

The Impact of Multilateral Trade Agreements on Intra-Regional Trade: The Case Of
SADC and ECOWAS

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THE IMPACT OF MULTILATERAL TRADE AGREEMENTS ON INTRA-REGIONAL
TRADE: THE CASE OF SADC AND ECOWAS

I declare that the above thesis is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the thesis to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at UNISA for another qualification or at any other higher education institution.



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10th February 2021

DATE

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I would like to offer thanks to Almighty God for leading me to successfully complete another phase in my academic career.

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DEDICATION

I dedicate this thesis to Mrs. Agnes Osa Osagie (My late Mum). MAY HER SOUL REST IN PERFECT PEACE.

ABSTRACT

This study examines the comparative impact of multilateral trade agreements on intra-regional trade in the Southern African Development Community (SADC) and the Economic Community of West African States (ECOWAS) regions in Africa. Annual data was gathered from 2000 to 2018 and dynamic panel data and econometric techniques were used to control for individual country characteristics, endogeneity, serial correlation, heteroscedasticity and interdependencies between the countries in each region. Two estimations were done, one using the tariff measures of multilateral agreements, the second using non-tariff measures of multilateral agreement. The results of the empirical analysis show that the SADC region has a slight edge over ECOWAS in terms of technological progress and investment, especially in trade infrastructure. However, the ECOWAS levels of employment and economic growth are higher than those in the SADC region. These differences further translate into differences that drive intra-African trade in these regions, and how they relate to the role of multilateral agreements in intra-African trade in each of these regions. While technology and investment are key drivers and enhancers of intra-African trade in SADC countries, economic growth and employment stand out as key enhancers of intra-African trade in ECOWAS, especially where multilateral agreement is represented by tariff measures. This study reports that when non-tariff measures are used to represent multilateral agreements, export trade costs, in addition to investment and technology, are the key drivers of intra-African trade in SADC countries. For ECOWAS, under non-tariff measures of multilateral agreements, only economic growth drives intra-African trade.

Keywords: Intra-African trade, multilateral agreement, investment, institutional environment, tariff and non-tariff trade barriers, panel data estimation.

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LIST OF ACRONYMS

AFDB	African Development Bank
AU	African Union
CEN-SAD	Community of Sahel-Saharan States
COMESA	Common Market for Eastern and Southern Africa
EAC	East African Community
EC	European Community
ECCAS	Economic Community of Central African States
ECOWAS	Economic Community of West
EPA	Economic Partnership Agreements
EU	European Union
FEM	Fixed Effect Model
FGLS	Feasible Generalised Least Squares
FTA	Free Trade Agreements
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GDPPK	Gross Domestic Product per Capita
HT	Hausman Taylor
IGAD	Inter-Governmental Authority on Development
MFN	Most Favoured Nation
MNCs	Multinational Corporations
OECD	Organisation for Economic Cooperation and Development
PTA	Preferential Trade Agreements
REM	Random Effects Model
RTA	Regional Trade Agreements
REC	Regional Economic Community
SA	South Africa
SACU	Southern African Customs Union
SADC	Southern African Development Community
LSDV	Least Square Dummy Variable
TRQ	Tariff Rate Quotas
UMA	Arab Maghreb Union
UNCOMTRADE	United Nations Commodity Trade
UNCTAD	United Nations Conference on Trade and Development
WDI	World Development Indicators
WTO	World Trade Organisation

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

Regional integration through trade has been viewed in the past as a key tool for boosting economic development and creating solid trade links among nations. As such, the establishment of the OAU (Organisation of African Unity) in 1963, now AU (African Union) was primed on its potential to actualise macroeconomic engagement and trade integration within the African continent (Jordaan, 2014). Countries in Africa formed their domestic trade policies and various regulatory instruments intended to utilise trade in a way that would advance a broader national growth plan (UNECA, 2015). However, due to the numerous trade regulations and their conflicting nature, African countries have found it necessary to align with other nations for bigger trade gains. This was the bedrock for establishing regional trade blocs (African Development Bank (AfDB)/OECD/UNDP, 2017).

Despite creating a large amount of integration strategies in Africa, regional market consolidation remains weak and the degree of intra-African trade is still comparatively low (AfDB/OECD/UNDP, 2017). One of the major weaknesses in Africa's regulatory factionalism is the contradictory agreement terms in overlapping trade alliances. This has been singled out as a major hindrance to trade fluidity and functionality on the continent (Standaert & Rayp, 2016; United Nations Conference on Trade and Development Report, 2013).

There are numerous multilateral and bilateral agreements among different African countries that have generated challenges to effective compliance by importers and exporters, and these complexities have further hindered easy facilitation of trade across the continent. Hence, bottlenecks created by duplication in policies tend to upsurge the cost of trade transactions among African countries (Chibira & Moyana, 2017).

The absence of integration and a collective approach regarding a plan of action and legislation aimed at augmenting intra-Africa trade and investment could explain the low trade performance and limited growth success attained so far in boosting intra-Africa trade (Chingono & Nakana, 2009). This leads to the question of whether this frail performance of intra-African trade and investment over the years is caused by poor policy implementation, or if it results from some idiosyncratic economic characteristics or complexities that characterise trade negotiations on the continent.

To consolidate past gains from previously adopted international trading schemes and further enhance national performance on trade relationships, most countries in Africa have participated in major negotiations such as the integration of fragmented African markets into a unified continental free trade area through the African Union umbrella (African Union 2012; Hoekman, *et al.*, 2017). This initiative is intended to redress the continent's collective failure to correct previous disingenuous agreements under the General Agreement on Tariffs and Trade (GATT, 1948).

Africa as a collective, has continued to engage in two groups of trade negotiations through the Doha Round with the World Trade Organisation (WTO), as well as through the Economic Partnership Agreement (EPA) with the European Union (EU). Both groups of negotiations created much expectation across the continent, with the hope that trade developments would ultimately result in improving the continent's international trade profile (African Union, 2012). Regrettably, these negotiations reached a deadlock (Aregbeshola, 2012; Anyanwu, 2014), thus necessitating the continent to investigate alternative means of improving its trade performance for sustainable growth and development.

Enhancing intra-African trade is an essential means for resolving the challenges that face Africa in terms of low intra-regional trade and weak participation in global trade regimes (African Union, 2012). The significance of intra-African trade was detailed further by the heads of state and the Government Summit of the African Union in January 2012, where they focused on boosting intra-Africa Trade (Anyanwu, 2014).

Therefore, this research is aimed at investigating the nuances of intra-regional trade and investment towards economic growth, and to uncover the impact of multilateral

agreement as a facilitating instrument in boosting intra-regional trade and economic growth in the SADC and ECOWAS Regions.

1.2 RESEARCH PROBLEM

Trade blocs are usually created through trade agreements by the government of member countries. The fundamental rule of regional trade agreement is the liberalisation of domestic market. The process of market liberalisation may ultimately incorporate some global perspectives, which would imbibe multilateral dimension as espoused by globalisation (Rosario, 2015).

For years now, regional integration has been part of Africa's trade arrangements and formation, as all countries belong to one or more regional trade bloc. Still, almost all indicators suggest that economies in Africa are not really integrated (Standaert and Rayp, 2016). To buttress this observation, the rules of the WTO suggest that regional trade agreements ought to meet specific requirements (Baldwin, 2016), most of which largely eluded African trade bloc formations. In most instances, inability to properly interpret these trade agreements and regulatory rules has proven contentious, and the various WTO committees have been called upon to help resolve some of these imbroglios (WTO, 2018).

The cumbersomeness and the duplication of regional trade blocs have posed unsurmountable challenge for the regional trade agreement committee of the WTO since 1995, and the committee has been unsuccessful at accomplishing its assessments of these individual regional trade agreements to find out if they comply with the provisions of the WTO or not (WTO, 2018). This is a challenge, because virtually all members of the WTO's committee are aligned to at least two regional agreements, and they are also involved in its negotiations, or are given consideration for negotiating them. Below are some of the identified problems that have hindered the full implementation of intra-regional trade and investment agreements in Africa over the past decades:

i. Overlapping Membership

Intra-regional trade agreements usually involve two or more partner countries and most of those agreements are overlapping (Mugerwa, *et al.*, 2014). This implies that one country could be involved in two trade agreements with countries that haven't signed any agreement (Standaert and Rayp, 2016). As a result, these agreements that are entered into and the overlapped membership within the same area, results in various incongruence, especially with regards to the conditions of setting and attaining effective economic goal that motivate their formation (Jordaan, 2014). Such numerous multilateral and bilateral arrangements, as well as Regional Economic Communities in Africa potentially triggered non-tariff barriers that notoriously obstruct Intra-regional trade in Africa (Chibira and Moyana, 2017).

ii. Lack of Adequate Trade Information

There is lack of a clear information regarding trade components of Intra-regional trade within the African continent. This is because a few of the countries pay little attention to the competitive advantage of neighbouring countries on the production of certain products or offer of certain services. By implication, quite a substantial part of imports into Africa can very easily be sourced from close-by neighbours, and sometimes at far cheaper rates (Jordaan, 2014; Chibira and Moyana, 2017). For example Kenya imports raw hides from New Zealand whereas Burundi and Botswana exports that same product to other continents at much lower prices.

iii. Lack of Integration and Common Approach Aimed at Increasing Intra-Regional Trade

The absence of integration and a collective approach with regards to plan of action and legislation that are aimed at boosting Intra-regional trade and investment, is possibly a primary explanatory element for the low performance and limited success attained so far in boosting Intra-regional trade (Chingono & Nakana, 2009). The problem is even worsened by national rivalry, incompatible political and economic systems, debt traps, poor state of infrastructure, scarce financial and technical resources, multiple membership of trade blocs, poor economic and political governance and institutional inadequacy.

Furthermore, the cardinal element of every trade bloc arrangement, which is elimination of tariffs, are mostly defeated through inefficient border post management and administration. The complexity of determining country of origin of products, which is underpinned by rule of origin that is built into every regional trade bloc, becomes challenging because of the huge importation and mismatch in product component declaration. Consequently, the volume of intra-African trade hardly exceed 12%, and at times, the volume reduces after agreements are signed (Standaert and Rayp, 2016, pp.1).

iv. Low Demand For Made-in-Africa Products within Africa

There is low demand for products manufactured in Africa by other African countries, not because they also manufacture similar goods, but because they consider those products inferior and thus inadmissible to their markets. Furthermore, the interest of colonial hegemons continue to dominate trade negotiations and agreements. For instance, the volume of trade between South Africa and Britain by far supersedes trade volume with any African country. The same holds sway for most of other African countries.

v. Low Manufacturing Capability

Africa's major exports go through little or no processing before been re-exported. An example is Ghana and Côte d'Ivoire's cocoa beans and Nigeria's petroleum products and crude oil. Africa's Petroleum exports to other continents was estimated to be at USD 85 billion between 2010 and 2015. During the same period, importation of refined fuel from other parts of the world was between USD 63 billion and USD 84 billion (African development Bank, 2017, pp.83). Given the low level of mineral and material beneficiation on the continent, full realisation of benefits associated with regional trade blocs will be elusive, especially considering stringent application of rule of origin by member countries to the regional trade bloc.

vi. Non-Tariff Barriers to Trade

Another problem associated with low intra-regional trade level is the numerous non-tariff barriers that constraint trade among African countries. Such barriers consist of application of political stature against weaker economies, poor border management

and administration, lack of requisite infrastructure and manpower at border posts, and systemic administrative bottleneck (Chibira and Moyana, 2017).

vii. Macro-economic Disparities/Destabilisation

Macroeconomic disparities have diminished the value of currencies in many countries in Africa. Between 2015 and 2016, most countries suffered reduction in nominal exchange rates, especially because of commodity price shock. By extension, volume of trade and trade terms were negatively altered, especially at the disadvantage of major oil exporting countries (African Development Bank Group, 2018, pp.16). The fast rate of currency depreciation had unfavourably influenced macroeconomic fundamentals of many African countries, thereby triggering inflation and debt trap.

viii. Ineffective and Expensive Transportation System

Cost of transportation in Africa is viewed as highest globally. Over 80% of the products traded among continental states are sent by road transportation. Meanwhile, most Africa countries are landlocked and cost of transportation add up to 40% of the price of products traded. This is because of high cost of transportation, which makes it almost impossible to carry out productive trade relations. For example, the trade cost in sub-Saharan Africa is higher than the cost of trading in East Asia (Chibira and Moyana, 2017, pp.212).

