Master's Thesis of International Studies

A Comparative Study of the Impact of COMESA and IGAD on Ethiopian Trade

에티오피아 무역 내 동남아프리카 공동시장 **(COMESA)**와 동아프리카 정부간 개발기구**(IGAD)**가 미치는 영향 비교 연구

August 2023

Graduate School of International Studies
Seoul National University
International Commerce Major

Esete Solomon Andargie

A Comparative Study of the Impact of COMESA and IGAD on Ethiopian Trade

Academic Advisor: Jeong, Hyeok

Submitting a master's thesis of International Commerce

August 2023

Graduate School of International Studies
Seoul National University
International Commerce Major

Esete Solomon Andargie

Confirming the master's thesis written by
Esete Solomon Andargie
August 2023

Chair	Rhee, Yeongseop	(Seal)
Vice Chair	Kim, Chong-Sup	(Seal)
Examiner	Jeong, Hyeok	(Seal)

Abstract

A Comparative Study of the Impact of COMESA and IGAD on Ethiopian Trade

Esete Solomon Andargie
International Commerce Major
Graduate School of International Studies
Seoul National University

Regional integration in Africa has a long history. However, intra-regional trade lags behind other developing regions. This thesis focuses on Ethiopia, a founding member of the Common Market for Eastern and Southern Africa (COMESA) and the Intergovernmental Authority for Development (IGAD), and investigates its utilization of regional economic communities for trade and engagement in the globalized world. Employing indicators such as the Trade Intensity Index and Revealed Comparative Advantage, the thesis assesses the correlation between the comparative advantage of Ethiopia's export products and the share of exports to COMESA and IGAD. The study is conducted on six case study export products based on two-digit Harmonized System (HS) code: code 1 – live animal, code 4 – diary product, code 9 – coffee, tea, mate and spices, code 11 – products of the milling industry, code 30 – pharmaceutical products, and code 70 – glass and glassware. The findings of the correlation assessment reveal alignment between comparative advantage and export share in five products, except for live animal (code 1), indicating the presence of a trade barrier between Ethiopia and

COMESA. Based on the result, the thesis highlights the importance of Ethiopia's active participation in international trade and regional economic communities, which can lead to economic growth, development, and improved market access.

Key Words: Revealed Comparative Advantage, Trade Intensity Index, Regional Economic Communities, Economic Integration, Regional Economic Integration, HS code, Ethiopia.

Student Number: 2021-28564

Table of Contents

List of Figures v

List of Tables vii

CHAPTER ONE: INTRODUCTION 1

1.1. Background 1

1.2. Purpose of the Study 6

1.3. Research Question 6

CHAPTER TWO: LITRATURE REVIEW 8

2.1. Rationale for Intra-Regional Integration 8

2.2. Regional Integration in Africa 10

CHAPTER THREE: THE ETHIOPIAN TRADE LANDSCAPE 13

3.1. Overview of Ethiopia's Development State 13

3.2. Trade Landscape 17

3.2.1. Trade Openness 17

3.2.2. FDI and External Financial Resources 21

CHAPTER FOUR: STUDIES ON IGAD AND COMESA RECs 23

4.1. Studies on IGAD 23

4.1.1. Background 23

4.1.2. Level of Trade Integration in IGAD 24

4.1.3. Intra-IGAD Goods Trade 26

4.1.4. Trade Facilitation in IGAD 28

4.2. Studies on COMESA 30

4.2.1. Background 30

4.2.2. Level of Trade Integration in COMESA 32

4.2.3. Intra-COMESA Goods Trade.....34

4.2.4. Trade Facilitation in COMESA.....37

CHAPTER FIVE: METHODOLOGY 40

5.1. Methodology 40

5.1.1. Trade Intensity Index 41

5.1.2. Revealed Comparative Advantage 41

5.1.3. Categorizing Products 43

5.1.4. Correlation between Trade Share and RCA Values. 43

5.2. Data Source 45

CHAPTER SIX: RESULT AND DISCUSSION 46

6.1. Trade Intensity of Ethiopia with IGAD and COMESA 46

6.2. Competitiveness of Ethiopia's Products: RCA Results.....47

6.3. Case Study on Selected Products 54

6.4. Correlation Result between Trade Share and RCA Values.....58

CHAPTER SEVEN: CONCLUSION.....61

7.1. Conclusion.....61

Bibliography.....62

Appendix.....66

Abstract in Korean 68

Acknowledgments.....69

List of Figures

Figure 1. Multiple Memberships of African Nations in RECs in 2018.....4

Figure 2. Ethiopia's Sum of Imports and Exports as %of GDP (Source: World Development Indicators of the World Bank) 18

Figure 3. Ethiopia's Export Share Relative to GDP (Source: World Development Indicators of the World Bank).....19

Figure 4. Ethiopia's Import Share Relative to GDP (Source: World Development Indicators of the World Bank).....20

Figure 5. Ethiopia's Trade Balance Relative to GDP (Source: World Development Indicators of the World Bank).....21

Figure 6. Ethiopia's Financial Flow Trends (Source: World Development Indicators of the World Bank).....22

Figure 7. Evolution of Intra-IGAD Export, 2010-2021 (Source: World Integrated Trade Solution).....27

Figure 8. Evolution of Intra-IGAD Import, 2010-2021 (Source: World Integrated Trade Solution).....28

Figure 9. Evolution of Intra-COMESA Export, 2010-2021 (Source: World Integrated Trade Solution) 35

Figure 10. Evolution of Intra-COMESA Import, 2010-2021 (Source: World Integrated Trade Solution) 36

Figure 11. Trade Complementarity Index among REC Member States, 2016 (Source: UNCTAD) 36

Figure 12. Comparison of Trade Intensity Index Values of IGAD and COMESA 47

Figure 13. Pearson Correlation between IGAD's Share of Ethiopia's Product Exports and RCA Value Difference of Ethiopia's Export to IGAD and COMESA for Selected Case Studies 59

List of Tables

Table 1. Trade within Continent, 2017(Source: UNCTAD (2019)).....2

Table 2. Key Differences between HERA and GTP-II 16

Table 3. Ethiopia's Financial Inflows Relative to GDP (Source: World Development Indicators of the World Bank) 22

Table 4. Overview of IGAD Countries' Membership in Regional Integration Agreements and WTO (Source: IGAD Secretariat).....26

Table 5. Level of Trade Integration in COMESA (Source: COMESA Secretariat) 33

Table 6. Trade Intensity Index of Ethiopia with IGAD and COMESA 46

Table 7. Revealed Comparative Advantage of Ethiopia with IGAD in Broad Categories 1-1 48

Table 8. Revealed Comparative Advantage of Ethiopia with IGAD in Broad Categories 1-2 49

Table 9. Revealed Comparative Advantage of Ethiopia with COMESA in Broad Categories.....49

Table 10. Revealed Comparative Advantage of Ethiopia with IGAD in Two-Digit Harmonized System, 1-1.....50

Table 11. Revealed Comparative Advantage of Ethiopia with IGAD in Two-Digit Harmonized System, 1-2.....51

Table 12. Revealed Comparative Advantage of Ethiopia with COMESA in Two-Digit Harmonized System, 1-1.....52

Table 13. Revealed Comparative Advantage of Ethiopia with COMESA in Two-Digit Harmonized System, 1-2.....53

Table 14. Categorization of Products by $DRCAi$ Values.....55

Table 15. Case Study of Products Recommended for Export to COMESA based on Negative $DRCAi$ Values.....56

Table 16. Case Study of Products Recommended for Export to IGAD based on Positive $DRCAi$ Values 57

Table 17. Case Study of Products Recommended for Export to both IGAD and COMESA based on $DRCAi$ Values 57

Appendix

Appendix 1. HS 2-Digit Code and Product Name 66

CHAPTER ONE: INTRODUCTION

1.1. Background

Economic integration in Africa has a long history. The formation of the Organization of the African Unity (OAU) in 1963 is evidence of this. African leaders recognized the need for regional economic integration to promote economic development and reduce dependence on former colonial powers. The focus of OAU was thus to rid the continent of remaining colonization and apartheid vestiges and to promote solidarity among African nations (African Union, 2023). The OAU was later changed into African Union (AU) in 2002, further reinforcing African countries' integration. It directed the focus toward increased integration and cooperation of African countries to drive Africa's economic development.

Although regional integration has been a longstanding feature in Africa, the volume of trade between African nations is not as high as it is in other developing regions. Reasons such as political turmoil and deep suspicion of free trade in several African nations have impeded the establishment of meaningful trade blocs (Shumiye and Ababa, 2014). The limited advancement in regional integration indicates that African economic communities have not fully tapped into their potential to achieve substantial economies of scale, improved competitiveness, industrial progress, increased domestic and foreign investments, and enhanced trade within the region. As a result, intra-African trade levels remain comparatively low when compared to other regions. In 2019, intra-African trade, defined as the average of intra-African

exports and imports, represent only 15.2% of trade (Table 1). Despite these hurdles, African countries have been facilitating regional integration, and currently, eight Regional Economic Communities (REC) are recognized under the AU. So, the story of economic integration in Africa is one of progress, challenges, and the ongoing pursuit of economic growth and development for the continent as a whole.

Table 1. *Trade within Continent, 2017(Source: UNCTAD (2019))*

	Intra-Regional Trade Level, 2015-2017
Intra-African Trade	15.2%
Intra-America Trade	47%
Intra-Asia Trade	61%
Intra-Europe Trade	67%

According to the AU, the 1980 Lagos Plan of Action for Africa's Development and the Abuja Treaty recommended the creation of RECs as the foundation for broader African integration, aiming toward regional and eventual continental unity (African Union, 2023). These RECs have increasingly taken on the responsibility of coordinating the interests of member states of the African Union in various areas, such as peace and security, development, and governance. The RECs are integrated into the organizational structures of the AU as constituent units (Adetula, V. A., Bereketeab, R., & Jaiyebo, O, 2016). Regional issues must pass through the RECs as constituents of the AU before reaching the global system represented by the United Nations. Within this global hierarchical system, African RECs are anticipated to execute functions and duties that have extensive implications

for global peace and security. Many states currently support the use of regional organizations and other types of alliances in both the domains of economic development and security.

The AU acknowledges eight RECs, and their purpose is to facilitate regional economic integration between members of the individual regions and through the wider African Economic Community (AEC), which was established under the Abuja Treaty (1991). The African RECs include:

- Arab Maghreb Union (AMU)
- Common Market for Eastern and Southern Africa (COMESA)
- Community of Sahel-Saharan States (CEN -SAD)
- East African Community (EAC)
- Economic Community of Central African States (ECCAS)
- Economic Community of West African States (ECOWAS)
- Intergovernmental Authority on Development (IGAD)
- Southern Africa Development Community (SADC).

In most cases, nations are members of more than one REC which has made it difficult to fully implement the trading arrangements to which they have committed under the different RECs. Figure 1 shows an example of the multiple memberships between African RECs. The overlapping coverage of RECs creates a picture similar to what is sometimes called “Spaghetti Bowl” (UNCTAD, 2019).

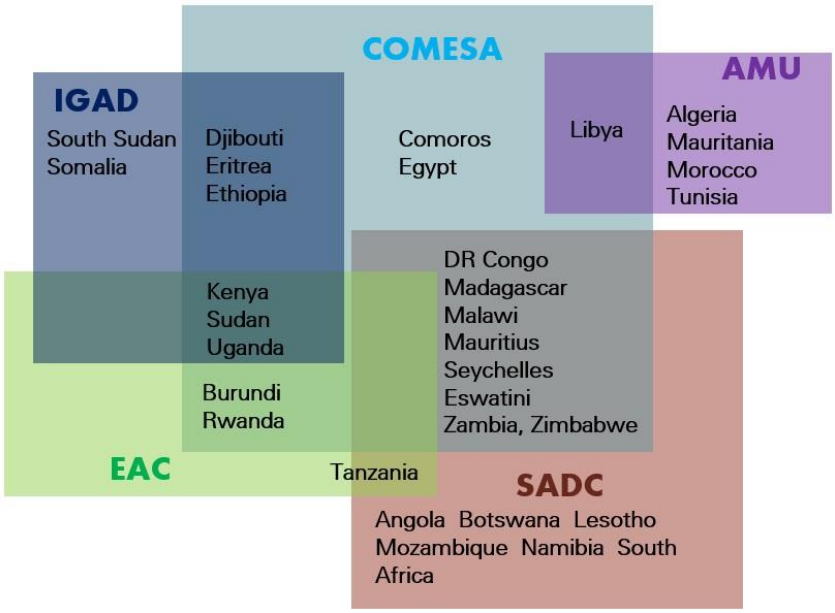

Figure 1. *Multiple Memberships of African Nations in RECs in 2018*

Ethiopia is a founding member of two of the RECs in Africa – COMESA, and IGAD. COMESA is a Regional Trade Agreement (RTA) comprised of 21 countries in the eastern and southern parts of Africa, whereas IGAD comprises eight East African countries. It is worth noting that all members of IGAD are also part of the COMESA REC, except South Sudan, and Somalia which joined COMESA in 2018. Through these trade blocs, Ethiopia and other member countries have expedited access to markets for their products. However, their level of commitment is at varying degrees. For example, Eritrea and Uganda have reduced tariffs by 80% while Ethiopia has reduced them only by only 10%. Kenya and Uganda have agreed to the COMESA common external tariff while the rest have not (Abdella, 2011). Even though the COMESA customs union is under preparation, none of the IGAD

member states have joined it. Ethiopia pursues its regional interests multilaterally through these organizations, although mainly through a dominant role in IGAD.

According to the World Bank (2023), Ethiopia has a population of more than 120 million, making it the second most populous country in Africa after Nigeria. In 2021, Ethiopia's GDP was 111.27 billion USD, ranked as the seventh largest economy in Africa. Ethiopia has been one of the fastest-growing economies in the last ten years, with GDP expanding at an average rate of 10.3% during 2004-2019 (World Bank, 2023). According to the World Bank, growth has been driven by large-scale public investment in infrastructure, and the service sector had the largest share of Ethiopia's GDP in 2017, accounting for 36.9%, followed by agriculture at 34.1% and industry at 22.9%.

Based on this background, this paper seeks to assess Ethiopia’s involvement in the COMESA and IGAD markets and compares its level of trade with the two RECs, while also examining the economic implications of engaging with neighboring countries. Chapter two provides the literature review. Chapter Three provides an overview of Ethiopia’s trade landscape, highlighting Ethiopia’s development sate and trade condition. Subsequently, Chapter Four discusses IGAD and COMESA’s trade policies, and the level of integration among member states. In Chapter Five, the paper analyzes Ethiopia’s trade with IGAD and COMESA countries. Here, the paper utilizes trade indexes such as Trade Intensity Index and Revealed Comparative Advantage.

