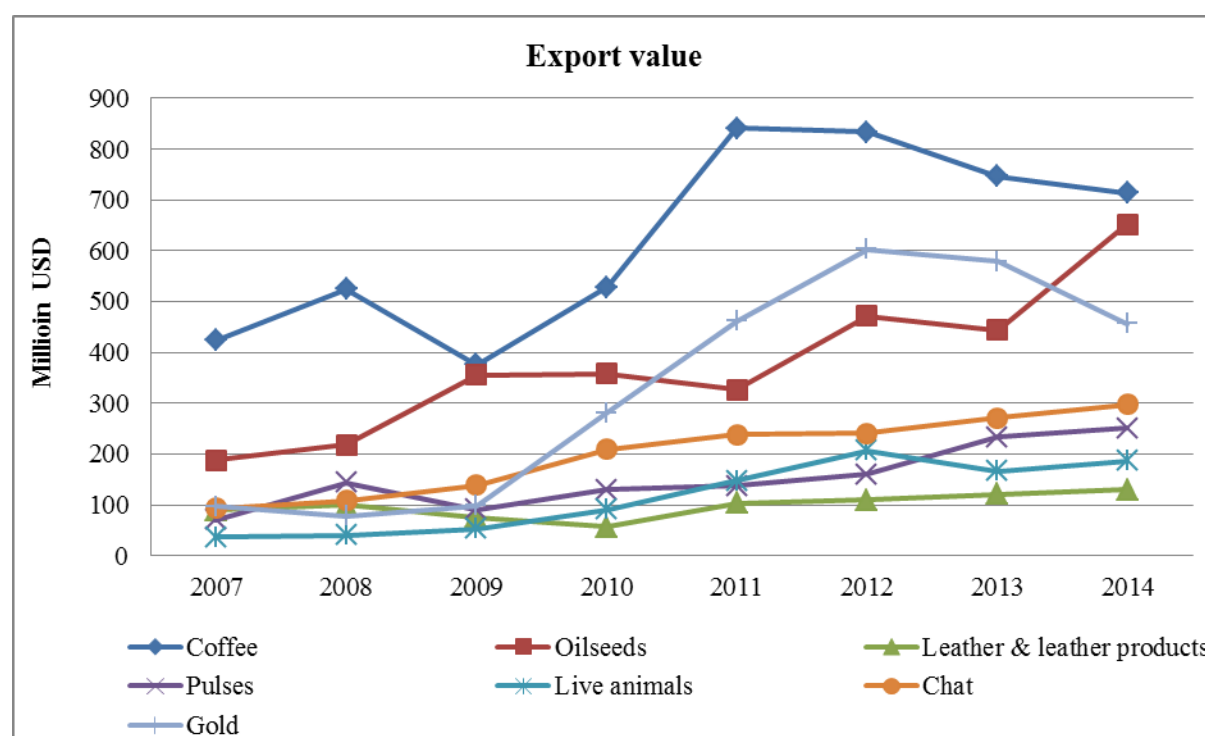
Ethiopian export earnings, particularly those derived from dominant agricultural exports such as coffee, have been subject to large fluctuations due to the unstable nature of international prices (Brautigam, 2011). The economic growth of the country has been too weak to absorb the effect of these exogenous shocks; it is less flexible in dealing with both internal and external disturbances. Therefore, the instabilities and decline in earnings are found to affect the economic growth adversely and there is a need for a large foreign exchange reserve in the short-run, while trade and exchange rate policies reforms would be the long-run instruments needed to reduce the instabilities in export earnings (Amin, 2002).

To this effect, policy makers in Ethiopia developed different plans to encourage different potential export industries and thereby diversify export commodities. The leather industry is one of the most important prioritised industries for the diversification of export and foreign exchange earnings. The prioritised industries link to agriculture and are highly labour-intensive demanding a large labour force (FDRE, 2010).

Ethiopia possesses a huge livestock resource endowment, which are mentioned in Chapter 2 section 2.2 in detail and a massive labour force, this is good opportunity exists for the development and competitiveness of the hide and skin production sector. Ethiopia's modern tanning industry was started in the mid-1920s by Armenian immigrants, and since then the country has increased the number of tanning companies to 29 (ELIA, 2014). During 1970 to 1980, the export of leather from hides and skins and finished leather products were some of the top exports of the country. Hides and skins export ranked second to coffee in the 1970s and early 1980s. However, the export ban imposed on hides and skins in 1986 resulted in a decline in the export volume (Abebe & Schaefer, 2013).

Figure 1.1 shows that the Ethiopian export of coffee has a declining trend in export performance. On the other hand, the export performance of oilseed, pulses, leather and leather products, and chat shows an increasing trend (see Figure 1.1). The share of coffee from the total exports has shown a declined trend from more than 50% before 2000 to 35.8% in 2006, and then 21.9% in 2013. Leather and leather products' export share from the total

exports declined from 7.6% to 3.9% in 2012, and then increased to 4.0% in 2013 (see Appendix 1).

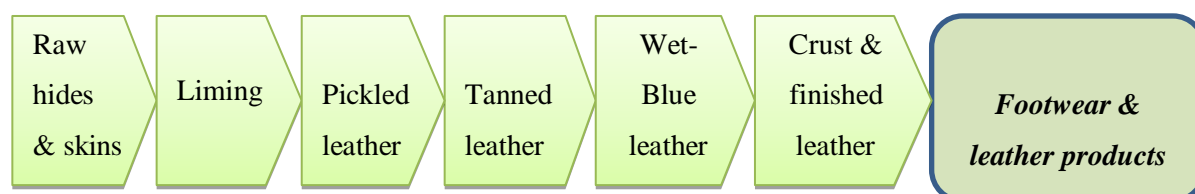


**Figure 1.1:** Export trends of main Ethiopian export items  
Source: Ethiopian Revenue and Custom Authority (2007-2015) data

To this effect, the Ethiopian Ministry of Finance and Economic Development Authority developed a different export policy to encourage and diversify exports. The export tax on hides and skins and leather products is one of the export policy measures to encourage and improve the domestic value chain in the leather industry and to increase the supply of raw materials to the local industry. In 1986, the socialist regime banned the export of raw hides and skin in an attempt to encourage the domestic production of semi-processed leather articles. This ban radically altered the marketing structure of hides and skins by restricting exports to at least the wet-blue level. In 2008, the government improved export ban to export tax and imposed a 150% export tax on the export of raw hides and skins and semi-finished leather products. In 2012, the government also levied a 150% export tax on the export of crusted leather on the leather industry. These high export taxes affected both international buyers and some domestic tanneries (USAID, 2013).

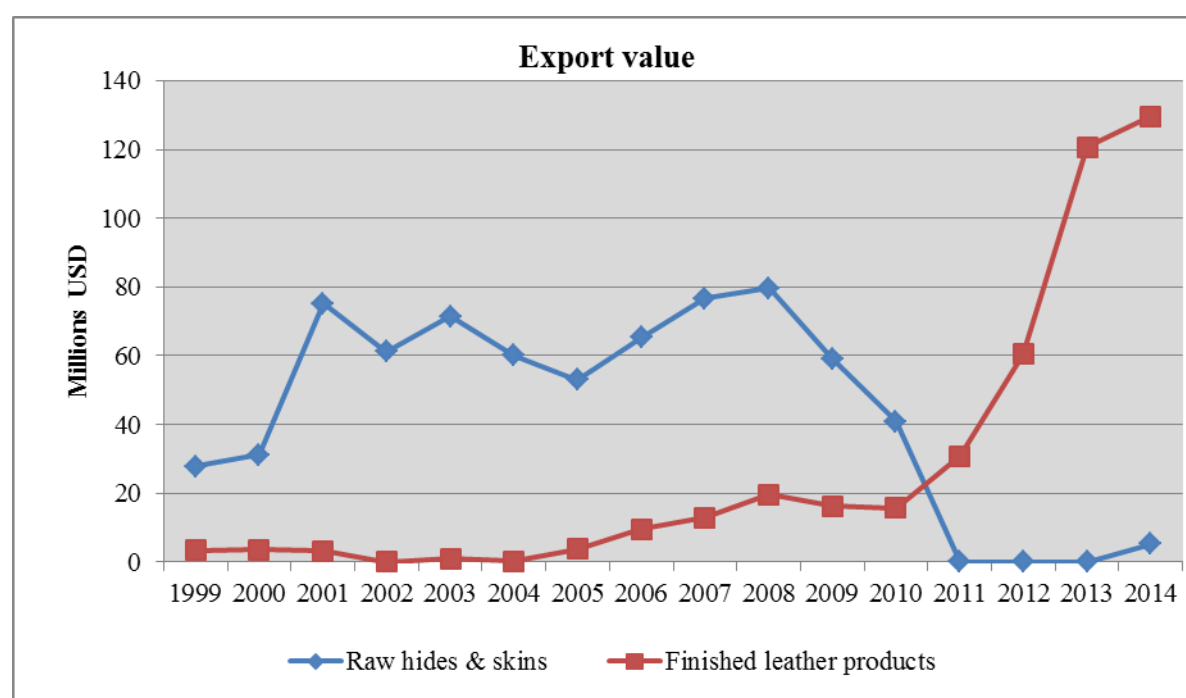
Ethiopia Leather manufacturing process flows from simpler form raw hides to pickled, to wet blue leather and semi-finished and then finished leather (Figure 1.2). Processing of

leather up to crust level may be made by receiving raw material in the form of raw hides and skins, pickled and wet-blue leather. Crust leather is higher added value product, where skin and hides are already tanned and become ready for the finishing stage. It is used as an input by the leather finishing industries.



**Figure 1.2:** Leather manufacturing process

Ethiopia raw hides and skins and semi-processed leather products export were fluctuated more during the year 1999 to 2005 and significantly decrease starting from 2008. However, export of finished leather products was very low up to 2005, after 2010 the export finished leather product increase significantly (see Figure 1.3).



**Figure 1.3:** Trends of hides and skins and leather products export in Ethiopia

Source: Author's own computation based on data obtained from ERCA and UNCOMTRADE (1999-2014)

The export of raw hides and skins (i.e. all raw hides and skin from bovine, sheep and goat) and semi-processed leather products was highly affected by the export tax. On the other hand, the export of finished leather products vastly increased after the imposition of the export tax

in 2008. While, the outcomes of the taxes on Ethiopia's leather industry's export competitiveness is uncertain; consequently the purpose of this study to provide empirical evidences to fill the information gap.

## **1.2 PROBLEM OF STATEMENT**

In Ethiopia, there is a huge gap between the livestock resource base of the country and the growth of its leather industry. As illustrated in Chapter 2 section 2.2 and Appendix 2, Ethiopia is the first rank on total livestock population from Africa, but the export value that gain from leather products rank fifth in 2014. Despite the enormous potential of the natural livestock resources, the country has not benefitted that much from the domestic and international trade of hides and skins and leather products (UNIDO, 2012). According to the World Bank report of 1997, the characteristics of Ethiopian leather are particularly strong in sheepskin because of its special nature of fine grain and compact texture, which results in better quality products. The skin from sheep is highly demanded by the international markets for the production of high-quality leather products such as shoes, gloves, and bags.

In addition to the vast natural livestock resource endowment, the country also has a massive labour force, indicating the great opportunity the country has to develop its domestic leather industry and to become competent in the world leather and leather products market. The country has great potential to become a world-class supplier of high-quality processed leather and leather products. Livestock are closely linked to the social and cultural lives of millions of resource-poor farmers for whom animal ownership ensures varying degrees of sustainable farming and economic stability. These values vary from society to society and largely determine the strategies, interventions, and demand and development opportunities for livestock. Livestock acts as security assets influencing access to informal credits and loans. They are also considered a common means of demonstrating wealth, cementing relationships through bride price payments and as social links, important in crises (Ouma *et al.*, 2004). Owing to its strong linkage to the rural economy and its expected role in the alleviation of poverty and the earning of foreign currency, the country has listed leather and leather products among the four top-priority industries. To this effect, foreign investors from China, India, Italy, Germany and others have also discovered the potential of the country in this sector (Workneh, 2014).

The government of Ethiopia imposed a 150% export tax on raw hides and skins and semi-finished leather products in 2008 with the objective of producing high-quality leather by urging Ethiopian tanneries to invest in new technology, as well as a 150% export tax imposed on cluster leather products in 2012. As mentioned above, export taxes have positive and negative impacts. Export taxes on primary commodities (i.e. raw hides and skins) serve as indirect subsidies to manufacturing and processing industries by lowering the domestic price of inputs, as compared to their world non-distorted price. Export taxes have also a positive effect on government revenue and income redistribution. On the other hand, export taxes can impose serious negative impacts on the producers of raw materials and negative impact for trade partners. However, the outcomes of the taxes on Ethiopia's leather industry's export competitiveness is uncertain; therefore this research aims to fill the information gap by providing empirical evidence to investors, policy makers and other responsible organization.

### **1.3 THE OBJECTIVES OF THE STUDY**

The main objective of this study is to analyse the effect of export tax on Ethiopia's raw hides and skins and leather products' export growth and its world market share situation.

The specific objectives are:

- To examine the export trends of raw hides and skins, leather products, and footwear products in Ethiopia.
- To analyse the comparative advantages of Ethiopia's raw hides and skins and leather products.
- To determine the competitiveness of Ethiopia's leather industry.

### **1.4 RESEARCH METHODOLOGY**

This study used secondary data from different national and international data sources from the year 1997 to 2014. National data sources are used to get Ethiopian data (export, GDP, livestock population, employment, FDI and other relevant information) from Ethiopia Central Statistical Agency (CSA), National Bank of Ethiopia (NBE), Ministry of Finance and Economic Development (MoFED), and Ethiopian Revenues and Customs Authority (ERCA).

International data sources like the UNCOMTRADE database (export value data), Food Agricultural Organization Statistics (FAOSTAT) to get the livestock population of different countries, and International Trade Centre (ITC) to capture more export value data. From all data sources Harmonized System “HS” 4 code is used to get the export data of specific leather product.

Firstly, an analysis of the export growth of raw hides and skins, finished leather products, and footwear will be undertaken using export data from 1997 to 2014 and a linear trend analysis model is used to analyse the first objective. The result is important to know whether raw hides and skins, finished leather products, and footwear exports indicate upward or downward growth. After estimating the export trends of raw hides and skins and finished leather products, the researcher used the revealed comparative advantage (RCA) model to analyse the second objective of this study. RCA identify whether Ethiopia is comparative advantage on exporting of raw hides and skins, finished leather products, and footwear by comparing other exporting countries (South Africa and Nigeria) using data from the period 2006 to 2014. However, the revealed comparative advantage does not provide information about the source of growth or advantage, therefore the constant market share model will be used to analyse the export competitiveness of the leather industry. The constant market share model is important to identify which specific product export is growing more and what is the source of the growth. CMS decomposes country export growth into four components; namely the market size effect, the commodity composition effect, the market distribution effect, and competitiveness effects.

## **1.5 JUSTIFICATION OF THE STUDY**

The government of Ethiopia has applied different export policies in order to diversify exports. The leather industry is one of four prioritised sectors. Its initial step towards fostering the development of this sector is to create a conducive environment for the private sector. This study evaluates the effect of export tax on the export competitiveness of the leather industry and aims to help to understand whether the government’s policy on export tax on raw hides and skins and crust leather products is achieving the objective of export diversification.

The government of Ethiopia imposed a 150% export tax on raw hides and skins and crust leather products in 2008 and 2012 respectively to encourage the finished leather products

industry. Previous research analysed the effects of export tax on the welfare of the leather industry and did not account for the effect of export tax on the competitiveness of the leather industry (Zhao, 2014 and Mulat, 2015). Analysing the effects of export tax on Ethiopia's leather industry's competitiveness will help to provide information to policy makers to recognise whether the sector is competitive in the world market or not, as well as to enable them to develop appropriate policies regarding the growth of the sectors and the economy as a whole.

## **1.6 OUTLINE OF THE THESIS**

This chapter mentioned the background of the study and what it aims to achieve with this research. Chapter 2 reviews the role of livestock production in the leather industry, the history of the Ethiopian leather industry, Ethiopia's overall export policy and leather industry policy in particular, and the leather industry value chain. Chapter 3 provides information on export measures and global trends, which includes export restrictions and World Trade Organization (WTO) agreements, types of export restrictions policies, overall effects of export tax, and empirical studies on Ethiopia's leather industry. Chapter 4 describes the theoretical framework and empirical analysis of each model used; which are the linear trend analysis model, the constant market share model, and the revealed comparative advantage (RCA) analysis. Chapter 5 presents the research results and discussions, and finally Chapter 6 concludes the study and provides policy implications.

## **1.7 DELIMITATION OF THE STUDY**

One of the limitations of this study is that no empirical evidence was available regarding exact figures of gain and loss in terms of the export tax policy in the leather value chain (welfare analysis); this is due to a lack of price and other relevant data. The other limitation of this study is inflows of FDI in the country as whole were considered, and not specified for the leather industry. This study also not did provide full information on the informal leather industry's sector employment data.



## **CHAPTER 2**

### **OVERVIEW OF ETHIOPIA’S LEATHER INDUSTRY**

#### **2.1 INTRODUCTION**

Ethiopia is the second most populous country in Africa after Nigeria (166.21 million in 2013). According to the 2012/13 census, Ethiopia’s population was 84.8 million people. Ethiopia has nine regional states and two chartered cities (city administrations). Ethiopia was never colonised by foreign forces except for a brief period of Italian occupation from 1936 to 1941. Ethiopia’s economy is based on agriculture, which contributes 42.7% of the GDP and 80% of employment, and generates an estimated 75% of the export earnings (NBE, 2013). The International Monetary Fund (IMF) ranks Ethiopia as among the five fastest-growing economies in the world and first from Africa. The Ethiopian economy registered an average annual growth rate of 10.1% during the period 2010/2011 to 2013/2014. Agriculture grew by 5.4%, and industry and services expanded by 21.2% and 11.9% respectively. The agricultural sector suffers from poor cultivation practices and frequent drought. The government is pushing to diversify into manufacturing, textiles, leather, and energy generation (USAID, 2013).

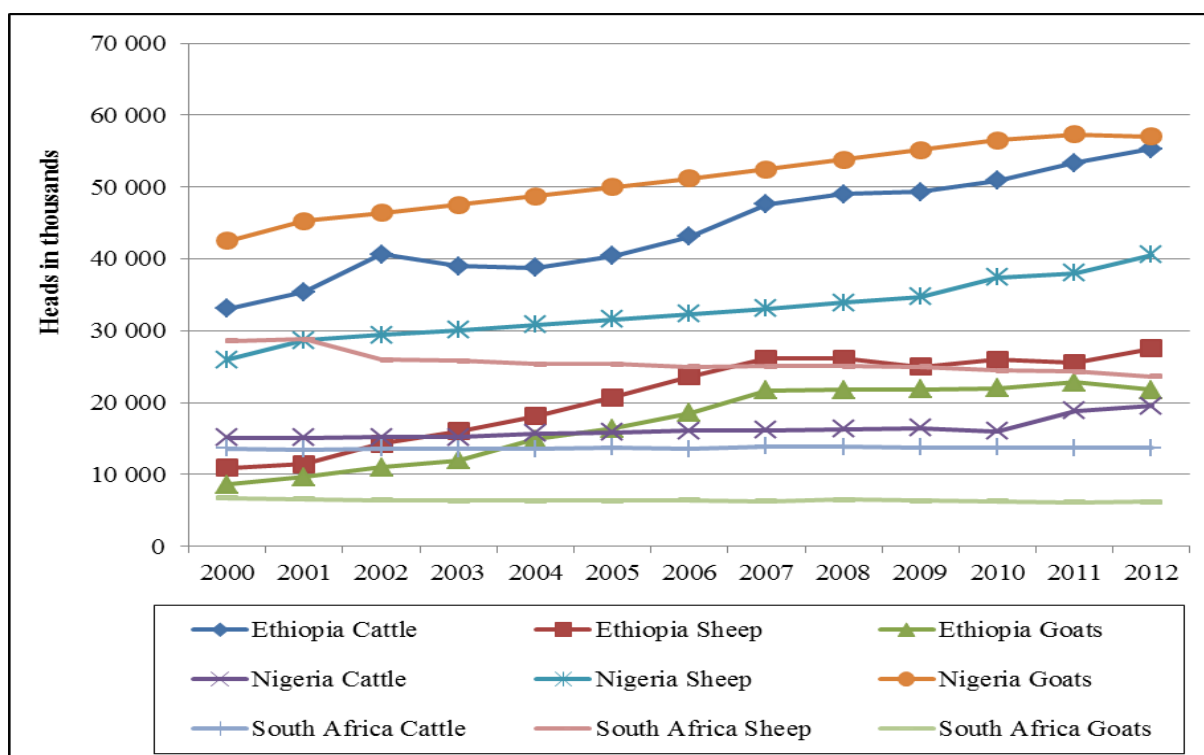
#### **2.2 ETHIOPIA’S LIVESTOCK SECTOR**

Ethiopia is highly endowed with livestock resources; ranking first in Africa and is among the top ten countries in the world. It has more than 55.03 million heads of cattle, 27.35 million sheep, and 28.16 million goats (CSA, 2013). Livestock is an integral part of the agricultural GDP (i.e. 45%) and serves the Ethiopian economy as sources of food traction (ICPALD, 2013). Livestock are closely linked to the social and cultural lives of millions of resource-poor farmers for whom animal ownership ensures varying degrees of sustainable farming and economic stability. These values vary from society to society and largely determine the strategies, interventions, and demand and development opportunities for livestock. Livestock acts as security assets influencing access to informal credits and loans. They are also considered a common means of demonstrating wealth, cementing relationships through bride price payments and as social links, important in crises (Ouma *et al.*, 2004). Consequently, an increasing trend of livestock populations shows the country has substantial resource potential

to attract investment and consequently foster the development of the leather industry (USAID, 2013).