Furthermore, in spite of geographical nearness of all African countries, a large amount of its imports are sourced from overseas markets. This is particularly problematic because Africa exports her raw materials and import refined/manufactured products at exorbitant prices (Jordaan, 2014). The bulk of exports from Africa, which is over 86%, are sent to countries outside Africa (United Nations Economic Commission for Africa, 2015, p.2). This is as a result of the problematic transportation system, which are rarely serviceable, notoriously dangerous and unmotorable (Chibira and Moyana, 2017).

ix. Restricted Movement of goods, Services and Manpower Across Borders

There is hindered movement of products and services, as well as human capital across African borders. This has resulted in decrease in productivity, weak domestic

and intraregional competition and lowered prospects for foreign and domestic investors. At present and until the introduction of the African-wide passport, Africans are required to obtain an access visa when traveling to over 75% of African countries and travel restrictions differ within regions. In all, Central and North Africa are considered the most restrictive regions on the continent (African Development Bank report, 2017, pp.93). The complex visa processes, time to obtain a visa and visa costs are main travel restrictions. Seychelles is the only African country that offers free access to visa for all Africans (African development bank report, 2016; AfDB/OECD/UNDP, 2017).

x. African Countries Trade Less With Each Other

A fundamental characteristics of trade in Africa that has had unfavourable implications on its economic development is its increased external orientation and comparatively low degree of intra- African trade. Intra-African trade is about 10% compared to 30%, 40%, 60% of intra- regional trade attained by the Association of South-East Asian Nation (ASEAN), North America and Europe respectively. Even when there is allowance for identification of undocumented informal cross- boundary trade in Africa, overall degree of Intra- African trade would not be up to 20% (African Union, 2012, pp.2).

1.3 MOTIVATION FOR THE STUDY

In 1947, when 23 countries signed the General Agreement on Tariffs and Trade, the objective was to set up a rule-based global trading scheme and ease a mutually beneficial liberalisation of trade. GATT evolved over time, which necessitated it to convert and become the World Trade Organisation in 1993. The WTO led a rule-based trading scheme founded by standards that were virtually universally recognized and well thought of by its 164 member states (Baldwin, 2016). A major role played by the WTO as an international trade regulator, offered a faster and easier flow of products and services across international borders, thereby stimulating economic growth and catalysing global economic development. The WTO attained this by formulating and implementing various principles as the foundation of a multilateral trading scheme, and as the regulatory instrument that supported the idea of trade liberalisation (Stanceva-Gigov 2016; WTO, 2018).

Despite its apparent success, the WTO is generally viewed as undergoing the profound challenge of continued relevance. This is because the Doha Round negotiations, anchored by the WTO, have stumbled between non-achievement and inconclusiveness since its inception in 2001 (Baldwin, 2016). The challenges faced by the WTO due to the deadlock in the Doha negotiations resulted in one questioning the viability of a “free, fair and secure trade”, and of those institutions that masterminded it (Aregbeshola, 2012).

Although intra-African trade consolidation has always been a tactical goal for Africa and regardless of it successfully getting rid of some tariffs inside regional arrangements, African markets are still extremely fragmented. Non-tariff and tariff trade barriers still increase transaction costs and restrain the movement of services, products, capital, and individuals across African borders (Standaert & Rayp, 2016). Trade barriers continuously restrict trade growth throughout African territorial groupings. According to documented reports, when excess trade costs are imposed on exports, prices of goods increase, thus lowering household consumption capability and reducing investment in the affected regions (Hill, 2018). This eventually leads to low trade participation as potential trade partner countries divert their investment attention to other continents with more flexible trade barriers. The outcome of such increased intra-African trade costs implies that Africa has integrated more into the global trade system than within its own continent. (UNCTAD, 2013).

Encouraging intra-African trade means adopting and utilising logical trade policies at domestic, regional and continental levels particularly directed at promoting intra-African trade (African Development Bank Group, 2018). Enhancing such trade necessitates trade policies between countries in Africa, which should be designed or distinguished in such a manner that no country gets less favourable deals than those offered to non-African countries, even if the latter is a developing or a developed country (African Union, 2012).

Thus, the continued weak level of intra-African trade and the absence of trade advancement over time justifies further investigation. This research finds it worthwhile to analyse why trade levels among African countries are so low. The study presumes that such low trade levels among African countries occur because of the high cost of trade that results from poor transportation links, existing non-tariff and tariff trade

barriers and probable language impediments that make it difficult to gain detailed understanding and acceptance of the trade terms. This research anticipates that reduction in transaction costs by eradicating non-tariff and tariff trade barriers would create wider markets across the continent. In that sense, the study intends to investigate the role played by multilateral agreement, and why progress has been stalled for so many years in terms of intra-African trade.

Although Africa is not short of trade-related multilateral agreements, they warrant investigation if they have translated into enhancing intra-African trade. A case study and comparative analysis is made of the Southern African Development Community (SADC) and the Economic Community of West African States (ECOWAS). These two regional economic communities (RECs) were selected as the case study for cross- country comparison firstly because they represent the RECs with the highest economic growth levels and most progressive trade protocols and agreements (Agbahoungba & Biao, 2019; *African Economic Outlook*, 2019), Secondly, SADC is known for its technological progress (Bankole, *et al.*, 2015; World Trade Report, 2018), while ECOWAS has made huge progress in the area of tariff control and high levels of employment and economic growth (AfDB/OECD/UNDP, 2017; UNECA, 2017).

1.4 RESEARCH OBJECTIVES

The main objective of this study is to deploy scientific approaches in uncovering the interaction between trade, growth and investment in the countries comprised in SADC and ECOWAS regions of Africa.

The Secondary objectives of this study are:

- i. To analyse the impact of regional trade agreements on intra-regional trade in the SADC and ECOWAS regions of Africa.
- ii. Investigate how different perspectives on multilateral agreement, specifically tariff and non-tariff measures, perform in enhancing intra-African trade in SADC and ECOWAS.
- iii. Analyse how other factors that affect intra-African trade through their impact on economic growth also relate to enhancing intra-African trade i.e.

investment, capital accumulation, labour, economic growth and technological progress in the two RECs.

- iv. Establish whether there exist country-specific differences in terms of the pathways and trajectories of trade policy outlook.
- v. Explore what the implications are for trade policy formulation, implementation, and regional agreements and protocols on trade in SADC and ECOWAS.

1.5 RESEARCH QUESTIONS

This research attempts to answer a major question: What is the impact of multilateral trade agreements on intra-regional trade, specifically in SADC and ECOWAS?

Sub-questions includes:

- i. How do different perspectives on multilateral agreement, specifically tariffs and non-tariff measures, enhance intra-African trade in SADC and ECOWAS?
- ii. How do other factors that affect trade through their impact on economic growth relate to enhancing intra-African trade in these two RECs?
- iii. Is there any country-specific difference in terms of the pathways and trajectories of trade policy outlook that need to be taken into consideration in regional trade agreements in SADC and ECOWAS?
- iv. What are the implications for trade policy formulation, implementation, and regional agreements and protocols on trade in SADC and ECOWAS?

1.6 RESEARCH HYPOTHESES

H₁: Multilateral agreement enhances intra-African trade in SADC and ECOWAS.

H₂: Drivers of economic growth should also drive intra-African trade in SADC and ECOWAS.

H₃: There are country-specific differences that need to be included into regional trade agreements in terms of differences in policy pathways, implementation trajectories and trade policy outlook.

1.7 RESEARCH METHODOLOGY

This research is aimed at analysing the impact of multilateral trade agreements on intra-regional trade: the case of SADC and ECOWAS. To attain the research objectives, this study utilised quantitative research method. Sukamolson (2007) defines quantitative research method as a kind of research that explains a phenomena by gathering numerical data, which are analysed by making use of mathematical-based techniques (statistics) (Sukamolson, 2007).

The study fundamentally relied on secondary data (existing data) from sources such as the World Bank, the United Nations Conference on Trade and Development statistical database and annual reports. Annual data was gathered from 2000 to 2018 and dynamic panel data and econometric techniques were used to control for individual country characteristics, endogeneity, serial correlation, heteroscedasticity and interdependencies between the countries in each region.

1.8 SCOPE OF THE STUDY

This study covers the comparative impact of multilateral trade agreements among African countries, with more focus on the Southern African Development Community (SADC) and the Economic Community of West African States (ECOWAS) countries between 2000 and 2018.

1.9 SIGNIFICANCE OF THE STUDY

This study contributes to the scant literature on the impact of multilateral agreements on intra-regional trade, specifically in SADC and ECOWAS, because limited research has been done on the subject. This is achieved by empirically evaluating the impact of these regional trade communities in Africa. It would shed further light on the fact that handling intra-African trade necessitates a regional, integrated and comprehensive procedure that exceeds developing border management schemes,

advancing hard infrastructure, and eliminating and coordinating border and customs processes.

The outcome of this research offers government and policy makers in African countries more information on ways to create better trade agreements to facilitate growth by embracing intra-regional trade between countries in the continent. The study thus helps by suggesting ways in which Africa can best boost intra-African trade, and various intervention strategies that could be implemented that exceed those that are currently enforced.

1.10 CONCLUSION

This research is aimed at analysing the impact of multilateral trade agreements on intra-regional trade in two economic blocs in Africa, namely SADC and ECOWAS. In chapter one, the framework of the study is presented, beginning with general academic opinion on what constitutes trade blocs, some specific challenges to trade blocs in Africa, as well as the implication of these challenges on the affected countries. The specific focus of the study is highlighted, just in the same vein as the research objectives and questions. The next chapters cover, chapter 2, explains the different trade policies, institutional environment of intra-African trade and trade liberalisation.

CHAPTER 2

INTERNATIONAL TRADE THEORIES, INSTITUTIONS OF TRADE, TRADE LIBERALISATION AND INTRA-AFRICAN TRADE AND INVESTMENT

2.1 INTRODUCTION

The previous chapter provided an evaluation of the background of the study, the research problem, the research questions, research hypotheses, the aim and objectives of the study, and the significance of the study. Chapter 2 follows on from the background provided in Chapter 1, by providing a conceptual discussion on the institutional environment of intra-African trade and investment. It begins by evaluating international trade theories, trade liberalisation, and the role of multilateral agreement in advancing this initiative. The chapter further presents an analysis of intra-African trade initiatives established over the years in an attempt to boost intra-continental trade relations.

In global trade, there are winners and losers, but the winners' net gains are greater than the costs borne by those who lose. In the long run, free trade impacts on economic development and increases standards of living (Hill, 2019). Most overseas investments by MNCs are guided by trade theories, which serve as academic pointers to how operations are conducted in offshore markets. Trade theories were formed at different periods when trade started to develop and had various dimensions. International trade theory has moulded countries' economic policies for the past 50 years and was the driver behind the establishment of regional trade blocs such as the E U, the North American Free Trade Agreement, and the World Trade Organisation among others (Aregbeshola, 2017b). Countries like the United States and the EU member countries all have distinctly diverse export structures as their main exports are knowledge intensive, capital intensive, technology intensive, or a combination of these (Shenkar & Luo, 2008).

It is therefore significant to review and understand these theories of trade and the reasons behind their success in shaping the economic policy of numerous countries, and the competitive environments in which international business

enterprises compete. This study thus concisely examines the evolution of trade theories, starting with the mercantilism theory, and advances through to the 20th Century theories of trade. This approach was adopted in order to help comprehend the reason why countries have diverse export structures, why they have diverse vulnerabilities towards trade situations and disruptions, and why they don't imitate or copy each other.

2.2 INTERNATIONAL TRADE THEORIES

International trade is defined as the exchange of products and services across national borders (Shenkar & Luo, 2008). Historically, there have been several evolutions in the theories of trade between countries. In particular, international trade has always been controversial with regard to the possible benefits and impairments that might occur when applying certain practices (De Feis, *et al.*, 2016). To ensure chronology and maintain some degree of evolutionary traits, the theories are reviewed according to their age and specific pertinence to trade dynamics and praxis. In the following sections, some identified trade theories are presented with efforts made to relate them to this study.

i. MERCANTILISM THEORY

The Mercantilism theory began in France in the mid-16th century, and its practical application to the international business environment gained prominence in that century before its relevance began to dwindle in the late 1700s (Hill, 2011, p.162). It was a popular theory at that time with its main objective being to ensure that exports increased and imports were reduced (Czinkota, *et al.*, 2009; Hill, 2019). The theory also aimed at creating a powerful and wealthy nation by purchasing gold, through promoting exports and restricting imports (Shenkar & Luo, 2008).

The trade logic of this theory can be expressed as follows: "if a stranger purchases more products from you than you purchase from them, the stranger can pay the balance in silver and gold, thereby enabling you to accumulate the value of your wealth" (Stancu, 2009, p.5). This theory caused European governments to establish policies that stepped-up business strength and capital through export promotion initiatives (De Feis, *et al.*, 2016).

Mercantilism theory enabled an animated economic position for monarchies, as it allowed them to exercise unchecked economic power over many countries. The monarchies used their large reserves of silver and gold to build and maintain empires, and to wage wars and conquer. The mercantilism doctrine was advanced by the working classes, industrial circles and productive divisions directed towards export markets (Stancu, 2009). The philosophical assumption of this theory, though flawed, was that in trade there was not a win-win result, but that it was a zero-sum game where a country's profit must lead to another country's loss (Hill, 2019).

ii. THEORY OF ABSOLUTE ADVANTAGE

When Adam Smith published *The Wealth of Nations* in 1776, he attacked the underlying assumptions of the mercantilism theory which indicated that trade was indeed a zero-sum game and as such, the theory started to fade away and shortly thereafter became insignificant in developed countries (Hill, 2019). Adam Smith's theory of absolute advantage began a new era of trade. The theory states that countries must manufacture the products they produce more efficiently compared to other countries (Shenkar & Luo, 2008).