1.2. Purpose of the Study

In light of the growing importance of regional integration, the study will seek to assess Ethiopia's integration with COMESA and IGAD in terms of regional trade. Regional integration has become a key strategy for many countries and regions to enhance their competitiveness, address common challenges, and achieve shared goals. Regional integration is often supported due to the potential benefits of achieving economies of scale in various activities associated with trade and economic growth (Oyejide, 2000).

Ethiopia, despite being a founding member of COMESA and IGAD regional economic communities, has not fully exercised its negotiating power to benefit from trading and engaging in a globalized world. This thesis will evaluate how significant regional integration is and which trade bloc is more beneficial for Ethiopia's economy in terms of trade flow, trade policies, and economic cooperation. The paper considers indicators of intra-regional trade and trade share such as the Trade Intensity Index and Revealed Comparative Advantage. The study aimed to provide policy directions that enable policymakers to maximize the benefits from the regional economic communities. The identification of trade intensity between the two trade blocs should help the preposition of realistic and achievable targets.

1.3. Research Question

The aim of this research is to analyze the trade relationship between Ethiopia and member states of two trade blocs in Africa: Common Market for East and Southern Africa (COMESA) and Intergovernmental Authority and Development

(IGAD). The study focuses on examining the trade blocs' impact on exports competitiveness of Ethiopia's products. The outcome of this research could be used in expanding existing knowledge and improving the trade strategies of Ethiopia. Consequently, the study seeks to answer the following research questions:

A. In which products does Ethiopia have a comparative advantage for producing and exporting to the IGAD and COMESA trade blocks?
B. Are there any untapped export opportunities for Ethiopia in the IGAD and COMESA trade blocks?
C. What factors influence the export value of Ethiopia's competitiveness in the IGAD and COMESA blocs?

CHAPTER TWO: LITRATURE REVIEW

2.1. Rationale for Intra-Regional Integration

The Acceleration of globalization and international competitiveness has led to the development of regional integration that expanded considerably within the span of the last 50 years. Regional integration is a worldwide trend that involves increased interactions between different territories and new forms of organization beyond traditional structures. Nations have shifted their inward-looking policies of import substitution to actively seeking open trade with their neighbors and participating in regional economic communities (Abdi & Seid, 2013). Free trade policies replaced protectionism, which emphasized reducing trade barriers, and the pursuit of integration became the norm. While economic cooperation remains a central aspect of regional integration, it now encompasses dimensions of politics, diplomacy, security, culture, etc. (Lombaerde and Van Langenhove, 2005).

There exists a substantial amount of theoretical literature that explores the significance of regional economic integration. Historically, the customs union theory primarily focused on examining welfare gains in the formation of customs unions. The gains and losses associated with customs unions stem from various sources, including (1) specialization, (2) economies of scale, (3) changes in terms of trade, (4) forced changes in efficiency as a result of foreign competition, and (5) changes in the rate of economic growth, (Lipsey, 1987). Lipsey argues that the theory of customs unions has mainly investigated the first source, with limited attention given to economies of scale and changes in terms of trade. The fifth source, changes in the

rate of economic growth, has not been addressed at all, and the fourth is disregarded by traditional theory on the assumption that production is carried out through technically efficient processes, despite evidence to the contrary.

The idea behind the formation of regional trade is driven by the belief in the standard trade theory that free trade is superior to other trade policies (Geda & Kebret, 2007). Geda and Kebret claims establishing free trade among multiple countries can enhance the well-being of member countries, provided that it generates more trade than it diverts in accordance with the Vinerian sense. However, regional agreements may not always result in an improvement in the welfare of member countries, as the theory of the second best suggests, unless trade diversion is kept to a minimum and trade creation is sufficient.

Viner (1950) introduced the idea of the Vinerian sense, which refers to the net welfare gain from a customs union. He discussed the concept of trade creation and trade diversion effects of regional integration. According to him, Vinerian sense of trade creation occurs when a customs union leads to the creation of new trade, while the Vinerian sense of trade diversion occurs when a customs union diverts trade away from more efficient non-member countries towards less efficient member countries. (Mistry, 1995) contends that integration is likely to result in trade creation when the following conditions are met: (a) each member's tariffs on the other member's products prior to integration are high; (b) the output mix of members' economies is similar, but they differ in the pattern of relative prices at which similar products are produced; (c) common and low external tariffs are applied by the region's members in comparison with the pre-integration tariffs; and (d) members' production structures are responsive enough to allow for import substitution within

the region at the same or lower cost than sourcing from outside the region. Trade diversion is certain to occur when none of these conditions are met.

Baldwin (1997) states the allocation effect and the accumulation (or growth) effect of free trade within a regional bloc are the two major theoretical motivations for the formation of trade blocs. The allocation effect aims to increase efficiency in resource allocation by removing trade barriers that interfere with the signal between consumers and producers. By removing such barriers, countries can allow the market to allocate resources more efficiently, reducing production costs and increasing productivity (UNCTAD, 2009). The result of the allocation effect is the so-called "scale and variety effects" (Elmorsy, 2015). The scale effect reduces inefficiency created by the protection of inefficient industries, while the variety effect increases consumer welfare by providing a wider selection of products. The second outcome of regionalism is accumulation which is observed through the investment and trade channels. Regional integration attracts suppliers and encourages the specialization of firms which reduces production costs within a region, increasing the return of factors of production. This leads to an accumulation of physical and non-physical factor accumulation, including knowledge.

2.2. Regional Integration in Africa

There is a wide range of literature that analyzes regional integration in Africa. For instance, Jeong (2013) conducted a study to examine trade patterns and various indicators related to the integration degree of COMESA member states. The study utilized indicators such as revealed comparative advantages (RCA), trade intensity index (TII), and regional orientation index (ROI). The findings indicated that

COMESA has “significant potential”, except for manufacturing industries. The analysis of RCA and ROI revealed that COMESA member states are unable to complement each other’s various industries. Additionally, heavy reliance on the export of primary commodities and the absence of competitive manufacturing sectors may pose significant challenges in advancing the developmental stages of COMESA.

Elmorsy (2015) also examined the most effective variables determining Egypt’s trade intensity with COMESA countries. He used TII and the gravity model and analyzed the potential for Egypt-COMESA trade. The study revealed that the potential and effort to advance regional integration through intra-COMESA trade is challenged by the similarity of exports and imports and the relative competitive position of COMESA suppliers. This is the result of weak infrastructural basis, productivity, and facilitation. The study further discusses the importance of efficient core services such as finance, telecommunication, energy and transportation to facilitate trade between COMESA members.

Abdi & Seid (2013) evaluated the advancement and impediments confronting the regional integration process in the Horn of Africa, with a specific emphasis on IGAD. They argued that IGAD has encountered significant difficulties in attaining regional integrations for numerous challenges faced by its member states, such as political and military conflicts that arise from competition for scarce resources, ethnic animosity, rebellions against neighboring states, border disputes, bad practices such as livestock theft, etc. Moreover, the existence of overlapping membership in other regional trading blocs has led to sluggish progress in achieving regional integration in comparison to other regional economic communities.

Several studies have also analyzed the trade potential of Ethiopia. For example, Guangul (2020) analyzed the impact of the COMESA trade bloc on Ethiopia's trade using panel data regression. The study found that Ethiopia exports its primary product to a COMESA member state at a higher value compared to a nonmember country. Abdella (2011) analyzed potential trade partners of Ethiopia from the IGAD using the gravity model and generalized two-stage stage Least square estimation technique (G2LS). He found that Ethiopia has almost exhausted its trading potential with three IGAD members (Djibouti, Kenya, Sudan) but can expand trade with Uganda.

Lyakurwa (1997) noted that despite attempts at regional integration, the African RECs have not been very successful in achieving their goals due to insufficient political commitment and economic instability that impede progress towards economic integration on the continent. Longo and Sekkat (2004) suggest that further progress in economic reforms is needed to enhance intra-African trade. Investment in infrastructure is also essential, but coordination among national policymakers is necessary to ensure optimal investment. Finally, political tensions negatively impact economic activity, and reducing poverty and improving economic performance could indirectly contribute to reducing political tensions and initiating an "African virtuous circle."

CHAPTER THREE: THE ETHIOPIAN TRADE LANDSCAPE

3.1. Overview of Ethiopia's Development State

Sub-Saharan African (SSA) nations, including Ethiopia, have experienced a surge of trade liberalization since the 1980s (Milner & Morrissey, 1999). Despite formerly employing protective trade policies, Ethiopia has embraced liberalization, which has become a crucial aspect of the country's economic growth and prospects for sustained structural transformation. Ethiopia's trade policy aims to leverage the dynamic benefits of trade, such as productivity improvements, technological learning, and economies of scale, to accelerate transformation (Gebrehiwot, 2019). To fully comprehend Ethiopia's trade policy and participation in regional trade pacts, it is essential to first examine the political landscape by which broader developmental context within which the trade policy has been designed.

Since 2010, Ethiopia's political landscape has undergone significant changes, including a power shift from the ruling Ethiopian People's Revolutionary Democratic Front (EPRDF) in 2018 to the current administration under Prime Minister Abiy Ahmed. This power shift has also had significant implications on the trade policy of Ethiopia.

The EPRDF launched successive five-year plans named GTP-I (Growth and Transformation Plan I) and GTP-II (Growth and Transformation Plan II) to guide the country's economic and social development (Gebrehiwot, 2019). GTP-I was launched in 2010 and ran until 2015, aiming to achieve rapid economic growth and

transform the country into a middle-income economy by 2025. It focused on infrastructure development, particularly in transportation and energy, as well as boosting agricultural productivity and expanding industrialization. It also emphasized social development, such as improving access to education, healthcare, and safe drinking water. GTP-II was then launched in 2015 and ran until 2020, with similar objectives to its predecessor. The plan aimed to continue the focus on infrastructure development, particularly in the areas of transportation, energy, and telecoms, and to further promote industrialization, particularly the manufacturing sector.

According to Gebrehiwot (2019), Ethiopia's trade policy consisted of three elements during the EPRDF administration. First, Since the early 2000s, Ethiopia adopted a “developmental state” approach as a model for pursuing development, heavily inspired by East Asian developmental experiences, particularly China. He establishes that, under this framework, trade policy is a critical instrument for enhancing economic efficacy and competitiveness in international markets which is used in collaboration with other developmental polices. For instance, it exists as ‘Trade and Industry’ chapter in the GTP-II (National Planning Commission, 2016). Daka (2021) claims that the “developmental state” has been successful in terms of GDP growth over a decade, social sector development, and infrastructure expansion. However, the “developmental state’ did not follow the principles of the classical developmental state model as it resembled a centrally planned economic system.

Second, the nation has committed significant resources towards enhancing its infrastructure, improving skills in the industrial sector, and boosting agricultural output to lower costs of production and create a business-friendly environment.

Gebrehiwot (2019) claimed that a significant portion of the investment in infrastructure has been concentrated in “development corridors or development centers” which feature integrated agro-parks and industrial parks. It was critical to have trade policies connected to these infrastructure investments and bolstered by them. This would enhance Ethiopia's global competitiveness, especially given the pressing balance-of-payments restrictions and recurrent foreign currency shortages that Ethiopia is struggling with. Additionally, it would promote faster growth of Ethiopian exports.

Lastly, he emphasized the importance of positioning oneself strategically to take advantage of the opportunities that arise from enhanced participation in global value chains (GVCs). Being a part of this chain is critical for Ethiopia because the sectors it prioritizes, such as textile and apparel, and agri-business, are now part of international production networks involving a range of countries.

The current administration has launched a comprehensive economic program called Homegrown Economic Reform Agenda (HERA) in 2019 to ‘safeguard macro-financial stability and rebalance and sustain economic growth’ (Ministry of Finance, 2019). It represents a shift towards a more market-oriented and liberalized economy, emphasizing private sector-led growth and improving the overall business environment. The reform agenda does not abandon and do away with the previous development plans but rather builds on the accomplishments and rectifies the shortcomings of the past. There are however some key differences in the trade policy between HERA and GTP-II as shown in Table 2.

Table 2. *Key Differences between HERA and GTP-II*

	GTP-II	HERA
Approach	A five-year plan with specific targets and indicators	A more flexible and comprehensive reform
Emphasis	Strong focus on infrastructure development. Particularly in the areas of transportation, energy, and telecoms.	Great emphasis on economic liberalization and private sector-led growth.
Sectoral Reforms	Sectoral targets and indicators for agriculture, manufacturing, and services.	Crosscutting issues such as trade and investment, financial sector development, and human capital development.
Implementation	Implemented as a centralized, government-led program.	Decentralized approach. Greater involvement of the private sector, civil society, and development partners in the implementation.

The approach that GTP-II took was a five-year plan with specific targets and indicators which emphasized a focus on infrastructure development, particularly in the areas of transportation, energy, and telecoms. Whereas HERA is a more flexible and comprehensive reform that aims to place greater emphasis on economic liberalization and private sector-led growth, as well as improving governance and public service delivery. HERA has a stronger focus on macroeconomic stability than GTP-II, with measures aimed at reducing inflation, improving fiscal discipline, and strengthening monetary policy. While both plans prioritize agriculture, manufacturing, and services, HERA focuses more on financial sector reform, trade and investment liberalization, and public sector reform as key drivers of economic growth. As for the implementation, GTP-II relied heavily on public investment and

state-led development, while HERA aims to promote private sector participation and investment through policy and regulatory reforms.

3.2. Trade Landscape

3.2.1. Trade Openness

Trade openness is an important measure that reflects the extent to which a country engages in international trade. It is typically calculated by dividing the sum of a country's exports and imports by its GDP. In the case of Ethiopia, Figure 2 illustrates a declining trend in trade openness over time. This trend could have several implications, including the possibility that Ethiopia is moving towards protectionism in an attempt to shield its domestic industries from foreign competition, or reduced foreign investment. Although there has been a gradual decline over the years, the trend has become more pronounced in recent years, dropping from 35% to 24% between 2016 and 2021. Despite HERA's focus on economic liberalization, which includes reducing trade barriers and privatizing state-owned enterprises, Ethiopia's trade openness has declined in recent years.