Two African countries (Nigeria and South Africa) are used for comparison based on high livestock population. Ethiopia's total livestock population increased vastly during the period 2000 to 2012, as compared to Nigeria and South Africa. Ethiopia's cattle population increased from 33 075, 000 in 2000 to 55 272 000 heads, and sheep and goats increased from 10 951 000 and 8 598, 000 heads in 2000 to 27 539 000 and 21 787 000 heads in 2012 respectively. Ethiopia was more highly endowed in terms of the cattle population (55 272 000 heads) in 2012 than sheep and goats (i.e. 27 539 000 and 21 787 000 respectively), as compared to Nigeria and South Africa. However, Nigeria was highly endowed with sheep and goat populations, which values were 40 542 000 and 57 000 000 heads, compared to cattle (19 543 000 heads) in 2012. South Africa was highly endowed with sheep (23 680 000 heads) in 2012 but was still lower than Ethiopia and Nigeria in terms of goat populations (6 206 000 heads) (see Appendix 2).

Figure 2.1 described that Nigeria goats populations is the highest followed by Ethiopia cattle populations. South Africa was smallest cattle and goat population compared to Ethiopia and Nigeria. However, South Africa was the leading African exporter of raw hides and skins and leather products. Conversely, Ethiopian leather particularly from sheepskin is stronger and highly demanded by the international markets for the production of high-quality leather products such as shoes, gloves, and bags.



**Figure 2.1: Trends of livestock populations**  
Source: FAO, 2013

As mentioned, Ethiopia has high livestock populations; however, there was a gap between the livestock resource base of the country and the growth of its leather industries. Table 2.1 shows that, South Africa was the leading African exporter of raw hides and skins and leather products (US\$351 827 000) in 2014, followed by Nigeria (US\$286 621 000). Ethiopia was the fifth largest exporting country and its export value was US\$89 504 000 in 2014 (see Table 2.1). Recently, Ethiopian exports mainly depended on finished leather products and footwear.

**Table 2.1: Top ten African RHS and leather products exporting countries**

Rank	Country	Export value (USD)
1	South Africa	351 827 000
2	Nigeria	286 621 000
3	Egypt	195 392 000
4	Kenya	136 364 000
5	Ethiopia	89 504 000
6	Uganda	73 758 000
7	Zambia	55 405 000
8	Zimbabwe	37 928 000
9	Tunisia	35 903 000
10	Namibia	25 898 000

*Source: Author's calculation based on UNCOMTRADE data, 2014*

Tunisia was the largest African exporter of footwear in 2014, with US\$669 385 000 export value, followed by South Africa (US\$198 385 000). Ethiopia was the third largest footwear exporter; its export value was US\$30 971 000 in 2014. Ethiopia's footwear exports increased after the imposition of the export tax on raw hides and skins and crust leather products; however, it was much smaller than Tunisia and South Africa (see Table 2.2).

**Table 2.2: Top five African footwear exporting countries**

Rank	Country	Export value (USD)
1	Tunisia	669 385 000
2	South Africa	198 551 000
3	Ethiopia	30 971 000
4	Lesotho	18 054 000
5	Kenya	15 034 000

*Source: Author's calculation based on UNCOMTRADE data, 2014*

The foregoing tables indicate that Ethiopia was the first African country in livestock populations; however, it was ranked fifth and third on raw hides and skins and leather products and footwear exports respectively. Even if livestock production was high, there was a critical shortage of raw hides and skins in Ethiopia due to insufficient supply to meet even the most minimal market demand, and poor-quality (e.g. scarred, diseased, improperly flayed) hides and skins, which directly limited the market potential of the finished leather

products (USAID, 2013). Generally, this section discussed African countries livestock populations and leather export values. The next section of the study provides information about the history of Ethiopia leather industry within the three regimes.

## **2.3 THE HISTORY OF ETHIOPIA'S LEATHER INDUSTRY**

The history of leather production starts in ancient times, when primitive methods were developed for treating raw hides and skins so that they could be used for clothing to protect people from the elements. The preservation of raw hides and skins by smoking and treatment with vegetable matter for durability is an indication of the beginning of the standardisation in the leather sector. This section explains the history of the leather industry's development in Ethiopia within the imperial regime (pre-1974), the derg regime (1974 – 1991), and post-1991.

### **2.3.1 The establishment of the modern tannery in the imperial regime**

The Ethiopian economy during the imperial period was characterised by the feudal land tenure system that deprived the vast population of the rural poor from the right to own land. However, this policy initiated the expansion of foreign private companies like the ASCO tannery (the current Addis Ababa Tannery) in 1918 and the Darmar/Awash (currently ELICO) tannery by Armenian traders in 1927, which were the first leather-soaking and tanning industries that emerged (Bayou, 2005). In the subsequent years, several local tanneries (Dire, Modjo, and Kombolcha), meat and meat product processing, and dairy industries started in the country. The setting up of these plants initiated the transformation of hides and skins preservation methods from traditional methods (ground drying, pegging, pole drying) to frame drying and wet salting. The Addis Ababa slaughterhouse, owned by Italians, and the meat processing plants were engaged in the export of a very limited number of hides, which were either frame dried or cured by wet salting of raw hides on the premises, to foreign countries (UNIDO, 2012).

The Livestock and Meat Board (LMB) was set up in 1964 to improve the collection, preservation, and trading of hides and skins throughout the country (Mahmud, 2000). The LMB also supervised and monitored the construction of slaughterhouses in different regions of the country (LMA, 2001). The LMB launched the Second Livestock Development Project

(SLDP 1973 – 1981), which was financed by the World Bank to improve livestock marketing and infrastructure and thereby the quality of the hides and skins through a package of investment on stock routes, markets, slaughterhouses, hides sheds, as well as ranch development.

During this period, it was generally made possible to introduce the principles and applications of modern hides and skins improvement procedures and grading techniques and thereby creating awareness about the economic significance of the raw materials. The construction of slaughter premises, modern hides and skins drying sheds, the establishment of private tanneries, and shoe and garment factories increased the capacity of local tanning. The new policy environment and the efforts made by the LMB enabled to achieve considerable quality improvement and growth in the volume of hides and skins that entered in the formal market chain (Bayou, 2005).

### **2.3.2 The development of the leather industry during the derg regime (1974 – 1991)**

The change in government and economic policy that took place in 1974 was based on socialist principles. The policies included radical measures such as land reform, the nationalisation of commercial and large-scale private farms, industrial plants and economic institutions, expansion of state farms, organisation of peasant associations, producers' cooperative services, and a villagization programme for the rural community. In 1975, private tanneries and shoe and garment factories that were engaged in the production of leather and leather products for domestic and export marketing, were nationalised and administered under the then National Leather and Shoe Corporation (NLSC). The corporation assisted the existing hides and skins improvement extension service with treated salt, which meant distribution among traders for the preservation of hides and skins (Workneh, 2014).

The government of Ethiopia levied an export ban on raw hides and skins in 1986 to encourage the domestic production of semi-processed leather products. This ban completely changed the market structure of hides and skins by restricting exports up to wet-blue level. The export ban encouraged the illegal cross-border trade of raw hides and skins and live animals due to this ban. Producers were forced to sell raw hides and skins directly to the tanneries to produce semi-processed leather products. However, the export ban on raw hides and skins had a limited impact on improving the capacity of the leather tanneries and leather

manufacturing industries. For instance, during the period only around 6 000 jobs had been created in large-scale tanning and manufacturing of leather products (such as footwear, luggage, and handbags) when the Derg Regime was unseated in 1991 (CSA, 2013).

During this period, the Second Livestock Development Project made a significant contribution to the development of the hides and skins extension service and subsequent improvement of the raw materials. This notable achievement included the deployment of hides and skins staff; launching training programmes for butchers, flayers, traders, and the public at large; the construction of more slaughterhouses with attached drying sheds; and the inspection of raw hides and skins that were destined for the domestic and export markets. In addition, the project encouraged the buying and selling of hides and skins based on quality-grade differences. It also purchased hides and skins at its demonstration site where the raw stocks were made ready for export (USAID, 2013).

### **2.3.3 The expansion of the leather industry post-1991**

Since 1992, the new economic policy attached great importance to the liberalisation, privatisation, and internationalisation of the country's manufacturing sector. In conformity with the country's comparative advantage, manufacturing is expected to rely on labour-intensive technology and the utilisation of domestically available raw materials. The aim is to place the manufacturing sector on a competitive basis internationally and to progressively shift the composition of exports from primary agricultural products to manufactured goods. (UNIDO, 2012).

The National Leather and Shoe Corporation (NLSC) was dissolved and the state tanneries become autonomous, and the Ethiopian Tanners Association (ETA), comprising both public and private tanneries, has emerged and set the selling price of raw hides and skins based on quality grades in line with international price movements. Accordingly, the Ethiopian Livestock Marketing Authority (LMA), established in 1998, has the objective of promoting the domestic and export marketing of animals, animal products, and by-products by increasing their supply and improved quality. The Ethiopian Leather and Leather Products Training Development Institution (ELLPTDI) was launched. The Institution produces trained personnel for the domestic leather-manufacturing industry which allows the production of

standardised products for the international market. It has also introduced new and modern technologies to the local tanning industry and finished leather goods producers (Bayou, 2005).

In the meantime, due to the liberalisation policy, the number of both private tanneries and leather goods manufacturing industries was increased. There were 21 tanneries in Ethiopia in 2008, with a tanning capacity of 34 000 pieces of hides and skins per day. The number of tanneries increased to 27 and the tanning capacity increased to 170 000 pieces of hides and skins per day in 2012. There are more than 15 large export-oriented footwear manufacturing companies and an innumerable number of micro and small shoemakers in Ethiopia. Footwear producers can produce more than 20 000 pairs of shoes per day (USAID, 2013).

During this period of export sector prioritisation by the government, the leather industry was privileged to have access to credit, land, semi-constructed factories and footwear producers, and duty-free imports of raw material. The industry also gained access to training and other incentives. Tax and regulatory policies were extensively used by the government to encourage the improvement of the leather products along the value chain. For instance, the government imposed a 150% export tax on the export of raw hides and skins and semi-finished leather products in 2008. The government levied the same level of tax on the export of crust leather products in 2012. These government interventions had a collective effect of improving the exports and employment potential of the leather industry (Abebe & Schaefer, 2013). The next section describes the leather industry's value chain and the imposition of the export tax.

## **2.4 THE LEATHER INDUSTRY VALUE CHAIN**

Hides and skins change hands several times before they reach the tanneries, since traders collect them in small quantities over a large geographic area. The leather tanneries in Ethiopia obtain most of the hides and skins from collectors and traders. Larger tanneries equipped with machines and tanning<sup>1</sup> raw hides and skins to produce semi-processed leather

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<sup>1</sup> Tanning is the process of treating raw hides and skins to produce leather, which makes more durable and less susceptible to decomposition. There are two types of tanning vegetable or mineral methods (bio acid).



products like pickled leather<sup>2</sup>, wet-blue leather<sup>3</sup> and crust leather<sup>4</sup>. The leather industries buy raw materials from the tanneries and produce various types of finished leather products for both domestic use and export purposes (i.e. shoes, gloves, garments, and other articles of leather) (USAID, 2013).

In 2012, there were 27 tanneries (i.e. eight are foreign firms) which produced crust leather for the export market and finished leather mainly for the domestic market. These tanneries have an average daily soaking capacity of 107 850 pieces of sheep skin, 51 550 pieces of goat skin, and 9 800 hides of cattle (USAID, 2013). However, they produce below their capacity because of the shortage of raw hides and skins; this leads to tanneries being price takers, as the shortage of hides and skins force them to bid aggressively against other tanneries (Urgessa, 2013). Particularly, foreign tanneries overall present unfair competition rather than being sources of technology transfer (Abebe & Schaefer, 2013).

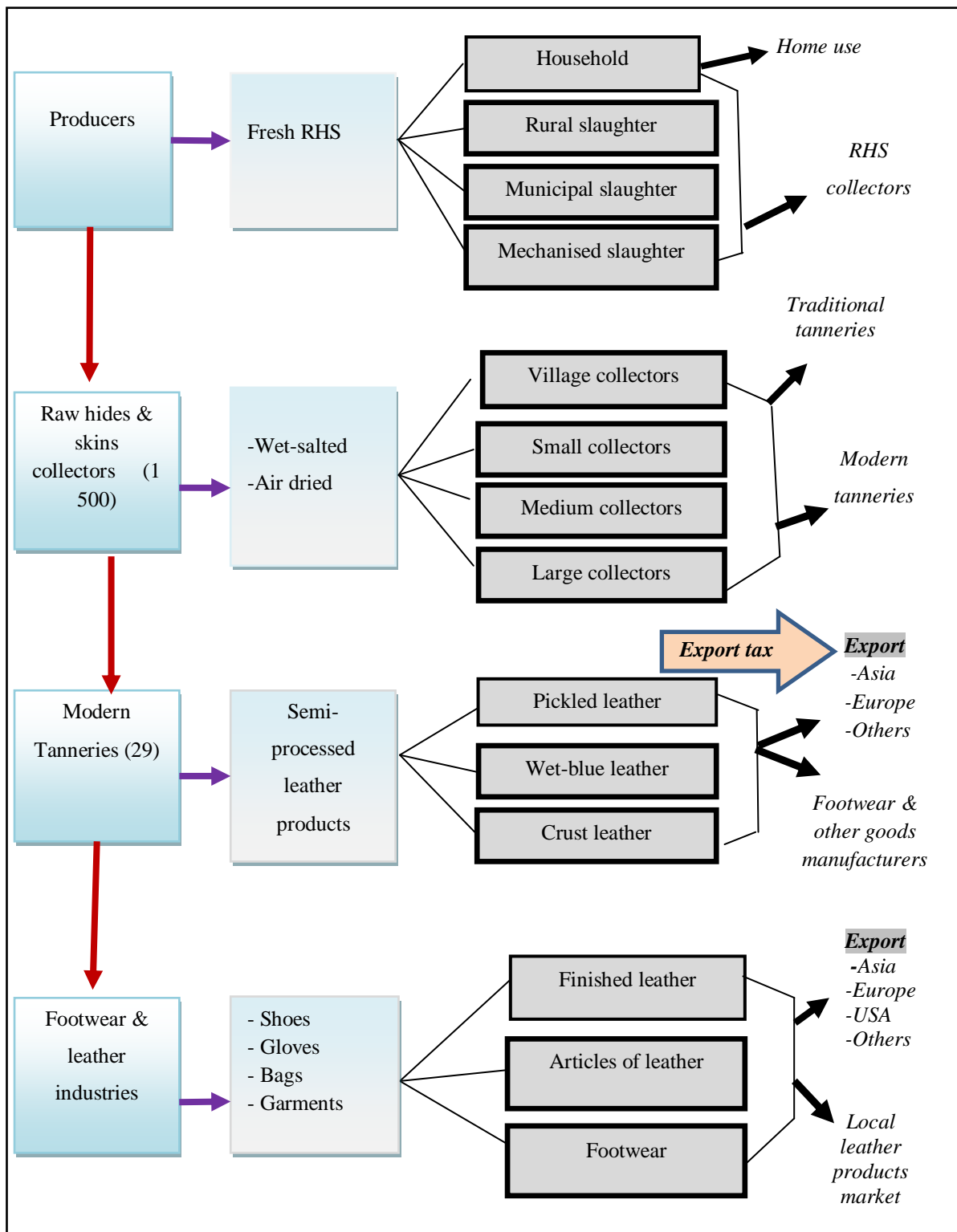
The Ethiopian shoe industry is one of the leather goods producing industries and consists of two distinct groups: smaller manufacturers that produce for the local market, mostly covered by most of the domestic producers; and medium- and large-scale manufacturers that produce for the export market. The glove industry, which currently strictly focuses on export markets, is in its infancy and is expected to grow rapidly in the years to come as more investors discover that Ethiopian hair sheep skin is one of the best materials in the world for making fashion and sports gloves because of its softness and strength. The garment industry in Ethiopia is small and they produce for the local market, and therefore has negligible penetration in the international market (USAID, 2013). Leather industry are many processing and market chain. The most common leather industry value chain is illustrated in the following figure (see Figure 2.3).

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<sup>2</sup> Pickle leather is preserved raw hides and skins by acid (prepare for bleaching and tanning).

<sup>3</sup> Wet- blue leather is hides and skins after the chrome-tanning process

<sup>4</sup> Crust leather is leather after re-tanning and drying of wet-blue.



**Figure 2.2: Leather industry value chain**  
 Source: Modified from USAID, (2013)

## **2.5 ETHIOPIA'S EXPORT POLICY AND ITS EFFECT ON THE LEATHER INDUSTRY**

Agricultural Development Led Industrialization (ADLI), which was formulated in the mid-1990s, is Ethiopia's broad development vision. The idea of ADLI is that agricultural development plays a leading role in industrialisation; therefore it focuses on improving the productivity of smallholder agriculture and creating linkages with the industrial sector. Based on this broad development vision, the country formulated the Industrial Development Strategy (IDS) in 2002/2003 (Mitik, 2010). One of the guiding principles of the IDS is that sustainable and rapid industrial development can only be ensured if the sector is competitive in international markets (UNIDO, 2012). Thus, export sectors should lead industrial development and be given preferential treatment. The strategy identifies priority sectors, including: textiles and garments; meat, leather, and leather products; construction; and micro- and small-scale enterprises.

### **2.5.1 Ethiopia's export policies**

The Industrial Development Strategy (IDS) was implemented by the subsequent development plans, through setting targets specifically for export performance. In order to meet the targets, the government has played an important role by improving the investment climate and providing direct support to selected sectors. Tanneries have received a wide-ranging package of support to improve the quality of their products. The LLPTI (now LIDI) has offered training on production and managerial skills for workers and managers of tanneries free of charge. The government has also co-financed the employment of foreign experts and consultants who helped improve the production facilities of tanneries. As part of the economic incentives, exporters/investors were granted cheaper credit, easy access to land at lower lease prices and longer tenure periods, and duty and tax exemptions (Abebe & Schaefer, 2013).

The government has also increasingly engaged in developing industrial zones around the major cities with the necessary infrastructure such as roads, electricity, and telecommunications – with special attention to export-oriented sectors. For instance, the Ministry of Trade and Industry allocated industrial zones for export sectors, including garment and footwear industries, in the vicinity of Addis Ababa, and industrial zones for

local and foreign investors (e.g. China, India, Turkey, and Egypt) promising to engage in the export sectors (USAID, 2013).