Contrary to the claims of the mercantilism theory, Adam Smith opined that the primary gain from trade was not to augment a country's silver and gold stocks, but rather, in a practical sense, a country should manufacture a product more efficiently than other countries. In so doing, that country could enlarge its market overseas and therefore specialise in manufacturing products in terms of quality and cost. On the other hand, the importing country could make notable gains from trading because it would be more expensive for them to manufacture that same product compared to the less expensive one rendered them by the exporter (Vurgun & Metin, 2013).

Put differently, Adam Smith believed that a country's wealth is founded on its productive capability. He explained that if a foreign nation could offer cheaper products compared to those manufactured by the home country, it would be better for the home country to purchase products from that foreign country and utilise the comparative advantage from specialisation to its maximum

advantage (Popa, 2013). This conception is founded on the notion that countries have different strengths and weaknesses concerning the manufacture of various products (De Feis *et al.*, 2016). This communicates the idea of a shift in the function of work division from productive unity to a nation. Because of the work division, the surplus acquired can benefit all participants in the exchange, hence leading to an absolute comparative advantage (Popa, 2013). This theory helps to explain that through imports, countries could augment their welfare through selling products that are produced at comparative costs, while simultaneously importing products that offer a comparative disadvantage (Smit, 2010).

Though this theory sheds light on the dynamics of global trade, it is also an elementary trade theory, and has not been able to explicate changes in the form of trade because of its limitations. Its main limitation is that labour is erroneously considered a homogeneous manufacturing activity in a country. Another limitation is that Adam Smith suggested that a country that has an absolute advantage in the manufacturing of a product must always export it. However, this is not so in many real-world trade situations and it might not always be advantageous for a country to follow this prescript (Vurgun & Metin, 2013).

iii. THEORY OF COMPARATIVE ADVANTAGE

In 1817, David Ricardo propounded the theory of comparative advantage as documented in his findings that were published in the book entitled *Principles of Political Economy and Taxation* (Hill, 2011, p.166). The theory of comparative advantage implies that countries should manufacture products that they are able to produce most efficiently and purchase those products that they manufacture less efficiently (Shenkar & Luo, 2008; Smit, 2010).

In a situation where a country can efficiently manufacture products they can produce efficiently in the home country, and can also efficiently manufacture those products they import from other countries, the comparative advantage theory suggests that such a country must manufacture only those products that they are able to produce most efficiently (De Feis, *et al.*, 2016), because trade

would be mutually beneficial for both countries. This principle represents the real foundation of international trade (Popa, 2013). The comparative advantage theory allows for an increase in total output, as both countries involved benefit from trading with each other (Shenkar & Luo, 2008).

For example, if Ghana is more efficient (has an absolute advantage) in manufacturing cocoa and rice compared to South Korea, and it has a comparative advantage only in manufacturing cocoa, let's assume it produces four times more cocoa compared to South Korea, but only 1.5 times as much rice as South Korea. This implies that Ghana has a greater comparative advantage and is more efficient in manufacturing cocoa than it is in manufacturing rice. By trading with each other, both countries can augment their combined manufacture of cocoa and rice and their consumers can utilise more of both products (Hill, 2011).

While the origin of comparative advantage from countries that are highly developed is derived from high-tech and high value-added products manufactured through specialisation, the benefit is derived from common labour-intensive manufacturing in developing countries (Vurgun & Metin, 2013). Although the comparative advantage theory is helpful in explicating trade patterns, as it takes place because of countries' divergence in technology or factor endowment, this theory does not shed light on the intra-industry trade that occurs among developed countries. Also, the comparative advantage theory sees labour as a main exchange and cost determinant, and as a homogeneous manufacturing factor in a country, without considering global dissimilarities in labour productiveness (Smit, 2010; Vurgun & Metin, 2013).

iv. HECKSCHER-OHLIN THEORY

Eli Heckscher and Bertil Ohlin, who was his student, added a twist to David Ricardo's theory of comparative advantage, and elucidated on the reasons for comparative advantage (Hill, 2011; De Feis, *et al.*, 2016; Aregbeshola, 2017b). In 1933, Heckscher and Ohlin discovered that having factor endowments had its benefits, such as capital, land, and labour, and would therefore export such products (Shenkar & Luo, 2008; De Feis *et al.*, 2016). They also discovered that the more easily available the resources, the lower the cost would be (De Feis, *et al.*, 2016). The

Heckscher and Ohlin theory posits that countries should manufacture those products that utilise the relatively abundant factor of production in their locality, and import those goods that need the intensive utilisation of relatively scarce (and imported) resources (Shenkar & Luo, 2008; Wang'ombe, 2013; Hill, 2019). The theory proposes that with a situation of relative abundance of capital, wage rates tend to be high, and as such, production costs of goods that necessitate more labour than capital would likely be comparatively higher than those that are more capital intensive (Wang'ombe, 2013).

The six assumptions in the Heckscher-Olin theory (Lam, 2015):

- i) No transport costs or trade barriers (meaning that commodity prices are the same in all countries within the purview of a free trade regime).
- ii) Perfect competition in factor and commodity markets.
- iii) A homogeneous production function, which signifies constant returns to scale.
- iv) Given the production functions, two goods always display contrasting factor intensity levels.
- v) Production functions differ among goods, but are similar in both countries.
- vi) Tastes are similar in both countries.

Furthermore, the theory suggests that trade policies must take the form of trade restrictions rather than trade stimulation, and gains from trade must be higher in a country that has superior structural differences in its economy. The theory further indicates that trade should make countries specialise in manufacturing and exporting products that are clearly different from those they import (Shenkar & Luo, 2008). In real-world situations, the impact of qualitative dissimilarities in cost of transportation, input factors, trade barriers and technological equipment exist. Hence, disparities remain. Because the Heckscher-Ohlin theory provides a needed understanding on wage costs and other input resources, it affects the opinion of different groups towards free global trade and globalisation (Juozapavičienė & Eizentas, 2010).

According to this theory, the attitude towards foreign trade schemes that protect scarce factor owners are encouraged by their interest groups, compared to the abundant factor owners who support the eradication of trade barriers and encourage free trade to attain profit (Husted & Melvin, 1995). Policymakers are inclined to use this argument in opposition to free trade to shield scarce factor owners from the negative effects that could theoretically occur if the Heckscher-Ohlin theory were synchronised with real-world situations, and its suppositions were regarded as homogeneous to actual business situations. Though the projection of this theory is widely cited by politicians, experimental tests are required to assess its fitness in specific country situations (Juozapavičienė & Eizentas, 2010).

v. PRODUCT LIFE-CYCLE THEORY

The product life-cycle theory was propounded by Raymond Vernon in the 1960s (Shenkar & Luo, 2008; Hill, 2019). This theory calls for manufactured products to be transported to and from various countries and as such, is viewed as relevant in modern times (De Feis, *et al.*, 2016). Vernon's product life-cycle theory further advanced the imitation-gap proposition by suggesting that changes happen in the input specification of new products as they are being accepted or recognized in a market and standardised in manufacturing (Shenkar & Luo, 2008).

The life cycle of a product is divided into four stages (Shenkar & Luo, 2008; Stancu, 2009; De Feis, *et al.*, 2016). In the first stage, a new product is produced and sold in the same country in which it was manufactured (De Feis, *et al.*, 2016; Hill, 2019). The exporter country quickly enlarges its exports by investigating the benefits of a monopolistic market composition and the growing demand from overseas; thus, the product moves to the second phase (Vurgun and Metin, 2013).

In the second stage, manufacturers in other countries begin production of that product, whose manufacturing and design is standardised (Shenkar & Luo, 2008). To avoid price competition in international markets, efforts towards product differentiation intensify (Vurgun & Metin, 2013). The third stage occurs when foreign manufacturers supersede the exports of the innovating country in other export markets (Shenkar & Luo, 2008; Hill, 2019). As a result of the standardisation of specific goods, the manufacturing location shifts to less-developed countries to pull

through the increasing price war. This is called “production relocation”. An example of the product life cycle procedure is the shift in industrial location for individual industries, from western countries to eastern countries (Vurgun & Metin, 2013).

In the fourth stage, foreign manufacturers attain adequate competitive strength that originates from economies of scale and the reduced labour costs in moving to the innovating country (Shenkar & Luo, 2008; Stancu, 2009).

vi. NEW TRADE THEORY

Krugman (1980), Brander (1983), and other theorists, began the new thinking and perspectives on the internationalisation of businesses (Shenkar & Luo, 2008). This theory implies that a country’s ability to attain economies of scale is essential in international trade. The new trade theory proposed that international trade could result in a reduction in the average cost of products, due to the availability of product varieties (Aregbeshola, 2017 and b). The theory presumed that global trade emanates from economies of scale. It also attempted to be practical in dealing with components that impact on trade such as imperfect competition, product differentiation, market imperfections, industrial growth and political economic disputes, particularly in classical economics (Wang'ombe, 2013).

Trade then would become advantageous as it assisted consumers in connecting with economies of scale. It also created greater product variety and as such, created more competitive prices (De Feis *et al.*, 2016; Hill, 2019). This theory also brought about the idea of first mover advantage, which helped establish entry barriers for future entrants, and, from an international viewpoint, allowed monopolistic gains for the enterprises involved (De Feis *et al.*, 2016).

vii. NATIONAL ADVANTAGE THEORY

The theory of national advantage was proposed by Michael Porter in 1990 and was published in his book *The Competitive Advantage of Nations* (Hill, 2019). Porter tried to answer the question of why it is that some countries are more prosperous in specific industries than others (Smit, 2010). He recognized four categories of country characteristics, which he called “the national diamond”. According to Porter, these

diamonds render the fundamental structure for determining a country's national competitive advantage, such as: demand conditions, related and support industries, factor conditions, and a company's competition, strategy and construction (Smit, 2010; De Feis *et al.*, 2016).

Porter also suggested other factors that could aid the viability of a nation's competitive advantage, namely, exogenous shocks (chance), and government policy that supported the scheme of domestic competitiveness but did not generate continued competitive advantages (Smit, 2010). Competency and competition varied considerably from one country and one region to another, and the firms capability to compete in specific spheres of the economy were individualised. The strategy also adopted, the envisioned goods to be produced, the technological development internalised, and rights of the intellectual property to ascertain the optimum place for a firm's actions (Stancu 2009).

Michael Porter's theory provides a conceptual structure for comprehending the forces and actualities of the external business environment. It enables firms to evaluate the attractiveness of its business enterprise and its level of competitiveness in the industry by assessing the level of threat that new entrants into the industry could potentially pose. The theory also deals with the dangers of substitute goods, the power of customers and of suppliers to businesses in the industry, and the nature and level of competition between enterprises in the same industry (Stonehouse & Snowden, 2007).

2.3 THEORETICAL CONTRIBUTION

The above theories show that several trade theories justify why it's advantageous for countries to partake in international trade. The conventional trade theory had two major disadvantages. Firstly, it explains only inter-industry trade, and not Intra-industry trade (Hill, 2011). Secondly, it anticipated that trade among countries that were different in factor endowments ought to be greater than trade among countries with similar factor endowments (Armando & Garcia, 2012). However, in international business practice, the bulk of the flow of global trade remains intra-industry, and between and within the boundaries of wealthy nations (Hill, 2019).

Krugman (1980), and Brander (1983), proposed economies of scale to justify patterns of international trade. Krugman, (1980) argues that the preference of consumers for diversity in global trade helps industries that are imperfectly competitive to seek increasing returns in producing differentiated products. Brander and Krugman (1983), advanced oligopoly market power to justify reciprocal dumping of identical goods. Other empirical studies have shown that economies of scale are beneficial to international trade. For instance, Antweiler and Trefler (2002), demonstrated that one-third of all traded goods produce industries in global markets that are defined by economies of scale. Bergoeing and Kehoe (2003) also offered grounds that increasing returns to scale considerably increases our capability to anticipate global trade flows. Furthermore, a major objective of neoclassical economics is the advancement of free trade areas. It presumes that a free market reign in a global area, where the key goal is to attain maximal consumption and production prospects for all citizens, is due to each country's resource capacity (Maha & Postolachi, 2012).

Based on the above explanations, this research is anchored by the Krugman (1980) and Brander (1983) new trade theory, which proposed that a firms capability to achieve economies of scale may have significant inferences for global trade. Evidence suggests that trade can augment the variety of products accessible to consumers and reduce the average outlay for such products through its influence on economies of scale (Hill, 2018). New trade theories generally challenge the supposition of continual returns to scale and are mostly referred to as the principal advocate of free trade (Wang'ombe, 2013).