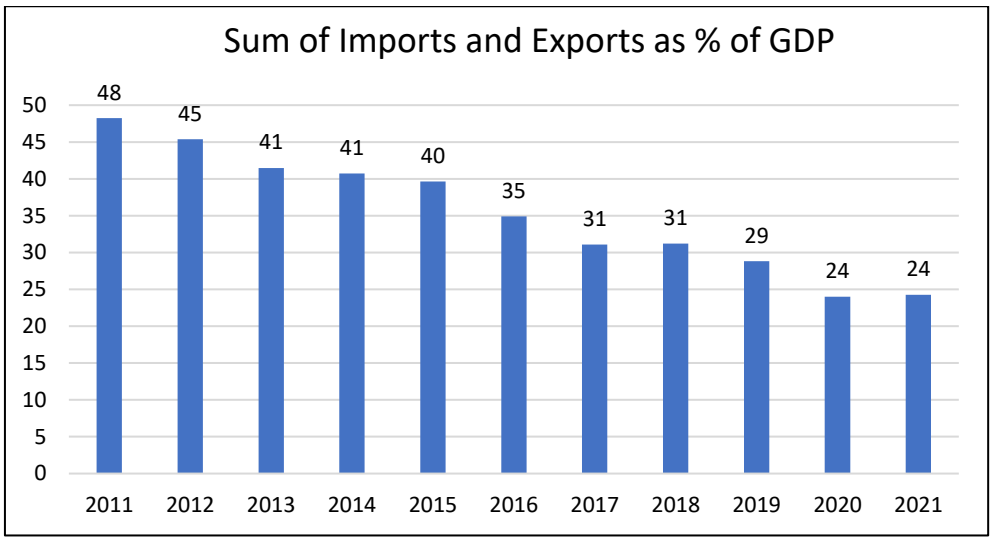

Figure 2. *Ethiopia's Sum of Imports and Exports as %of GDP (Source: World Development Indicators of the World Bank)*

To identify whether it is the export deterioration or import regulation that is the driving force behind the declining trend of trade openness in Ethiopia, the export and import share relative to GDP was assessed. As shown in Figure 3, export share relative to GDP has been declining significantly, with the lowest recording of 7.13% in 2020, and only slightly increasing to 7.59% in 2021. As shown in Figure 4, the import share relative to GDP has also been declining, with the lowest record of 16.66% in 2021. The decreasing trend started in 2016 as shown in Figures 3 and 4.

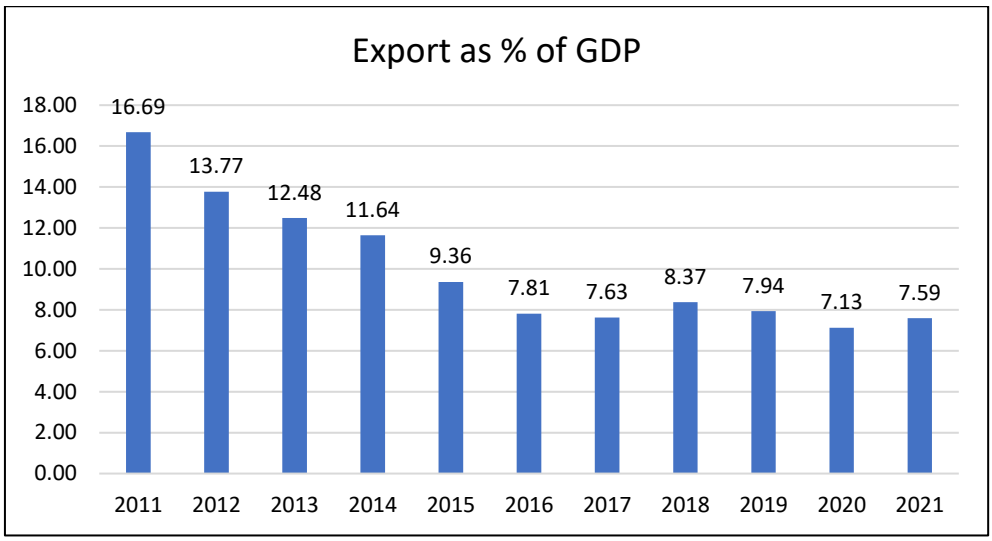

Figure 3. *Ethiopia's Export Share Relative to GDP (Source: World Development Indicators of the World Bank)*

The driving force behind the declining trend of trade openness appears to be export deterioration. Although the import share relative to GDP has also been declining, the decline is not as significant as that of exports. These trends suggest that Ethiopia may be facing challenges in terms of its export competitiveness which may be impacting its trade openness.

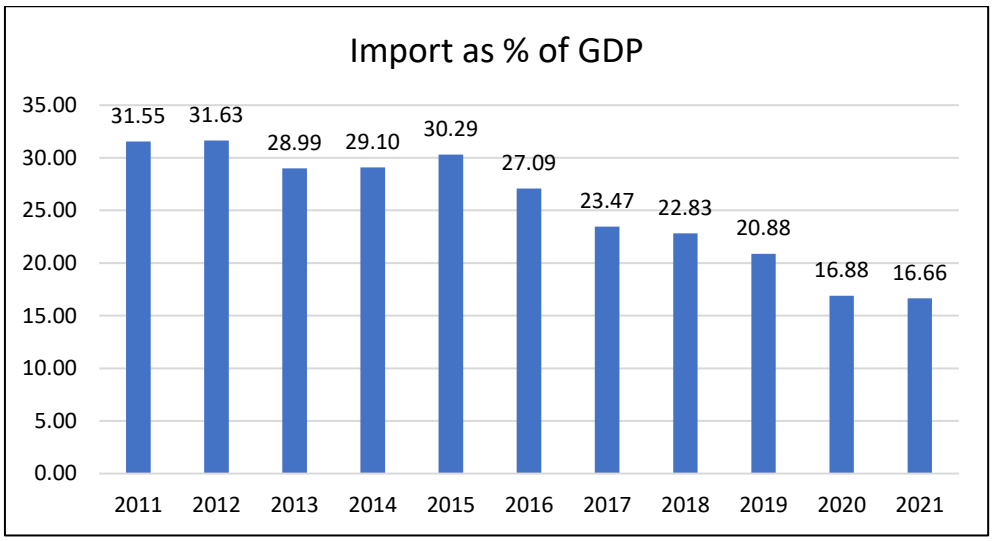

Figure 4. *Ethiopia's Import Share Relative to GDP (Source: World Development Indicators of the World Bank)*

Figure 5 illustrates Ethiopia's trade balance relative to GDP, showing persistent trade deficit, with a significant low record of -20.9% in 2015. However, there has been an improvement in recent years, with the deficit narrowing to -9.1% in 2021. A trade deficit occurs when a country's imports exceed its exports. This means that the country is buying more goods and services from other countries than it is selling to them. A persistent trade deficit can lead to a depletion of a country's foreign exchange reserves and can negatively impact the economy's overall balance of payments. In order to make up for this deficit, a country may seek to attract foreign investment, including Foreign Direct Investment, to help finance its current account deficit.

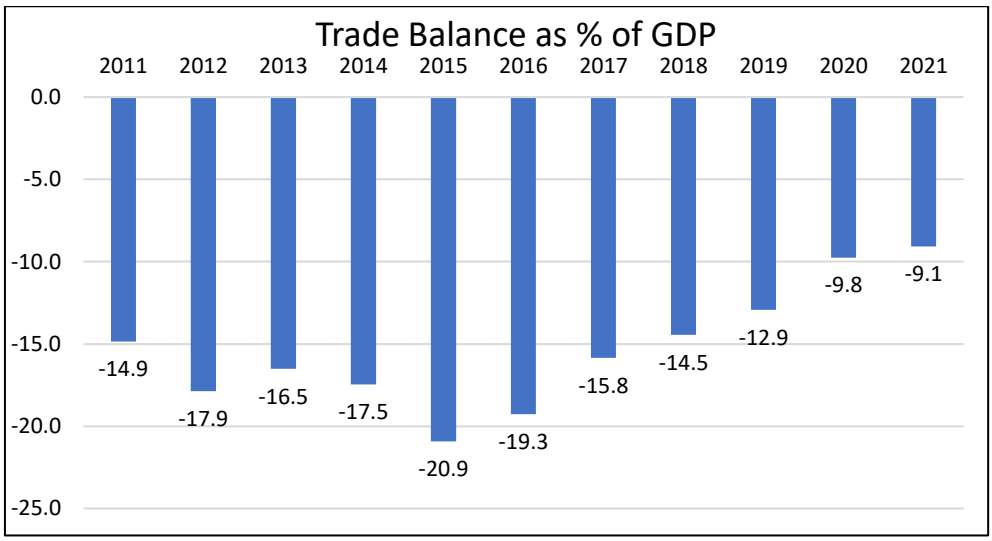

Figure 5. *Ethiopia's Trade Balance Relative to GDP (Source: World Development Indicators of the World Bank)*

3.2.2. FDI and External Financial Resources

Table 3 presents a declining trend in financial inflows, as evidenced by the decrease in FDI net inflows and personal remittances relative to GDP. The reasons for this decline are multifaceted, but its impact on the country's foreign exchange reserves is a tangible fact. Figure 6 further demonstrates the declining trend of financial flows to Ethiopia. FDI net inflow has decreased from a record high of $4142 million USD in 2016, to $2396 million USD in 2020, then peaked to $4260 million USD in 2021. Personal remittance inflow had a record high of $1796 million USD in 2014, and has been decreasing since then, with the smallest record of $404 million USD in 2020.

Table 3. *Ethiopia's Financial Inflows Relative to GDP (Source: World Development Indicators of the World Bank)*

% of GDP	Year											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
FDI net Inflows	0.96	1.97	0.64	2.82	3.34	4.07	5.58	4.91	3.99	2.66	2.23	3.83
Personal Remittances	1.46	1.68	1.44	1.75	3.23	1.68	1.04	0.48	0.52	0.50	0.38	0.40

The reduction in FDI inflows can lead to a further depletion of foreign exchange reserves and may even trigger a currency crisis. Furthermore, this trend may indicate that foreign investors are losing confidence in the country's economic prospects, thereby exacerbating the trade deficit, and discouraging investment. These findings highlight the importance of attracting sustainable and long-term foreign investment, as well as the need to promote policies that enhance the country's economic competitiveness and address any existing barriers to investment.

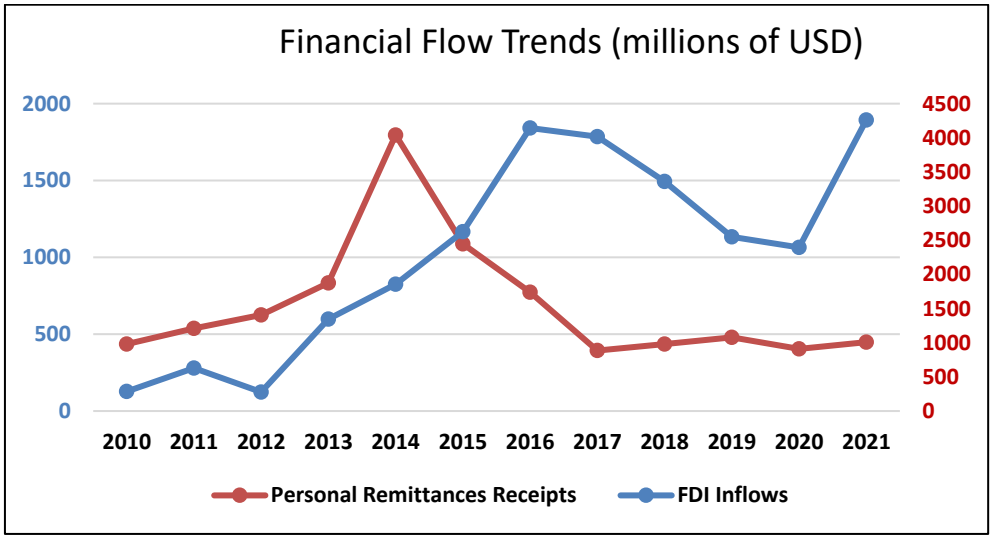

Figure 6. *Ethiopia's Financial Flow Trends (Source: World Development Indicators of the World Bank)*

CHAPTER FOUR: STUDIES ON IGAD AND COMESA RECs

4.1. Studies on IGAD

4.1.1. Background

The recurring incidences of droughts and famine in the region led the leaders of six nations (Djibouti, Ethiopia, Kenya, Sudan, Somalia, and Uganda) to establish a regional organization known as the Intergovernmental Authority on Drought and Development (IGADD). Their primary goal was to combat environmental degradation, especially drought, deforestation, and desertification, which resulted in frequent famine. In 1986, these leaders assembled in Djibouti and signed an agreement, formally establishing IGADD (Bereketeab, 2019). Eritrea joined the organization in 1993 after achieving independence, and South Sudan became the eighth member state in 2011.

The IGADD Assembly of Heads of State and Government held a meeting in Addis Ababa in 1995, during which they declared their intention to expand the organization's mandate and foster cooperation among member states. The following year, the assembly executed an agreement to amend the IGADD Agreement and rebranded it as the Intergovernmental Authority on Development (IGAD) (IGAD, 1996). IGAD with an expanded mandate that included conflict prevention and resolution, economic cooperation and integration, and other obligations. The new mandate focused on three key objectives: ensuring food security and environmental

protection, promoting and maintaining peace and security, and handling humanitarian affairs, economic cooperation, and integration (Bereketeab, 2019).

Since its inception, IGAD has undertaken various activities with varying degrees of success. Additionally, IGAD is responsible for executing AU and UN peace mediation and peace-building initiatives both within and outside the region.

4.1.2. Level of Trade Integration in IGAD

The IGAD nations exhibit heterogeneity in terms of their level of trade integration(IGAD, 2022). Most are part of COMESA, and three countries (Kenya, South Sudan, and Uganda) are part of the EAST African Community (EAC), which limits their ability to make their own trade policies. Some have ratified the African Continental Free Trade Area (AFCFTA) Agreement, while others have only signed it or not signed it at all. Only three are members of the World Trade Organization (WTO), but four others are in the process of joining. Moreover, five countries, namely, Djibouti, Eritrea, Ethiopia, Kenya, and Somalia, came together in 2019 to establish the Horn of Africa Initiative (HoAI) to tackle regional issues. The HoAI has four primary areas of focus and two of them – "improving regional infrastructure connectivity" and "promoting trade and economic integration" – have direct relevance to IGAD's regional trade policy.