The Ethiopian economy has shown spectacular growth since 2003/2004; registering average annual growth of 10.6% between then and 2010/2011. This is about double the average growth rate (5.2%) recorded for sub-Saharan Africa (SSA) over the same period. Both the agriculture and manufacturing exports grew but the growth of the former is much higher than that of the latter. For example; between 2001 and 2011, agriculture exports grew about eightfold, while manufacturing exports grew threefold (Gebreeyesus, 2013). Ethiopian merchandise exports have expanded in this period (i.e. increased from less than US\$0.5 billion in 2004 to over US\$2 billion in 2011). However, these achievements have attained little in terms of structural transformation. The Ethiopian economy remains agrarian with the share of the industrial and manufacturing sectors' value added not exceeding 14% and 5%, respectively in 2010 (World Bank, 1997). Both merchandise exports per capita and manufacturing exports per capita have also remained far lower than the average for the SSA.

Another recent trend in Ethiopia's manufacturing exports is a substantial increase in the share of exports destined for developing country markets. For example, in 2000, the developed and developing countries' market share was in exports respectively 60% and 40%. In 2010, this was reversed and the developed and developing countries' markets respectively accounted for 42% and 58%. Actors along the value chain are expected to make use of new opportunities and they are also required to develop and supply new products to the new and existing markets (NBE, 2013). Recently in Ethiopia, the leather industry expanded the new supply chain production of leather gloves, which are a good example and a great opportunity for the Ethiopian leather industry. The glove industry, which is currently in its infancy, is firmly focused on export markets (USAID, 2013). This section described Ethiopia's export policy for all sectors. The next section provides information particularly on Ethiopia's leather industry policy and its outcome in the industry.

## **2.5.2 Ethiopia's leather industry policies**

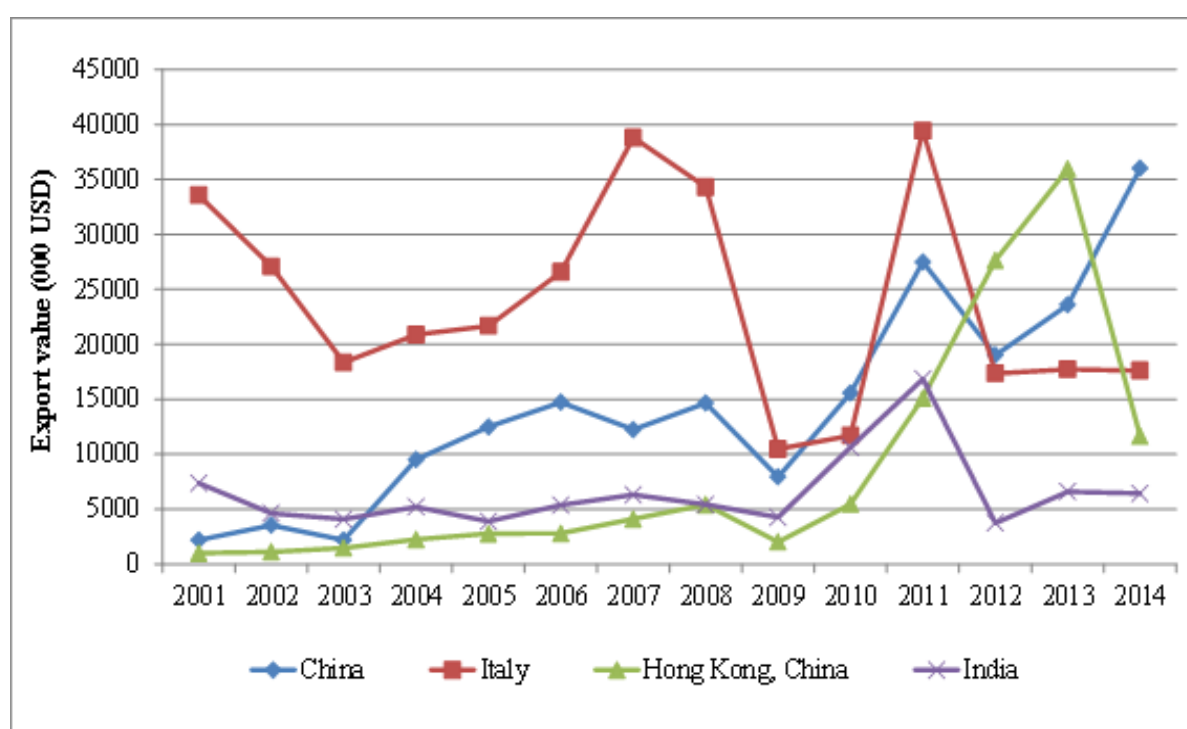
Since the early 1990s, the government of Ethiopia has introduced several business-friendly policies. The government has undertaken several policy measures and indirect interventions. In addition to these incentives, there have been several other policy measures and direct

government interventions to promote upgrading and value addition in the Leather and Leather Product Industry (LLPI) specifically. The leather industry is privileged with high resource potential. There is a gap between leather production and the livestock resource base of the country. Government interventions specifically increase the LLPI to improve the sector's value addition (Abebe & Schaefer, 2013). The government of Ethiopia has prepared strategy papers for the LLPI in the export promotion strategy in 1998 and in the Industrial Development Strategy (IDS) in 2002 to encourage investment in the sector.

A master plan prepared by UNIDO in collaboration with the Ministry of Trade and Industry (MoTI, now MoI) is the second most prominent strategy paper for the leather industry. A strategic action plan for the development of the Ethiopian leather product industry was prepared by UNIDO in 2005. This strategic plan contained two documents that comprised a master plan and a business plan according to the request of the MoTI. The “master plan” emphasised improving the quality of the inputs of the leather products by improving the value addition of the sectors, especially the tanning industry. Technically advanced leather industries in Italy, China, Vietnam, and India were taken as benchmarks. The Ministry prepared an action plan which mainly focused on upgrading programmes for tanneries and footwear producers. The Ministry has carried out several projects in partnership with UNIDO and other international donors to put into effect the capacity building and competitiveness programmes articulated in the plan (UNIDO, 2012).

The Ministry of Trade and Industry, in collaboration with UNIDO, designed a project entitled “Technical Assistance Project for the Upgrading of the Ethiopian Leather and Leather Products Industry”, to be implemented by UNIDO experts by 2012. This involved “a wide range of technical assistance from production layout to management and marketing” (UNIDO, 2012). The government has also adopted a benchmarking exercise to upgrade the leather and leather products industry. To this effect, the Leather Industry Development Institute (LIDI) entered into a twinning arrangement with the Central Leather Research Institute (CLRI) and the Footwear Design and Development Institute (FDDI) of India for the practical execution of the benchmarking exercises at factory level. The government selected seven tanneries and seven footwear producers to implement UNIDO's initial benchmarking study recommendations (Abebe & Schaefer, 2013).

In 2008, the Minister of Finance and Economic Development of Ethiopia imposed a 150% export tax on raw hides and skins and semi-leather products (FNG, 2008). In addition to this, the government again imposed a 150% export tax on cluster leather products in (FNG, 2012). These export tax systems could serve as instruments to encourage industries engaged in the production and export of hides and skins and/or semi-processed leather to finished leather products. Figure 2.3 shows that before the export tax, the main importers of Ethiopia raw hides and skin and leather products were Italy and the United Kingdom. However, after the export taxes in 2008 and 2012, Ethiopia raw hides and skins and leather products exports diverted to China, Hong Kong, and India (see Figure 2.3).



**Figure 2.3:** The major countries importing RHS and leather products from Ethiopia  
*Source:* Author's calculation based on UNCOMTRADE data, (2001-2014)

According to Workneh (2014), these export taxes affected incompetent tannery industries and diverted export destinations from European countries to Asian countries. The next section discusses the outcomes of leather industry policies in different aspects (export, import, employment and foreign direct investment).

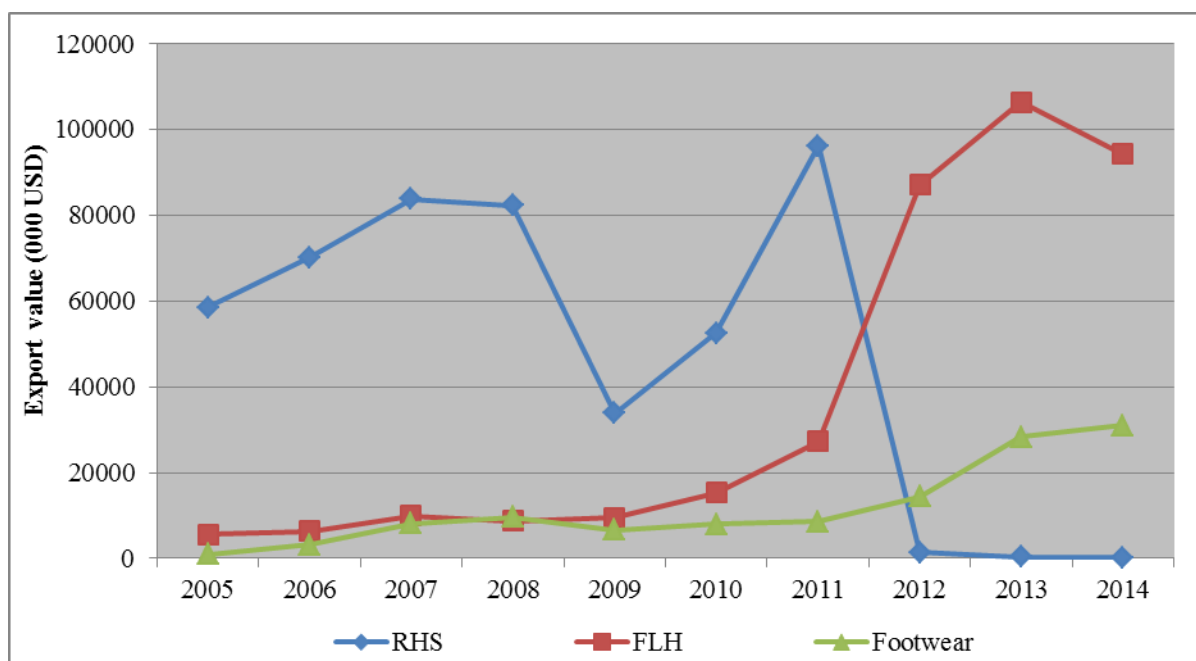
### **2.5.3 The outcomes of leather industry policies**

With regard to the leather sector, the government's objective was to maximise export earnings via the highest possible domestic value addition. This was achieved by transforming unprocessed hides and skins to subsequent products such as wet-blue and finally to finished leather products meant for the export market (USAID, 2013).

#### *2.5.3.1 Ethiopia's RHS and leather products exports*

In this study, raw hides and skins include wet-salted, dry-salted, pickled, and wet-blue; and finished leather products include different articles of leather, harnesses, travel goods, leather further prepared after tanning or crust, and the leather of other animals. The policy intervention, which levied a heavy export tax on the export of raw hides and skins and crust leather products to encourage the production and export of finished leather products, shifted to value addition in the leather industry.

Raw hides and skins and semi-processed leather products export has been increased and fluctuated more before 2008; after the export tax on raw hides and skins in 2008, the export of raw hides and skins and semi-processed leather products dropped radically. Meanwhile, the export of finished leather products and footwear shows an upward trend after the government imposed the export tax, specifically after the 2012 export tax on crust leather products (see Figure 2.4). Encouraged by this progress, world-known footwear companies from China, Italy, and the UK have shifted their facilities to Ethiopia. China's Huajian Group and Hong Kong's New Wing are examples of recently established shoe companies in Ethiopia (Workneh, 2014).



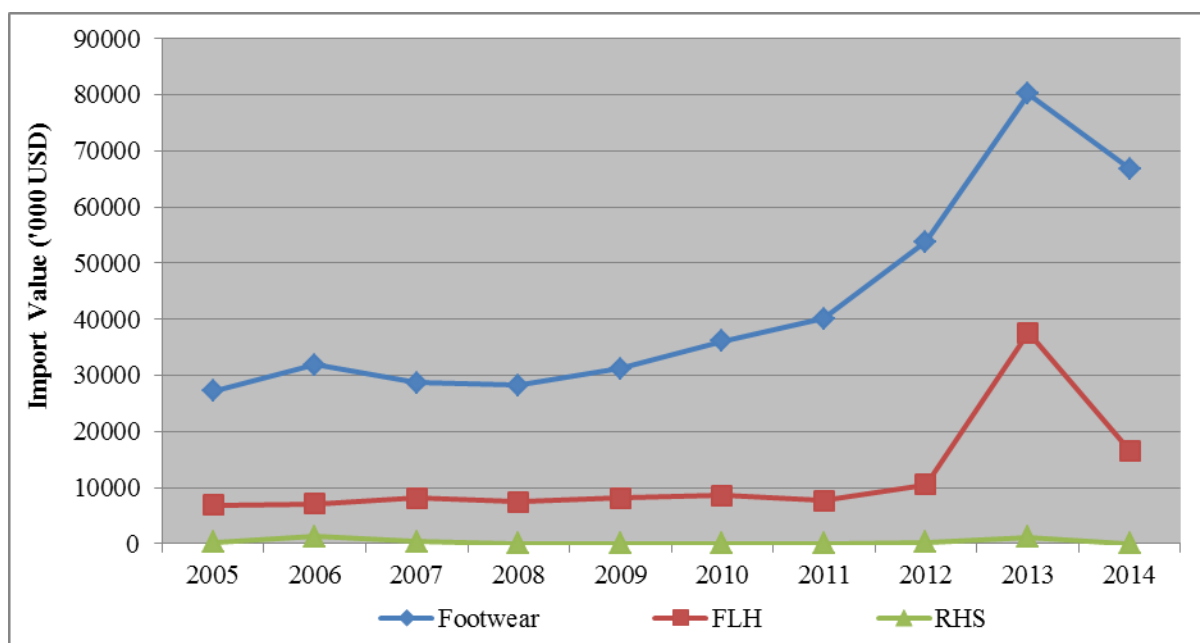
**Figure 2.4: Ethiopian RHS, FLH, and footwear exports**  
Source: Author's calculation based on ITC data, (2005-2014)

While the industry is still in its nascent stage, it is clear that the change in government policy was successful in attracting foreign direct investment in the processing of raw hides and in the manufacturing of leather products. The majority of foreign investors in leather processing are from China and India (UNIDO, 2012). The next section discuss about

### 2.5.3.2 Import trends of Ethiopia's leather products'

Ethiopia is still importing large numbers of shoes and leather and plastic products from across the world and spending millions of hard currency annually. In addition, as most shoe-making and leather products' accessories such as synthetic sewing thread, plastic linen, shoelaces, zippers, buckles, and the like are being imported, the country is a long way from fully substituting imported shoes with other leather products (UNIDO, 2012). Ethiopia's imports of leather products, especially shoes, indicate an increasing trend during 2005 to 2013 (see Figure 2.5). This leads to a negative trade balance of Ethiopia footwear.





**Figure 2.5: Ethiopian RHS, FLH, and footwear import**  
Source: Author's calculation based on ITC data, (2005-2014)

The leather industry policies in Ethiopia did not make a significant impact on the import of leather products. This is due to three new foreign firms from Germany, China, and Italy producing export-quality shoes; only domestic firms produced for the domestic markets and the price of imported shoes from China was lower than the domestic price (Jing, 2014). For instance, the Chinese shoe-manufacturing company Huajian, which has its own Shoe City in China, is currently producing 2 000 pairs of shoes every day in Ethiopia. China was the main exporter of leather products to Ethiopia compared to other countries, which covered 77% and 9% of the total leather product exports to Ethiopia in 2006 and 2014 respectively (see Table 2.3).

**Table 2.3: Total leather products imported by Ethiopia (thousands USD)**

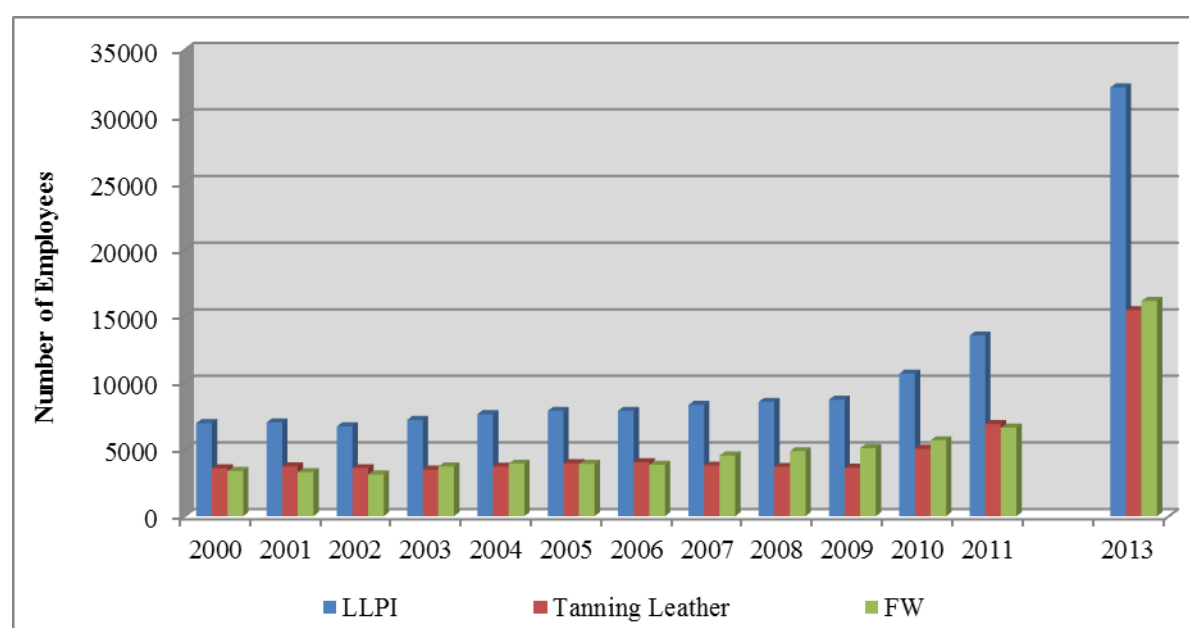
Exporting countries	2006	Share %	2007	Share %	2013	Share %	2014	Share %
China	30 936	76.82	31 039	83.34	74 273	62.42	75 139	90.10
Italy	1 977	4.91	2 381	6.39	2 050	1.72	1 253	1.50
Thailand	559	1.39	522	1.40	996	0.84	981	1.18
Others	6 801	16.89	3 300	8.86	41 666	35.02	6 021	7.22
<b>Total</b>	<b>40 273</b>	<b>100.00</b>	<b>37 242</b>	<b>100.00</b>	<b>118 985</b>	<b>100.00</b>	<b>83 394</b>	<b>100.00</b>

Source: own calculation from ITC data, 2006, 2007, 2013&2014

The next section of this chapter provides information on the impact of the government policy on the leather industry's employment and foreign direct investment.

### 2.5.3.3 *Employment trend in leather industry*

The Ethiopian Leather and Leather Product Institute (LLPI) contain two sectors: tanning and dressing of leather, luggage and handbags; and footwear manufacturing. The number of employees in both the tanning and dressing of leather and footwear manufacturing industries increased significantly from 950 007 people to 1 902 194 in 2000 to 2013 respectively; there was a data gap in 2012. This significant change in the number of employees in the leather industry, as well as other manufacturing industries, is due to the government policy that gave priority to producing more value-added products (see Figure 2.6).



**Figure 2.6: Ethiopia's leather industry employment trend**  
Source: CSA Large and Medium Manufacturing Survey, (2000-2013)

In 2007, the number of employees in tanning and dressing of leather, luggage, and handbags was 3 793; which then increased significantly to 15 452 in 2013. At the same time, the number of employees in the footwear-manufacturing industries increased from 4 558 in 2007 to 16 150 in 2013. However, the share of the leather industry in the total manufacturing sector declined from 8% in 2011 to 2% in 2013 , this is due to a significant increase in the textile and wood industry from 13 431 (8%) and 3 988 (2%) in 2011 to 416 913 (22%) and 114 485 (6%) in 2013 respectively (see Table 2.4).