Furthermore, Robinson and Thierfelder (2002, p. 596), in their study of trade-focused CGE models, stressed that "investigation that is carried out with neoclassical models appears to obtain the right sign, but get the magnitude wrong". This is due to the fact that models founded on the conventional theory of trade are insufficient for elucidating a significant occurrence in the global economy (intra-industry trade). However, the new trade theory proceeds beyond the structure of the neoclassical market and examines characteristics such as economies of scale, trade externalities, and imperfect competition (Osman, 2012).

The new trade theory has several implications for the conduct and operational imperatives of contemporary trade environments. The theory elucidates on intra-firm

trade where activities of import and export occur amid subsidiaries of a particular multi-national enterprise (MNE) that supports international integration activities (Shenkar & Luo, 2008). It clarifies Intra-industry trade as the concurrent export and import of products in the same industry, in which trade helps to achieve economies of scale (Kumar & Ahmed, 2015). In addition, the theory proposes that countries might gain from trade even when they have not improved in terms of technology and resource endowment (Hill, 2018). Thus, it is the function of governments and institutions to avert market irregularities by encouraging free trade strategies that would lower or get rid of subsidies or tariffs that have direct consequences on trade in goods or services (Maha & Postolachi, 2012).

While the conventional trade theories concentrate on prices and trade in goods, the new trade theory considers other trade effects and mechanisms besides creating more effective sectorial allotment of factors of production (Burfisher *et al.*, 2004). The new trade theory also considers imperfect competition, trade-productivity links and rent-seeking behaviour, especially when it relates to issues of multilateralism versus regionalism (Burfisher *et al.*, 2004; Wang'ombe, 2013). Furthermore, welfare impacts on regional integration cannot be fully explained when conventional trade theories are used.

2.4 TRADE LIBERALISATION

Trade liberalisation refers to actions taken to enable less restrictive trade regimes (Aregbeshola, 2018). Trade liberalisation necessitates a decrease or the removal of non-tariff and tariff barriers to establish a more open economy that is anticipated to result in further economic growth (Modeste, 2016).

With the increasing clamour for globalised economies, nearly all countries globally are actively participating in reducing barriers to trade among trading partners. The aim of wanting free trade is pinned on the hope of increasing economic growth, which would result in a stable macroeconomic environment (Hill, 2019). It is anticipated that trade liberalisation will boost economic growth via an increase in ideas and knowledge flow across international borders, efficient utilisation of scarce resources, and promotion of healthy competition. It is also expected to improve production processes and thus increase exports.

This expectation is recognized by multilateral institutions, mainly the WTO, IMF, the World Bank, and so on (Gigov, 2016). Trade liberalisation, especially multilateral trade liberalisation, could contribute to elevating people's living standards. Nevertheless, factors such as corruption, political unrest, limited advancement on functional amendments and infrastructural inadequacies, are major obstacles that limit the African continent from taking full advantage of the benefits that emanate from its' trade liberalisation interventions (Casabianca, 2016).

2.4.1 TRADE LIBERALISATION EFFECTS

Theoretical arguments that support openness date back to the era of Adam Smith, John Stuart Mill and David Ricardo. They claimed that trade openness encourages the efficient allocation of resources by means of comparative advantage, and that it is beneficial for knowledge transmission, technological advancement, and encourages competition in both domestic and offshore markets (Gnangnon, 2017). The affirmative effects of long-term economic growth through trade openness have been explained by growth models, which hold that trade specialisation produces increasing returns to scale, and advance long-term growth (Young, 1991). Ben-David and Loewy (2003), broaden the neoclassical model and explain that trade liberalisation facilitates the accumulation of knowledge, which in turn boosts economic growth, and is beneficial to all countries (Gnangnon, 2017).

Trade openness enables access to foreign inputs that increase returns on domestic producers' innovations by augmenting their market size, introducing new technologies, and promoting a country's specialisation in research-intensive manufacturing. Furthermore, an open economy is usually faced with more competition, stimulates productiveness, and ultimately induces economic growth (Rivera-Batiz & Romer 1991; Alesina *et al.*, 2000; Baldwin *et al.*, 2005; Huang & Chang, 2014).

Furthermore, trade openness helps to lower a countries' level of exposure to foreign shocks by assisting them in adjusting to a cut-off point in global financing. This could decrease fluctuations in stock trading and asset prices, which influence trade patterns and volumes (Montalbano, 2011). Trade openness also lowers a country's vulnerability to crashes in currency value (Cavallo & Frankel, 2008).

However, contrary to the above discussion, some of the literature argues that trade openness could indeed be detrimental to economic development. With regard to institutional or market imperfections, trade openness could result in the under-utilisation of capital and human resources, focus on extractive economic schemes, and not specialising in technologically advanced sectors for increasing returns (Chang *et al.*, 2009).

Also, the growth in economic openness makes countries more vulnerable to global economic volatility, and particularly vulnerable to trade volatility (Chowdhury *et al.*, 2017). The policies that regulate trade liberalisation can be linked to various risks, and therefore have the potential to engender volatility in current account balances (Gnangnon, 2018). It thus follows to suggest that trade volatility can crucially undermine the domestic economic strength of a country, jeopardise their employment strength, and adversely affect the wages of employees (Scheve & Slaughter, 2004). Furthermore, intense competition from advanced competitors could lower the profits of domestic firms, destabilise market competitiveness (Aizenman, 2003), and discourage economic development (Rodrik, 1999; Kim, 2007).

Moreover, trade openness can augment the risk of high shocks/exposure and thus create high instability in terms of trade (Gnangnon, 2018). Some studies explain that economic consolidation could increase competition and lower profits, hence it would prevent innovation. As greater trade openness results in sectoral specialisation in sectors that have comparative disadvantages, such as in research and development (R&D), gains from trade become inconclusive because consistent growth may be hindered by the fluctuating benefits of R&D (Young, 1991; Huang & Chang, 2014). Thus, trade openness might lower economic growth in the long run, if the economy is specialised in sectors characterised by potential comparative disadvantages, or in areas where technological innovation is no longer productive (Yanikkaya, 2003; Sarkar, 2008).

Empirical analyses have proven that these are theoretically arguable outcomes. Findings from several studies have shown affirmative effects of trade openness on economic development (Barro 1991; Dollar, 1992; Sachs & Warner 1995; Edwards 1998; Frankel & Romer 1999; Wacziarg, 2001; Chang *et al.*, 2009). Conversely, other studies have found that there are no benefits of trade openness on economic growth

(Harrison, 1996; Rodríguez & Rodrik, 2001; Clemens & Williamson, 2001; Irwin, 2002; Gnanon, 2017).

Barro, (1991) analysed the impact of market deformation on economic growth and discovered a significant negative correlation between market distortion or deformation, and economic growth (Barro, 1991). Dollar (1992) utilised data from 95 developing countries to explain that the more an economy is liberalised, the greater its growth rate will be (Dollar, 1992). In their studies on countries categorised as dichotomous benchmarks of openness, Sachs and Warner (1995), observed that closed countries experienced a two per cent yearly growth rate over the period 1970 to 1989, and were below open countries (Sachs and Warner, 1995).

Harrison, (1996) utilised a cross-sectional and panel data approach over the period of 1960 to 1987, to investigate the relationship between economic growth and trade openness in developing countries. Findings showed that in terms of economic development, more assertion of the affirmative effects of openness on global trade were established when longer time-series data was utilised (Harrison, 1996). Krueger (1997), explained that countries with open trade attitudes tend to grow rapidly over time (Huanga & Chang, 2014).

Chibira and Moyana (2017), carried out a study on enhancing intra-Africa trade, the need to go beyond hard infrastructure investment, border management reform, and customs process enhancement. The study investigated fundamental interventions that differ from the improvement of customs processes, investment in hard infrastructure, and border administration reforms that are needed to effectively enhance intra-Africa trade. The research was compiled using stakeholder consultations and environmental assessment. The findings showed that African countries do not significantly trade with each other, that products exported by them are traded in their raw form, non-tariff barriers hinder intra-regional trade and that there is inadequate integration and a communal approach with regard to trade strategies, policies and legislation.

The studies above are similar in one way or another to this thesis in the sense that their focus is mainly on investigating factors that hinder intra-African trade, and how trade can be liberalised to positively influence growth. However, this study utilises

various econometric approaches to analyse the data, contrary to the explorative/desk review approach employed by the body of the existing literature. Furthermore, the regional dynamics introduced in this study further enhance the academic literature in this area of specialisation.

2.4.2 INSTITUTIONAL ENVIRONMENT OF TRADE LIBERALISATION

In a previous study, it was argued that a country's attraction towards investment is determined largely by its institutional structure and procedures (Aregbeshola, 2019). The study was in line with an earlier work by Scott (1995), where it was proposed that institutional environments are defined by the expansion of rules and requirements that each organisation should follow to obtain operational legitimacy, through strong conformity to internal regulatory systems. There is a need for institutions to assist in regulating, managing, and policing the international market, essentially in order to ensure equitable access to operational opportunities (Aregbeshola, 2018).

Over the years, various international institutions were established to aid in carrying out these roles. They are: the General Agreement on Tariffs and Trade, its heir, the World Trade Organisation which had 164 nations as at 2017, the World Bank, the International Monetary Fund (IMF) established in 1944 by 44 nations, the United Nations (UN) established in 1945 by 51 countries, and the Group of Twenty (G20) established in 1999, and is made up of governors of central banks (from the world's 19 largest economies) and finance ministers (Hill, 2019). These institutions were established by voluntary accord among member countries (Aregbeshola, 2017b). For easy understanding of the relevance of these organisations in global trading arrangements, a few of these institutions are discussed below.

2.4.3 GENERAL AGREEMENT ON TARRIFS AND TRADE (GATT)

General Agreement on Tariffs and Trade is a multilateral agreement with the purpose is regulating global trade among member countries by lowering tariffs and barriers to trade (Irwin *et al.*, 2008). In 1947, the GATT was signed by 23 nations (Baldwin, 2016, p.95). Over the years, the institution has carried out eight rounds of negotiations and more countries have enlisted as members, thereby increasing the number of its members to 161 (Arpino, 2017; World Trade Organisation, 2019). After the Uruguay

round was concluded in 1995, the GATT was added as a treaty among the legal pillars on trade in goods in the recently created WTO. The transformation of GATT to the WTO was meant to strengthen the regulatory powers of this new creation, enlarge its operational structure, and streamline the bottlenecks that characterised GATT, and to engender a stronger sense of justice among its member countries (Aregbeshola, 2017b; Arpino, 2017).

After the end of the Second World War, ceaseless efforts were made to liberalise global trade. Throughout the reign of GATT, from 1947 to 1994, eight rounds of negotiations were carried out, namely: in Geneva (1947), Annecy (1949), Torquay (1950 to 1951), Geneva (1956), Geneva (1960 to 1961), Kennedy Round (1964 to 1967), the Tokyo Round (1973 to 1979) and the Uruguay Round (1986 to 1994) (Shenkar & Luo, 2008; Stanceva-Gigov, 2016; World Trade Organisation, 2019). The Uruguay Round broadened trade liberalisation in new spheres such as services, agriculture, intellectual property rights, and capital (Stanceva-Gigov, 2016; World Trade Organisation, 2019). During the Uruguay Round the decision to create the World Trade Organisation was adopted. The WTO is a global organisation that supervises international trade and boosts further trade liberalisation, while the GATT was merely able to establish a set of rules on trade, which it was unable to enforce (Stanceva-Gigov, 2016).

2.4.4 WORLD TRADE ORGANISATION (WTO)

The WTO is a multilateral trade institution that became operational on 1 January 1995 and was aimed at global trade liberalisation (Shenkar & Luo, 2008). While GATT dealt primarily with trade in goods, the WTO covered trade in intellectual property and trade in services, in addition to trade in goods (WTO, 2019). The establishment of the WTO also generated new processes for dispute settlement (Shenkar & Luo, 2008; WTO, 2019).

The Doha Round negotiations were the first multilateral trade negotiations since the WTO was established. They began in November 2011 in Doha, Qatar, and have not reached a conclusion to date (Baldwin, 2016; Stanceva-Gigov, 2016). Its primary goal is to consolidate developing nations into the global trading scheme (WTO, 2019). The

Doha Round negotiations are comprised of three subjects: lowering agricultural subsidies in the United States of America (USA), lowering agricultural tariffs in the European Union (EU), and facilitating easier access to industrial products and services on the markets of major developing countries (Stanceva-Gigov, 2016).

The challenges faced by the WTO due to the deadlock in the Doha negotiations has resulted in one questioning the viability of a “free, fair and sustainable trade” for those institutions that masterminded it (Aregbeshola, 2012, p.1208). The major reasons for the failure of the Doha Round negotiations remain obscure, although several different explanations are given in the literature. Ferguson, (2011) explains that the WTO is not fully equipped with the regulatory impetus required to enforce majority view. This specific weakness has frustrated its ability to navigate through ambitious negotiations. Furthermore, Rosset (2006) and Dorobät. (2015), suggest that the major obstruction to the finalisation of the Doha Round is its membership participatory formula and consensus approach that were adopted since the inception of the Round.