Table 4 presents IGAD's member state's membership in other RECs other than IGAD, and the WTO. Some IGAD members are part of COMESA, but their level of commitment varies. For instance, Djibouti, Kenya, Sudan, and Uganda are

members of the COMESA Free Trade Area (FTA). Eritrea reduced its tariffs by 80% as a commitment to joining the FTA, while Ethiopia provides a tariff preference of 10% only to COMESA FTA members. The COMESA Customs Union, which was launched in August 2009, has not been fully implemented by any county yet. Additionally, bilateral agreements for trade and investment exist between some IGAD members. Ethiopia and Sudan have a Preferential Trade Agreement that allows for duty-free quota-free exports based on COMESA rules of origin (RoO). Djibouti and Ethiopia have an agreement for favorable treatment of investments, and Djibouti has de facto FTA access to the Ethiopian market. Moreover, almost all IGAD states are members of at least three regional groupings out of the eight established in the region. Djibouti, Sudan, and Kenya trade duty-free under COMESA-FTA. Eritrea and Uganda have reduced their tariffs (80%) to COMESA member states. Kenya and Uganda trade with zero tariffs under the East African Community (EAC), while Ethiopia and Sudan are also enjoying zero tariffs under their bilateral treaty.

Table 4. *Overview of IGAD Countries' Membership in Regional Integration Agreements and WTO (Source: IGAD Secretariat)*

Country	WTO	AFCFTA	Sub-regional RECs
Djibouti	Since 1995	Ratified 2019	COMESA
Eritrea	NO	NO	COMESA
Ethiopia	Accession process started in 2003	Ratified 2019	COMESA
Kenya	Since 1995	Ratified 2018	COMESA, EAC
Somalia	Accession process started in 2015	Ratified 2020 (not yet deposited)	COMESA
South Sudan	Accession process started 2017	Signed	EAC
Sudan	Accession process started in 1994	Signed	COMESA
Uganda	Since 1995	Ratified 2018	COMESA, EAC

4.1.3. Intra-IGAD Goods Trade

Exports by IGAD countries to the world and to IGAD members increased sharply from 2011 to 2013, with a drop in 2014, and again a peak in 2015, and thereafter remained constant until 2020. Exports to the world were around 15 billion USD in 2015, reaching 12.7 billion USD in 2020, and a large decrease in 2021 to 9 million USD (Figure 7). Intra-IGAD exports were around 2 billion USD from 2015 to 2020, and there was a drop to 1.5 billion USD in 2021. The share of total exports to fellow IGAD members increased from 8.17% in 2014 to 19.44% in 2020, then dropped to 16.86% in 2021. The development since 2010 indicates an upward trend, as shown by the dotted line in Figure 7.

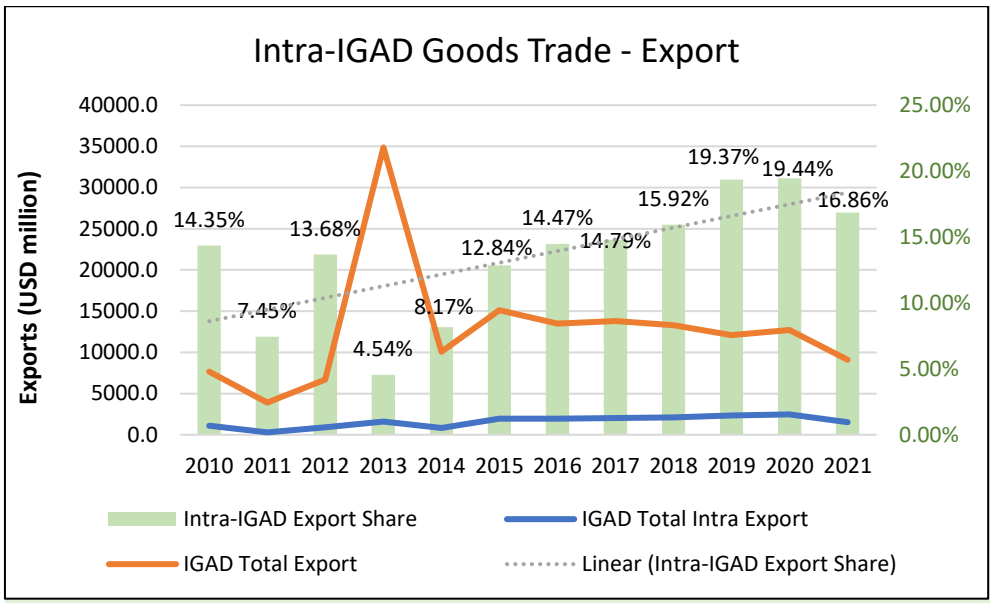

Figure 7. *Evolution of Intra-IGAD Export, 2010-2021 (Source: World Integrated Trade Solution)*

Figure 8 shows that IGAD suppliers account for only 3% of total imports on average, indicating the relatively limited importance of intra-regional imports. Furthermore, the trend for the years 2013 to 2020 did not show a significant change in this regard. Compared to other regional integration arrangements in Africa, IGAD has a lower share of intra-regional trade, which suggests room for improvement in promoting trade within the region.

While the significance of intra-IGAD trade in the region's total trade has grown unevenly, intra-regional exports offer a clear advantage due to their composition (IGAD, 2022). Specifically, exports destined for other IGAD countries have a different composition compared to exports to the rest of the world. Intra- regional exports have a higher value addition and greater diversity, highlighting the potential for the development of intra-IGAD trade. This potential

can be realized through policy support, including the development of regional value chains. However, there are still supply-side capacity gaps for capital goods that need to be addressed, non-tariff barriers and inadequate transport infrastructure hinder intra-regional trade.

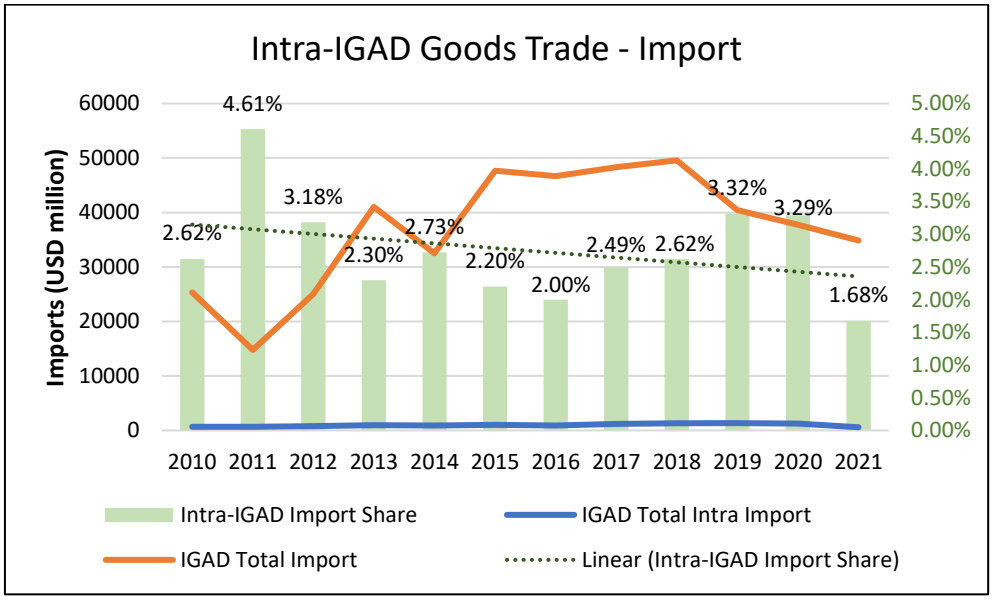

Figure 8. *Evolution of Intra-IGAD Import, 2010-2021 (Source: World Integrated Trade Solution)*

4.1.4. Trade Facilitation in IGAD

Inefficiencies at borders, bureaucratic delays, and corruption are pervasive issues in the IGAD region and throughout Africa, which result in higher costs and increased time required to conduct business within the region. As a result, it impedes progress in intra-regional and inter-regional trade. Enhancing trade facilitation governance would significantly benefit intra-IGAD and intra-African trade, resulting in reduced trade costs and time across the African continent. Thus, in the newly

launched Regional Trade Policy (IGAD, 2022), for the years 2022-2026, IGAD emphasized the importance of promoting cooperation among its members to fulfill their obligations regarding customs cooperation and trade facilitation, focusing on:

- Simplifying and standardizing the process for obtaining trade documents to ensure uniformity across all IGAD member states. This involves streamlining and harmonizing procedures for obtaining trade documents such as licenses and permits. This would help to reduce disparities and streamline the trade process, ultimately improving intra-regional trade.
- Introducing Electronic Single Windows to simplify clearance processes and speed up the import, export, and transit of goods. Electronic Single Window refers to a digital platform that integrates all trade-related activities, including customs, documentation, and payments into a single portal.
- Implementing an electronic customs management system to enhance operational efficiency and improve service delivery for customs control and clearance.
- Establishing a regional electronic cargo tracking system that enables real-time monitoring of goods transported across borders. This would improve the security of goods in transit and reduce the risk of theft or loss.
- Developing standardized regulations for cross-border freight transport to simplify the transportation of goods across borders by establishing clear rules to follow.
- Sharing official trade statistics to increase transparency, improve quality data, and enhance planning.
- Promoting the establishment of One-Stop Border posts at borders between

IGAD members to reduce the time and cost associated with cross-border trade. This would allow all trade-related activities, such as customs clearance and documentation, to be done in one location.

- Identifying measures to strengthen customs administration processes and institutional capacity building for cross-border trade facilitation among IGAD member states. This would ensure a standardized and effective approach to trade facilitation across all member states.
- Preventing, investigating, and suppressing customs offenses such as smuggling and bribery to maintain the integrity of the trade process and reduce the risk of fraud and corruption.
- Providing training facilities and programs for customs officials on topics such as harmonized transport regulations, special economic zones, and small-scale cross-border trade to enhance the knowledge and skills of customs officials and improve trade facilitation.

4.2. Studies on COMESA

4.2.1. Background

In the 1960s, African nations recognized the need to expand markets available to domestic economies by integrating and establishing various integration arrangements due to the small size of their economies, as highlighted by (Aryeetey & Oduro, 1996). As these economies were heavily reliant on a narrow range of primary products, their participation in world trade was limited, prompting the OAU to encourage member states to integrate their economies into regional markets. The ultimate goal was to form a cohesive and robust Africa-wide economic union that

would help mobilize resources and expand markets. To this end, the Lagos Plan of Action was adopted in 1980 as a major step towards this goal, as recognized by the OAU (OAU, 1985). The Treaty establishing the African Economic Community (AEC) was subsequently signed in Abuja, Nigeria in 1991, and after ratification, the AEC Treaty came into force in 1994. As a bridge towards achieving this goal, COMESA was established as one of the African regional economic communities (RECs).

COMESA, formerly known as the Preferential Trade Area (PTA) for Eastern and Southern Africa, initially aimed to become a common market by the year 2000. The PTA was signed in 1981 and came into force in the following year, with the primary goal of fostering intra-regional trade using measures that promote trade liberalization. This was to be accomplished through various protocols such as the elimination and reduction of trade barriers, customs cooperation, simplification, and harmonization of trade documents, as well as industry, agriculture, monetary affairs, and natural resources. By September 1992, the PTA aimed to achieve its trade liberalization program by reducing tariffs by 10%-70% and intending to further reduce them by 25% every two years. However, in 1993, the PTA was transformed into a Common Market and was accepted and ratified in 1994. The Common Market for Eastern and Southern Africa (COMESA) concentrates on deeper integration objectives after transitioning from a loose collaboration to a free trade area. It is Africa's second-biggest coalition next to AFCTA, with 21 member countries namely, Burundi, Comoros, D.R. Congo, Djibouti, Egypt, Eswatini, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Uganda, Zambia, Zimbabwe, and Tunisia and Somalia joining in 2018.

COMESA was instituted with the aim of establishing a customs union by removing all trade barriers, implementing a common external tariff, and establishing rules of origin. Moreover, the new treaty has introduced monetary and financial cooperation, intending to coordinate macroeconomic policies as the countries progress towards the free movement of services and capital, and the convertibility of currencies. COMESA's emphasis is on the equal distribution of the benefits of integration, a matter that was not previously addressed by the PTA. The organization aims to accomplish this by establishing unique regional programs to promote the least developed countries' growth within the area to achieve balanced development in the common market.

4.2.2. Level of Trade Integration in COMESA

The COMESA Free Trade Area (FTA) was launched on 31 October 2000, making it the first FTA in Africa under the African Union. It currently has 16 member states- Burundi, Comoros, Djibouti, D.R. Congo, Egypt, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Uganda, Zambia, and Zimbabwe- that trade on a full duty-free and quota-free basis, with other countries at different stages of joining, namely Ethiopia, Eritrea, and Eswatini. Non-FTA members grant partial tariff reductions or none at all, and the FTA permits new members to join once they are ready to reciprocate its terms.

COMESA also implements Rules of Origin to determine if goods produced in the region are eligible for preferential treatment. According to (COMESA, 2018), the member states require goods to meet one of the five criteria to qualify for Rules of Origin: (1) wholly produced in a member state; (2) produced in a member state

with foreign materials' C.I. (Cost, Insurance, Freight) value not exceeding 60% of total cost; (3) produced in a member state with value added at least 35% of ex-factory cost; (4) produced in a member state and classifiable under a different tariff heading than non-originating materials; (5) designated by the Council of Ministers as "goods of particular importance" with at least 25% value added. Exporters may choose to claim COMESA duty-free treatment based on their compliance with any of the Rules of Origin. Moreover, COMESA launched the Simplified Trade Regime (STR) in 2010 to bring formal structure to informal cross-border trade for small-scale traders by reducing costs and simplifying customs procedures. The STR applies to goods worth US$ 2,000 or less on the common list of eligible products negotiated by neighboring countries. The regime is implemented in Burundi, Kenya, Malawi, Rwanda, Uganda, Zambia, and Zimbabwe. Table 5 presents the different levels of integration of COMESA member states.

Table 5. *Level of Trade Integration in COMESA (Source: COMESA Secretariat)*

Trade Liberalization	COMESA Countries
Free Trade Area	Burundi, Comoros, Djibouti, D.R. Congo, Egypt, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Uganda, Zambia, and Zimbabwe. (Ethiopia, Eritrea, and Eswatini at different levels of participation)
Rules of Origin	All
COMESA Simplified Trade Regime (COMESA-STR)	Burundi, Kenya, Malawi, Rwanda, Uganda, Zambia, and Zimbabwe.
Great Lakes Trade Facilitation Program	D.R. Congo, Rwanda, and Uganda
COMESA Customs Union	launched in 2009, not yet implemented

In addition, the COMESA Customs Union was launched in 2009, at Victoria Falls in Zimbabwe with the aim of promoting intra-regional trade in goods, enhancing investment, and fostering economic development and industrialization in the region. Once fully implemented, it is expected to bring benefits such as faster clearance of goods, lower production costs, and a wider market for producers. Member States are in the process of transposing their Tariff Books to the COMESA CTN/CET. Elimination of Non-tariff barriers (NTBs) have also been progressing, including liberalization of import licensing, removal of foreign exchange restrictions and taxes, removal of quotas and roadblocks, easing of Customs formalities, and extended times border posts are open.