**Table 2.4: Number of employees and share of leather industry and other sectors**

Year	Total Manuf. sectors	Leather ind.	Share (%)	Food Manuf.	Share (%)	Textile ind.	Share (%)	Wood ind.	Share (%)
2007	124 554	8 351	6.70	35 686	28.65	21 702	17.42	2 010	1.61
2008	130 305	8 586	6.59	41 265	31.65	10 610	8.14	3 160	2.43
2009	147 193	8 750	5.94	44 957	30.54	16 466	11.19	2 111	1.43
2010	185 086	10 707	5.78	60 110	32.48	21 382	11.55	3 261	1.76
2011	173 397	13 567	7.82	67 072	38.68	13 431	7.75	3 988	2.30
2013	1 902 194	32 177	1.69	342 780	18.02	416 913	21.92	114 485	6.02

Source: CSA Large and Medium Manufacturing Survey, 2011; Labour Force Survey, 2013

On the other hand, employment in micro and small enterprises engaged in the leather industry also increased; there were more than 12 000 individuals working in shoe-making businesses in 2011 (Abebe & Schaefer, 2013). This indicates that the export tax on raw hides and skins and unfinished leather products led to increased production of finished leather products and footwear in the country.

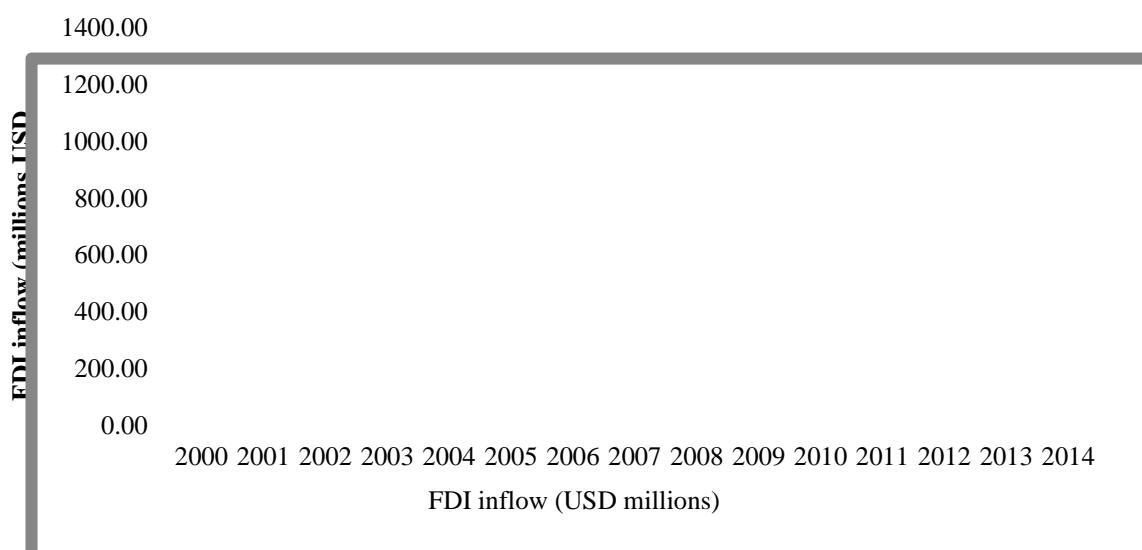
#### 2.5.3.4 Foreign direct investment and leather industry in Ethiopia

The growth of FDI is part of a more general trend in developing countries consisting of a rapid expansion of private capital flows and contraction of official ones. In developing economies Greenfield FDI still accounts for a large portion of FDI inflows (Calderón, 2004). Ethiopia has lacks of skilled manpower and the country's infrastructure is underdeveloped, due to these foreign investments are basically resource- seeking rather than efficiency-seeking.

Foreign Direct Investment (FDI) into Ethiopia began increasing with the liberalisation reforms that started in 1992 following the end of the Derg military regime. The new democratic administration sought to eliminate constraints on foreign investment and to establish a more conducive business environment. The inflow of foreign direct investment fluctuated more during 2000 to 2012, and then increased rapidly after 2013 and 2014 (see Figure 2.7). According to the Ethiopian Investment Agency (EIA, 2012), the areas with the most promising potential for investment are agriculture, agro-processing, textiles and

garment, leather and leather products, tourism, mining, and hydropower. Of the FDI projects licensed by 2003, 46.57% were in manufacturing and processing; 40.7% in trade, hotels, and tourism; and 12.7% in agriculture and mining (UNCTAD, 2004). Ethiopia was the third East African country in the inflows of FDI, next to Tanzania and Uganda (see Appendix 3).

According to the EIA (2012), of the 6 235 total FDI projects in Ethiopia, more than 900 project inflows were from Chinese investors. The second largest source was Sudan, which accounted for a total of 717 projects. The USA, Britain, Italy, Germany, France, Sweden, the Netherlands, and Turkey were also major sources of FDI. Other developing countries such as India, Saudi Arabia, Egypt, the UAE, South Korea, South Africa, and Kuwait were also sources of FDI in Ethiopia.



**Figure 2.7: FDI inflow in Ethiopia**  
Source: CSA Large and Medium Manufacturing Survey, 2000-2014

Ethiopia has seen a significant increase in foreign investment in leather processing and manufacturing since 2004. By relaxing control measures, the government suspended the ban on new foreign investment in tanneries for several years, because local tanneries were not advanced enough to process up to the crust level. After 2008, export tax increase on raw hides and skins and semi-processed leather product a number of foreign (from China, India, Hong Kong and Turkey) entered into tannery sector. Most foreign tanners who enter in the leather sector in Ethiopia are also subsidiaries of major companies in the global leather value chain (Workneh, 2014).

For instance, FDI from China to Ethiopia increased from US\$0.43 million in 2004 to US\$58.53 million in 2010 in the leather sector (Brautigam, 2011). However, these inflows of FDI in the leather industry hurt local tanneries; instead of being sources of technology transfer, foreign tanneries overall are regarded as unwelcome and unfair competition (Workneh, 2014). This means, some of the local firms out of the business, did not leap forward towards high value leather processing capacity. The local firms have not financial capacity to upgrade new technologies. In addition, of additional FDI to the sector competition for raw hides and skins increased significantly. Within two years the local market price of sheepskin increased by 430% from Birr 20 to Birr 106 per piece (Margaret, 2012).

#### **2.5.4 Previous studies on Ethiopia's leather industry**

Zewdie (2002) studied the performance and determinants of the Ethiopian leather export sector. He applied the Ordinary Least Square (OLS) to determine the significance of major quantitative factors for the variation in the supply response of the export sector. Zewdie (2002) used long-run and short-run error correction models. The long-run supply estimation confirms that changes in world unit prices and real exchange rates had relatively substantial influences on the exports of the leather sector. The short-run export supply responds reasonably insignificantly to foreign price realisation from sales in the international market. The result showed that the tanning industry operates much below full capacity and inevitably faces a relatively high unit cost of production; thereby adversely affecting its competitiveness in the world market. The existing technology utilised in the tanning industry limits the product diversification to the stages of semi-processing, which indicated losses from higher value added in finished leather production. This reduced the exports' competitiveness in the international market and productivity (in terms of value added) and produces increasing domestic unfulfilled demand for finished leather in the manufacturing sector for local consumption.

Global Development Solutions (GDS) (2011) analysed the competitiveness of the leather shoe sectors (sheepskin loafers) in Ethiopia, Tanzania, Zambia, China, and Vietnam. A domestic resource cost analysis and a comparative value chain analysis were used to analyse the competitiveness of these countries. The comparative value chain analysis was based on benchmarking of productivity and costs between mostly small and medium-sized formal firms in Ethiopia, Tanzania, and Zambia, and their comparators, Vietnam and China. These

leather products were selected based on the fact that they are produced through labour-intensive and simple manufacturing processes similar across all comparator countries. The result of the study shows that Ethiopian leather products are cost- and price-competitive on the world market due to the low labour costs and access to inexpensive local sheepskins. However, Tanzania and Zambia were inefficient on competitiveness, due to those countries not being main producers of fashion shoes. In recent years, several producers in Zambia have stopped manufacturing leather footwear.

Zhao (2014) conducted research on the effect of export tax on Ethiopia's leather industry. The partial equilibrium analysis model was used to analyse the research data. Zhao (2014) used data on sheep skin production and export before and after the year 2008 by considering domestic and international prices to analyse the welfare effect of export tax on tanneries. The result of the study indicated that the 150% export tax on wet-blue skins and hides did not lead to a significant loss in revenue for tanneries (i.e. US\$1.91 million) and only 0.49% of the GDP. It considered tanneries as both the producers and consumers of wet-blue hides and skins. The results also showed the effect of export tax on expanding the production and export of the leather industry through the increased numbers of employment and foreign direct investments to the sector.

Mulat (2015) analysed the revealed comparative advantage of the Ethiopian leather industry with selected African economies. This paper analysed the growth pattern of trade flow and the trade comparative advantages of the leather industry products between some selected African economies; namely Kenya, Egypt, Tunisia, and Ethiopia during 2004 – 2013. The Balassa index of revealed comparative advantage and “HS” 2-digit level leather industry data were used. Two product categories of leather products were used; namely Product: “HS” 41 raw hides and skins (other than fur skins) and leather Product: “HS” 42 articles of leather, animal gut, harnesses, and travel goods. The study was conducted for these two categories separately and the analysis indicated that Ethiopia has a comparatively high RCA in raw hides and skins exports over the selected economies during the period of study. The results of this paper showed that Ethiopia has greater than one RCA for the raw hides and skins export category compared with other RCA indexes.

This study is different from all the aforementioned studies; for instance, Zewdie (2002) studied the performance of the leather industry before the government imposed the export tax

on raw hides and skins and leather products; Global Development Solutions (2011) analysed the competitiveness of the leather shoes sector (sheepskin loafers) without considering the export tax and other leather products sector; Zhao (2014) analysed the effect of the export tax on the welfare of the tanneries without considering the 2012 export tax (150% export tax on crust leather products), and only focused on sheepskin; Mulat (2015) analysed the revealed comparative advantage of the leather industry by using two categories of Ethiopian leather products in general level “HS”2 digit (raw hides and skins and leather products (“HS” 41) and articles of leathers, animal gut, harnesses, and travel goods (“HS” 42 ). This means, some of finished products mixed with raw hides and skins and difficult to see the effect specifically. However, this study analyses the effect of export tax by using the RCA and CMS models by selecting nine main export products (“HS” 4 digit level), as well as by selecting the four main destinations of Ethiopia’s raw hides and skins and leather products. Consequently, this study provides wide and detailed information on the effect of export tax on the Ethiopian leather industry. Therefore, policy makers can easily select which specific leather product fosters the leather industry’s export growth.

## **2.6 SUMMARY**

The aim of this chapter was to provide broad and diverse information on Ethiopia’s leather industry. It started with livestock populations compared with other African countries and followed by the history of the leather industry in the three regimes. Leather was the second main export item during the past two regimes; however, it recently held the sixth rank among Ethiopia’s main export items. The next section described the leather value chain in Ethiopia. The other sections of the chapter emphasised Ethiopia’s export policies, particularly leather industry policies, and their effect on export, import, and employment in the leather industry. The government of Ethiopia applied different policy measures on the leather industry to encourage the production and export of final leather products in the sector. The export ban on raw hides in 1986, the 150% export tax imposed on raw hides and skins and semi-finished products in 2008, and the 150% export tax on crust leather products in 2012 are some of the policies that affected the export of raw hides and skins and finished leather products. The final section of the chapter reviewed previous studies on Ethiopia’s leather industry. Most studies analysed the performance and competitiveness of Ethiopia’s leather industry without considered export tax or taken the products at a general level. This study analyses the effect of export tax on the leather industry’s export competitiveness using two models (Constant

Market Share and Revealed Comparative Advantage) on specific products in selected markets. The next chapter reviews existing literature on export restrictions, particularly export tax and its effect on trade.



## **CHAPTER 3**

### **REVIEW OF EXPORT MEASURES**

#### **3.1 INTRODUCTION**

This chapter reviews global trends of export measures, particularly focused on export tax. It also describes export restrictions and WTO agreements in the second section. The third section lists and defines three types of export restrictions, which are export tax, export bans and export quotas and licensing. The fourth section discusses the overall effect of export tax using case study. The fifth section reviews empirical studies conducted on using constant market share and revealed comparative advantage.

#### **3.2 EXPORT RESTRICTIONS AND THE WORLD TRADE ORGANIZATION**

World Trade Organization (WTO) Trade Policy Reviews (TPRs) provide information on the policy objectives of export taxes. Under developmental objectives, the governments of countries often refer to export taxes, aimed at trade diversification and upgrades along the value chain, ensuring the supply of inputs to domestic processing capacities, as well as reducing inflationary pressure and insulating domestic prices from world price volatility. Other objectives include the redistribution of windfall profits and gains from currency devaluation, offsetting import tariff escalation, preventing smuggling, complementing diminishing import tariff revenues, as well as redistributing welfare among industries, consumers, and producers (Korinek & Kim, 2010).

The WTO has an asymmetric treatment of exports and imports. The discipline on the export side is more lax; the WTO does not specifically prohibit export taxes (Piermartini, 2004). Export restriction is mainly mentioned in WTO Article XI (General Elimination of Quantitative Restrictions) of GATT 1994, and export restriction is also concerned in the agriculture agreement in Article 12 (Disciplines on Export Prohibitions and Restrictions) of the 1994 Agreement on Agriculture (AoA). Article XI of GATT stated that import and export restriction policy instruments like quotas and export license are prohibited (XI: 1); only taxes and other duties are allowed. Temporary quantitative export restrictions or prohibitions are

applied to prevent critical shortages of food or other products that are important for exporting countries (XI: 2a).

Article 12 of the Agreement on Agriculture (AoA) refers to consultation and notification obligations. Based on subsection 1(a), when a country institutes “a new export prohibition or restriction on foodstuff in accordance with paragraph 2(a) of Article XI of GATT 1994”, it “shall give due consideration to the effects of such prohibition or restriction on importing Members’ food security”. Subsection 1(b) states that:

“Before any Member institutes an export prohibition or restriction, it shall give notice in writing, as far in advance as practicable, to the Committee on Agriculture comprising such information as the nature and the duration of such measure, and shall consult, upon request, with any other Member having a substantial interest as an importer with respect to any matter related to the measure in question. The Member instituting such export prohibition or restriction shall provide, upon request, such a Member with necessary information.”

The second paragraph of Article 12 states that developing country members are excused from these obligations, unless the export restricting measure is taken by a developing country member which is a net-food exporter of the specific foodstuff concerned (GATT, 1994).

According to Solleder (2013), export restrictions did not receive as much attention as import protection in the Uruguay Round and in the Doha Round, because when the Uruguay Round was launched in 1986, high supply and low prices of many commodities were recorded. Instead, developed countries were mostly using export subsidies as a way to encourage the export of products. Current less attention to export restrictions by the WTO resulted in that they persisted outside the core elements of the 1994 AoA. They do not have good reason to restrict their exports. The policy responses made by some of the core food exporters towards the recent food crises and the consequences of their decisions on food insecurity of several food-importing developing countries and the negative effects of all these crises on the status of international markets demanded a different framework than the Uruguay Round negotiation.

According to Karapinar (2011), who screened the accession, the protocols of the 25 countries which became members of the WTO between 1995 and November 2011, and commitments

on export restrictions which are more restrictive than the current WTO provisions, can be found in three of them; those of China, Mongolia, and the Ukraine. China agreed to eliminate export taxes on all products except for 84 tariff lines (defined at the 8-digit “HS” level) and for China the accession protocol includes bound rates. The Ukraine agreed to eliminate export bans to reduce existing export taxes on certain products and to bind all its existing export taxes, unless increases above the bound rate are justified under the GATT of 1994. Mongolia agreed to replace the export ban it had in place on raw cashmere with an export tax which was bound at 30% and agreed to eliminate it within ten years of the date of accession. Among the accession protocols of the six countries which become members of the WTO since then (Lao PDR, Montenegro, Russia, Samoa, Tajikistan, and Vanuatu), WTO-plus obligations regarding export restrictions are included only in that of Russia, which agreed to eliminate, reduce, or bind export taxes for a long list of goods (Korinek & Kim, 2010).

Export restrictions are mostly regulated by Regional Trade Agreements (RTAs), including bilateral ones, and provisions often go well beyond those of the WTO. Commitments regarding export restrictions in RTAs are subject to the Most Favoured Nation Treatment rule (Article I of GATT, 1994). However, they could only obtain cold responses from the majority of developing countries. Currently, a number of WTO members are arguing for a stricter discipline on export taxes. As before, the agenda is driven by the resource-poor developed countries. The European Communities (EC) is actively seeking to introduce obligations by all WTO members to bind and reduce export taxes. The EC has tabled a negotiating proposal under the current Non-Agriculture Market Access (NAMA) negotiations on non-tariff barriers to trade, which aims at preventing the use of export taxes for industrial or trade policy purposes (Emlinger, Jacquet & Lozza, 2008). Japan has also submitted several proposals. While the EC proposal aims at reduction, elimination, and at least restriction of export taxes, the Japanese proposal seeks to enhance transparency in the application of export restrictions.

### **3.3 TYPES OF EXPORT RESTRICTION POLICIES**

The last few years have seen a sharp increase in prices of commodities such as minerals, metals, and agricultural products. At the same time, export restrictions on raw materials have been used more frequently (OECD, 2014). The increased use of export restrictions has focused the attention of policy makers and the business community on their economic

consequences – specifically their impact on the trade of raw materials. There is growing concern about the relatively weak multilateral disciplines on export restrictions and the lack of transparency in this area. Export restrictions by nature affect industries and consumers of importing countries, which in turn are confronted with reduced import volumes and higher import prices. When restrictions are applied by large countries with a significant market share of a particular product, such measures can raise international prices (Martin & Anderson, 2011).

Export restrictions are designed to meet diverse policy objectives that range from environmental protection and increasing fiscal revenue to the development of processing sectors. In view of existing alternative policy options, the question is under what conditions are export restrictions effective in achieving the stated policy objectives. The answer will depend in part on whether export restrictions affect the price and quantity of the product as expected (Bouët & Laborde, 2010).

Export restrictions on raw materials affect global competition and supply chains. They create a difference between prices for domestic consumers and those for foreign importers. Although providing a price advantage to domestic consumers could aim to attract investment in the processing sector, the lack of transparency on export restrictions leads to an insecure business environment which can negatively affect the investment and long-term supply capacity of the subject sector. The relevance of the measures to global sourcing emphasises the importance of business perspectives to understand the economic consequences of export restrictions (Korinek & Kim, 2010). Export restrictions take various forms, such as export bans, quotas and taxes, minimum export prices, reduction of VAT rebates, and licensing requirements (Warr, 2002).

### **3.3.1 Export tax**

Export tax is a duty collected on exported commodities. There are different forms of export tax that reduce the volume of exports such as ad valorem tax (percentage tax of the value of the product), specific tax (fixed amount to pay per unit of a product), and progressive tax (i.e. it depends on the price of the product; when the price of the product is high, the tax rate is also high, and when the price of the product is low, the tax rate is also low). There are similarities between export taxes and import tariffs in terms of their impact on world prices

and on the economic outcomes for exporting and importing countries. Despite these similarities, export taxes are not subject to specific disciplines under current WTO regulations, while import tariffs are (Warr, 2002). Export taxes also differ from quantitative export restrictions in that the latter are in principle prohibited under the WTO.

### **3.3.2 Export bans**

An export ban is a type of export restriction which cuts exports completely. Export bans are mostly applied on hides and skins, cotton, live fishery products, wildlife, and others to prevent exports of dangerous materials and to improve domestic value addition. However, export bans have two fundamental problems; namely a lack of long-term credibility of such a policy, and it mostly leads to smuggling (Marks, Larson & Pomeroy, 1998). For instance, India banned cotton exports in 2012 to ensure supplies for domestic mills, and Indonesia banned exports of raw logs, cattle hides, and raw animal skins (Piermartini, 2004).

### **3.3.3 Export quotas and licensing**

An export quota is a restriction of export imposed by a country either voluntarily or on request of other countries. Some of the reasons countries impose export quotas are to protect the local industry from a shortage of raw materials, protection of the local population from a shortage of foodstuffs or other essential goods, export restriction agreements with members of the producers' cartel, or export restraint agreements with consumer countries. Quotas restrict the maximum amount of exports, while licensing ensures that commodities can be exported only by allowed exporters. Export licensing is a form of export control by the government agency by using documents issued to monitor and control the export of sensitive technologies, prohibited materials (i.e. drugs, genetically modified plants, explosives, radioactive substance, advanced alloys, etc.). Therefore, in this case, the government is responsible for allocating quotas to selected exporters. This system is sometimes adopted to capture economic rents associated with a perceived position of market power in an exporting country and leads to rent-seeking activities (Takacs, 1987).