The WTO has for years neglected tariff reduction and has given more attention to protecting investments, labour regulations, environmental affairs, intellectual property, and health standards (Shenkar & Luo, 2008; Dorobät, 2015; Baldwin, 2016). The Doha Round negotiations concentrated on minor concerns and ignored discourse on critical issues on their agenda, which centred on the opening up of advanced markets for developing countries as well as the elimination of subsidies for farmers in advanced economies (Mattoo & Subramanian, 2008).

Practically, the WTO rules are communicated in a sequence of mega-regional and regional agreements such as the Transatlantic Trade and Investment Partnership (TTIP) and the Trans-Pacific Partnership (TPP) between the EU and the US (Baldwin, 2016; Bilas & Sanja, 2016).

2.5 TRADE AND ECONOMIC GROWTH

Trade is a major contributor to a country’s growth. At a global level, trade drives the global economy and creates a foundation for attainment of development. There is generally a favourable effect of augmented national income, derived from contributions attained from exports that ultimately precipitated economic growth (Aregbeshola, 2017a and b). This is because such earnings from exports offer not

just the foreign currency needed for importing essential commodities that are not manufactured locally, but it can also assist government in financing external debt.

In addition, spill-over effects, such as knowledge exchange and technological advancement, created from trade is beneficial to both economies especially for smaller economies because they would gain more from economies of scale. Such exposure would also increase competition and efficiency among domestic producers (Khosla, 2015).

With regards to producers, augmented competition acts as a motivator and makes certain that they lower production cost (Aregbeshola, 2017), and improve on the quality of goods produced, thereby guaranteeing efficiency. This approach also motivates new technological development and advancement to avoid loss of market share and revenue.

2.5.1 THEORIES OF ECONOMIC GROWTH

The major ideas and theories that began the modern economic growth theories consist of mercantilism (15th century), physiocracy (second half of the 18th century), classical theories (1776), innovative growth theory of Schumpeter (1911), Keynesian theories (1930s), Post-Keynesian theories (1950s), the neoclassical theories and exogenous theory of Robert Solow (1950s to 1960s) and endogenous growth theories (1980s to 1990s) (Sharipov, 2015). For this research, the Post-Keynesian theories, neoclassical theories and the exogenous theory and endogenous growth theories would be deployed.

i. POST-KEYNESIAN THEORY OF ECONOMIC GROWTH

Post-Keynesian growth theory emanated from the theoretic and methodological foundation of John Keynes's macroeconomic balance. Roy Harrod and Evesy Domar's theories stand out within the Post-Keynesian growth theory (Sharipov, 2015).

Roy Harrod and Evsey Domar, in the 1950s developed a theory later referred to as the theory of Harrod-Domar. It states that in technical situations of production, economic growth is ascertained by marginal propensity to save, and

the dynamic equilibrium of market system is intrinsically unstable. Therefore, maintaining full employment would necessitate an active and meaningful action of the state (Sharipov, 2015). This theory describes a cyclical economic process in which more investments would result in more growth (Masoud, 2014).

ii. NEOCLASSICAL GROWTH THEORIES AND THE EXOGENOUS THEORY OF ROBERT SOLOW

Neoclassical growth theories first emerged in the 1950s and 1960s, when there was less focus on the issue of dynamic equilibrium, but on the difficulty of attaining possible growth through enhancing organisational production, and the introduction of new technology as panacea for boosting productivity. Robert Solow and other scholars were against the intervention of the state in the economy and supported the idea of authorising large firms to attain optimal production capacity in competitive market environment, by utilising the resources accessible to them (Sharipov, 2015).

The neoclassical theory explicates how accumulating capital and technological alterations impact on the economy (Popa, 2014). This theory, which was founded on the classical theory of production factors, regarded capital, land and labour as independent factors of development of national goods. Further to this, the marginal productivity theory buttresses the importance of productivity in an economy by suggesting that income obtained by the owners of the factors of production are ascertained by the marginal products of the factors.

The exogenous theory was derived from the supposition that an essential condition for the economic system to attain equilibrium is when aggregate supply and demand are equal. Aggregate supply is ascertained on the foundation of Cobb-Douglas's production function, which explicates the structural dependence between the factors utilised, production volumes and their combinations (Sharipov, 2015).

The theory also introduced a third factor called technical progress, which is also referred to as an exogenous factor. The technical progress help to increase the productive effectiveness of the other factors, which helps to decipher the growth of output per capita in the long run (Popa, 2014). Therefore, Solow's theory

points out that technological progress is a sole foundation for attainable welfare growth and obtaining optimum growth variant, providing highest consumption that further drives growth (Sharipov, 2015). This theory also highlights that there is the risk of stopping economic growth, when there is a lack of technological progress because of a decrease in income (Popa, 2014). Furthermore, Solow's theory explains that population growth is also a reason for continuous economic growth as active market size expands. Nevertheless, if the growth in population is not supplemented by increased investment, it would result to a decrease in capital stock per worker (Sharipov, 2015). This theory thus promotes trade among nations as a possible driver of further growth and creator of national commonwealth.

iii. THEORY OF ENDOGENOUS ECONOMIC GROWTH

The theory of endogenous economic growth started gaining momentum in the 1980s to 1990s, and brought about the "new growth theory" (Sharipov, 2015, p.768). Robert Lucas and Paul Romer proposed the endogenous attribute of the most significant technological innovations, founded on investment in human capital and in technological innovation.

A major element in Paul Romer endogenous growth theory is "information or knowledge" (Sharipov, 2015, p.770). This theory is of the assumption that the knowledge creation by a firm is presumed to have a positive external impact on another firm's production prospect, because knowledge does not belong to one person or cannot be kept a secret (Masoud, 2014). To that extent, economic growth rate depends directly on the worth of human capital that is focused on acquiring new knowledge. The theory also suggest that countries that accumulates more human capital would achieve higher economic growth rates. Consequently, the establishment of a free global trade will lead to higher growth, as the exchange of goods helps to boost the economic system and results in further advancement of human capital (Sharipov, 2015). This is a strong motivation for interregional trade and the establishment of regional trade blocs.

In contrast, the theory established by Robert Lucas explains that accumulating human capital would require specific resources, and would result in alternative costs. He opined that even if there is zero growth in labour, the economy will

still grow (Lin, 2019). Robert Lucas propose that individuals can decide to either take part in actual production or to roll up human capital, and that the time allocated between these two alternative ways would induce the economy to grow. For example, when there is a decrease in production time, it would result in a decrease in the actual product output, but with an increase in investment on human resources, the production output would increase (Sharipov, 2015).

Hence, the endogenous growth theories established the relationship between the processes of acquiring new knowledge as it relates to economic growth, which is actualised through technological innovations. The theory also conceptualise the reasons why different countries have different growth rates and the effect of trade and global integration process on economic growth (Sharipov, 2015).

2.6 INTRA-AFRICAN TRADE AND INVESTMENT

Intra-African trade is defined as a process where buyers and sellers are involved in business transactions, and as such, business activities are carried out within the African continent (Kometsi, 2017). Such trade is aimed at advancing economic growth and development among member countries (Dlagnekova, 2009). Hence, it becomes imperative for African countries to embrace further diversification of their economy in order to boost investors' confidence and to attract trade interests. Still, attaining this goal would necessitate additional technical and financial resources. This can be achieved through the engagement of national private investors and through foreign direct investment (FDI) (Gui-Diby and Renard, 2015).

FDI has been known to impact positively on economic development. For example, The United Nations Conference for Trade and Development (UNCTAD) supports this viewpoint because it believes that FDI is an effective instrument that helps to integrate economies at production level, into the global economy by bringing in assets, including technology, managerial abilities, capital, and skills (Aregbeshola, 2018; Opoku, *et al.*, 2019).

Trade among African countries is directed by bilateral and multilateral agreement concluded among member countries (Aregbeshola, 2017). In most cases, the nature and structure of these agreements sets down the requirements and regulatory

conditions for the movement of products and traders (Chibira & Moyana, 2017). These arrangements have advanced the realisation of intra-regional, socio-political, and economic integration. Evidence suggests that intra-regional trade and investment has created a significant platform for attaining regional amalgamation, and that it has augmented overall growth in Africa (Anyanwu, 2014). Further evidence suggests that encouraging intra-African trade and investment would allow for job opportunities, economic growth, and poverty alleviation (Jordaan, 2014).

Intra-African trade registers at about 10% compared to the 30%, 40%, and 60% of intra-regional trade that is attained by the Association of South-East Asian Nations (ASEAN), North America, and the EU respectively. Even if an allowance were to be made for the identification of undocumented informal cross-border trade in Africa, the overall percentage of intra-African trade would not exceed 20%, which is much lower than in other major parts of the world (African Union, 2012, pp.2; Kometsi, 2017, p.5).

Addressing the main regional groups that aid integration, and admitting that trade integration is a mechanism through which intra-African trade and investment can be developed, Foroutan and Pritchett (1993), posit that undiversified economic composition as well as cultural and economic dissimilarities are among constituents that have led to inactivity in the ECOWAS action plan (Foroutan and Pritchett, 1993). This also applies to other regional groups on the African continent.

Africa's development has been ascribed to reduced trade levels, especially Intra-regional trade (Nijnkeu & Fosso, 2006). Todaro and Smith, (2009) explain that trade levels between countries in Africa have not been any better since the Second World War era (Kometsi, 2017). Intra-African trade remains low, even though trade between African countries and the rest of the world has increased tremendously over the past decades (Longo & Sekkat, 2004).

Furthermore, in 2002, the Africa Action Plan (AAP), was adopted at the Kananaskis G8 summit, in reply to the New Economic Partnership for Africa's Development. One of its action plans was to assist in boosting the economic integration of Africa and promote intra-African trade and investment (Kometsi, 2017, p.6). Compared to other regional economic groups, SADAC members are viewed as a gleam of hope for intra-African trade, because studies show that this region has higher intra-regional trade

levels due to its infrastructural development that was created to boost regional integration in the region (Behar & Edwards, 2011; SADC, 2019).

For one to draw the conclusion that the decrease in intra-African trade does not bode well for the African continent, it is necessary to corroborate the fact that Africa has not adopted the conventional approach to trading, and that its' trade momentum has not influenced the growth and development of member countries (Saurombe, 2009, Aregbeshola, 2017b). Thus, an efficient measure of a country's attraction towards investment is the incorporation of institutional and macroeconomic variables, because they combine to determine growth. Economic growth is a percentage alteration in a country's production capability that is obtained by comparing the GDP of a prior year to that of a current year (Aregbeshola, 2017b).

Other factors that influence the amount of trade and potential growth of a country are: gravity of inflation, interest rate regimes, foreign exchange regimes, the unemployment rate, actual and potential market size, political stability, purchasing power of consumers and investor protection. The possibility and incidence of terrorism is also a factor (Aregbeshola, 2017b).

2.6.1 FACTORS RESTRICTING THE IMPLEMENTATION OF INTRA-AFRICAN TRADE AND INVESTMENT

The development of intra-African trade and investment is strained by various factors such as restrictions of productive capability, trade regime dissimilarities, and constraining customs processes (African Union, 2012). A number of these identified hindrances are discussed below.

In intra-African trade, the kind of products exported is significant for its success (Njinkeu, *et al.*, 2008). Exports from African countries are based on primary products, with the exclusion of South Africa and some other industrialised countries whose exports are mostly manufactured products (Standaert & Rayp, 2016). Most goods produced by African countries experience low demand from fellow African countries because those prospective consumers create similar goods (UNECA, 2015). This could explain why products manufactured in Africa aren't used on the continent (African Union, 2012; Chibira & Moyana, 2017). This results in a lack of African

countries trading with each other. The reality is particularly challenging because it leaves these producer countries the only option of trading with countries outside Africa (Chibira & Moyana, 2017).

Additionally, there is lack of a clear trade information regarding intra-African trade on the African continent. This is because African countries have no in-depth knowledge of what is being produced by neighbouring countries. Some African countries import products from outside the continent when that same product is produced by countries around them. For example, Kenya imports raw hides from New Zealand, whereas Burundi exports that same product to other continents at a much lower price.

Furthermore, trade agreements offer a basis for transactional engagement among nations and regional blocs, which ultimately enhances quality of life and alleviates poverty (Chibira & Moyana, 2017). However, issues such as ways to handle contradictory agreement terms in overlapping trade alliances, and the requirements of the rule of origin hinders intra-African trade and investment (AfDB/OECD/UNDP, 2017). This is because the proliferation of regional trade agreements has led to undesirable outcomes in the past, especially due to the numerous blocs established with contrasting agreements and trade prerequisites (Chibira & Moyana, 2017). Notwithstanding the presence of several regional trade set-ups, trade carried out in most African countries is still affected by colonial and historical connections (Jordaan, 2014).

Another factor restricting the implementation of intra-African trade and investment is that the mode of transportation and its trade facilitation programme impedes development in most African economies. Poor transport networks and their antecedent costs restrict the capacity of trade and investment among regional participants. Free movement of people from one country to another is strained by excessive bureaucracy, thereby hindering cross-border travel and socialisation (AfDB/OECD/UNDP, 2017).