4.2.3. Intra-COMESA Goods Trade

The exports of COMESA countries to the world have shown some variability over the years. Between 2010 and 2014, there were fluctuations, but the trend peaked in 2018 before it started to decline. In 2010, exports to the world amounted to around US$ 84 billion, and despite a few declines and increases, it reached a peak of US$ 113 billion in 2018 (as illustrated in Figure 9). Intra-COMESA exports also displayed fluctuations, with the highest record of US$ 7 billion occurring in 2020. In 2012, intra-COMESA exports stood at 10.76%, increased to 10.89% in 2015, but then decreased until 2019 before rising again to 10.64% in 2020. Since 2010, the trend has shown a slight upward trajectory, as shown by the dotted line.

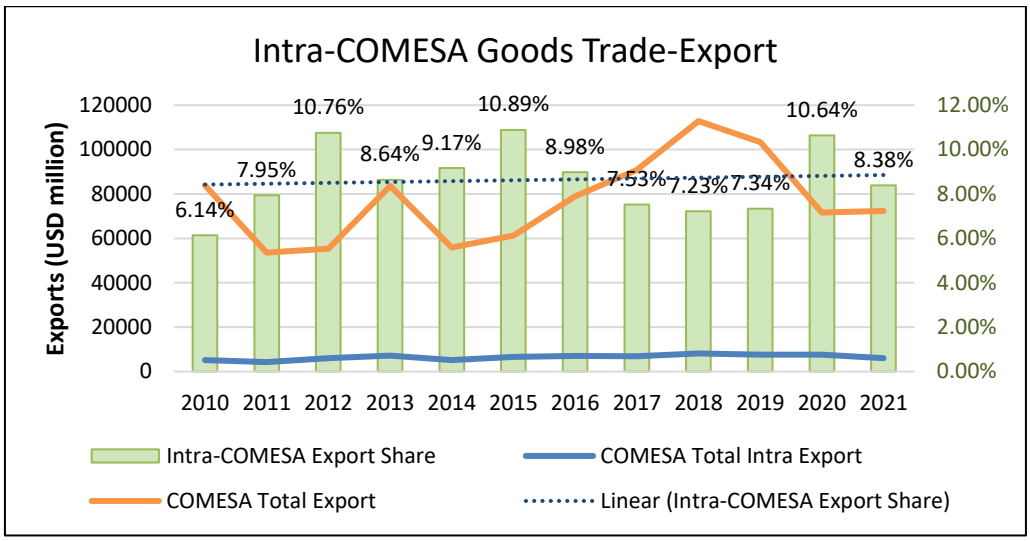

Figure 9. *Evolution of Intra-COMESA Export, 2010-2021 (Source: World Integrated Trade Solution)*

According to Figure 10, COMESA suppliers make up an average of 4.5% of total imports, indicating a relatively limited importance of intra-regional imports. The trend shows a slight decline between 2010 to 2021 as depicted by the dotted line. While many RECs in Africa tend to have lower trade potential with each other, COMESA shows a higher share of intra-regional trade when compared to other regional integration arrangements in Africa.

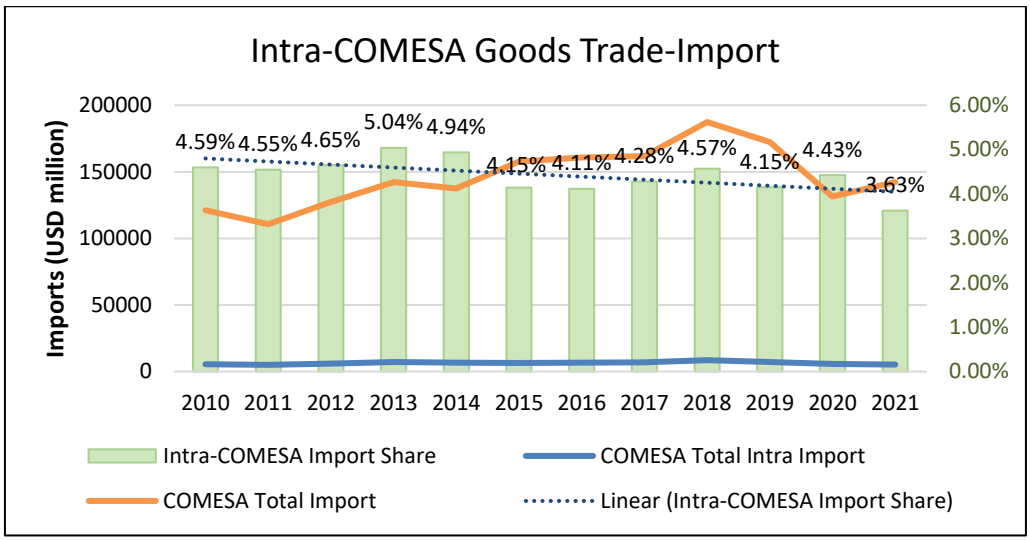

Figure 10. *Evolution of Intra-COMESA Import, 2010-2021 (Source: World Integrated Trade Solution)*

Figure 11 presents trade complementarity indexes of RECs in Africa and in other regions. A low figure suggests a low correspondence or match between the export supply and import demand among RECs. Particularly, low figures are observed for ECOWAS and ECCAS.

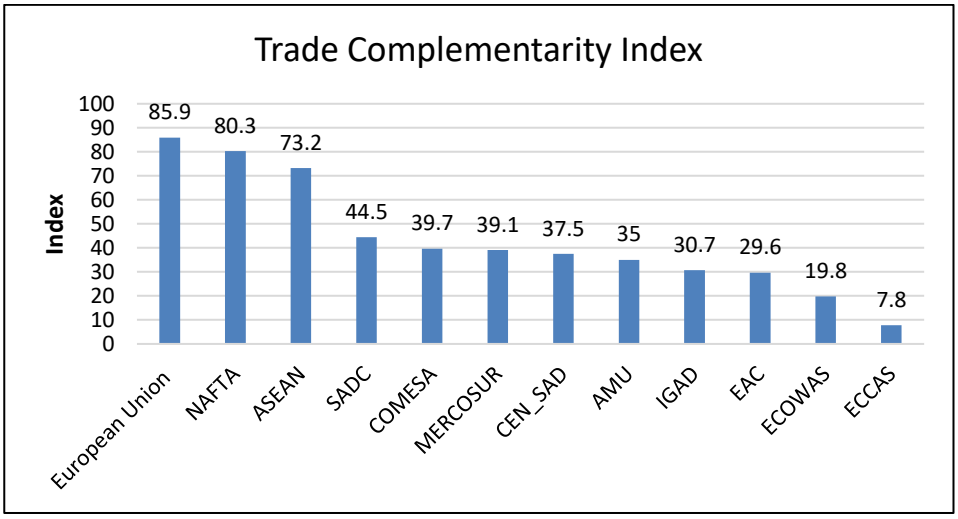

Figure 11. *Trade Complementarity Index among REC Member States, 2016 (Source: UNCTAD)*

When the trade complementarity index is low, it may suggest that trade policies such as tariff reductions and lower transportation costs may have a limited impact on boosting regional trade in the short to medium term. On the other hand, in regions like the Association of Southeast Asian Nations (ASEAN), the European Union, and NAFTA, the index is higher. These regions tend to have high shares of intra-industry trade and similar endowments. As a result, intra-regional trade has the potential to increase gradually over time.

4.2.4. Trade Facilitation in COMESA

To improve communication and transportation infrastructure in the COMESA region, the COMESA Secretariat has implemented several initiatives, including the following measures:

- A standardized mechanism for road transit fees: Harmonized Road Transit Charges mandates that freight trucks weighing more than 3 axles pay $10 per 100 km, while those with 3 axles or less pay $6/100 km. Buses with over 25-passenger capacity are charged $5/100 km. The system was launched in 1991 and is presently being executed by nine countries including Burundi, Ethiopia, Kenya, Malawi, Rwanda, Sudan, Uganda, Zambia, and Zimbabwe.
- The COMESA Carrier's License allows commercial goods vehicles to operate with a single license recognized across the region, in all member states. The license reduces trade costs and promotes the efficient use of transport fleets. It is operational in 11 countries: Burundi, Ethiopia, Eritrea,

Kenya, Malawi, Rwanda, Eswatini, Tanzania, Uganda, Zambia, and Zimbabwe.

- One-stop border post initiative is designed to enhance regional competitiveness by reducing cross-border transactions through the reduction of processing time at the border. The post created a shared common control zone for border agencies to avoid duplicate procedures.
- COMESA Customs Transit Guarantee Scheme was established to remove obstacles to trade and transport. Popularly known as RCTG-CARNET, the scheme was signed and ratified by twelve countries, including Burundi, Djibouti, D.R. Congo, Ethiopia, Kenya, Madagascar, Malawi, Rwanda, Sudan, Tanzania, Uganda, and Zimbabwe. Customs bond guarantees ensure that governments can recover duties and taxes if goods are unlawfully disposed of for domestic consumption in the country of transit. The RCTG-CARNET replaced locally implemented procedures and practices, provided a reliable regional control system, and safeguarded the revenue of each country.
- COMESA collaborates with relevant authorities and airlines in the region to remove air traffic controls, except those necessary for safety, to increase competition and reduce air travel costs to promote regional trade. COMESA, SADC, and EAC adopted a detailed Air Transport policy, considering the Yamoussoukro declaration. Jointly developed Air Transport Competition Regulations by EAC, COMESA, and SADC Ministers are in place. In 2014, the COMESA Secretariat secured approximately US $10 million from the African Development Bank to establish a single airspace in the sub-region

to reduce air transport costs, increase tourism, and promote regional socio-economic integration.

CHAPTER FIVE: METHODOLOGY

5.1. Methodology

The study employs an analysis of Trade Intensity Index (TII) for the years from 2010 to 2021 to compare the level of Ethiopia's trade intensity with IGAD and COMESA RECs. Furthermore, the competitiveness of Ethiopia's products in the IGAD and COMESA blocs is assessed through the analysis of Revealed Comparative Advantage (RCA) using two-digit manufacturing data from the Harmonized System (HS). The analysis focuses on export values exceeding 10,000 USD for the majority of the years between 2010 and 2021.

Based on the result of RCA analysis, the paper introduces equation (3) to find the difference between IGAD's and COMESA's RCA values, aiming to identify products with a higher competitive advantage in each RECs. Additionally, equation (4) examines IGAD's share of Ethiopia's product exports from exports to IGAD and COMESA.

To explore whether Ethiopia's export to the two RECs align with comparative advantage, the correlation between equation (3) and equation (4) is conducted on six products, utilizing equation (5).

5.1.1. Trade Intensity Index

The Trade Intensity Index (TII) is based on the ratio between a country's trade share in region and its share of world trade. It was developed by economist Bela Balassa (Balassa, 1965), and he defined it as the share of one country's exports going to a partner divided by the share of world exports going to the partner. It is used to determine whether the value of trade between two countries and/or trade blocs is greater or smaller than would be expected on the basis of their importance in world trade.

Trade Intensity Index is calculated as follows:

$$T_{nm} = \frac{(X_{nm}/X_{nw})}{(X_{wm}/X_{ww})} \quad (1)$$

Where X_{nm} and X_{wm} are the values of country n's exports to country m (COMESA/IGAD) and of world exports to of COMESA/IGAD, respectively. X_{nw} and X_{ww} are country n's total exports and total world exports, respectively. A value of 1 means that Ethiopia shows no bias towards the REC, or that it is neutral. If the index is higher than 1, it indicates that Ethiopia trades more with the region than what would be expected based on its share of world trade.

5.1.2. Revealed Comparative Advantage

The RCA index reveals the competitiveness of a product in a country's exports compared to its share in global trade. It refers to the comparative trade performance of a nation with specific goods on the assumption that the trade pattern

of commodities indicates difference in relative costs and non-price factors among countries, thus uncovering their comparative advantage in trade. The RCA indicates whether a country is in the process of extending the products in which it has a trade potential, as opposed to situations in which the number of products that can be competitively exported is static. Products with higher RCA values demonstrate greater competitiveness in regional markets and can be exported to countries with lower RCA values.

It is calculated as follows:

$$RCA_{ij} = \frac{(x_{ij}/X_{it})}{(x_{wj}/X_{wt})} \quad (2)$$

Where x_{ij} and x_{wj} are the value of country i's export value of product j and world (COMESA/IGAD) exports of product j, respectively. X_{it} and X_{wt}refer to the country's total exports and world total exports, respectively.

If the RCA value if less than 1, Ethiopia has revealed comparative disadvantage in exporting that product to both IGAD and COMESA, whereas if the RCA value exceeds 1, Ethiopia has a revealed comparative advantage in exporting that product to both regions. This means that Ethiopia would have a relatively specialized advantage in producing and exporting the product line under consideration to the region.

5.1.3. Categorizing Products

To further analyze Ethiopia's product competitiveness in IGAD and COMESA blocs, the study employes a product-by-product approach by calculating the difference between the RCA values of IGAD and COMESA using Equation (3) for the years between 2010 to 2021.

It is calculated as follows:

$$DRCA_i = RCA_i^{IGAD} - RCA_i^{COM} \quad (3)$$

Where i is product index, and RCA_i^{IGAD} and RCA_i^{COM} are RCA value of product i for Ethiopia's export to IGAD and COMESA, respectively. $DRCA_i$ refers to the difference between RCA value of product i for IGAD and COMESA.

If the value of $DRCA_i$ is positive, it means the product has a stronger comparative advantage for IGAD than COMESA. In this case, the product should be exported more to IGAD. Conversely, if the value is negative, it indicates a stronger comparative advantage for COMESA so the product should be exported more to COMESA. If the value of $DRCA_i$ is close to zero, the choice of export destination becomes less significant.

5.1.4. Correlation between Trade Share and RCA Values.

To further examine whether Ethiopia's product exports to IGAD and COMESA align with the comparative advantage, the study examines the correlation between the difference in Ethiopia's RCA values with IGAD and COMESA, and

IGAD's share of Ethiopia's product exports to both regions. Equation (4) is implemented to calculate the IGAD share of Ethiopia's product exports from both IGAD and COMESA, and the resulting values are plotted alongside the $\mathrm{DRCA_i}$ values obtained from Equation (3) for six products chosen as a case study.