### 3.4 OVERALL EFFECTS OF EXPORT TAX

Major commodity exporters have a long history of raising government revenue from export taxes on a variety of commodities (petroleum, mineral and metal products, sugar, coffee, cocoa, raw logs and forestry products, fishery products, tobacco, leather and hides and skins, grain, edible nuts, bananas, and oilseed products like palm oil, copra, soybeans) (Piermartini, 2004). However, several studies justify the different reasons countries impose export tax; some of the reasons are:

- Export taxes can raise the world prices of exported products and therefore improve country terms of trade.
- Export taxes can reduce the domestic price of the taxed commodity and thus benefit the final local consumers of this commodity; this element is especially important when food security is at stake.
- Export taxes can reduce the domestic price of the taxed commodity and benefit consumers of this commodity as inputs; this element is important when downstream industries using this commodity to provide higher value-added product than the taxed industry.
- Export taxes increase public revenue, which is beneficial in a country where fiscal receipts on the domestic base are limited.
- Export taxes are a means of redistributing income from domestic producers to domestic consumers and the public sector.

Mark (2010) analyse the impact of 40% export tax on raw hides and skin in Kenya. The result of the case study shows that the export tax on raw hides and skins was effective in developing the leather processing industry. The policy increase number of tanneries in the country, created 7000 new jobs and increase earning from sector by £8 million.

An Export tax has different effects when imposed by large and small countries (Laborde, Estrades & Bouët, 2013). When export tax is imposed by a large country, it will affect both the exporting country as well as the importing country. A large exporting country is a market power that affects world price. This leads to term-of-trade gain for the exporting country; however, in the importing country, the term-of-trade worsens. Producers in exporting are

discouraged because of low domestic prices and consumers consuming more. Meanwhile, the consumption of the importing country reduces because of the high world price.

Export tax imposed by a small country has a different effect; its share in the world market does not affect the world price. In a small country case, unlike a large country, export tax does not result in a gain on the terms-of-trade (welfare loss), because the implementing cost is greater than the revenue. In general, the national welfare effect of export tax imposed by a small country is negative. However, the national welfare effect in a large country can be positive or negative; depending on the ability of the country to increase the world price. Overall, the world welfare effects of export tax are also negative, due to both production and consumption efficiency losses in the exporting and importing country (Anania, 2013).

In addition, export tax policy results in income distribution effects from producers to consumers in the same sectors, as well as from other sectors. If export tax is imposed on a raw commodity, it results in a low domestic price of the raw commodity in the domestic market; which subsidises the domestic processor industry that uses this raw commodity, which shows income transfer from the raw-commodity producing sector to the processing industry. The export tax policy encourages the processing industry because the industry gains competitiveness in the international market; however, it harms the raw-commodity-producing sectors (Piermartini, 2004). All these factors make export taxes a trade policy option in achieving several policy objectives; however, this study considers the strains that export taxes cause, and their effect on value-added industries. The next section reviewed empirical studies that show the impact of export tax using the two approaches, which are constant market share and revealed comparative advantage analysis.

### **3.5 EMPIRICAL STUDIES USING CMS AND RCA**

Poramacom (2002) used Revealed Comparative Advantage (RCA) and Constant Market Share Model (CMS) techniques to analyse the export performance of Thailand natural rubber compare with Indonesia using 1991-1998 data. The study found that the RCA index Indonesian natural rubber shows a comparative advantage or specialization of trade in the U.S. market. Thailand, however, shows no comparative advantage in the U.S. market, with RCA at 0.42-0.96. The CMS Thailand was delighted in an actual export growth of natural rubber in the world at \$425.91 million, comparing the year 1995-1996 to 1991-1993. By

contrast, comparison of the period 1997-1998 to the period 1995-1996, the actual export growth was >\$125.35 million due to negative effects on standard growth effect, market effect and competitive effect.

Skriner (2009) used CMS model to evaluate competitiveness and specialisation of Austrian export sector by using merchandise exports data from 1990 to 2006. He found that long-term trend of the indicators suggests that the Austrian foreign trade sector was able to maintain its market share in the global environment. While the Austrian foreign trade performance only slightly deviates from the pattern of the traditional industrialised countries, a strong structural change is observable in the external sector of the emerging markets.

Chien (2010) investigate the component factors of change in Taiwan's exports from 1997 to 2007 and the variations of its export competitiveness by using CMS model. He evaluate Taiwan's performance in trade and obtained trade effect, commodity effect, market effect and competitiveness effect by calculating export data from 1997 to 2007. The study found that Taiwan's exports conform more and more to more prosperous market orientations, but exported merchandise items have not followed the demands for growth of merchandise trade in the four markets

Rafin and Naualy (2013) used CMS model to analyse the effect of export tax on Indonesia's on cocoa export competitiveness. Their finding indicates that with the implementation of export tax, cocoa export product composition shift from cocoa beans to processed cocoa products. On the other hand, Indonesia's cocoa export growth is lower than the growth of cocoa world demand which is mainly caused by the decrease of competitiveness.

Shaha and Mahmood (2013) analyse the comparative advantage of leather industry in Pakistan with comparison to other selected Asian countries using RCA. The finding shows that Pakistan has a high comparative advantage in leather products over all the selected economies during the period of study. The paper highlights the problems faced by the leather industry and identifies some immediate policy action to be taken to improve the performance of the leather industry in the light of evidence.

Islam and Siddique (2014) analyses the comparative advantage and the pattern of trade flows of Bangladeshi leather industry with comparison to other selected Asian countries using



Revealed Comparative Advantage (RCA) Balassa's Index. The result showed that Bangladesh has a comparatively high RCA in overall leather exports with other selected countries from 2004 to 2013 which is driven by a very high RCA in raw hides & skins exports. This indicates that Bangladesh has significant potentiality for specialization in leather export especially raw hides & skins.

### **3.6 SUMMARY**

The purpose of this chapter was to review the global trends of export measures; this provided overview information on export tax and export restrictions. The second section of the chapter explained export measures and World Trade Organization rules, especially on export tax. The WTO has an asymmetric treatment of exports and imports. The disciplines on the export side are more lax, but the WTO does not specifically prohibit export taxes (Piermartini, 2004). There are many types of export restrictions; of which only three were mentioned in this chapter, with export tax as the main focus of the chapter. The fourth section of the chapter reviewed the overall effect of export tax in the cases of large and small countries. The final section of the chapter reviewed previous studies using CMS and RCA. The next chapter describes the conceptual framework and empirical analysis of these models.

## **CHAPTER 4**

### **METHODS OF EVALUATING EXPORT TAXES**

#### **4.1 INTRODUCTION**

This chapter focuses on the methods of data analysis that were used to analyse the research objectives stated in Chapter 1 and the listed sources of data. The theoretical analysis and model specification of the three methods of data analysis are explained in this chapter. The linear trend analysis model was used to analyse the export trends of raw hides and skins and finished leather products. After the trend analysis, the Revealed Comparative Advantage (RCA) was used to determine whether Ethiopia has gained comparative advantages on the upward trend products and lost comparative advantages on the downward trend products. The RCA provides information on the comparative advantages of the exports of leather products compared with selected countries (South Africa and Nigeria). However, the RCA does not show the sources of growth, therefore the Constant Market Share (CMS) model was used to show the sources of the growth (components). Finally, the national and international data sources that were used in this research are discussed.

#### **4.2 METHODS OF DATA ANALYSIS**

For this study, the above mentioned three approaches were used to analyse the data (the linear trend analysis model, the Constant Market Share model, and Relative Comparative Advantage). For trend analysis annual export data from 1997 to 2014 (17 observations) was used. South Africa and Nigeria were selected to analyse RCA using data for the periods 2006 to 2013. Those two countries (South Africa and Nigeria) were selected based on the highest livestock populations and highest raw hides and skins and leather products exporters as mentioned in Chapter 1 section 2.2. Four main importing destinations from Ethiopia were selected; namely Italy, China, Hong Kong, and the USA to analyse CMS. Note that China import is not include Hong Kong, this means Hong Kong import leather products from Ethiopia by itself (Hong Kong is its own money; economics system and legal system are also different from china).

#### 4.2.1 Linear Trend Analysis (LTA) Model

Trend analysis is an important tool in the time series analysis to determine the status of a variable, i.e. whether it is improving or not. This study evaluated the trends of the export volumes of raw hides and skins and finished leather products and footwear from 1997 to 2014. In order to estimate the trend coefficients, the Linear Trend Analysis (LTA) model was formulated in which the following were regressed: raw hides and skins export volume (Y) in natural log on time (t), finished leather product export volume (X) in natural log on time (t), and footwear export volume (Z) in natural log on time (t). Trend analysis is a vital tool for policy implications (Kingu, 2014). In this study, the empirical results of the trend analysis provide the impact of government policy on leather products' export volume.

The decision criteria are as follows: If the slope coefficient in the model is positive, then there is an upward trend on the volume of exports; whereas if it is negative, it implies that there is a downward trend (Gujarati, 2004).

The growth rate model is specified as follows:

$$\ln Y_t = B_0 + B_1 T + u_t \quad (4.1)$$

$$\ln X_t = B_0 + B_1 T + u_t \quad (4.2)$$

$$\ln Z_t = B_0 + B_1 T + u_t \quad (4.3)$$

Where:

$Y_t$  is export volumes of raw hides and skins at time t

$X_t$  is export volumes of finished leather product at time t

$Z_t$  is export volumes of footwear at time t

$B_0$  is a constant,  $T$  is the trending variable, and  $u_t$  is the error term.  $B_1$  is expected to be positive or negative. This model resembles the linear regression model (linearity in parameters  $B_0$  and  $B_1$ ). The dependent variable is in logarithmic form to provide a linear relationship, while the explanatory variable time takes values of 1, 2, 3, etc. The model is known as a semi-log model or log-linear model since one of the variables is in logarithmic

form. The slope coefficient  $B_1$  measures the proportional or relative change in export for a given absolute change in the value of the regressor,  $t$ , that is,

$$B_1 = \frac{\text{proportional change in regressand}}{\text{absolute change in regressor}} \quad (4.4)$$

$B_1$  can also be interpreted as the partial elasticity of export with respect to time. Multiplying (4) by 100 gives the percentage change or the growth rate in export for an absolute change in time. The coefficient of the trend variable  $B_1$  in the above growth model (1-3) gives the instantaneous (at a point in time) rate of growth and not the compound (over a period of time) rate of growth (Gujarati, 2004).

$$\begin{aligned} \text{Numerically, } B_1 &= \frac{d(\ln Y)}{dX} = (1/Y) (dY/dX) \\ &= (dY/Y) / dX \end{aligned} \quad (4.5)$$

In this study,  $B_1$  indicates the growth rate of raw hides and skins, finished leather products and footwear at a point in time. To obtain the compound rate of the growth of raw hides and skins, finished leather products and footwear exports, the antilog of the estimated  $B_1$  is taken and 1 is subtracted from it and the difference is multiplied by 100. This gives the growth rate of the exports of raw hides and skins or finished leather products or footwear over a period of time (1997 to 2014).

$$\text{The equation gives: } r = (e^{B_1} - 1) \times 100 \quad (4.6)$$

Where  $r$  indicates compound export growth rate for 1994 -2014.

After analysing the export trends of raw and skins and leather products, the revealed comparative advantage model was used to determine whether Ethiopia have gained comparative advantage or have no comparative advantage in the world market.

#### **4.2.2 Revealed Comparative Advantage (RCA)**

The Revealed Comparative Advantage (RCA) is one of the few formal methodologies that measure a country's comparative advantages and disadvantages in a particular industry. It is important for managers of firms in countries engaged in international trade to understand the driving forces behind the international flow of goods and services (Dhanaraj & Beamish, 2003). Comparative advantage was first introduced by David Ricardo, who postulated that even if one nation is less efficient than another nation in the production of both commodities, there is still a basis for mutually beneficial trade (Salvatore, 2001). Utkulu and Seymen (2004) also stated that there mainly exists two prominent theories of trade based on comparative advantage: the Ricardian theory, and the Heckscher-Ohlin (H-O) theory.

The Ricardian theory assumes that comparative advantage arises from differences in technology across countries, while the H-O theory suggests that technologies are the same across countries. Then, the H-O theory assumes that comparative advantage to cost differences results from differences in factor prices across countries. According to Utkulu and Seymen (2004), the H-O theory also assumes a country's comparative advantage is determined by its relative factor scarcity. However, it is known that measuring comparative advantage and testing the H-O theory have some difficulties, since relative price under autarky is not observable. Balassa (1965) proposed that it may not be necessary to include all constituents effecting a country's comparative advantage and suggested that comparative advantage is "revealed" by observed trade patterns and in line with the theory, one needs pre-trade relative prices which are not observable. Thus, inferring comparative advantage from observed data is called the "revealed" comparative advantage or RCA (Utkulu & Seymen, 2004).

The Balassa index is used to measure a country's exports of a commodity (or industry) relative to its total exports and to the corresponding exports of a set of countries (Utkulu & Seymen, 2004).

The original RCA index, formulated by Balassa (1965), was used in this research and is formulated as:

$$RCA = (X_{ij} / X_i) / (X_{wj} / X_w) \quad (4.7)$$

Note:  $X_i = \sum_{j=1}^k X_{ij}$ ,  $X_{wj} = \sum_{i=1}^n X_{ij}$  and  $X_w = \sum_{i=1}^n X_i$

Where:

$i = 1 \dots n$ , the number of countries (Ethiopia, South Africa and Nigeria)

$j = 1 \dots k$ , the number of products (export of raw hides and skins, leather products, and footwear)

$X_{ij}$  = Ethiopia, South Africa and Nigeria export of raw hides and skins, leather products, and footwear to world

$X_i$  = Ethiopia, South Africa and Nigeria export of all goods to world

$X_{wj}$  = World export of raw hides and skins, leather products, and footwear

$X_w$  = World export of all goods

According to Balassa index, when the result is more than 1 ( $RCA > 1$ ), it means the country has a revealed comparative advantage, and when it is less than 1 ( $RCA < 1$ ), it indicates that country does not have a revealed comparative advantage on those products in the world markets.

The RCA provides information on comparative advantages to export products compared to other competitive countries. However, the RCA does not show the sources of growth, therefore the CMS model was used to indicate the sources of growth (components); namely world growth (market size), commodity composition, market composition, and competitiveness effect (Poramacom, 2002).

#### 4.2.3 The Constant Market Share (CMS) model

This study is different from most previous export tax policy studies in Ethiopia (Zewdie, 2002; GDS, 2011; Zhao, 2014; Mulat, 2015). They mostly analysed the effects of the export tax on welfare and analysed the export competitiveness without relating it to the analysis of

export tax policy analyses. Constant market share is used to show the source of export growth and to analyse the effect of export tax on the competitiveness of raw hides and skins and leather products exports in the leather industry.

#### *4.2.3.1 Conceptual framework*

A traditional market share analysis states a country's export performance only depending on the total imports of the partner countries (James & Movshuk, 2000). However, constant market share is adopted from the sub-discipline of marketing and is used to explain changes in a country's share of trade in world markets. This model identifies the causes of the extent to which a country's exports growth differs from the world. Kellman, Roxo and Shachmurove (2002) stated that there are four components that differentiate the export growth between the constant-share norm and the actual export performance; namely the world trade effect, the commodity composition effect, the market distribution effect, and competitiveness effects.

The CMS model was first proposed by Tyszynski (1951) to analyse export growth. According to Fleming and Tsiang (1956), a change in export share not only depends on a change in competitiveness, but also depends on the conditions of world demand. Fleming and Tsiang (1956) analysed the variation in export through the difference between export revenues and constant export share revenues by applying CMS methods.

The basic assumption of the CMS model is that the export market share of a country in the world market should remain unchanged over time. The difference between the country's export growth and its probable growth, if a country could maintain its market share, is assumed competitive effect. The positive value of competitiveness effect indicates that the country maintains its market share, and a negative value indicates that the country fails to maintain its market share. In CMS analysis, the competitiveness effect is affected mainly by price competitiveness (Suprihatini, 2005).

The CMS model has some weaknesses. One of the weaknesses is that an identity equation is used to decompose export growth. A change in export competitiveness could not be evaluated only by CMS analysis. The other weakness of CMS analysis is that a change in the competitiveness of two points of time interval is not taken into account in the analysis.

However, this analysis is useful in assessing trends of commodity competitiveness produced by a country (Mohamad, 1993).

Leamer and Stern (1970)<sup>5</sup> faced an inconsistency problem after conducting further research on the correlation between export and changes in the structure of world trade. Richardson (1971)<sup>6</sup> showed that commodity composition and market distribution affect the calculation result when the market distribution effect is included in the analysis. He suggested three solutions to solve the problem; namely use different base weights to calculate multiple CMS values, select appropriate and effective competitors to represent the whole world with regard to a given exporter.

Bowen and Pelzman's (1984), empirical work incorporated the sensitivity analysis proposed by Richardson, but changed the definitions by the base year, the composition level of the commodity, and the world market. Bowen and Pelzman (1984), found that changes in commodity composition did not have a significant influence on the results, but changes in the base year yielded considerable influence. Fagerberg and Sollie (1987)<sup>7</sup> deducted five effects instead of three from export variations. The two additional effects were used to measure the ability of a specific country to adapt to import composition commodities and change the market's export structure. This approach solved the problem of the adaptability of different countries in the face of changes in the world's trade pattern raised by Tyszynski. This study used CMS by adopting the suggestions of Richardson (1971), Bowen and Pelzman (1984), and Fagerberg and Sollie (1987).

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<sup>5</sup> Leamer and Stern (1970) conducted further research on the correlation between export and changes in the structure of world trade. They all faced the same problem: inconsistency in the use of indicators resulted in inadequate discussion of the residual term in the calculation process.

<sup>6</sup> Richardson (1971) proposed the following solutions: 1) use different base weights to calculate multiple CMS values; 2) select appropriate and effective competitors to represent the whole world with regard to a given exporter; and 3) use data about "quantity".

<sup>7</sup> Fagerberg and Sollie (1987) deducted five effects, instead of three, from export variations. The two additional effects were used to measure the ability of a specific country to adapt to import composition commodities and changes in the market and in export structure.



#### 4.2.3.2 Analytical method

The CMS model has been widely used to evaluate trade policy and its implications (Amzul, 2010). The analysis basically decomposes export growth into four components; namely the market size effect, the market composition effect, the commodity composition effect, and the competitiveness effect (Richardson, 1971).

The formula for the constant market share is as follows (Tyres, Phillips & Findlay, 1987):

$$TE = MSE + MCE + PCE + CE \quad (4.8)$$

$$TE = \frac{X_t - X_0}{X_0} \quad (4.9)$$

$$= \sum_i \sum_j X_{ij} (X_{(t)ij} - g_{(t)ij}) + \frac{\sum_i (g_i - g) X_{0i}}{X_0} + \frac{\sum_i \sum_j (g_{ij} - g_i) X_{0ij}}{X_0} + \frac{\sum_i \sum_j (X_{tij} - X_{0ij} - g_{ij} X_{0ij})}{X_0}$$

Where: TE indicates total effect (Ethiopia total leather industry export growth), MSE indicates market size effect, MCE indicates market composition effect, PCE indicates product composition effect and CE indicates competitiveness effect.

Where:

$$g = \frac{W_{(t)} - W_{(0)}}{W_{(0)}} \quad \text{growth rate of world leather product export} \quad (4.10)$$

$$g_i = \frac{W_{(t)i} - W_{(0)i}}{W_{(0)i}} \quad \text{growth rate of world export for leather product i} \quad (4.11)$$

$$g_{ij} = \frac{W_{(t)ij} - W_{(0)ij}}{W_{(0)ij}} \quad \text{growth rate of country j import of leather product} \quad (4.12)$$

Notes:

$X_0$  = Ethiopia's total leather product export value at base year

$X_t$  = Ethiopia's total leather product export value at year t

$X_{(t)i}$  = Ethiopia's leather product export value at year t for commodity i

$X_{(t)j}$  = Ethiopia's total leather product export value at year t to country j

$X_{(t)ij}$  = Ethiopia's leather product export value at year t for commodity i to country j

$W_{(0)}$  = World's total export value for all leather products at base year

$W_{(t)}$  = World's total export value for all leather products at year t

$W_{(t)i}$  = World's total export value at year t for leather product i

$W_{(t)j}$  = World's total export value at year t to country j

$W_{(t)ij}$  = World's total export value at year t for commodity i to country j

Where:

t = current year (2013)

0 = base year (2007)

i = specific product ("HS"4101, "HS"4102, "HS"4103, "HS"4104, "HS"4105, "HS"4106), finished leather products<sup>10</sup>, "HS"42<sup>11</sup> and "HS"64<sup>12</sup>

j = importing destinations (Italy, China, Hong Kong, and the USA)

The above mention total effect decomposes into the following four components (MSE, MCE, PCE and CE).