Furthermore, limited means of transportation and its resultant high cost is another notable hindrance. Cost of transportation in Africa is viewed as the highest globally, and infrastructure is regarded as a vital determining factor of cost of transportation, particularly for landlocked nations (Jordaan, 2014; Yilmazkuday & Yilmazkuday,

2014). An efficient transportation network is crucial for trade. In a practical sense, a 1% improvement in the transportation infrastructure index of a country, could aid intra-African trade by approximately 2% (Longo & Sekkat, 2001, pp.1315).

2.7 CONCLUSION

Despite efforts to enhance intra-African trade and investment, over the past 20 years the reality has remained disappointingly low, estimated at between 12% –14% of Africa's entire trade. This is mainly due to the continent's continuous reliance on raw materials and its reduced levels of industrial enterprise (Parshotam, 2018, p.5). For example, about 26% of countries in Africa are dependent on one or two commodities for a minimum of 75% of their exports. To further this argument, about 60% of African countries depend on five commodities at most for their export earnings (AfDB/OECD/UNDP, 2017; Parshotam, 2018, p.5)

It is anticipated that the new African Continental Free Trade Area (AfCFTA, 2019) will affect total exports in Africa by 4% (\$25.3 billion), and will lead to a 52% (\$34.6 billion) increment in intra-African trade and investment (Mishra, 2018, p.3; Parshotam, 2018). With this new intra-continental trade opportunity, inclusion of industrial services as well as agriculture and agro-industries are expected to further boost trade relations within the continent. A recent study suggests that between 2010 and 2022, trade involving industrial products is anticipated to rise by 53% (Parshotam, 2018, p.9).

However, it will not be easy to fully implement the AfCFTA because there are several economic and political factors that potentially impede its successful execution (Parshotam, 2018). For example, the AfCFTA agreement presumes a long execution period, which would thus be dependent on political involvement. The lead period between the adoption and implementation would be a strong test of resilience, commitment, and determination to enforce the Treaty (Dabrowski & Myachenkova, 2018).

CHAPTER 3

REGIONAL ECONOMIC ARRANGEMENT

In the previous chapter, the researcher discussed the institutional environment of intra-African trade and investment by first evaluating international trade theories and trade liberalisation. Multilateral agreements and its role in advancing intra-African trade and investment were discussed. Chapter 3 focuses on analysing regional integration as well as regional economic communities, and how they have impacted so far on the level of intra-regional trade and investment. The chapter also examines some intra-African trade initiatives that have been established over the years in attempting to boost trade in Africa.

3.1 INTRODUCTION

Regional trade agreements (RTAs) are also called preferential trade agreements (PTAs) or regional economic communities (RECs), as referred to in Africa. This form of trade blocs has evolved across the continent over the past thirty years (De Melo & Tsikata, 2015). Regional economic communities are regional groups of African countries that represent the pillars of the African Union. They have grown individually, and their function and composition vary (African Union, 2017). The RECs' overall purpose is to ease regional integration among members of the various individual zones and through the broader African Economic Community that was created in 1991 under the Abuja Treaty (AfDB/OECD/UNDP, 2017; United Nations Economic Commission for Africa, (UNECA, 2015). This Treaty has matured into an African "common market" by utilising the RECs as building blocks (African Union, 2017).

In the 1970s, while RECs in the North-South regions depicted about 60% of the total, the South-South RECs depicted only 20%. By the year 2010, two-thirds of the RECs were South-South, while the North-North had only one-quarter. Fifty-eight countries in Africa had participated in 55 RECs by 2010, of which 12 were North-South and 43 were South-South and had progressively become cross-regional. Of the 55 African regional economic communities, 31 of them are cross-regional (De Melo & Tsikata, 2015). Furthermore, various plans of action were taken by African countries to advance regional integration, intra-regional trade being one of them. Plans include the formation of the African Union (AU) and the establishment of several RECs

pursuing regional integration through the development of a common market, customs unions, and free trade areas (Kayizzi-Mugerwa *et al.*, 2014).

3.2 EMPIRICAL LITERATURE

From the assessment of available research on regional integration and Intra-regional trade, there seem to be insufficient study carried out with regards to the impact of multilateral agreements on intra-regional trade and investment, especially in Africa. Also, most studies available have concentrated on evaluating regional economic communities in Africa making use of gravity model. Geda, and Kebret, (2008) utilised the conventional gravity model to examine the regional economic integration in Africa and reviewed its problems and potentials by utilising COMESA as a case study.

Buigut, (2012) conducted a study, making use of a modified gravity model to assess the trade effects of the EAC Customs Union on member States, from a period of 1996 to 2009. The outcome showed that the EAC has created a disproportionate effect on intra-regional imports and individually, on export member countries (Buigut, 2012).

Yang and Martinez-Zarzoso, (2014), analysed the impact of the ASEAN-China Free Trade Agreement (ACFTA) on exports, with focus on the effect of trade creation and diversion. They analysed 31 countries, making use of data from export, within a period of 1995 to 2010, using gravity model. The outcome showed an affirmative trade effect. This suggest that lowering or eliminating trade barriers would promote the total volume of trade for both intra-regional and inter-regional countries (Yang and Martinez-Zarzoso, 2014).

Nevertheless, it is essential to be careful when inferences are drawn from the outcome of gravity model estimate, especially if a single model is considered. Piermartini and Teh, (2005), proposed that gravity-model outcomes are generally dependent on several approximation choices, such as country samples, use of aggregated or dis-aggregated data, time frame, gravity model specification and so on (Ivus, and Strong, 2007).

This research expanded and contributed to previous studies by empirically evaluating the impact of multilateral trade agreements on intra-regional trade in the Southern

African Development Community (SADC) and the Economic Community of West African States (ECOWAS) regions in Africa. The choice of ECOWAS and SADC as the basis for comparison is driven by the fact that among the eight regional economic communities, SADC and ECOWAS are dominant, and significantly contribute to Africa's economy. Also, SADC is known for its technological advancement and ECOWAS has made tremendous progress in the area of tariff controls and has high levels of economic and employment growth.

Annual data was gathered from 2000 to 2018 and dynamic panel data and econometric techniques were used to control for individual country characteristics, endogeneity, serial correlation, heteroscedasticity and interdependencies between the countries in each region. This study helps to ascertain the reason for the low level of intra-regional trade over time, determine the reason for the weak level of regional integration among African countries, and suggested ways of ameliorating these challenges by recommending policies that can be implemented to enhance trade in the regions.

Before going into details on regional integration, it would be best to understand the nature and different types of trade agreements, and the reasons why RECs enter into trade agreements with each other.

3.3 TRADE AGREEMENTS

Trade agreements (TAs) have become an accepted policy tool to control global economic consolidation. The WTO regulations permit these agreements even though they could hinder the rule of the most favoured nations (Kohl, 2016). This is because trade agreements regarded as a great path towards achieving a free trade area. The economic globalisation process is defined by international and regional integration, particularly via RTAs. From the Bretton Woods Agreement (1944) and the establishment of the General Agreement on Tariff and Trade, over one hundred regional trade agreements have been signed globally, among them are hundreds of free trade agreements (Estupiñán, 2017).

A solid argument of global trade theory is that intensifying trade among countries may create improvements in welfare for the nationals of member countries (İncekara &

Ustaoğlu, 2012). Johnson, (1953) explains that when there are no trade agreements, countries will utilise their global market capability through taxes on trade, leading to subsequent balance not positively impacting on those countries involved (Estupiñán, 2017). Furthermore, Maggi and Rodriguez-Clare (2007), opined that trade agreements are a means of averting trade wars in conditions where governments are susceptible to political pressures (Estupiñán, 2017).

However, trade agreements can bring about changes in all economic spheres and establish a domino effect outcome in developed or developing trade environments. Though the general aim of trade agreements is to reduce tariffs, as trade enlarged it moved from low tariffs to non-tariff trade barriers, thereby augmenting the function of regulations and rules. This could become either a help or a hindrance in the development of such economies, but the overall reason for trade agreements is to protect consumers, workers, the economic system and the environment (Gutu, 2016).

Even though the WTO permits the continuation of Trade Agreements, the impacts aren't always viewed as positive. This is due to Trade Agreements that may replace fully applying the rules of the WTO, to the extent that these rules could lead to trade diversion instead of trade formation and hinder the overall impacts of the WTO (Kohl, 2016). Consequently, global change policies organised for eradicating such problems must be the primary goal in attaining a multilateral free trade agreement, which is the best answer to the problem of maximisation of international welfare (Gnangnon, 2017). This said, there are various types of trade agreements, as discussed below.

3.3.1 TYPES OF TRADE AGREEMENTS

Trade agreements can either be bilateral, which involves two countries, or multilateral, which involves more than two countries. These agreements are usually expected to lower or eliminate barriers to trade between countries and result in an increase their levels of economic integration (Smith *et al.*, 2001).

1) BILATERAL AGREEMENT

In bilateral trade agreements, each country declares the names of those partner(s) it wants to have a free trade agreement with (Saggiy & Yildiz, 2009). A free trade agreement among two countries necessitates discarding the existing tariffs between

them. This arises when both countries declare each other's names (Saunders *et al.*, 2012). The next stage, given the global trade regime, is for countries to openly document their tariff regimes. (Saggiy & Yildiz, 2009).

- i. The characteristics or features of bilateral agreements depend on political and economic factors linked to impacts on interest groups, the political capabilities of such groups, and the global trade conditions within which they are negotiated. These factors also impact on the choice of elements in altering bilateral agreements or establishing new trade arrangements (Aggarwal, 2013). To understand the features of bilateral free trade agreements, the study conducted by Baier and Bergstrand, (2004) stated that prospective welfare gains and the probability of a bilateral free trade area would be notably and economically higher (Yilmazkuday & Yilmazkuday, 2014).
- ii. When the distance between two trade partners is close.
- iii. When there is a great distance between a natural pairing and other countries worldwide.
- iv. When the two countries are large and economically related (in terms of real GDP).
- v. When both countries are mostly different in terms of comparative advantages.
- vi. When the two countries do not differ much from the rest of the world in terms of comparative advantages.

2) MULTILATERAL AGREEMENT

Multilateral trade liberalisation is viewed as all decisions, inclusive of those decisions taken under the endorsement of the WTO at multilateral level, which eventually contribute to lowering non-tariff and tariff trade barriers by all or a majority of countries (Gnangnon, 2018). In a broad sense, multilateralism can be defined as a global collaboration between two or more countries, created to solve global issues and disputes that may arise from anarchy in global relationships (Krause, 2004). The prevailing viewpoint states that multilateralism is the most effectual way to build

global relations and to address problems and obstacles in numerous fields (Bilas & Franc, 2016).

Furthermore, multilateral trade schemes assist in creating direction for regional trade collaboration and agreements and enable identification of several regional trade consensuses entered into at the regional level (Rosario, 2015). By 2017, there were 432 regional trade agreements globally (Hill, 2019). Multilateral trade has offered the foundation for establishing regional trade alliances. Identifying regional trade agreements by multilateral trading schemes has profited the regionalism in global trade (Yilmazkuday & Yilmazkuday, 2014).

Since the establishment of the GATT, multilateral trade liberalisation has resulted in an incremental increase in global trade volumes, and an upsurge in the number of foreign direct investments (FDI), with numerous industries undergoing increases in intra-industry FDI and intra-industry trade (Collie, 2011). By restricting activities of trade that deform the global trade marketplace, multilateral trade liberalisation has generated a level playing field for world trade, particularly for developing nations (Gnangnon, 2017).

3.3.2 CHANNELS THROUGH WHICH MULTILATERAL TRADE LIBERALISATION PROMOTE ECONOMIC GROWTH

Various channels through which multilateral trade liberalisation could encourage economic development are:

- 1) By boosting inflows of FDI: multilateral trade liberalisation can stimulate high economic growth through the feasible positive effect of inflows of FDI on economic development (Collie 2011; Gnangnon, 2017). Inflows from FDI can boost long-term economic growth through various channels, such as incorporating new production technologies in the host country (Borensztein *et al.* 1998). Another important nexus is through skill acquisition and training of labour in the host market (Hanson & Slaughter, 2003). Some evidence suggests that MNCs introduce other possible management actions and organisational set-ups that enhance operational efficiency (De Mello & Luiz, 1999), and through knowledge spillover and capital increment (Russ, 2007).