The IGAD share of Ethiopia's product exports to IGAD and COMESA is calculated as follows:

$$IGAD_i^{sh} = \frac{Exp_i^{IGAD}}{Exp_i^{IGAD} + Exp_i^{COM}} \tag{4}$$

Where, Exp_i^{IGAD} and Exp_i^{COM} represent Ethiopia's product *i* exports to IGAD and COMESA, respectively. $IGAD_i^{sh}$ represents the share of Ethiopia's product *i* exports from both IGAD and COMESA that are destined for the IGAD region.

Accordingly, the Pearson correlation coefficient between IGAD's share of Ethiopia's product export from both IGAD and COMESA, denoted as $IGAD_i^{sh}$, and the difference of RCA values of Ethiopia's export to IGAD and COMESA, denoted as $\mathrm{DRCA_i}$, is computed. For a given product *i*, let the pair of values of the IGAD and DRCA values for multiple years be $\{(IGAD_k^{sh}, \mathrm{DRCA_k}), \ldots, (IGAD_n^{sh}, \mathrm{DRCA_n})\}$.

The Pearson correlation coefficient between $IGAD_i^{sh}$ and $\mathrm{DRCA_i}$ for *n* years is calculated as follows:

$$\frac{\sum_{k=1}^{n}\left((IGAD_k^{sh} - \overline{IGAD}^{sh})\,(\mathrm{DRCA_k} - \overline{\mathrm{DRCA}})\right)}{\sqrt{\sum_{k=1}^{n}(IGAD_k^{sh} - \overline{IGAD}^{sh})^2} - \sqrt{\sum_{k=1}^{n}(\mathrm{DRCA_k} - \overline{\mathrm{DRCA}})^2}} \tag{5}$$

Where $IGAD_k^{sh}$ is IGAD's share of Ethiopia's product *i* export for the kth year. $\overline{IGAD}^{sh}$ is average of IGAD's share of Ethiopia product *i* export for n years. $\mathrm{DRCA_k}$ is DRCA of product *i* for the kth year. And $\overline{\mathrm{DRCA}}$ is average DRCA of product *i* for n years.

According to the analysis, if a positive Pearson correlation is observed for a given product, then the product should be exported more to IGAD. If it shows a negative correlation, then it should be exported more to COMESA. Otherwise, it shows there are trade barriers between Ethiopia and the two regions.

5.2. Data Source

To calculate the Trade Intensity Index of Ethiopia with IGAD and COMESA, the paper collected the following data for the year 2010-2021:

- Total exports of Ethiopia from UN Comtrade
- Ethiopia's export to IGAD and COMESA from UN Comtrade
- Total import of IGAD and COMESA from UNCTAD STAT

The data for Revealed Comparative Advantage is collected from World Integrated Trade Solution (WITS) database under the two-digit Harmonized System (HS) code scheme and spans the years 2010-2021.

CHAPTER SIX: RESULT AND DISCUSSION

6.1. Trade Intensity of Ethiopia with IGAD and COMESA

Table 6 presents the result of Ethiopia's trade intensity with IGAD and COMESA. Accordingly, Ethiopia's trade flow with both regions exceeds 1, indicating a larger than expected trade flow with both RECs. This implies that Ethiopia has significant trade relations with both RECs. However, Ethiopia's trade with IGAD is more critical compared to COMESA, as the trade intensity is notably higher for all years analyzed, (refer to Figure 12). Ethiopia's TII with IGAD reached 61 in 2020 and 2021, while the average TII with COMESA stands at 6.16 (Table 6).

These results underscore the significance of prioritizing efforts to strengthen trade ties with COMESA, considering that trade ties with IGAD countries are already stronger. Therefore, exploring avenues to deepen economic integration with COMESA becomes crucial to enhance Ethiopia's integration within the bloc.

Table 6. *Trade Intensity Index of Ethiopia with IGAD and COMESA*

	Year											
TII	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
IGAD	10.34	12.93	40.88	33.68	24.59	25.89	18.28	19.32	33.66	54.86	61.14	61.80
COMESA	3.09	3.68	9.95	8.24	6.65	6.82	5.26	5.64	5.69	6.53	7.03	5.32

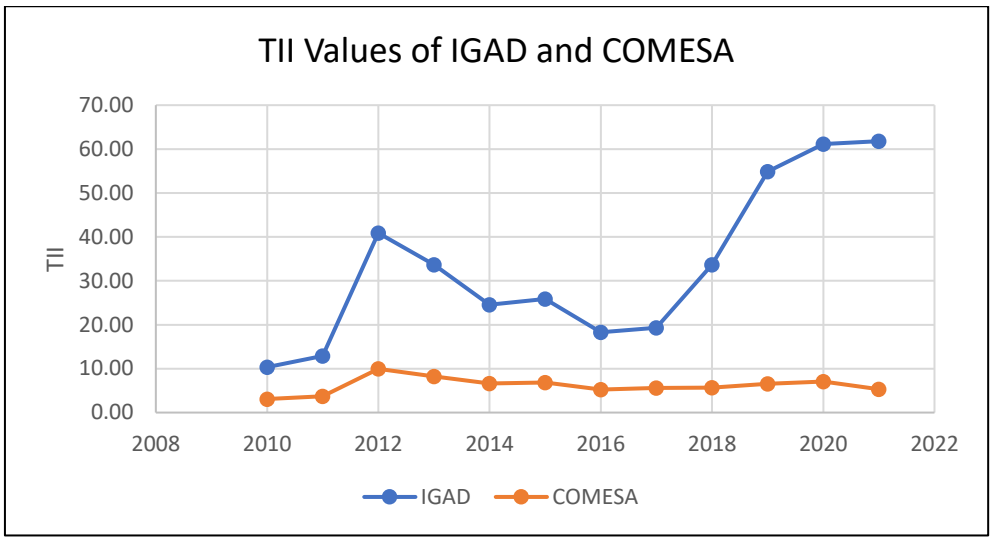

Figure 12. *Comparison of Trade Intensity Index Values of IGAD and COMESA*

6.2. Competitiveness of Ethiopia's Products: RCA Results

Tables 7-1 and 7-2 display the results of RCA analysis conducted for Ethiopia's product export to IGAD, focusing on broad product categories. Table 8 shows the result of RCA analysis conducted for Ethiopia's product export to COMESA, focusing on broad product categories. The RCA values highlighted in blue indicate the products for which Ethiopia has revealed a comparative advantage in a given year. Among the products under study, Ethiopia has revealed a comparative advantage in product categories of vegetable, machine and electric, and transportation for trade with IGAD at a decreasing trend. It had originally revealed comparative advantages for product categories of animal, minerals, chemicals, wood, and footwear, but it started to reveal a comparative disadvantage in recent years for those categories.

As for trade with COMESA, Ethiopia reveals a stronger comparative advantage than IGAD in product categories of animal, vegetable, footwear, and transportation. This means that trade of the above products is of paramount importance for Ethiopia with IGAD and COMESA, but more with COMESA as it has a higher RCA value.

Table 7. *Revealed Comparative Advantage of Ethiopia with IGAD in Broad Categories 1-1*

Year/ HS No	01-05	06-15	16-24	25-26	28-38	39-40
	Animal	Vegetable	Food Products	Minerals	Chemicals	Plastic OR Rubber
2010	0.55	1.10	0.42	0.00	0.19	0.15
2011	1.86	1.12	0.29	0.00	0.41	0.64
2012	3.86	1.71	0.38	0.03	1.46	0.74
2013	7.49	3.68	1.13	1.04	1.07	1.23
2014	0.90	1.90	0.53	4.79	0.60	5.35
2015	1.64	1.43	0.37	1.44	0.05	0.53
2016	1.23	1.38	0.44	1.68	0.15	0.84
2017	0.35	1.58	0.66	2.43	0.21	0.63
2018	0.26	1.99	0.16	2.76	0.13	0.48
2019	0.56	1.97	0.24	0.68	0.09	0.48
2020	0.89	1.88	0.19	0.20	0.10	0.33
2021	0.53	1.49	0.18	0.01	0.07	0.32

Table 8. *Revealed Comparative Advantage of Ethiopia with IGAD in Broad Categories 1-2*

Year/ HS No	44-49	50-63	64-67	72-83	84-85	86-89
	Wood	Textiles and Clothing	Footwear	Metals	Machine and Electronics	Transportation
2010	0.10	0.27	3.52	0.12	4.19	13.26
2011	0.08	0.05	0.36	0.18	1.63	6.33
2012	1.49	0.89	1.07	0.23	0.72	3.11
2013	1.61	2.20	12.22	1.17	26.04	33.40
2014	1.47	1.87	25.97	0.39	8.75	17.86
2015	0.07	0.79	6.33	0.18	3.58	17.85
2016	0.14	0.43	8.60	0.17	1.25	11.04
2017	0.10	0.33	5.94	0.09	3.98	9.27
2018	0.29	0.11	2.09	0.23	0.81	0.93
2019	0.43	0.11	0.42	0.21	1.58	1.67
2020	0.37	0.19	0.26	0.13	0.69	1.42
2021	0.33	0.15	0.22	0.04	0.14	0.47

Table 9. *Revealed Comparative Advantage of Ethiopia with COMESA in Broad Categories*

Year/HS No	01-05	06-15	25-26	44-49	64-67	84-85	86-89
	Animal	Vegetable	Minerals	Wood	Footwear	Machine and Electronics	Transportation
2010	5.16	6.37	0.00	0.23	21.48	6.23	40.03
2011	8.89	4.78	0.00	0.89	2.35	2.30	5.13
2012	10.92	5.34	0.02	0.50	4.23	0.77	7.57
2013	8.61	4.98	0.30	0.88	19.54	4.93	20.35
2014	3.01	4.82	1.60	0.42	42.06	1.09	15.59
2015	3.71	3.45	0.75	0.06	19.67	1.05	25.34
2016	3.89	4.98	1.08	0.15	34.04	0.70	19.07
2017	1.05	6.02	1.51	0.12	25.39	1.11	10.64
2018	0.96	9.24	2.84	0.69	18.90	0.72	3.37
2019	1.49	8.62	0.91	1.54	8.80	4.46	12.61
2020	2.49	5.04	0.25	1.01	3.56	1.83	5.99
2021	4.18	5.06	0.03	0.84	2.90	0.50	1.93

However, by estimating RCA measures at high levels of product disaggregation i.e., at a more detailed level of product classification, Ethiopia can identify specific products and other non-traditional products that might be successfully exported to both regions. Tables 9, 10, 11, and 12 show the RCA of Ethiopia with IGAD and COMESA regions in product disaggregation, respectively.

Tables 9 and 10 present the Revealed Comparative Advantage of Ethiopia's products with IGAD, in the two-digit HS system from 2010 to 2021 in 16 categories. These categories were chosen based on their relevance in recent years and their recording of more than one RCA for most number of years. The RCA values highlighted in blue indicate the products for which Ethiopia has revealed a comparative advantage in a given year.

Table 10. *Revealed Comparative Advantage of Ethiopia with IGAD in Two-Digit Harmonized System, 1-1*

Year/ HS No	1	4	9	10	19	22	25	40
	Live animals	Dairy produce; birds' eggs; natural honey;	Coffee, tea, mate and spices.	Cereals	Preparations of cereals, flour, starch or milk; pastrycooks' products	Beverages, spirits and vinegar.	Salt; sulphur; earths, stone;	Rubber and articles thereof.
2010	1.61	3.13	0.10	0.31	4.74	0.52	0.00	0.85
2011	9.83	1.84	0.13	1.08	1.61	0.48	0.00	1.81
2012	11.76	2.17	1.33	9.09	0.12	1.80	0.03	7.36
2013	18.42	6.96	3.33	6.46	7.54	5.97	1.11	10.61
2014	1.37	1.84	2.26	11.61	2.94	2.75	6.11	40.04
2015	2.90	1.45	1.37	1.08	0.16	2.28	2.24	4.32
2016	1.95	1.30	1.46	0.26	1.64	2.56	3.09	3.76
2017	0.46	0.58	1.22	3.48	0.75	2.49	5.66	4.24
2018	0.39	0.24	0.74	0.17	0.07	1.41	6.91	2.58
2019	3.87	0.09	0.30	0.02	0.51	0.65	1.74	0.78
2020	6.05	0.07	0.28	0.59	0.28	0.63	0.46	0.42
2021	2.59	2.61	0.12	7.88	0.34	1.06	0.02	1.28

Table 11. *Revealed Comparative Advantage of Ethiopia with IGAD in Two-Digit Harmonized System, 1-2*

Year/ HS No	44	57	63	70	64	84	86	87
	Wood and articles of wood;	Carpets and other textile floor covering	Textiles, made up articles; sets;	Glass and glassware	Footwear; gaiters and the like; parts of such articles	Nuclear reactors, boilers, mchy & m	Railw/tramw locom, rolling-stock &	Vehicles o/t railw/ tramw roll-stock
2010	0.09	5.80	0.38	0.18	3.75	5.04	0.78	14.87
2011	0.01	1.52	0.25	0.01	0.37	4.38	1.47	7.13
2012	3.42	14.45	1.56	0.01	0.94	1.97	2.77	3.57
2013	5.26	60.66	2.96	0.02	14.24	52.54	100.68	41.94
2014	2.89	4.52	1.02	15.85	26.53	10.96	48.58	29.49
2015	0.38	1.34	1.47	1.26	8.15	6.27	53.34	11.79
2016	0.48	2.71	0.23	2.00	10.62	2.44	1.98	12.25
2017	0.27	0.51	0.16	2.57	7.70	7.50	0.02	18.24
2018	1.34	1.03	0.21	0.83	2.68	1.11	0.09	1.15
2019	1.51	0.58	0.83	0.04	0.52	1.96	4.52	1.84
2020	1.22	1.17	1.67	2.53	0.35	1.07	14.01	1.08
2021	4.50	0.15	2.32	2.75	0.22	0.15	0.82	0.63

The RCA analysis with IGAD revealed that products such as (1) Live animals, (4) dairy products, (10) cereals, (22) beverages, (44) wood, and (63) other made-up textile article had a comparative advantage in 2021, with a fluctuating trend of increase and decrease over the years. This means that Ethiopia is extending the products for which it has a trade potential in IGAD. In contrast, products such as (86) railway, (57) carpets, (40) rubber, (84) nuclear reactors, (87) vehicles, exhibited a sharp hike in their RCA values between 2013-2015, followed by a decline since then. Furthermore, there is a general decline in the RCA values for every product since 2015, with a slight increase in 2021.