#### **a) The Market Size effect (MSE)**

The market size effect shows that the country's export growth is caused by an increase in market destination imports. It's computed as the difference between the growth rate of Ethiopia and world exports in each period. The market size for a specific product i (destination country j) can be taken as the sum over j (i) of this effect.

$$MSE = \sum_i \sum_j X_{ij} (X_{(t)ij} - g_{(t)ij}) \quad (4.13)$$

Where:  $X_{ij}$  is Ethiopia's leather product export value for commodity i to country j,  $X_{(t)ij}$  is Ethiopia's leather product export value at year t for commodity i to country j and  $W_{(t)ij}$  is World's total export value at year t for commodity i to country j.

#### **b) The Market Composition Effect (MCE)**

The market composition effect measures the effect of restricting the geographical breakdown of a country's exports.

$$MCE = \frac{\sum_i \sum_j (g_{ij} - g_i) X_{0ij}}{X_0} \quad (4.14)$$

Where:  $g_i$  is growth rate of world export for leather product i,  $g_{ij}$  is growth rate of country j import of leather product and  $X_0$  is Ethiopia's total leather product export value at base year.

If a country's foreign trade is directed to markets where the demand is strongly growing, then the value of the market composition effect will be positive. A negative value shows that the exports of the focus country are directed to markets in which demand is growing slower than the rest of the world. The resulting loss in market share will stem from the market distribution of the country's exports (Chien & Lee, 2010). This study identifies which raw hides and skins and leather products importing destination from Ethiopia (Italy, China, Hong Kong, or the USA) is growing faster than the world demand.

#### **c) The Product (commodity) Composition Effect (PCE)**

The product (commodity) composition effect defines the influence of the product specialisation of a country's exports. Small, open economies usually concentrate their industrial production on a few products only, which they also want to export.

$$PCE = \frac{\sum_i (g_i - g) X_{0i}}{X_0} \quad (4.15)$$

Where:  $g_i$  is growth rate of world export for leather product i,  $g$  is growth rate of world leather export and  $X_0$  is Ethiopia's total leather export value at base year.

The success of specialisation depends on the development of the demand in the foreign markets. If a country specialises in products with a strongly growing foreign demand, then the product composition effect will have a positive pattern. That indicates that Ethiopia concentrates on exporting increases relatively fast in accordance with growth trends for those commodities (raw hides and skins or leather products) in world trade. The gain in the market share will be due to the product specialisation (Chien & Lee, 2010).

#### **d) The Competitiveness Effect**

The competitiveness effect reveals the capacity of a country to increase its market share due to competitiveness factors only, independently of structural developments in the market or in the product trade pattern.

$$CE = \frac{\sum_i \sum_j (X_{tij} - X_{0ij} - g_{ij} X_{0ij})}{X_0} \quad (4.16)$$

Where:  $g_{ij}$  is growth rate of country  $j$  import of leather product,  $X_0$  is Ethiopia's total leather export value at base year,  $t$  is current year (2013),  $0$  is base year (2007),  $i$  is specific product and  $j$  is importing destinations product export value at base year. A positive value indicates a competitive advantage of the exports of the focus country compared to the rest of the world and a negative value indicates disadvantage (OECD, 2015).

Table 4.1 shows that "HS" code of different raw hides and skins and leather products used in this study. For instance, from "HS" 41 a total of nine products were selected such as: three products from raw hides and skins<sup>8</sup> three leather products from semi-processed leather products<sup>9</sup> and three products from finished leather products<sup>10</sup>. In the meantime, six from "HS" 4 code of "HS" 42<sup>11</sup> and six from "HS" 64<sup>12</sup> were selected and used.

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<sup>8</sup> Raw hides and skin contain products ("HS" 4101, "HS" 4102 and "HS" 4103)

<sup>9</sup> Semi-processed leather products contain ("HS" 4104, "HS" 4105 and "HS" 4106)

<sup>10</sup> Finished leather products contain ("HS" 4107, "HS" 4112 and "HS" 4113)

<sup>11</sup> "HS"42 contains six products ("HS" 4201, "HS" 4202, "HS" 4203, "HS" 4204, "HS" 4205 and "HS"4206)

<sup>12</sup> HS"64 contains six products ("HS" 6401, "HS" 6402, "HS" 6403, "HS"6404, "HS" 6405 and "HS"6406)

**Table 4.1: RHS and leather products “HS” code**

No.	“HS” code	Specification	Product categories
1	4101	Raw hides & skins of bovine/equine animals	Whole hides and skins of bovine animals (fresh or wet-salted or dry-salted)
2	4102	Raw skins of sheep or lambs	Raw skin of sheep or lamb with wool or without wool, fresh, salted, dried, pickled
3	4103	Raw hides and skins nes	Raw hides and skins of goats or kids (fresh or preserved)
4	4104	Leather of bovine/equine animals	Bovine leather pre-tanned or tanned or full grains or wet-blue
5	4105	Sheep/lamb skin leather	Sheep or lamb skin leather (without wool or pre-tanned)
6	4106	Goat/kid skin leather	Goat or kid skin leather (without hair or pre-tanned)
7	42	Articles of leather, harnesses and travel goods	Articles of apparel and clothing accessories of leather or composition leather, handbags
8	64	Footwear, gaiters, and the like parts	Footwear with uppers of leather or composition of leather
9	4107, 4112 & 4113	Leather further prepared after tanning or crust and leather of other animals	Leather further prepared after tanning or crusting, including parchment-dressed leather, of other animals, without wool or hair on, whether or not split

Source: ITC (2015)

The Harmonized system (“HS”) is an internationally standardised system of names and numbers for classifying traded products developed and maintained by the World Customs Organization (WCO) (formerly the Customs Co-operation Council).

### 4.3 DATA SOURCES

Secondary data were used from both national and international data sources. National data sources were used to get Ethiopian data (export, GDP, livestock population, employment, FDI and other relevant information) from Ethiopia Central Statistical Agency (CSA), National Bank of Ethiopia (NBE), Ministry of Finance and Economic Development (MoFED), and Ethiopian Revenues and Customs Authority (ERCA). International data sources like the UNCOMTRADE database (export value data), Food Agricultural Organization Statistics (FAOSTAT) to get the livestock population of different countries, and

International Trade Centre (ITC) to capture more export value data were used and analysed. This study mostly calculated and analysed data from the International Trade Centre (2006-2014), UNCOMTRADE (2006-2014), and the Ethiopian Revenues and Customs Authority (1997-2014). Data were taken and analysed based on the procedure of the model and Excel was used to construct the three models.

#### **4.4 SUMMARY**

This chapter described the three methods that were used to analyse the three specific objectives mentioned in Chapter 1. The Linear Trend Analysis (LTA) was selected to estimate the trend coefficient. This analysis was essential to identify the growth (upward or downward) of leather products. After that, the Revealed Comparative Analysis (RCA) was used to examine the comparative advantage of specific leather products in selected markets. The RCA is important to confirm whether leather products that indicate upward or downward export growth are gaining or losing their comparative advantage. However, the RCA cannot provide evidence about the source of the advantages, therefore the Constant Market Share (CMS) model was used to identify the source (components) of export growth. The CMS is an appropriate model to use to analyse the effect of export tax on the competitiveness of Ethiopia's leather industry, because it gives empirical evidence about the source of export growth and which is the main driver for export growth in the leather industry. Secondary data were important sources of information from national and international data sources. The next chapter summarises each model's results, and provides a discussion based on the results.

## **CHAPTER 5**

### **EFFECTS OF EXPORT TAXES ON ETHIOPIA LEATHER INDUSTRY**

#### **5.1 INTRODUCTION**

This chapter presents the research results and related discussion. Ethiopia's export and world market share status are examined in the second section. The third section describes the results of Ethiopia's raw hides and skins, finished leather products, and footwear export trends. The fourth and fifth section contains the results of countries RCA and CMS of raw hides and skins and leather products respectively. Before the main analysis, Ethiopia's raw hides and skins and leather products export and market share in the world market was evaluated in the next section.

#### **5.2 ETHIOPIA'S EXPORT AND WORLD MARKET SHARE**

This section provides general information about Ethiopia raw hides and skins and leather products export status in the world market. Table 5.1 presents the total raw hides and skins and leather products export value of Ethiopia and the world for the period 2007 and 2013. The export value of Ethiopia were US\$105 433 000 and US\$135 052 000 in 2007 and 2013 respectively. This is a 28% export value increase in 6 year time. Meanwhile, the world demand for raw hides and leather products in the same period increased from US\$ 15 7662 088 to US\$235 267 554 (i.e. a 49% increase). This is an indication for increase in the world demand of leather products during this period. In Ethiopia raw hides and skins and semi-processed leather products contributed 82.84% of the total leather export value in 2007. Conversely, in 2013, raw hides and skins and semi-processed leather products exports decreased significantly to 0.22%. Surprisingly, finished leather products including footwear exports increased significantly from 17.16% in 2007 to 99.78% in 2013 (see Table 5.1). This clearly demonstrates how implementation of an export taxes likely results in a shift from exporting raw hides and skins and semi-processed leather products to finished leather products and footwear exports.

**Table 5.1: Ethiopia's RHS and leather products export**

Product	2007				2013			
	Ethiopia		World		Ethiopia		World	
	Value (000) USD)	%	Value (000) USD)	%	Value (000)	%	Value (000) USD)	%
<b>RHS</b>	87 340	82.83	14 541 736	9.22	301	0.22	16 975 131	7.22
<b>FLH</b>	18 093	17.17	142 866 958	90.78	134751	99.78	218 292 423	92.78
<b>Total</b>	<b>105 433</b>	<b>100.00</b>	<b>15 7662 088</b>	<b>100.00</b>	<b>135 052</b>	<b>100.00</b>	<b>235 267 554</b>	<b>100.00</b>

Source: Author's calculation based on ITC (2015) data

The next table demonstrate Ethiopia export share in global market. In terms of market share, Ethiopia held 0.057% export share of raw hides and skins and leather products in 2013, which had decreased from by 0.01% compared to 0.067% export share in 2007 (Table 5.2). The decrease in Ethiopia's market share is due to a decrease in raw hides and skins and semi-processed leather products exports. This was reflected by a significant increase in export of Ethiopia's finished leather products in the world market, particularly for product ("HS" 4107, "HS" 4112 and "HS" 4113).

**Table 5.2: Ethiopia's export in world market share**

Product "HS" code	Market Share (%)			
	2006	2007	2013	2014
4101	0.184	0.101	0.000	0.000
4102	2.544	2.368	0.000	0.000
4103	0.572	0.726	0.000	0.000
4104	0.038	0.079	0.000	0.000
4105	4.341	5.477	0.053	0.021
4106	3.059	3.154	0.004	0.016
42 <sup>11</sup>	0.000	0.000	0.004	0.006
64 <sup>12</sup>	0.004	0.018	0.022	0.022
FLH <sup>10</sup>	0.043	0.062	0.599	0.516
<b>Total</b>	<b>0.057</b>	<b>0.067</b>	<b>0.057</b>	<b>0.049</b>

Source: Author's calculation based on ITC (2015) data



Regarding export destinations, Italy was the largest market destination for both Ethiopia's raw hides and skins and finished leather products in 2007. The value reached US\$37 816 000 (43.30%) and US\$8 783 000 (48.54 %), respectively of Ethiopia's total raw hides and skins and finished leather products export (see Table 5.3). However, in 2013 the value of raw hides and skins imported by Italy declined significantly to zero. Meanwhile, the value of finished leather products import increased from US\$8 783 000 in 2007 to US\$17 998 000 in 2013. However, the share of Italy's imported finished leather products from Ethiopia's total export value of finished leather products declined from 48.54% in 2007 to 13.36% in 2013 and was replaced by the Chinese and USA markets (Table 5.3).

China was the second largest market destination for Ethiopia's raw hides and skins and finished leather products in 2007, which contributed 13.30% and 3.51%, respectively of Ethiopia's total export value of raw hides and skins and leather products (Table 5.3). In 2013, the share of raw hides and skins decreased to 0.00% likely due to the export tax. However, the share of Ethiopia's finished leather products in Chinese import increased from 3.51% in 2007 to 17.71% in 2013, indicating the replacement of Italians market to Chinese market, and China become the top destination (Appendix 4). USA was the second export destination next to China for Ethiopia's finished leather products in 2013, with a market share of 16.63% of Ethiopia's total finished leather products export value. Hong Kong was the third export destination for Ethiopia's raw hides and skins export in 2013, with a market share of 19.60% of the total raw hides and skins export value of Ethiopia (see Table 5.3).

**Table 5.3: Ethiopia RHS and finished leather products export destination**

Importer	Total RHS imported value (000 USD)				Total finished leather products imported value (000 USD)			
	2007	Share (%)	2013	Share (%)	2007	Share (%)	2013	Share (%)
<b>World</b>	87 340	100.00	301	100.00	18 093	100.00	134 751	100.00
<b>China</b>	11 612	13.30	0	0.00	635	3.51	23 861	17.71
<b>Italy</b>	37 816	43.30	0	0.00	8 783	48.54	17 998	13.36
<b>Hong K</b>	3 492	4.00	59	19.60	2 101	11.61	3 576	2.65
<b>India</b>	5 332	6.10	161	53.49	36	0.20	6 441	4.78
<b>Thailand</b>	921	1.05	0	0.00	0	0.00	6 675	4.95
<b>UK</b>	14 128	16.18	0	0.00	2 109	11.66	3 576	2.65
<b>Indonesia</b>	0	0.0	0	0.00	159	0.88	1 978	1.47
<b>Turkey</b>	894	1.02	73	24.25	0	0.00	1 078	0.80
<b>USA</b>	1 562	1.79	0	0.00	634	3.50	22 403	16.63
<b>Others</b>	11 583	13.26	8	2.66	3 636	20.09	47 165	35.00

Source: Author's calculation based on ITC (2015) data

These general information concur with the findings of Workneh (2014) regarding the old supply chain and new competitors. Italy being the old market and China and other Asian countries becoming the new competitors. Before the imposition of export tax, the European market namely, Italy and the United Kingdom were main market destinations for both raw hides and skins and finished leather products Ethiopia. However, after the imposition of the export tax, the export destinations shifted to the Asian markets to China, Hong Kong, and India. The next three sections describe the results of the three approaches (linear trend analysis, RCA and CMS).

### 5.3 TRENDS ETHIOPIA'S RHS AND LEATHER PRODUCT EXPORT

The first objective of this study is to analyse the growth trends of Ethiopia's raw hides and skins (RHS), finished leather products (FLH), and footwear (FW) over the last 17 years by using a trend analysis model. A Linear Trend Analysis provides information on whether there has been an upward or downward trend in the growth of the products' exports. A semi-log regression was estimated in which the export volumes of each product with regressed over time (over the period 1997 to 2014).

### 5.3.1 Growth in exports of raw hides and skins (1997 – 2014)

The regression analysis' results of RHS exports over time are summarised in Table 5.4. From The coefficient of time (-0.321) indicated that RHS exports decreased by 32% for each additional year. The negative sign of the coefficient of time indicated the down ward trend of Ethiopian RHS and semi-processed leather products exports over the period 1997 to 2014. However, the coefficient is interpreted as the instantaneous growth rate (growth rate at a point in time), therefore an anti-log of estimated coefficient was used to obtain the compound growth rate (growth rate over the period 1997 – 2014). The compound rate of growth of RHS exports was -38.06%. The P-value (0.002) shows that the growth of export is significant at 1% significant level. A 0.47 value of  $R^2$  reveals that 47% of the variation in Ethiopia raw hides and skins export growth was explained by time (see Table 5.4).

**Table 5.4: Ethiopia's raw hides and skins export trends**

<b>Dependent variable: ln RHS</b>				$F(1, 16) = 14.38$ $\text{Prob} > F = 0.0016$ $R\text{-squared} = 0.4733$ $\text{Root MSE} = 1.8642$
Variables	Coefficients	t Stat	P-value	Compound rate of growth
<b>Intercept</b>	659.05	3.88	0.001	
<b>Trend</b>	-0.32	-3.79	0.002	-38.06***

\*(\*\*)[\*\*\*] Statistically significant at a 10(5)[1] % level

Source: Author's calculation based on UNCOMTRADE (2015) data

This down ward export trend of Ethiopia RHS and semi-processed leather products result is coincide with the above mentioned export value trend of RHS and semi-processed leather products in sub-section 2.5.3.1. The result showed that RHS and semi-processed leather products export was likely affected by the export taxes imposed by the government in 2008 on export of RHS and in 2012 on export of semi-processed leather products.

### 5.3.2 Growth in exports of finished leather products (1997 – 2014)

Table 5.5 describes the regression analysis of finished leather products (FLH) export with time. Finished leather products include articles of leather, harnesses, travel goods, leather further prepared after tanning, or crust and leather of other animals. A coefficient of time

(0.562) obtained from the regression analysis, which indicates the fact that finished leather products' export increased by 56% for each additional year. The positive sign of the coefficient of time indicates an upward trend of FLH exports of Ethiopia over the period 1997 to 2014. However, like raw hides and skins, the coefficient is interpreted as the instantaneous growth rate (growth rate at a point in time), therefore an anti-log of estimated coefficient was used to obtain the compound growth rate (growth rate over the period 1997 to 2014). The compound rate of growth of FLH exports was 75.34%, indicates an increasing trend of export of Ethiopia's finished leather products (see Table 5.5). The P-value (0.000) shows that the growth of export is significant at 1% significance level. A 0.86 value of  $R^2$  result indicate that 86% of the variation in Ethiopia finished leather products export growth was explained by time.

**Table 5.5: Ethiopia's finished leather products export trends**

<b>Dependent variable: ln FLH</b>				$F(1, 16) = 96.59$ $\text{Prob} > F = 0.0000$ $R\text{-squared} = 0.8579$ $\text{Root MSE} = 1.2578$
<b>Variables</b>	<b>Coefficients</b>	<b>t Stat</b>	<b>P-value</b>	<b>Compound rate of growth</b>
<b>Intercept</b>	-1115.13	-9.73	0.000	
<b>Trend</b>	0.56	9.83	0.000	75.34***

\*(\*\*)[\*\*\*] Statistically significant at a 10(5)[1] % level

Source: Author's calculation based on UNCOMTRADE (2015) data

As mentioned in sub-section 2.5.3.1 the export trend of finished leather products was an upward trend, the positive export growth rate result of linear trend analysis model also match with this upward trend. This indicates that the export taxes (in RHS and semi-processed leather products in 2008 and 2012) imposed by the government were a significant increase on the export of finished leather products. The trend of exports of finished leather products highly increased especially after the imposed of second export tax in 2012.

### **5.3.3 Growth in exports of footwear (1997 – 2014)**

This section discusses the results of the regression analysis of footwear (FW) export over time. The coefficient of time (0.367) indicates that footwear export increased by 37% for each additional year. An upward trend over the period 1997 to 2014 for Ethiopia's footwear

was obtained alike finished leather products export. This is explained by the positive sign of the coefficient of time. As this coefficient is showing the instantaneous growth rate (growth rate at a point in time), the anti-log of estimated coefficient was used to obtain the compound growth rate (growth rate over period 1997 to 2014). The compound rate of growth of footwear exports was 44.37%, indicates an increasing trend of Ethiopia's footwear export. (see Table 5.6). The P-value (0.000) shows that the growth of footwear exports is significant at 1% significance level. A 0.87 value of  $R^2$  indicates 87% of the variation in Ethiopia footwear products export growth was explained by time.