- 2) Since multilateral trade liberalisation can create high public tax income, it can assist government in rendering the basic physical infrastructure required to stimulate greater economic growth (Gnangnon, 2017).
- 3) By assisting to cut down costs of trade through trade facilitation, multilateral trade liberalisation can encourage export diversification (Beverelli *et al.*, 2015).
- 4) When cooperation among WTO members in terms of trade at multilateral level is increased, it can ease multilateral collaboration on other matters, such as international monetary issues, international security, etc. This assists in lowering the rate at which external shocks happen, which in turn affects economic growth (Dabla-Norris & Gündüz, 2014).
- 5) Multilateral trade liberalisation augments the likelihood of a level playing field for traders in global markets and contributes to advancing the profits of enterprises involved in global trade schemes. Furthermore, it enhances the income of manufacturers whose products (including agricultural goods), are traded on global markets (Gnangnon, 2018). This is significant for poor nations, where farmers suffer seriously from subsidies offered by developed nations to assist their exports of agricultural goods (Gnangnon, 2017). For example, at the Nairobi Ministerial Conference (2015), a decision endorsed by trade ministers of the WTO on Export Competition, accepted provisions that require all members of the WTO, especially those in developed countries, to lower their agricultural subsidies, as they distort global trade markets (Gnangnon, 2017). Executing this decision was aimed at benefitting farmers in poor countries and helping to lower the fluctuations in global prices of agricultural goods.

3.4 ECONOMIC INTEGRATION

Economic integration is defined as the elimination of several trade barriers among countries and denotes the development of their economic relations (Muli & Aduda, 2017). It is founded on economic agreements with the intention to better the welfare of their countries. This is defined by the lowering or removal of tariff and non-tariff trade barriers, and coordinating fiscal and monetary policies, with the overall goal of attaining full integration, (encompassing common fiscal, social-economic and monetary policies managed by supranational organisations) (Marinov, 2014).

Economic integration theories are generally classified into traditional and new economic integration theories, and these theories indicate a developmental phase in their evolution (Hosny, 2013). The traditional theories explicate the potential gains of integration and are usually described as classical theories of economic arrangements. On the other hand, the new economic integration theories are called the dynamic analyses, and are formed to show alterations in economic situations and trade environs that characterise regional arrangements (Hosny, 2013; Marinov, 2014).

Furthermore, Viner's traditional customs unions theory, founded on the study he conducted in 1950 was the first literature on gains of economic integration, and was the first work that outlined particular criteria for the benefits and limitations of economic integration by splitting the feasible impact of economic integration into trade diversion and trade creation effects (Ogbuabor, *et al.*, 2019). Thus, when two or more member countries decide to be involved in a trade agreement, and trade is shifted from a high-price manufacturer to a low-cost manufacturer, it is referred to as trade creation (Hosny, 2013). Viner, (1950) explains that trade creation augments a country's welfare (Ogbuabor *et al.*, 2019).

Contrary to this, trade diversion happens when imports shift from a low cost manufacturer from a third world country that is not a participant in the integration agreement, to a high cost manufacture from a member country (Hosny, 2013). It occurs when a common customs duty tariff utilised in such an agreement, preserves the high price supplier of a member country. Viner (1950) points out that trade diversion is known to lower a country's welfare.

Therefore, countries would be driven to take part in economic integration when it results in more trade creation or trade gain, compared to trade diversion that results in trade loss (Ogbuabor *et al.*, 2019). Meade (1955) and Lipsey (1960), broadened Viner's theory by tackling diverse matters on the impact of economic integration. Still, they all concluded that there is not any potential direct result on whether or not integration augments international welfare (Ogbuabor *et al.*, 2019). Various forms of economic integration are discussed below.

3.4.1 TRADE AGREEMENTS /FORMS OF ECONOMIC INTEGRATION

Trade agreements are classified by degree of economic consolidation. These are economic unions (EUs), preferential trade agreements (PTAs), customs unions (CUs), free trade agreements (FTAs) and common markets (CMs). It is projected that a profound incorporated agreement must produce powerful trade advancement effects (Baier *et al.* 2014; Estupiñán, 2017). These trade agreements are discussed below:

I. PREFERENTIAL TRADE AGREEMENTS (PTAS)

Preferential trade agreements (PTAs) are regarded as the weakest economic integration and are defined by preferential entrance and treatment of specific goods by its member states. This kind of arrangement is characterised by decreased tariffs and removal of non-tariff restraints (quotas) on goods produced by its members, but still retaining individual trade restraints to non-member states (Hosny, 2013). Preferential trade agreements are not permitted among members of the WTO because they are obliged to allow most-favoured nation status to all members of the WTO. Most negotiations under PTAs are bilaterally agreed upon, are carried out through a trade treaty, and are viewed as an initial step to fully-fledged economic integration with the purpose of establishing a free trade area (Wang'ombe, 2012). Examples of preferential trade agreements are the Association of Southeast Nations free trade area, and the now defunct North American Free Trade Area (Hosny, 2013).

II. FREE TRADE AREAS (FTAs)

In a free trade area, countries create trade blocs where member countries agree among themselves to eradicate tariff and non-tariff trade barriers (zero tariff) on all or most trade between them, but carry on withholding their individual domestic restraints on non-member states (Marinov, 2014; Estupiñán, 2017). This divergence in the structure of external tariff necessitates the establishment of detailed rules of origin explicitly intended to stop the importation of products from a member country of an FTA with the lowest tariff, and export the goods to countries having higher tariffs (Wang'ombe, 2012). An example of a free trade area is the now defunct North

American Free Trade Agreement created in 1993 by Canada, the USA and Mexico (Hosny, 2013).

III. CUSTOMS UNIONS (CUs)

A customs union involves the total elimination of all trade barriers between member states, and equalisation of a communal external tariff to non-member countries (Estupiñán, 2017). Customs Unions permit the free movement of products and services, factors of production, labour and capital, hence making the best use of a spatial arrangement of production via enhanced usage of factors of production (Marinov, 2014). Nevertheless, there are restraints on the movement of factors within a customs union. The economic effects of having a Customs Union depend on the common tariffs levels adopted. Though Customs Unions do not necessitate harmonising individual economic plans of action, the adopted communal tariffs may ascertain the individual member states' national policies (dependent on potential effects on public income), which may necessitate policy coordination (Wang'ombe, 2012). A good example of a customs union is the European Community established by France, West Germany, the Netherlands, Italy, Belgium and Luxembourg in 1957 (Hosny, 2013).

IV. COMMON MARKETS (CM)

Common markets can be described as factor integration, and include all the constituents of customs unions, but in addition are characterised by the removal of restraints on movement of factors of production. Common market members take on common restraints and plans of action for controlling the movement of factors of production for non-member states (Hosny, 2013; Estupiñán, 2017). This arrangement is strengthened by having homogeneous policies among member nations. Common market members also harmonise their national policies, which is critical when executing the final phase of consolidation by establishing economic unions (Wang'ombe, 2012).

V. ECONOMIC UNIONS (EUs)

An economic union encompasses all the constituents of the common market, and necessitates the total harmonisation of every domestic system (welfare, monetary, and fiscal) along with adopting a communal foreign relations procedure which could result in the fusion of their domestic economic procedure as a group (Hosny, 2013; Estupiñán, 2017). An example of an economic union is the European Union, which uses a single legal tender (the euro), within the euro zone, and has common labour laws that permit all citizens to have passports and permit them to invest in or gain employment in any country within the union without restraint (Wang'ombe, 2012, Hosny, 2013).

3.5 REGIONAL TRADE AGREEMENTS (RTA)

Regional trade agreements are not new, but the depth they have so far reached involves many partners from diverse regions and various developmental levels. They involve huge trade volumes, which are aimed at achieving deeper agreements on a broad range of issues (Bilas & Franc, 2016; Aregbeshola, 2017b). In their study, Frankel and Rose (2000) showed that regional trade arrangements could impact positively on intra-regional trade. Therefore, regional integration is viewed as a way to facilitate easier entrance to larger markets and augmented trade levels, which lead to high economic development. Countries involved in trade obtain significant amounts of welfare gains, though inevitably, not in a fair manner (Jordaan, 2014).

Regional economic integration, which permits the free movement of people, goods, capital and services across international markets, has been significantly desired by many African states since they first achieved independence. In Africa, regional economic integration has the possibility of propelling vigorous and conscientious economic development as well as encouraging a reduction in unemployment. Nevertheless, these opportunities for profound regional integration can only occur by their careful exploitation (Kayizzi-Mugerwa *et al.*, 2014). Establishing regional economic agreements not only fortifies the position of member countries on the international political stage, but strengthens their negotiating powers on global issues. It also allows countries to jointly grapple with the economic development of their regions, as countries within an economic region or bloc are not expected to deal with

their economic situations individually (Mapuva, 2014). Hence, regional integration in Africa is viewed as a means of promoting trade and obtaining economies of scale.

Furthermore, Winters and Masters (2010), explain that the comparative advantage theory supports the notion that when trade integration is augmented, it generates trade openness with high subsequent income and consumption levels through division of labour and specialisation (Jordaan, 2014). However, Krugman, (1980) set a model that relied on economies of scale, cost of transportation, and displayed how concentration of manufacturers in a region would promote that concentration further. He also emphasised that economies of scale bring mass production and transport development.

On the other hand, if only a small portion of the population is involved in manufacturing, there won't be a strong tendency for concentration because the small pool of manufactures can serve only remote markets (Enaifoghe Asuelime, 2018). Indeed, African countries are faced with a trade-off between closeness to larger markets (which is gainful due to the home market capacity enhancement effect), and manufacturing for smaller markets, where there is less competition, less demand and lower wages. As a result of the small size of most markets in Africa, regional integration seems to be a way to increase demand (Enaifoghe & Asuelime, 2018).

3.5.1 EVOLUTION OF REGIONAL TRADE AGREEMENT, 1948-2019

Figure 3.1 below displays all regional trade agreements with notifications that were submitted to the GATT and WTO between 1948 and 2019. The Table also include year of entry as well as inactive RTAs.

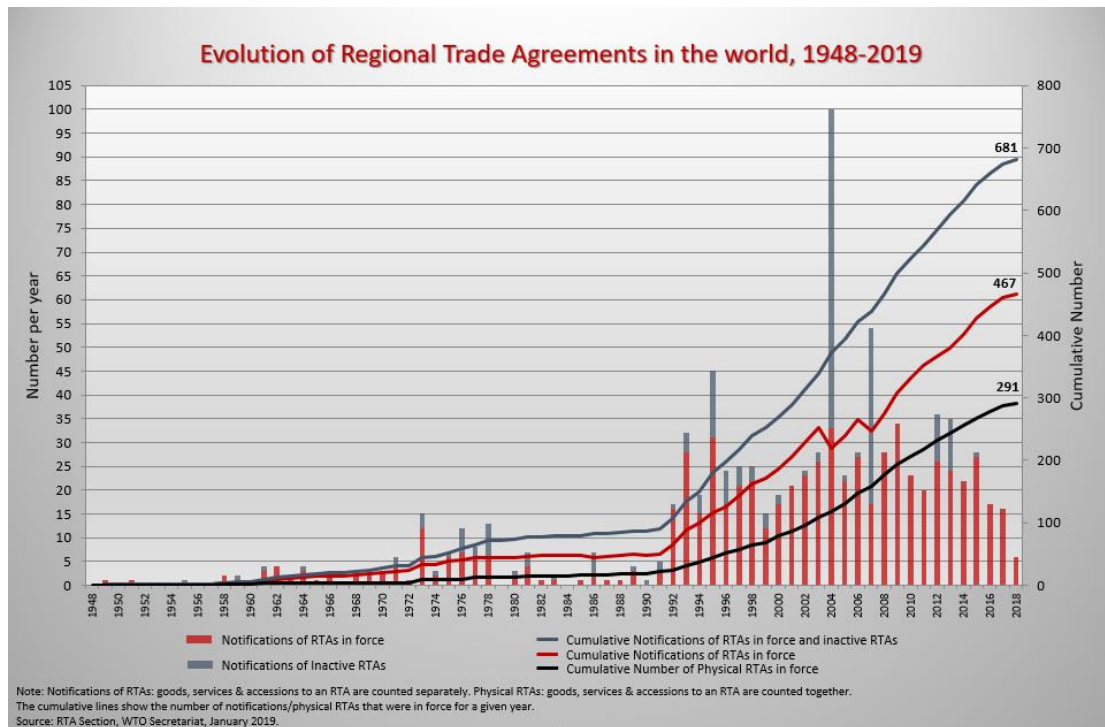


Figure 3.1: Evolution of Regional Trade Agreement in the world, 1948- 2019

Source: World Trade Organisation, (2019, p.1).

In emerging market economies, which show increased trade demands and requirements, and dynamic perspectives of commercial trade, numerous countries globally engage in regional trade arrangements in order to encourage economic growth. While this offers a flexible trade plan, it also functions as a developmental instrument for the nation’s economy (Singh *et al.*, 2018). In Africa, regional integration is a priority objective for both global donor organisations and their governments (Marinov, 2014). African countries enter into agreements with each other through institutional organisations directed by rules, thus boosting national growth through economic integration (Enaifoghe & Asuelime, 2018). The agreed aim of these agreements consists of political, financial, and/or natural dispositions (Enaifoghe & Asuelime, 2018). They are meant to address the mechanics of globalising an economy to ascertain its competitiveness through the greater opportunities that it generates in the global trade field, and are viewed as a possible solution to different economic and political issues in Africa (Marinov, 2014).