Tables 11 and 12 show the result of Ethiopia's RCA analysis with COMESA in 13 product categories, from 2010-2021. The selected product categories were based on their relevance in recent years and consistent recording of more than one RCA for most of the years.

Table 12. *Revealed Comparative Advantage of Ethiopia with COMESA in Two-Digit Harmonized System, 1-1*

Year/ HS No	1	9	10	12	22	25	40
	Live animals	Coffee, tea, mate and spices.	Cereals	Oil seeds and oleaginous fruits	Beverages, spirits and vinegar.	Salt; sulphur; earths, stone;	Rubber and articles thereof.
2010	37.09	1.48	1.67	10.52	1.98	0.01	2.91
2011	71.95	1.66	1.10	4.43	1.53	0.00	0.58
2012	67.94	7.05	14.98	1.98	6.22	0.03	2.07
2013	40.28	6.44	1.80	1.95	2.89	0.34	3.16
2014	7.41	8.17	19.54	2.14	2.19	3.51	5.46
2015	9.45	4.64	1.12	0.89	2.37	2.25	2.04
2016	8.54	6.48	0.56	3.05	1.76	3.23	2.82
2017	1.94	5.82	15.89	1.18	2.26	6.07	2.28
2018	1.92	6.58	1.71	5.36	2.33	12.44	2.81
2019	13.17	4.69	0.28	1.85	0.93	3.51	1.48
2020	18.99	3.42	0.05	2.24	0.67	0.91	0.85
2021	24.69	2.63	2.74	1.25	0.84	0.03	0.70

Table 13. Revealed Comparative Advantage of Ethiopia with COMESA in Two-Digit Harmonized System, 1-2

Year/ HS No	44	63	64	84	86	87
	Wood and articles of wood;	Textiles, made up articles; sets;	Footwear; gaiters and the like; parts of such articles	Nuclear reactors, boilers, mchy & m	Railw/tramw locom, rolling-stock	Vehicles o/t railw/ tramw roll-stock
2010	0.16	0.68	23.49	13.58	1.54	57.17
2011	5.30	0.31	2.62	7.66	1.08	28.50
2012	1.29	1.06	4.26	2.17	13.06	10.52
2013	3.82	0.85	23.50	17.38	79.47	22.16
2014	1.83	0.12	50.82	4.13	68.62	17.43
2015	0.21	1.13	25.24	4.89	106.95	13.33
2016	0.56	0.26	45.21	3.02	3.85	22.28
2017	0.31	0.16	33.28	5.96	0.08	18.97
2018	4.05	0.47	24.14	2.61	0.13	5.24
2019	6.96	2.06	10.78	15.36	72.06	17.37
2020	5.16	3.55	4.75	4.05	146.76	4.52
2021	10.12	4.79	4.36	0.32	1.67	4.42

The RCA analysis revealed that products such as (1) live animals, (9) coffee, (12) oil seed, (64) footwear, (86) railway, and (87) vehicles, have demonstrated a consistent comparative advantage over the years. However, the RCA values for these products have experienced a declining trend over time. Conversely, some products such as (10) cereals, (44) wood, and (63) other made-up textiles shown a slight increase in their RCA values in 2021, indicating a potential improvement in their competitiveness. In contrast, products such as (22) beverages, (25) salt, and (40) rubber have revealed a comparative disadvantage in recent years.

6.3. Case Study on Selected Products

The comparative advantage analysis of Ethiopia's export products with IGAD and COMESA reveals a stronger advantage in COMESA for most categories, raising the question of whether Ethiopia should prioritize exporting to COMESA. To further analyze this, the study employed a product-by-product approach by calculating the difference between the RCA values of IGAD and COMESA. Accordingly, Table 13 presents the result of categorizing products based on their average $DRCA_i$ values between the years 2010 to 2021. Products with a $DRCA_i$ value of less than -0.2 have a stronger comparative advantage in COMESA, and there are 12 products under this category. Products with a $DRCA_i$ value greater than 0.2 have positive value, and they should be exported to IGAD. There are 11 products under this category. The third category includes product with a $DRCA_i$ value between/equals -0.2 and 0.2, and their export destination does not matter. There are 14 products under this category.

Table 14. *Categorization of Products by $DRCA_i$ Values*

$DRCA_i$ < -0.2		$DRCA_i$ > 0.2		-0.2 ≤ $DRCA_i$ ≤ 0.2	
HS. No		HS. No		HS. No	
1	Live animals	4	Dairy produce; birds' eggs; natural honey;	11	Products of the milling industry; malt, starches, inulin, wheat gluten
2	Meat and edible meat offal	19	Preparations of cereals, flour, starch or milk; pastrycooks' products	26	Ores, slag and ash.
5	Products of animal origin, nes or	33	Essential oils & resinoids; perf,	30	Pharmaceutical products.
9	Coffee, tea, mate and spices.	40	Rubber and articles thereof.	34	Soap, organic surface-active agents
10	Cereals	57	Carpets and other textile floor covering	39	Plastics and articles thereof.
12	Oil seeds and oleaginous fruits	58	Special woven fab; tufted tex fab;	41	Raw hides and skins
22	Beverages, spirits and vinegar.	61	Art of apparel & clothing access,	42	Articles of leather; saddlery/harne
25	Salt; sulphur; earths, stone;	69	Ceramic products.	48	Paper & paperboard; art of paper pu
44	Wood and articles of wood; wood ch	70	Glass and glassware.	49	Printed books, newspapers, pictures
64	Footwear; gaiters and the like; parts of such articles	84	Nuclear reactors, boilers, mchy & m	52	Cotton.
86	Railw/tramw locom, rolling-stock &	85	Electrical mchy equip parts thereof	62	Art of apparel & clothing access,
87	Vehicles o/t railw/tramw roll-stock			63	Textiles, made up articles; sets;
				72	Iron and steel.
				73	Articles of iron or steel.

The thesis conducts a case study to test the hypothesis that the value of $DRCA_i$ dictates Ethiopia's product export to IGAD and COMESA. To this end, two products are selected from each product category. Specifically, the paper examines (1) live animals and (9) coffee as representative products for export to COMESA, while (4) dairy products, bird's eggs, natural honey, and (70) glass and glassware are selected as representative products for export to IGAD. Additionally, the study considers (11) products of mill industry, mallet, starches, and (30) pharmaceutical products as representative products for which the export destination is not crucial.

The result of the case study confirms the hypothesis for all product categories, except for (1) Live animals. Tables 15 and 16 provide evidence that Ethiopia's product export align with the $DRCA_i$ value. In Table 15, the $DRCA_i$ value is positive for most of the years, indicating a higher export to IGAD. Meanwhile, Table 16 shows that the $DRCA_i$ value falls between or equals -0.2 and 0.2, indicating that the export destination is not significant. However, Table 14 demonstrates that despite a negative $DRCA_i$ value, Ethiopia export more live animals to IGAD than COMESA (indicated in blue). This finding suggests that transaction cost or trade barriers differences exist between IGAD and COMESA, and that Ethiopia's product exports are affected by it.

Table 15. *Case Study of Products Recommended for Export to COMESA based on Negative $DRCA_i$ Values*

Year	Code 1- Live animals		$DRCA_i$	Code 9- Coffee, tea, mate and spices.		$DRCA_i$
	Export to IGAD	Export to COMESA		Export to IGAD	Export to COMESA	
2010	278,638.00	1,754,004.00	-35.48	966,999.00	2,023,790.00	-1.39
2011	6,740,325.00	8,000,128.00	-62.13	2,158,158.00	3,471,603.00	-1.52
2012	31,971,397.00	34,324,459.00	-56.17	44,975,428.00	46,585,898.00	-5.72
2013	15,395,229.00	18,953,075.00	-21.86	36,669,298.00	37,901,148.00	-3.11
2014	11,694,651.00	13,325,799.00	-6.04	42,058,881.00	43,528,958.00	-5.91
2015	16,831,223.00	14,416,607.00	-6.54	38,798,810.00	40,483,097.00	-3.27
2016	11,976,564.00	9,487,165.00	-6.60	30,573,822.00	31,641,305.00	-5.03
2017	3,856,340.00	2,631,389.00	-1.47	37,413,326.00	39,382,697.00	-4.60
2018	3,309,694.00	1,342,934.00	-1.54	20,561,914.00	22,060,949.00	-5.84
2019	9,928,254.00	3,347,244.00	-9.30	29,757,448.00	32,636,655.00	-4.39
2020	13,581,815.00	6,683,680.00	-12.94	29,738,434.00	33,369,412.00	-3.14
2021	7,062,334.00	8,857,150.00	-22.11	18,081,447.00	23,425,631.00	-2.51

Table 16. *Case Study of Products Recommended for Export to IGAD based on Positive $DRCA_i$ Values*

Year	Code 4 - Dairy prod; birds' eggs; natural honey		$DRCA_i$	Code 70 - Glass and glassware.		$DRCA_i$
	Export to IGAD	Export to COMESA		Export to IGAD	Export to COMESA	
2010	516,356.00	516,356.00	1.40	24,666.00	32,833.00	0.035
2011	527,209.00	527,209.00	1.02	1,007.00	8,640.00	-0.009
2012	1,607,465.00	1,607,465.00	1.24	3,638.00	13,692.00	0.001
2013	1,315,100.00	1,315,100.00	5.57	2,513.00	3,885.00	0.018
2014	925,545.00	925,545.00	1.16	196,317.00	198,523.00	15.652
2015	762,347.00	762,347.00	0.76	210,559.00	88,658.00	1.162
2016	657,651.00	481,903.00	0.40	201,619.00	25,031.00	1.948
2017	477,451.00	429,113.00	-0.12	296,742.00	52,475.00	2.488
2018	199,966.00	174,316.00	-0.26	103,279.00	52,065.00	0.702
2019	240,646.00	130,695.00	-0.08	19,842.00	6,917.00	0.029
2020	207,260.00	296,448.00	-0.26	1,517,586.00	1,510,206.00	1.170
2021	619,172.00	459,067.00	1.93	3,067,963.00	4,791,711.00	-0.527

Table 17. *Case Study of Products Recommended for Export to both IGAD and COMESA based on $DRCA_i$ Values*

Year	Code 11- Products of the milling industry; malt, starches, inulin, wheat gluten		$DRCA_i$	Code 30- Pharmaceutical products.		$DRCA_i$
	Export to IGAD	Export to COMESA		Export to IGAD	Export to COMESA	
2010	48,728.00	48,728.00	-0.1	295,790.00	319,475.00	0.1
2011	596,695.00	78,589.00	2.5	205,410.00	381,878.00	0.3
2012	255,426.00	255,586.00	-0.2	113,614.00	127,854.00	4.8
2013	231,934.00	231,934.00	0.5	132,100.00	132,149.00	11.4
2014	201,334.00	201,334.00	-0.1	261,506.00	140,534.00	2.7
2015	208,322.00	200,648.00	0.1	101,925.00	75,505.00	0.0
2016	165,808.00	166,281.00	0.0	345,887.00	233,092.00	0.0
2017	89,603.00	89,603.00	0.0	356,645.00	265,753.00	0.1
2018	134,165.00	233,110.00	-0.7	236,104.00	171,748.00	0.0
2019	104,941.00	259,053.00	-0.3	322,560.00	241,957.00	-0.1
2020	88,567.00	88,773.00	-0.1	567,721.00	527,577.00	-0.1
2021	43,873.00	26,050.00	0.1	136,906.00	66,741.00	-0.2

6.4. Correlation Result between Trade Share and RCA Values

To further examine the hypothesis that the value of Ethiopia's product exports to IGAD and COMESA corresponds to its comparative advantage, the thesis examined the correlation between the difference in Ethiopia's RCA values with IGAD and COMESA, and IGAD's share of Ethiopia's product exports to both regions.

Figure 13 presents the results of correlation between IGAD's Share of Ethiopia's Product Exports and RCA Value Difference of Ethiopia's Export to IGAD and COMESA for selected case studies. The analysis shows that for the products selected as representative products for export to IGAD, namely (4) dairy products, bird's eggs, natural honey, and (70) glass and glassware, a positive correlation is observed with correlation coefficients of r = 0.238 and r = 0.363, respectively. In contrast, the representative products for export to COMESA show a negative correlation for (9) coffee, tea, mate and spices, but a positive correlation for (1) live animal, with a correlation coefficient of r = -0786 and r = 0.233, respectively. Moreover, for the products selected as representative products for which the export destination is not crucial, a positive correlation is observed for (11) products of mill industry, mallet, starches, with a correlation coefficient of r = 0.359, and negative correlation is observed for (30) pharmaceutical products, with a correlation coefficient of r = -0.363.