**Table 5.6: Ethiopia's footwear products export trends**

<b>Dependent variable: ln FW</b>				$F(1, 16) = 105.20$ $\text{Prob} > F = 0.0000$ $R\text{-squared} = 0.8680$ $\text{Root MSE} = 0.78799$
<b>Variables</b>	<b>Coefficients</b>	<b>t Stat</b>	<b>P value</b>	<b>Compound rate of growth</b>
<b>Intercept</b>	-724.72	-10.09	0.000	
<b>Trend</b>	0.37	10.26	0.000	44.37***

\*(\*\*)[\*\*\*] Statistically significant at a 10(5)[1] % level

Source: Author's calculation based on UNCOMTRADE (2015) data

In general, trend analysis for the period 1997 to 2014 clearly showed that the export of raw hides and skins and semi-processed leather products has a decreasing trend (down ward); whereas, finished leather products and footwear exports have an increasing (upward) trend. The next section of this chapter ratifies these upward and downward trends of export products (finished leather products, footwear, and raw hides and skins, respectively) as gaining or losing their comparative advantage compared with the other two exporting countries (South Africa and Nigeria) using RCA.

## **5.4 REVEALED COMPARATIVE ADVANTAGE (RCA) ANALYSIS**

As mentioned earlier, the second objective of this study is to analyse the comparative advantage of Ethiopia's raw hides and skins and leather products using the revealed comparative advantage (RCA) model. This section of the study presents the results of revealed comparative advantage in leather industry for Ethiopia, South Africa and Nigeria for the period 2006 to 2014. Leather industry products were divided into three categories to

analyse the RCA. The first category comprises of six taxed products from raw hides and skins and semi-processed leather products (“HS” 4101, “HS” 4102, “HS” 4103, “HS” 4104, “HS” 4105 and “HS” 4106). The second category includes nine finished leather products (“HS” 4107 HS” 4112, “HS” 4113 and “HS” 42<sup>11</sup>, which are free of export tax. The third category is including six footwear products “HS”64<sup>12</sup>, which also not imposed export tax.

#### 5.4.1 Countries RCA of RHS and semi-processed leather products

The trend of countries RCA of raw hides and skins and semi-processed leather products for a period of 2006 to 2013 was analyse using the sum of six products listed above. As illustrated in chapter two section 2.2, South Africa and Nigeria were the highest export countries of both raw hides and leather products compared to Ethiopia and other African countries. However, up to 2012, Ethiopia was the highest RCA of raw hides and skins and semi-processed leather products (Figure 5.1). Ethiopia’s RCA index was more than 50 ( $RCA > 1$ ) before 2008, this indicates a significant potential the country growth of raw hides and skins and semi-processed (Appendix 5). After 2008, the RCA index dropped and started increasing in 2010. However, after 2012 the RCA was less than one, which could be the result of export taxes imposed by the government. This indicates the loss of in comparative advantage of Ethiopia compared with the case South Africa and Nigeria.

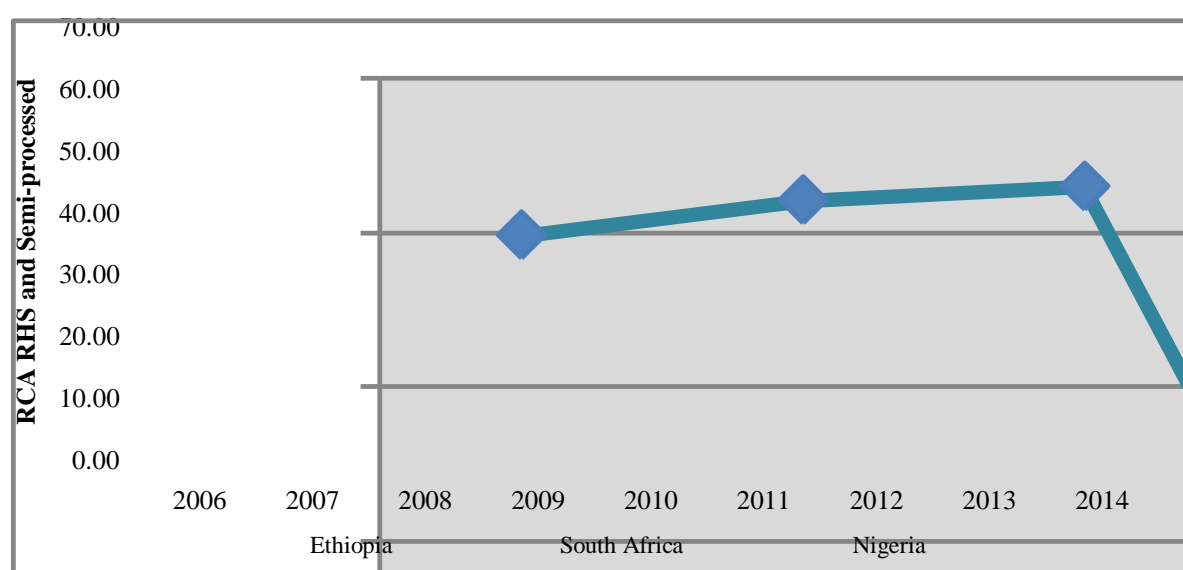
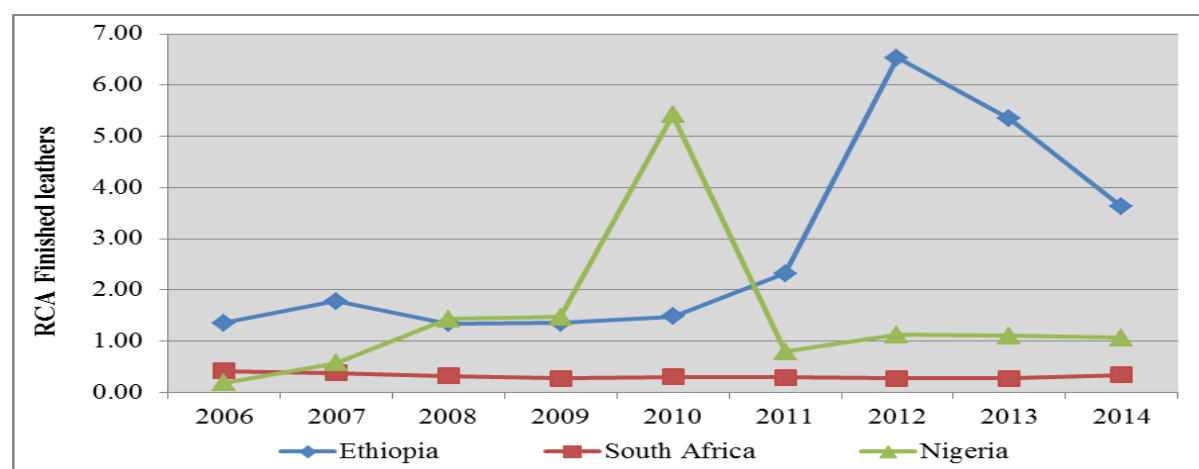


Figure 5.1: **RCA index of RHS and semi-processed leather products**  
Source: *Author’s calculation based on ITC (2015) data*

The RCA index trend of South Africa in the figure shows much more stable and greater than one ( $RCA > 1$ ) during 2006 to 2014 (Figure 5.1), showing South Africa's comparative advantage on raw hides and skins and semi-finished leather products export. In the meantime, the RCA trend of Nigeria's was not stable and in most year reveal comparative advantage greater than one ( $RCA > 1$ ). In general, the revealed comparative advantage indexes of South Africa and Nigeria have showed the fact that both countries were performing better during the period. The RCA of South Africa raw hides skins and semi-processed leather product was stable during the period. However, the RCA of Nigeria was more increase in 2010 due to government policy. This is an indication of how government policies affect the comparative advantage of countries (in this case Ethiopia) raw hides and skins and leather products export. The next section explains the RCA of finished leather products.

#### 5.4.2 Countries RCA of finished leather products

In the second group, finished leather products RCA was analysed using the sum of nine finished leather products. Figure 5.2 shows the RCA index of the three exporting countries (Ethiopia, South Africa and Nigeria). Ethiopia has a revealed comparative advantage in the export of finished leather products during the period 2006 to 2014 ( $RCA > 1$ ). The effect of export tax was clearly seen in this figure, where the RCA started increasing after 2008. The increase in the export of finished leather product in Ethiopia has more likely happened due to the decrease in export of raw hides and skins and semi-processed leather products. This allowed finished leather product producing companies to access more raw materials and enable them to produce and export different finished leather products.

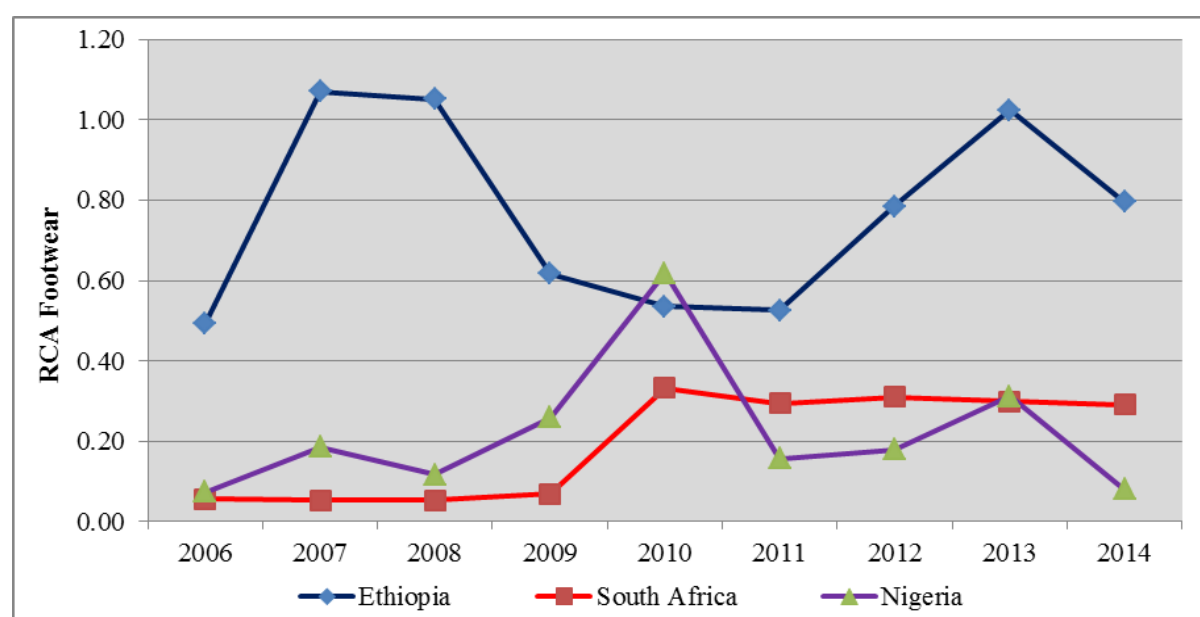


**Figure 5.2:** RCA index of finished leather products  
Source: Author's calculation based on ITC (2015) data

The RCA index trend of South Africa in the figure shows much more stable and less than one during 2006 to 2014 (Figure 5.2), showing South Africa's no comparative advantage on finished leather products export. In the meantime, the RCA trend of Nigeria's was not stable and in most year reveal comparative advantage greater than one ( $RCA > 1$ ). In general, the revealed comparative advantage indexes of South Africa and Nigeria have showed the fact that both countries were not performing well during the period. The next section describes the result of countries RCA of footwear products.

### 5.4.3 Countries RCA of footwear products

The third category consists of leather footwear products ("HS"<sup>12</sup>). The RCA indexes of footwear for all three countries were less than one except Ethiopia in (2007, 2008 and 2012) (Figure 5.3). This shows that all the three countries have no comparative advantage in exports of footwear for the period 2006 to 2014.



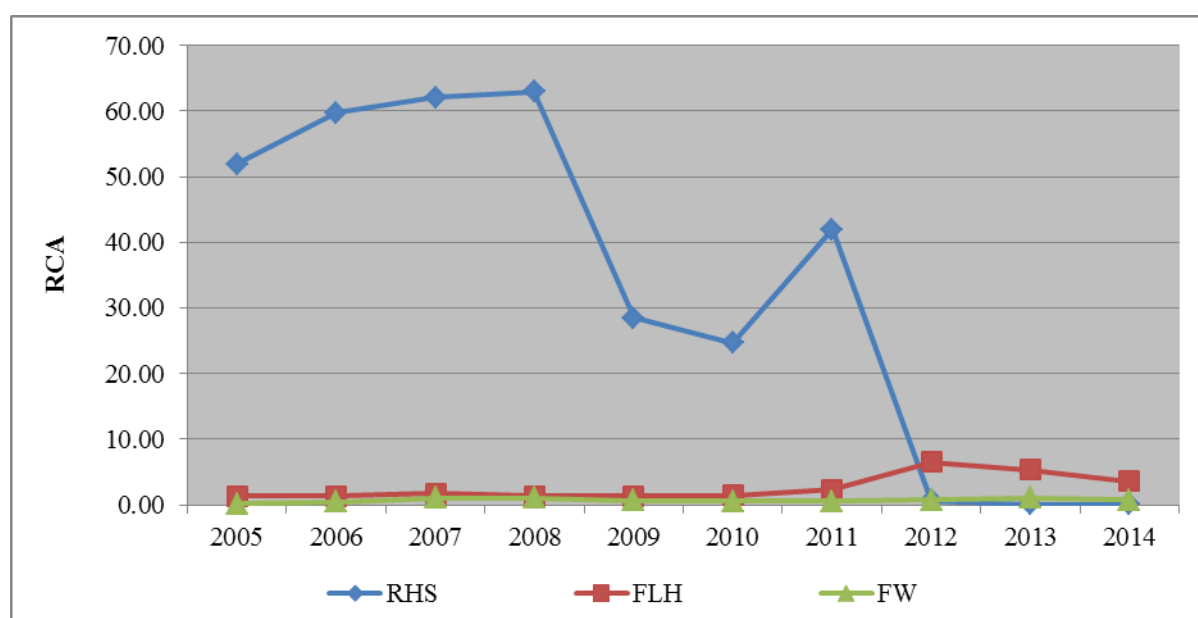
**Figure 5.3: RCA index of footwear products**  
Source: Author's calculation based on ITC (2015) data

In the above mentioned three figures (Figure 5.1- 5.3) the RCA indexes of South Africa were more stable, this is likely due to South African leather industry is developed than Ethiopia and Nigeria. The RCA indexes of Nigeria for the three products were high in 2010. This is due to Export Expansion Grant (EEG) scheme by the government in 2010 and major tanneries started to invest in higher value product (i.e. from crust to more finished leather).



#### 5.4.4 RCA of Ethiopian leather product at aggregate level

The previous three subsections explained the RCAs of three different categories of leather product compared with other countries. This section describes the overall results of the RCA index of Ethiopia's raw hides and skins, finished leather products, and footwear products in the world market. The result show a higher RCA for raw hides and skins and semi-processed leather product up to 2008 and a decreased in RCA in 2009 and an increase in 2010, this is due to transition period for most tanneries to improve production capacity to produced finished leather product. The RCA became less than one after 2012 (see Figure 5.4). This indicates that the export tax policy likely caused a loss of comparative advantage on raw hides and skins and semi-processed leather products in the world market.



**Figure 5.4:** Over all RCA of RHS, FLH and FW  
*Source:* Author's calculation based on ITC data, 2005-2014

The RCA index of Ethiopia's finished leather products were greater than one during the period 2005 to 2014. However, it increases significantly from RCA 1.78 in 2007 to 6.48 in 2012. Ethiopia has a very low RCA of footwear in the world market and its value was less than one (except in the years 2007, 2008, and 2013) (Appendix 6). The next section describes the results and discussion of constant market share model.

## 5.5 CMS RESULTS OF ETHIOPIA’S RHS AND LEATHER PRODUCTS

Ethiopia’s raw hides and skins and leather products’ competitiveness were analysed by comparing Ethiopia’s export growth with two main African raw hides and skins leather products exporting countries; namely South Africa and Nigeria.

Ethiopia’s leather industry exports in 2007 mainly depended on raw hides and skins and semi-finished leather products, which contributed 82.23% of the total export (Table 5.7). However, in 2013, exports shifted to finished leather products because of the imposed export tax on raw hides and skins and semi-finished and crust leather products.

South Africa’s leather industry exports depended on both raw hides and skins and leather products in 2007 and 2013. For instance, South Africa’s RHS export share in 2007 and 2013 52.68% and 52%, respectively. However, South Africa’s finished leather products exports decreased by half from 39.76% in 2007 to 19.04% in 2013; due to shifts in South Africa’s export to footwear. South African footwear exports increased four times within the period –it increased from 7.56% in 2007 to 28.96% in 2013 (see Table 5.7).

Nigeria’s leather industry’s exports in 2007 mainly depended on RHS, especially from goat/kid skin leather 50.31% whereas, finished leather products contributed 34.48% in the same year. In 2013, Nigeria’s finished leather products export increased to 43.82% and RHS exports declined to 38.99%, but it did not decline significantly like the case in Ethiopia (see Table 5.7). Nigeria’s footwear exports did not significantly increase during the period; this is due to Nigeria not being the main exporter of footwear.

**Table 5.7: Export share composition of Ethiopia, South Africa and Nigeria**

Exporting Country	Types of product export and export share (%)					
	RHS		FLH		FW	
	2007	2013	2007	2013	2007	2013
<b>Ethiopia</b>	82.23	0.22	9.71	78.79	8.05	20.99
<b>South Africa</b>	52.68	52.00	39.76	19.04	7.56	28.96
<b>Nigeria</b>	50.31	38.99	34.48	43.82	15.21	17.19

Source: Author’s calculation based on ITC (2015) data

Ethiopia's raw hides and skins and leather products' market share in selected markets using a constant market share approach is presented in Table 5.8. In this study, the competitiveness value indicates the change in percentage points; the greater the positive the value, the better the competitiveness. The competitiveness of Ethiopia's raw hides and skins and semi-processed leather products ("HS" 4101 to "HS"4106) were very low in all selected countries, namely Italy, China, and Hong Kong. However, Ethiopia's finished leather product (FLH) was positive value, indicates that high competitiveness in all selected markets except in USA (see Table 5.8).

Hong Kong is the main importer of Ethiopia's leather further prepared after tanning or crust and leather of other animals, with a change in percentage points 1.950; followed by China (1.273). The positive and high competitiveness of Ethiopia's finished leather products shows that Ethiopia's exports of finished leather products increased in fast-growing markets; namely China, Hong Kong, and Italy. Hong Kong was also the main importer of Ethiopian articles of leather, as indicated by its positive coefficient of 0.002. The USA was a major importer of Ethiopia footwear (more than other leather products) and its competitiveness value was 1.112 (see Table 5.8).

**Table 5.8: Competitiveness of Ethiopian RHS and FLH (change in percentage points)**

Market	Specific product imported								
	4101	4102	4103	4104	4105	4106	42	64	FLH
<b>Italy</b>	-0.036	-0.098	-0.014	-0.015	-0.117	-0.141	-0.010	-0.387	0.872
<b>China</b>	-0.008	-0.104	0.000	-0.023	-0.029	-0.045	0.000	0.015	1.273
<b>Hong Kong</b>	-0.006	0.000	0.000	-0.012	-0.014	-0.056	0.002	0.000	1.950
<b>USA</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.120	1.112	-0.027

*Source: Author's calculation based on ITC (2015) data*

As mentioned above in Table 5.1, during the period 2007 to 2013, exports of raw hides and skins and leather products increased by 28.10%. At the same time, world demand increased by 49.50%. The CMS model was used to evaluate data for 2007 and 2013 and decomposed export growth into four components. The positive value of Ethiopia's leather products' export growth (2.55) comes from four components; namely market size (0.695), the commodity composition effect (-0.132), the market composition effect (-0.262), and the competitiveness effect (2.25). The negative commodity composition effect (-0.132) and the market

composition effect (-0.262) show that the imposition of the 150% export tax on raw hides and skins in 2008 and 150% export tax on crust leather in 2012 likely affected market destinations and commodities exports. The export tax led to the expulsion of all raw hides and skins and most unfinished leather products out of the market (those countries importing such products decreased) and not growing faster than the world market (see Table 5.9).

On the other hand are the positive competitiveness effect (2.25) and the market size effect (0.695). The positive value of the competitiveness effect shows that the implementation of the export tax on raw hides and skins and crust leather products led to an increase in the competitiveness of Ethiopia's leather industry. The positive market size effect (0.695) indicates that the world demand for leather products had a positive trend during the period of 2007 and 2013 (see Table 5.9).

**Table 5.9: Ethiopia's total leather products export growth, 2007 and 2013**

Component	Value
Export growth	2.551
Commodity composition effect	-0.132
Market composition effect	-0.262
Competitiveness effect	2.250
Market size effect	0.695

*Source: Author's calculation based on ITC (2015) data,*

Even though Ethiopia has negative RHS export growth (-0.53) due to the export tax, the overall Ethiopia's leather products export growth was positive (2.55) and greater than Nigeria; but still less than South Africa. The export tax on RHS and semi-finished leather products led to higher export growth in finished leather products (3.08). This value is greater than both South Africa's and Nigeria's finished leather products export growth (2.09 and 2.39, respectively). South Africa has a higher RHS export growth compared to Ethiopia and Nigeria (see Table 5.10).

The commodity composition effects of finished leather products in all three countries are negative, indicating that the finished leather products exported by these countries are growing slower than the world growth. However, the commodity composition effect of RHS is positive in Ethiopia and South Africa, meaning the RHS products exported by the two

countries are more demanded than others. The market composition effect for both RHS and FLH products are negative for the countries except a positive FLH for Nigeria. The negative value indicates that the market destinations for these specific products, which were exported by those countries, are growing slower than the rest of the world. All countries' competitive effects are positive; except Ethiopia's RHS. The competitiveness effect of Ethiopia's FLH products is higher than South Africa's and Nigeria's, which ultimately led to positive total export growth of Ethiopia's leather products. The positive competitive value indicates that the country's export growth of total leather products is due to the competitiveness effect, rather than commodity and market effects (see Table 5.10).

**Table 5.10: Leather products export growth of Ethiopia, South Africa, and Nigeria's**

Components	Exporting Countries					
	Ethiopia		South Africa		Nigeria	
	RHS	FLH	RHS	FLH	RHS	FLH
<b>Export growth</b>	-0.529	3.080	0.969	2.090	0.095	2.390
<b>Commodity composition effect</b>	0.093	-0.224	0.173	-0.232	-0.011	-0.289
<b>Market composition effect</b>	-0.072	-0.190	-0.122	-0.016	-0.306	0.062
<b>Competitive effect</b>	-0.717	2.697	0.745	1.81	0.242	2.090
<b>Market size</b>	0.167	0.528	0.167	0.528	0.167	0.528

*Source: Author's calculation based on ITC (2015) data*

The overall leather products export growth of Ethiopia, South Africa, and Nigeria were 2.551, 3.059, and 2.485, respectively (see Table 5.11). These positive values of export growth are the result of competitiveness effect as all three countries scored negative on the commodity composition effect and the market composition effect.

**Table 5.11: Total leather products' export growth of Ethiopia, South Africa, and Nigeria's**

Components	Exporting Countries		
	Ethiopia	South Africa	Nigeria
<b>Export growth</b>	2.551	3.059	2.485
<b>Commodity composition effect</b>	-0.132	-0.138	-0.243
<b>Market composition effect</b>	-0.262	-0.059	-0.300
<b>Competitive effect</b>	2.250	2.560	2.333

*Source: Author's calculation based on ITC (2015) data*

The results indicate that Ethiopia had positive finished leather products' export growth and negative raw hides and skins and semi-processed leather products' export growth; however, the overall export growth was positive, which means that the increase in finished leather products' export is greater than the decline in raw hides and skins export.

## **5.6 SUMMARY**

This chapter mainly summarises the findings of the three approaches (linear trend analysis, RCA and CMS) used in this study. The second section provides general information of Ethiopia's export and its world market share. Italy was the main importer of both RHS and FLH for the last 50+ years; around 50% and 43% of Ethiopia's FLH products and RHS respectively was imported by Italy in 2007. In 2013, RHS imported by Italy dropped to zero and Italy was replaced by Hong Kong (59%). FLH imports to Italy also decreased to 13%; this was also replaced by China (increased from 4% in 2007 to 18% in 2013).

This result also corresponds with Workneh (2014) in terms of the old supply chain (Italy) and new competitors (China). He stated that trade was diverted from the old partner to the new competitor due to internal (government policy and regulations) and external (FDI and quality and quantity of resources, especially Ethiopian sheep skin) factors. These internal policy changes and external economic trends affected not only foreign buyers but also the local industry. Results from the three models are summarised as follows:

### **5.6.1 The Linear Trend Analysis (LTA)**

The third section of this chapter described the results of linear trend analysis to examine the first objective of the study. The linear trend analysis estimated the coefficient of time during 1997 to 2014. This is important to understand the export growth trends (upward or downward) of RHS, FLH, and FW by calculating the compound rate of growth. The regression results show that the trend of RHS exports between the years 1997 and 2014 declined by -38.06%. The negative and significant compound rate of growth showed that the total sum of RHS and semi-finished leather products exports decreased due to the export tax. The trends of finished leather products, which include different articles of leather, harnesses, travel goods, leather further prepared after tanning or crust and leather of other animals for the period 1997 to 2014 was 75.34% and significant at 1% significance level. The positive

and significant compound rate of growth indicated an increasing trend of Ethiopia's finished leather products export. In the meantime, the trend of footwear products was 44.37% and significant at 1% significance level. This indicates how the export tax on RHS and semi-finished products led to a negative export growth in RHS and positive export growth in finished leather products.

### **5.6.2 The Revealed Comparative Advantage (RCA)**

After estimating the trend of export products, the comparative advantage of those products were analysed to determine whether the upward trends in products were comparative advantage or not in selected markets; and the downward trends in products caused a loss of their comparative advantage. Results of the RCA analysis of this study coincided with the results of trend analysis. For instance, the RCA of Ethiopia's raw hides and skins was more than one ( $RCA > 1$ ) up to 2012. However, after the export tax in 2012, the RCA became less than one and gradually dropped to zero. This indicates the loss of comparative advantage of Ethiopia compared with the case South Africa and Nigeria. The same was true for finished leather products; the RCA of Ethiopia's finished leather products was more than one during the period 2006 to 2014, while increased more after 2010. The RCA of Ethiopia's footwear was less than one during the period 2006 to 2014. This indicated that Ethiopia has no comparative advantage on the export of footwear.

South Africa has comparative advantage only on the export of raw hides skins and semi-processed leather product ( $RCA > 1$ ). In the meantime, the RCA trend of Nigeria's was not stable for both raw hides and skins and finished leather products and in most year revealed comparative advantage greater than one ( $RCA > 1$ ). The RCA indexes of footwear for all three countries were less than one except Ethiopia in (2007, 2008 and 2012). This shows that all the three countries have no comparative advantage in exports of footwear for the period 2006 to 2014

### **5.6.3 Constant Market Share (CMS)**

Constant market share (CMS) is important for analysis of the export growth of RHS and FLH products, as well as to identify the source of growth. The CMS model's results show that the total leather export growth of Ethiopia was less than South Africa and greater than Nigeria.

However, Ethiopia's RHS export growth was less than both South Africa and Nigeria, and the FLH export growth was greater than both countries. These positive export growths in all selected exporting countries are due to the positive competitive effect, rather than commodity and market effects.

The total leather industry (raw hides and leather products) export growth of Ethiopia was less than South Africa. According to Samuel (2007), South Africa leather industry is grouped under developed leather industry like Egypt, Morocco and Tunisia among other African leather industry. However, Ethiopia leather industry is grouped under fairly developed like other Eastern and Southern Africa countries. This leads to Ethiopia leather industry export growth is less than South Africa.

The total leather products' market composition and the commodity composition effect in all three countries were negative. The negative commodity composition effects indicates that the main products exported by Ethiopia, South Africa, and Nigeria were growing slower than the rest of the world. The negative market compositions effects also indicate that the main market destinations (Italy, China, Hong Kong, and the USA) were growing slower for these specific products than the world growth rate.



## **CHAPTER 6**

### **CONCLUSION AND POLICY IMPLICATIONS**

#### **6.1 CONCLUSION**

The aim of this dissertation was to examine the effect of export tax on the competitiveness of Ethiopia's leather industry. Developing countries continue to use export taxes as a source of government revenue, to encourage value-added and infant industries, to attract foreign investment, for price stability, to improve terms of trade, or to deal with currency devaluations and inflation and as a method of addressing tariff escalation in importing countries (Piermartini, 2004). Ethiopia is a developing country that imposed export tax to obtain some of the abovementioned benefits (i.e. to encourage value-added industries, to attract foreign investment, and to increase government revenue). Export taxes on primary commodities, particularly unprocessed commodities, lead as an indirect subsidy to higher value-added manufacturing or processing industries. Consequently, the processing industry will benefit from lower prices of inputs and gain competitiveness in the international market.

Italy was the main market destination of Ethiopia's raw hides and skins and semi-finished leather products for more than 50 years. Italy has imported more than 60% of Ethiopia's raw hides and skins semi-finished leather products on average for decades. However, after the export tax, the market destination shifted to Asian markets (i.e. China, Hong Kong, and India). In 2012, Abebe and Schaefer examined Italy's imports of raw hides and skins and semi-finished leather products from Ethiopia and found a 32% decrease in 2008 after the imposed export tax. These policy changes and other external factors affected both the importing countries and local industries (Workneh, 2014). Small and medium-sized local tanneries (around 45% of the local tanneries) highly declined or stopped exporting due to the heavy export tax (McMillan, 2012)

The first objective of this study was to examine the export trend of raw hides and skins, leather products and footwear products in Ethiopia and we expected an increasing export trends for finished leather products and footwear and a decreasing export trend for raw hides and skins and semi-processed leather products. The findings of this study are in line with the researcher's expectations. Using the linear trend analysis model, Ethiopia's raw hides and

skins and semi-processed leather products exports showed a significant and declined trend due to the heavy export tax imposed by the government to increase the production and export of finished leather products. Meanwhile, finished leather products and footwear showed a significant and an increasing export trend after the export tax was levied. In the last two to three decades, Ethiopia's leather industry exports depended on raw hides and skins, which ranked as the second most exported product next to coffee. However, finished leather products recently were the main source of exports in the leather industry.

This study also analysed the revealed comparative advantage of raw hides and skins and leather products to meet research objective two. Results of the RCA analysis of this study coincided with the results of trend analysis. For instance, the RCA of Ethiopia's raw hides and skins was more than one ( $RCA > 1$ ) up to 2012. However, after the export tax in 2012, the RCA became less than one and gradually dropped to zero. This indicates the loss of in comparative advantage of Ethiopia compared with the case South Africa and Nigeria. The same was true for finished leather products; the RCA of Ethiopia's finished leather products was more than one during the period 2006 to 2014, while increased more after 2010. The RCA of Ethiopia's footwear was less than one during the period 2006 to 2014. This indicated that Ethiopia has no comparative advantage on the export of footwear.

CMS model was used to analyse the third objective, which is to determine the competitiveness of Ethiopia's leather industry. The CMS model results show that the competitiveness of Ethiopia's raw hides and skins and semi-processed leather were very low and negative in all selected markets; namely Italy, China, and Hong Kong. However, Ethiopia's leather further prepared after tanning or crust and leather of other animals were highly competitive in all selected markets. Ethiopia's footwear gained high competitiveness in the USA market. This indicates that export tax make the competitiveness of raw hides and skins and semi-processed leather product negative. However, the overall export growth was positive, which means that the increase in finished leather products' export is greater than the decline in raw hides and skins export.

In conclusion, this study provided empirical evidence of the effect of the export tax on the competitiveness of Ethiopia's leather industry. It shows that in the past few years, the industry has been made to focus on valued-added products mainly due to policy measures taken by the government, which had put the sector on the right path as can be understood

from the noted export descriptions and indicators. As a result, currently finished leather products, shoes and leather gloves export products have ensured a tangible technology transfer. In addition to this, these policy measures have led to increased foreign direct investment, as well as strongly contributed to creating job opportunities for citizens in the leather industry sectors. However, the government policy has favoured foreigners who have access to capital and better technology (McMillan, 2012).

## **6.2 POLICY IMPLICATIONS**

Based on the results of the study, the following recommendations are made to enhance the production and export potential of the leather industry:

- In the short run, export tax may enhance the competitiveness of the leather industry. Temporary measures can have long-lasting effects, therefore the government should consider eliminating export tax in the long run so that the Ethiopian leather industry will become as competitive as South Africa and other exporting countries by improving the supply of raw material. The government can improve the policy on livestock management, hides and skins collection, and preservation to reduce the supply shortage.
- Ethiopia's government policies mainly focused on increasing production and exports of value-added leather products at the expense of local tanneries. Large foreign tanneries are the capacity to upgrade their machinery to export finished leather products. However, local small and medium tanneries are still struggling due to a lack of working capital, adequate facilities, worker skills, and suppliers. The government must take policy measure to improve these different facilities.
- Finally, it is recommended that further research needs to account for a welfare analysis in each and every part of the leather value chain and market access up to the owner of livestock.

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## APPENDICES

### Appendix 1: Values and share of major export items (in millions of USD)

Item	2006	% share	2007	% share	2012	% share	2013	% share
Coffee	424	35.93	524	35.78	746	24.23	714	21.95
Oilseeds	187	15.85	218	14.93	443	14.39	651	20.03
Leather & leather products	89	7.54	99	6.77	121	3.93	129	3.99
Pulses	70	5.93	143	9.80	233	7.57	250	7.70
Meat and meat products	15	1.27	20	1.43	74	2.41	74	2.29
Fruits & vegetables	16	1.36	12	0.87	43	1.42	45	1.41
Live animals	36	3.05	40	2.79	166	5.40	186	5.74
Chat	92	7.80	108	7.39	271	8.80	297	9.13
Gold	97	8.22	78	5.38	578	18.78	456	14.02
Flower	63	5.34	111	7.63	186	6.06	199	6.14
Others	91	7.71	106	7.25	215	6.99	247	7.60
<b>Total</b>	<b>1185</b>	<b>100.0</b>	<b>1465.9</b>	<b>100.0</b>	<b>3,081.2</b>	<b>100.0</b>	<b>3,254.8</b>	<b>100.0</b>

*Source: Ethiopian Revenue and Custom Authority data*

## Appendix 2: Livestock populations (heads in thousands)

Year	Ethiopia			Nigeria			South Africa		
	Cattle	Sheep	Goats	Cattle	Sheep	Goats	Cattle	Sheep	Goats
2000	33 075	10 951	8 598	15 118	26 000	42 500	13 600	28 551	6 706
2001	35 383	11 438	9 621	15 133	28 693	45 260	13 500	28 800	6 550
2002	40 639	14 322	11 000	15 149	29 400	46 400	13 635	26 000	6 452
2003	39 000	16 000	12 000	15 164	30 086	47 552	13 538	25 820	6 358
2004	38 749	18 075	14 851	15 700	30 800	48 700	13 512	25 360	6 372
2005	40 390	20 734	16 364	15 875	31 548	49 959	13 790	25 334	6 356
2006	43 125	23 633	18 560	16 066	32 305	51 208	13 532	24 983	6 400
2007	47 571	26 117	21 709	16 153	33 080	52 488	13 911	25 082	6 265
2008	49 000	26 117	21 799	16 293	33 874	53 800	13 865	25 094	6 529
2009	49 298	25 017	21 884	16 435	34 687	55 145	13 761	24 989	6 358
2010	50 884	25 980	21 961	16 013	37 423	56 524	13 731	24 501	6 275
2011	53 382	25 509	22 787	18 871	38 000	57 300	13 688	24 303	6 165
2012	55 272	27 539	21 787	19 543	40 542	57 000	13 654	23 680	6 206

Source: FAO, 2013

### Appendix 3: Foreign Direct Investment (FDI) inflows, 1990 – 2014 (in million USD)

Year	Foreign Direct Investment to East Africa Countries			
	Ethiopia	Kenya	Uganda	Tanzania
1990	12.00	57.10	-5.91	0.01
1991	6.00	18.80	1.00	0.01
1992	0.17	6.00	3.00	12.00
1993	3.50	2.00	54.57	20.00
1994	17.21	4.30	88.15	50.00
1995	14.14	33.00	124.51	150.00
1996	21.93	10.55	121.51	148.51
1997	288.49	53.00	141.50	157.80
1998	260.67	11.41	132.63	172.20
1999	69.98	13.00	140.25	496.60
2000	134.64	110.90	180.81	282.00
2001	349.40	5.30	151.49	467.20
2002	255.00	27.62	184.65	387.60
2003	465.00	81.74	202.19	308.20
2004	545.10	46.06	295.42	330.60
2005	265.11	21.21	379.81	935.52
2006	545.26	50.67	644.26	403.04
2007	222.00	729.05	792.31	581.51
2008	108.54	95.58	728.86	1 383.25
2009	221.46	114.97	841.57	952.61
2010	288.27	178.06	543.87	1 813.25
2011	626.51	335.25	894.29	1 229.38
2012	278.56	258.61	1205.39	1 799.60
2013	953.00	505.00	1 096.00	2 130.86
2014	1 200.00	989.00	1 146.56	2 141.60

Source: CSA Large and Medium Manufacturing Survey

#### Appendix 4: RHS and leather product importing countries from Ethiopia

Importing country	Total RHS imported		4101		4102		4103		4104		4105		4106	
	2007	2013	2007	2013	2007	2013	2007	2013	2007	2013	2007	2013	2007	2013
<b>World</b>	87 340	301	4 727	0	23 724	1	3 738	0	5 662	9	29 575	256	19 914	35
<b>China</b>	11 612	0	333	0	3 624	0	0	0	1 464	0	2 958	0	3 233	0
<b>Italy</b>	37 816	0	2 319	0	10 255	0	1151	0	1 321	0	9 256	0	13 514	0
<b>Hong K</b>	3 492	59	749	0	0	0	0	0	1 253	0	316	58	1 174	0

#### Finished leather product and footwear importing countries from Ethiopia

Importing country	Total leather products		Finished leather		42 (Articles leather)		64 (Footwear)	
	2007	2013	2007	2013	2007	2013	2007	2013
<b>World</b>	18 093	134 751	9 644	103 121	249	3 286	8 200	28 344
<b>USA</b>	634	22 403	559	15	32	2 219	43	20 169
<b>China</b>	635	23 861	625	23 596	0	0	0	265
<b>Italy</b>	8 783	17 998	1 995	17 728	190	1	6 598	269

*Source: Author's calculation based on ITC (2015) data*



### Appendix 5: Detailed countries RCA index for leather products

Year	Ethiopia			South Africa			Nigeria		
	RHS and Semi-processed leather	Finished leather	Footwear	RHS and Semi-processed leather	Finished leather	Footwear	RHS and Semi-processed leather	Finished leather	Footwear
<b>2006</b>	59.82	1.36	0.49	1.89	0.42	0.06	0.44	0.19	0.07
<b>2007</b>	62.09	1.78	1.07	2.06	0.38	0.05	3.46	0.58	0.18
<b>2008</b>	62.98	1.34	1.05	1.18	0.32	0.05	3.15	1.43	0.12
<b>2009</b>	28.52	1.35	0.62	2.14	0.28	0.07	5.33	1.47	0.26
<b>2010</b>	24.68	1.48	0.54	1.71	0.30	0.33	12.10	5.43	0.62
<b>2011</b>	42.00	2.32	0.53	1.91	0.30	0.29	3.02	0.80	0.16
<b>2012</b>	0.62	6.53	0.79	2.35	0.27	0.31	3.32	1.13	0.18
<b>2013</b>	0.08	5.35	1.02	3.98	0.27	0.30	5.26	1.11	0.31
<b>2014</b>	0.04	3.62	0.80	3.33	0.34	0.29	0.43	1.06	0.08

*Source: Author's calculation based on ITC (2015) data*

## Appendix 6: Overall RCA of Ethiopia

Year	RCA									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>RHS</b>	51.93	59.69	62.11	63.00	28.52	24.71	41.97	0.62	0.08	0.04
<b>FLH</b>	1.30	1.36	1.78	1.34	1.34	1.47	2.31	6.48	5.31	3.61
<b>FW</b>	0.15	0.49	1.07	1.05	0.61	0.53	0.52	0.78	1.01	0.77

*Source: Author's calculation based on ITC (2015) data*