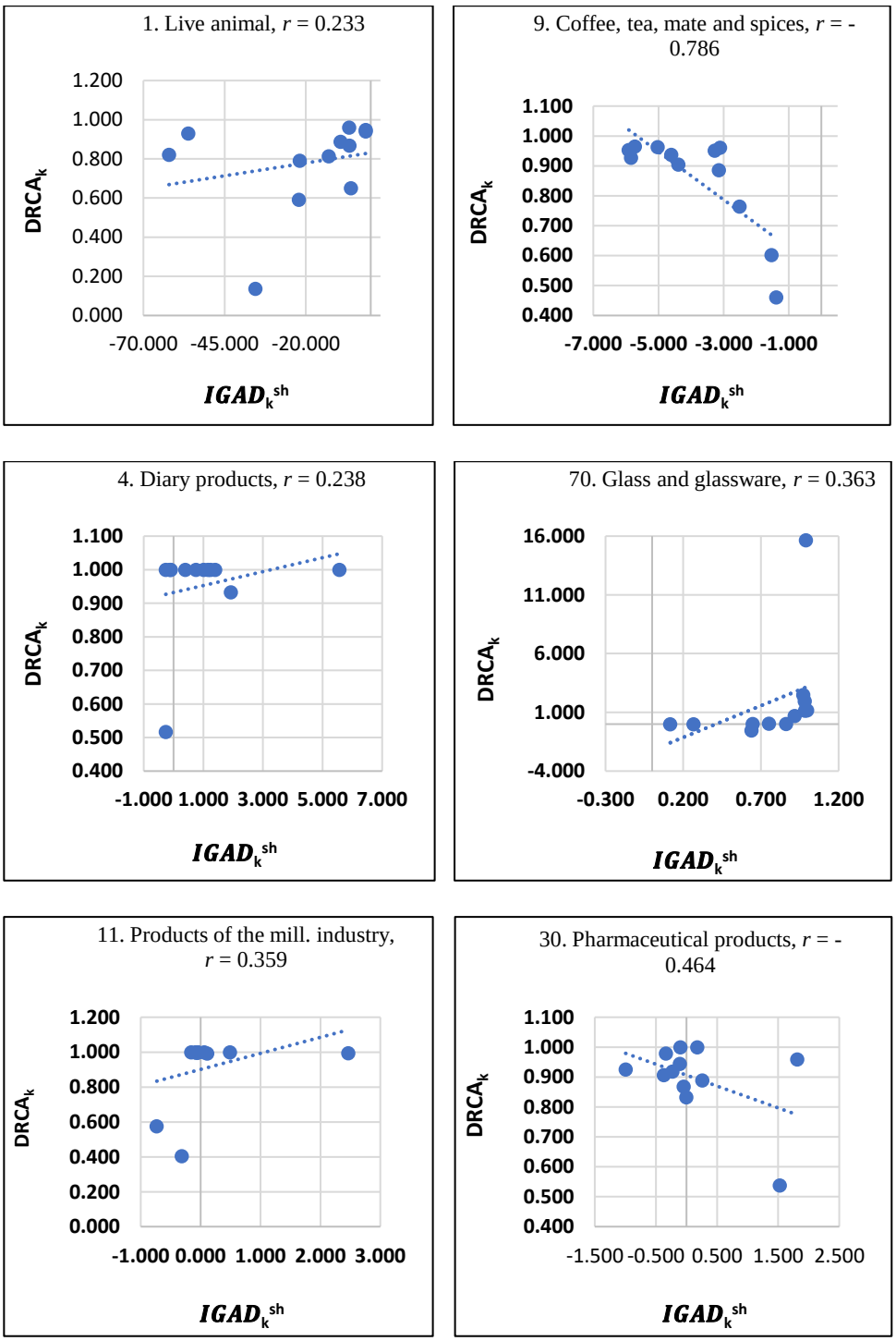

Figure 13. *Pearson Correlation between IGAD's Share of Ethiopia's Product Exports and RCA Value Difference of Ethiopia's Export to IGAD and COMESA for Selected Case Studies*

The result of the Pearson correlation analysis illustrates that Ethiopia's product exports to IGAD and COMESA align with the comparative advantage for all products, except for (1) live animal. According to World Integrated Trade Solution data, Djibouti levies a tariff of 1% on live animal imports from Ethiopia, while Egypt and Sudan impose tariffs of 5% and 30%, respectively. This disparity is due to the preferential treatment agreement between Djibouti and Ethiopia, which gives Djibouti de facto FTA access to the Ethiopian market. Consequently, Ethiopia exports more to Djibouti and other countries in the IGAD region with favorable trade arrangements. This suggests that trade barrier such as tariff can significantly impact Ethiopia's product export since it does not follow the comparative advantage.

Furthermore, Ethiopia's exclusion from the COMESA FTA deprives it of the benefits of tariff and quota elimination with member countries. In addition to tariff barriers, non-tariff barriers such as inefficient custom clearance, poor infrastructure, corruption, inefficient administration, and others also impede trade facilitation between countries. Although there has been some progress in COMESA, trade facilitation efforts are still inadequate in both regions. Ethiopia's insufficient involvement in these efforts presents a challenge to fully benefit from opportunities in regional integration. Therefore, it is imperative for Ethiopia to take proactive measures to facilitate trade and enhance its participation in regional integration to maximize its benefits.

CHAPTER SEVEN: CONCLUSION

7.1. Conclusion

This study assessed the strengths and weakness of Ethiopia's export products to IGAD and COMESA, with a focus on their alignment with comparative advantage. The thesis examines the correlation between comparative advantage and the export share of selected products. The findings indicate that Ethiopia's product exports to IGAD and COMESA generally align with its comparative advantage. However, there is a single exception where trade barriers between IGAD and COMESA influence Ethiopia's export patterns for that specific product.

These results emphasize the significance of prioritizing the facilitation of trade and enhancing regional integration. Ethiopia possesses immense potential to harness the benefits of international trade by leveraging its negotiating power and engaging in global trade opportunities. By doing so, Ethiopia can capitalize on its comparative advantage and further enhance exports to regions that offer favorable trading prospects. Hence, to fully exploit these opportunities, it is essential for the country to address trade barriers and foster closer economic ties within these regional communities.

This study contributes to the existing body of knowledge by shedding light on the alignment of Ethiopia's export products with its comparative advantage. Nevertheless, further research is warranted to delve deeper into the specific trade barriers affecting Ethiopia's export patterns and explore additional strategies for facilitating trade and regional integration.

Bibliography

Abdella, A. (2011). *Ethiopia's Trade Potential in the Inter-Governmental Authority on Development (IGAD).*

Abdi, A. I., & Seid, E. H. (2013). *Assessment of economic integration in IGAD.*

Adetula, V. A., Bereketeab, R., & Jaiyebo, O. (2016). *Regional economic communities and peacebuilding in Africa: the experiences of ECOWAS and IGAD*. Nordiska Afrikainstitutet.

African Union, Official Website. (2023) *About the African Union.* Retrieved April 5, 2023, from https://au.int/en/overview

African Union, Official Website. *Regional Economic Communities (RECs) | African Union*. Retrieved April 20, 2023, from https://au.int/en/organs/recs

Aryeetey, E., & Oduro, A. (1996). Regional integration efforts in Africa: An overview. *Regionalism and the Global Economy: The Case of Africa. The Hague: FONDAD*, 11–49.

Balassa, B. (1965). Trade Liberalisation and "Revealed" Comparative Advantage. *The Manchester School*, *33*(2), 99–123. https://doi.org/10.1111/j.1467-9957.1965.tb00050.x

Baldwin, R. E. (1997). Review of Theoretical Developments on Regional Integration in A. Oyejide, I. Elbadawi, & P. Collier (Eds.), *Regional integration and trade liberalization in Subsaharan Africa* (pp. 24–88). Palgrave Macmillan UK. https://doi.org/10.1007/978-1-349-25636-5_2

Bereketeab, R. (2019). Regional economic communities and peacebuilding: The IGAD experience. *South African Journal of International Affairs*, *26*(1), 137-156.

COMESA. (2018). *COMESA IN BRIEF*. COMESA Secretariat. Corporate Communications.

Daka, T. K. (2021). *Understanding the Shift in Ethiopia's 'Development Sate' Trajectory*: *A Political Settlement Perspective*. Master's Thesis. CERIS-ULB Diplomatic School of Brussels.

De Lombaerde, P., & Van Langenhove, L. (2005). Indicators of regional integration: Methodological issues. *Available at SSRN 739711*.

Dupasquier, C., & Osakwe, P. N. (2017). Trade regimes, liberalization and macroeconomic instability in Africa. In *Towards Africa's Renewal* (pp. 225-254). Routledge.

Elmorsy, S. S. (2015). Determinants of trade intensity of Egypt with COMESA Countries. *Bandung: Journal of the Global South*, *2*(1), 5. https://doi.org/10.1186/s40728-014-0002-6

Gebrehiwot, B. A. (2019). Trade policy in ethiopia, 1991–2016. In F. Cheru, C. Cramer, & A. Oqubay (Eds.), *The oxford handbook of the ethiopian economy* (pp. 229–248). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780198814986.013.13

Geda, A., & Kebret, H. (2007). Regional Economic Integration in Africa: A Review of Problems and Prospects with a Case Study of COMESA. *Journal of African Economies*, *17*(3), 357–394. https://doi.org/10.1093/jae/ejm021

Guangul, A. T. (2020). A Gravity Model Analysis of the Impact of the COMESA Trade Bloc on Ethiopia's Trade. Master's Thesis. Seoul National University.

IGAD. (1996). *Agreement Establishing the Inter-Governmental Authority on Development (IGAD)*. Assembly of Heads of State and Government.

IGAD. (2022). *Intergovernmental Authority on Development, Regional Trade Policy*. Intergovernmental Authority on Development.

Jeong, A. (2013). *An Analysis of Intra-Regional Trade and Economic Integration in Africa: the Case of the Common Market for Eastern and Southern Africa (COMESA)*. Master's Thesis. Seoul National University.

Longo, R., & Sekkat, K. (2004). Economic obstacles to expanding intra-African trade. *World Development*, *32*(8), 1309-1321.

Lyakurwa et al (1997), Regional Integration in Sub-Saharan Africa: A Review of Experiences and Issues. Regional Integration and Trade Liberalization in Sub-Saharan Africa, Volume I. Macmillian Press Ltd. London.

Milner, C., & Morrissey, O. (1999). Measuring trade liberalization in africa. In M. McGillivray & O. Morrissey (Eds.), *Evaluating Economic Liberalization* (pp. 60–82). Palgrave Macmillan UK. https://doi.org/10.1007/978-1-349-14307-8_3

Ministry of Finance. (2019). *Agenda: A Pathway to Prosperity*. FEDERAL DEMOCRA TIC REPUBIC OF ETHIOPIA.

Mistry, P. (1995). Regional Integration Arrangements (RIAs) in Economic Development: Panacea or Pitfall." *revised version of. Revised Version of" Paper for FONDAD Symposium on the Future of Regional Economic*.

National Planning Commission. (2016). *Growth and Transformation Plan II (GTP II)*. Minstry of Trade, Ethiopia, Volume I: Main Text.

Organization of African Unity (OAU) (1985), *Lagos Plan of Action for the Economic Development of Africa, 1980-2000*. Addis Ababa/Geneva, p.5.

Oyejide, T. A. (2000). *Policies for regional integration in Africa*. African Development Bank.

Shumiye, A. L. E. M. (2014). A Comparative Study of Trade Performance between Intergovernmental Authority on Development and Other African Union Recognized Economic Communities, PhD Thesis, Addis Ababa University, Ethiopia.

United Nations Conference on Trade and Development (UNCTAD). 2009. *Strengthening Regional Economic Integration for Africa's Development. Economic Development in Africa Report*. Geneva: United Nations.

World Bank. (2023). *World Development Indicators: Ethiopia.* Retrieved from https://data.worldbank.org/indicator/SP.POP.TOTL?locations=ET

Appendix

Appendix 1. *HS 2-Digit Code and Product Name*

HS Code	Product Name
1	Animal, live
2	Meat and edible meat offal
4	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included
5	Animal originated products; not elsewhere specified or included
9	Coffee, tea, mate and spices
10	Cereals
11	Products of the milling industry; malt, starches, inulin, wheat gluten
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit, industrial or medicinal plants; straw and fodder
19	Preparations of cereals, flour, starch or milk; pastrycooks' products
22	Beverages, spirits and vinegar
25	Salt; sulfur; earths, stone; plastering materials, lime and cement
26	Ores, slag and ash
30	Pharmaceutical products
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations
34	Soap, organic surface-active agents; washing, lubricating, polishing or scouring preparations; artificial or prepared waxes, candles and similar articles, modelling pastes, dental waxes and dental preparations with a basis of plaster
39	Plastics and articles thereof
40	Rubber and articles thereof
41	Raw hides and skins (other than fur skins) and leather
42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut)
44	Wood and articles of wood; wood charcoal
48	Paper and paperboard; articles of paper pulp, of paper or paperboard
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans
52	Cotton
57	Carpets and other textile floor coverings
58	Fabrics; special woven fabrics, tufted textile fabrics, lace, tapestries, trimmings, embroidery
61	Apparel and clothing accessories; knitted or crocheted

62	Apparel and clothing accessories; not knitted or crocheted
63	Textiles, made up articles; sets; worn clothing and worn textile articles; rags
64	Footwear; gaiters and the like; parts of such articles
69	Ceramic products
70	Glass and glassware
72	Iron and steel
73	Iron or steel articles
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles
86	Railway, tramway locomotives, rolling stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signaling equipment of all kinds
87	Vehicles; other than railway or tramway rolling stock, and parts and accessories thereof

Abstract in Korean

국문초록

아프리카의 지역 통합은 오래된 역사를 보유하지만(자랑하나), 지역 내 무역은 다른 개발도상국에 비해 상당히 뒤처지는 편이다. 본 연구는 동남아프리카 공동시장(COMESA)와 동아프리카 정부간 개발기구(IGAD)의 창립 회원국인 에티오피아에 초점을 두고 세계화된 세계에서의 무역과 참여를 위한 지역 경제 공동체의 활용을 조사한다. Trade Intensity Index 와 현시비교우위지수(Revealed Comparative Advantage) 같은 지표를 사용하여 에티오피아 수출 제품의 비교 우위와 IGAD 및 COMESA 에 대한 수출 점유율 사이의 상관관계를 연구한다. 이 연구는 코드 1 – 산동물, 코드 4 – 낙농품, 조란, 천연꿀 제품, 코드 9 – 커피, 차 및 향신료, 코드 30 – 의료용품, 코드 70 – 유리 및 유리제품, 코드 6 개에 대해 수행되었다. 상관관계 결과에 따르면 산동물(코드 1)을 제외한 5 개 제품에서 비교우위와 수출점유율 간의 정렬이 밝혀져 에티오피아와 COMESA 간의 무역장벽이 존재함을 알 수 있다. 이 연구는 그 결과를 바탕으로 경제 성장, 발전 및 시장 접근성 향상으로 이어질 수 있는 국제 무역 및 지역 경제 공동체에 대한 에티오피아의 적극적인 참여의 중요성을 강조한다.

Acknowledgments

First and foremost, praises and thanks to God, the Almighty, for granting me the strength and guidance. I also wish to express my gratitude to Mother Mary, our blessed intercessor, whose loving presence has been a source of comfort.

Second, I would like to take this opportunity to express my deepest gratitude to the following individuals who have been instrumental in the completion of this thesis:

I would like to acknowledge the contribution of my guidance professor, Professor Jeong, Hyeok, for the valuable insights and assistance throughout the writing of this thesis.

To my parents, Shiye and Daddy, I cannot put into words the depth of my gratitude for your unwavering support, prayers, and sacrifices. Your love has been my motivation, and I am proud to be your daughter.

To my Etoch, Mitu and Dudu, thank you for being my confidantes and pillars of strength. Your support and understanding have been a constant source of strength in my life and helped me overcome numerous challenges. I am blessed to have you both by my side, and I would not have asked for better sisters.

To Steveye, my deepest gratitude. Your encouragement and support have lifted me up during moments of self-doubt and made this journey more enjoyable. I am truly blessed and grateful to have you by my side.

Thank you from the bottom of my heart. This thesis would not have been possible without your encouragement, love, and support.

ሁሉ በእርሱ ሆነ ።