Regional Trade Agreements concentrate on specific trade blocs that have common tariffs, tax schemes and business policies, and have common developmental statements. These trade blocs are usually created through trade agreements

between governments of the member states of those trade blocs. It is proposed that regional trade agreements might add to, instead of supersede multilateral rules and advanced multilateral liberalisation. (Bilas & Franc, 2016).

Hence, the main aim of creating trade blocs is for members to assist each other in a centralised manner with clear policies (Rosario, 2015). Explanations for regional economic agreements can be classified as political (peace, national security and helping to develop social and political institutions), and economic (searching for bigger markets, sustainable investments, deeper integration, and as safe strategies for entering more advanced markets (Bilas & Franc, 2016).

Furthermore, Melendez-Ortiz, (2014) points out that the economic importance of regional trade agreements has undergone changes because, while regional trade agreements may have been characterised by global geopolitics in the past, the new trend emphasises commercially significant alliances that address various emerging policy interests (Bilas & Franc, 2016). These days, regional trade agreements are formed around matters of deeper consolidation that promote multinational collective manufacture and global value chains (Bilas & Franc, 2016). Regional integration would aid in interconnecting African countries and facilitate food supply among other things, thus intensifying Africa's position in the global supply chain (Enaifoghe & Asuelime, 2018).

3.5.2 NEW DEVELOPMENTS IN REGIONAL TRADE AGREEMENT

Contrary to just 25 regional trade agreements in Africa, notified to the GATT, there are currently 290 notified RTAs in force globally (Acharya, 2018). Many members of the WTO are continuously involved in negotiations to establish new RTAs, which shows that the quick development of these regional trade agreements since the 1990s would continue (Acharya, 2018; Mishra, 2018). Presently, more than half of all notified RTAs include a commitment towards liberalising trade in services, goods and investment (Acharya, 2018).

Most recent negotiations have been bilateral, but new improvements have been incorporated into negotiations between various members of the WTO (Mishra, 2018). They are: (i) in Asia, between members of the ASEAN and six members of the WTO

with whom the ASEAN has agreements (the Regional Comprehensive Partnership Agreement); (ii) the Asia-Pacific Region for a Comprehensive and Progressive Trans-Pacific Partnership (CPTPP) Agreement, among eleven parties, (iii) Latin America to form the Pacific Alliance between Colombia, Peru, Mexico, Chile and Africa with a Tripartite Agreement among the parties (SADC, COMESA, the EAC and the African Continental Free Trade Agreement) (Mishra, 2018).

Once in force, these plurilateral agreements could lower the disparities in RTAs, particularly if they replace current bilateral agreements and create common regulations to be implemented by the agreement participants (WTO, 2019). In addition, while regional trade agreements are authorised exceptions to multilateral regulations (with over 250 RTAs in 2014, their proliferation has been strengthened by the slow development in the areas of multilateral negotiations on matters relating to trade and the environment, and has raised obstacles for global trade (Acharya, 2018; Martínez-Zarzoso & Oueslati, 2018, p.2).

Furthermore, regional trade agreements can augment trade among parties by liberalising trade in products and services, but this can lead to augmented discrimination against other WTO members as well as against those non-regional trade agreement partners, making global trade complicated for importers and exporters by introducing regulations and rules in matters of standards, rules of origin, trade defence, and so on (Acharya, 2018). There are various regional economic communities in Africa, but only eight are recognized by the African Union, as discussed below.

3.6 REGIONAL ECONOMIC COMMUNITIES IN AFRICA

Post-independence consolidation attempts began in May 1963 in Ethiopia, with the establishment of the Organisation of African Unity (OAU). The charter of the OAU and the Constitutive Act that created the African Union, which was signed on 11 July 2000 in Lomé, Togo, determines the binding philosophical doctrine of African unity (UNECA, 2015). The African Union Abuja agreement of 1991 created the African Economic Community, to offer guidelines, rules, structure, and goals for regional consolidation (AfDB/OECD/UNDP, 2017).

Of the numerous economic arrangements on the continent, it is noteworthy that the AU recognized only eight of the regional economic communities: the East African Community (EAC), five of the North African countries in the Arab Maghreb Union (UMA), the Common Market for Eastern and Southern Africa (COMESA), the Economic Community of West African States (ECOWAS), the Southern African Development Community (SADC), the Community of Sahel-Saharan States (CEN-SAD), Economic Community of Central African States (ECCAS), and the Intergovernmental Authority on Development (IGAD) (AfDB/OECD/UNDP, 2017). To emphasise their importance and strategic contribution in our understanding of the workings of regional economic arrangements in Africa, these RECs are discussed after Figure 3.2 below, which shows Africa's regional trade agreements as of 2019.

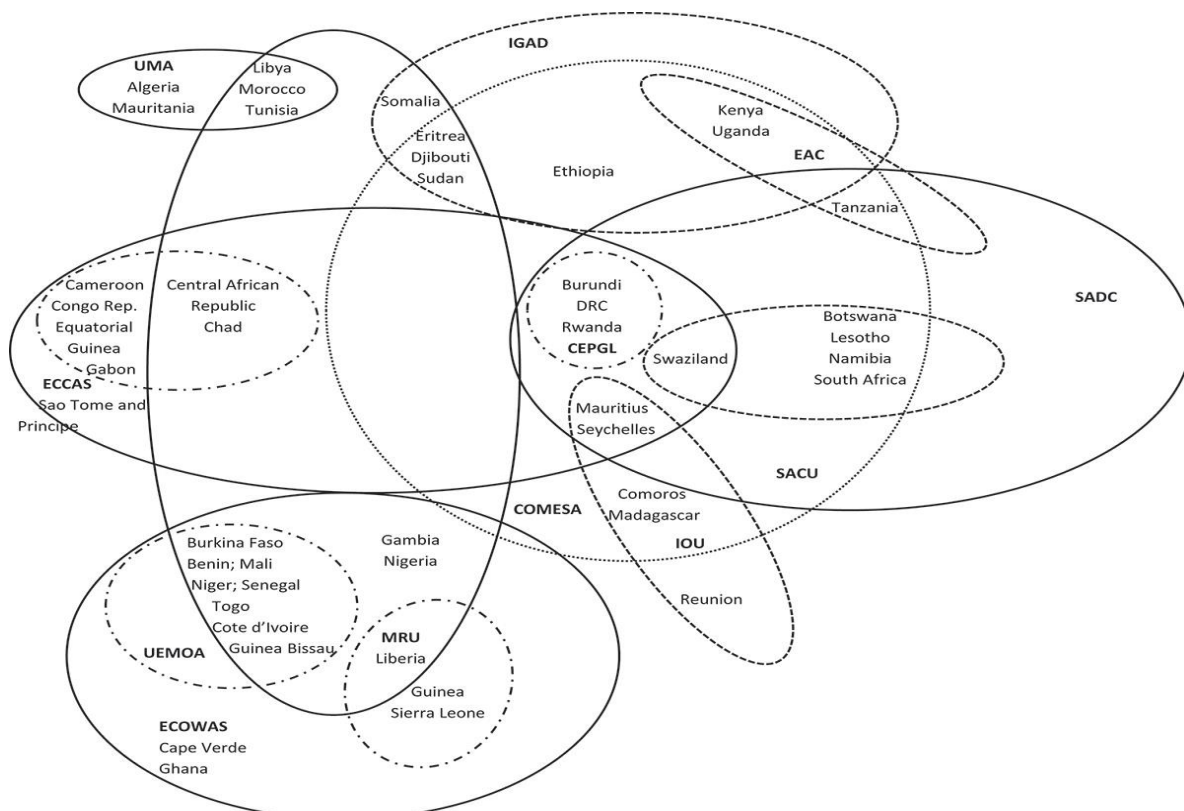


Figure 3.2: Africa's Regional Trade Agreements in 2019

Source: Abrego *et al.*, (2019, p.7)

1) EAST AFRICAN COMMUNITY (EAC)

The East African Community was established in 1967, and after enjoying strong economic development initially, it collapsed in 1977 due to misunderstandings

between its member countries. The main challenge that confronted the EAC then was resource sharing. Nevertheless, the EAC was re-established in July 2000 (Hemingway, 2018). It was created as a customs union in 2005 and is made up of the following countries: Rwanda, Kenya, Burundi, Uganda, Tanzania, and South Sudan (AfDB/OECD/UNDP, 2017; Mauro *et al.*, 2015). South Sudan accomplished its accession to the EAC in 2016, when the country signed the accession treaty (UNECA, 2017, p.37).

In 2010, the EAC created a common market to advance investment, enhance better productive capability, and to intensify development and cooperation among its members (Kakuba & Saidi, 2017). These measures were anticipated to facilitate the free movement of capital, labour, goods, and services. Member countries were committed to eradicating technical, tariff and non-tariff trade barriers, enforce a communal trade policy, and harmonise internal trade regulatory standards (AfDB/OECD/UNDP, 2017). The East African Community Common Market Protocols, which set the rules, is a significant stride towards integration.

In 2015, the EAC became a full force common customs territory, and about 90% of goods that enter the region get to their final destination by crossing borders with no new customs checks, thereby lowering transit duration from Mombasa to Kigali and Kampala (AfDB/OECD/UNDP, 2017, p.88). In 2016, the EAC was regarded as the region with the highest level of integration by the African Regional Integration Index Report that was conducted by the African Union, UNECA and AfDB (AfDB/OECD/UNDP, 2017, p.88; UNECA, 2017). By 2023, the EAC member countries aim to create an EAC Monetary Union (EAMU) (Githuku *et al.*, 2018, p.88).

Nevertheless, trade barriers still prevail in the East African Community such as an inadequate harmonisation of instruments of trade policy, which hinders inter-regional trade. These shortcomings complicate trade logistics and transit delays, as they result into time-consuming border process (Muli & Aduda, 2017). Consequently, in order to effectively galvanise a well-organised common market, the East African Community is required to systematise capital and labour regulations further, and to enact strict competition policies to avert the marginalisation of its members of smaller economies (AfDB/OECD/UNDP, 2017).

2) FIVE NORTH AFRICAN COUNTRIES IN THE ARAB MAGHREB UNION (UMA)

In 1989, five Maghreb countries, consisting of Tunisia, Algeria, Mauritania, Libya, and Morocco, came together to create the Arab Maghreb Union to ease free movement of goods, services, capital and people among its member countries. The move was meant to eradicate non-tariff and tariff trade barriers, and to encourage collaboration and integration between the Arab states of North Africa (AfDB/OECD/UNDP, 2017; Kireyev *et al.*, 2018). However, practical execution has been slow, and the possibility of establishing a free trade area remains obscure (AfDB/OECD/UNDP, 2017; African Union, 2019). Political instability is one of the culprits causing the slow progress made thus far. This has affected countries like Tunisia and Libya, and the spillover effects of political failures have prevented the region from achieving its potential on the integrative agenda (UNECA, 2017). There were also interruptions in UMA initiatives because of strained relationships between Morocco and Algeria over the Western Sahara status, and export data revealed in 2015 that the UMA is among the least integrated of all African communities. The study further indicates that over 90% of exports from the region were sent to non-African countries, while 3.4% were sent to UMA countries (AfDB/OECD/UNDP, 2017, p.87).

3) COMMON MARKET FOR EASTERN AND SOUTHERN AFRICA (COMESA)

COMESA is comprised of 19 countries, namely Burundi, Egypt, Comoros, Djibouti, Democratic Republic of the Congo, Eritrea, Kenya, Madagascar, Ethiopia, Malawi, Libya, Mauritius, Sudan, Rwanda, Uganda, Seychelles, Zimbabwe, Swaziland and Zambia. This regional economic arrangement spans the Eastern, Northern and Southern Africa regions (Jordaan, 2014; AfDB/OECD/UNDP, 2017). COMESA was meant to transform into a common market in 1994, but six years later, eight of its member states agreed to establish a free trade area, with Kenya and Burundi joining them in 2004 (AfDB/OECD/UNDP, 2017, p.87). Efforts to establish a customs union in 2009 collapsed due to the fact that some of its members had not allied their tariff programmes with their communal external tariff. Nevertheless, their initiatives consist of enforcing a COMESA Virtual Trade Facilitation System

(CVFTS), harmonisation of transport standards and regulations, an insurance scheme, and a regional customs bond guarantee system (AfDB/OECD/UNDP, 2017, p.87). However, despite these numerous initiatives, the considerable distances between member countries hinder notable progress on the trade and investment frontiers. For instance, COMESA was regarded as a region with low levels of integration by the African Regional Integration Index Report conducted by the African Union, the United Nations Economic Commission for Africa, and the African Development Bank (AfDB/OECD/UNDP, 2017, p.88; UNECA, 2017). In 2015, over 80% of COMESA exports were directed to non-African states, while a mere 11% of exports stays in the region (AfDB/OECD/UNDP, 2017, p.87).

4) ECONOMIC COMMUNITY OF WEST AFRICAN STATES (ECOWAS)

In 1975, ECOWAS was established and is composed of 15 member states: Benin, Côte d'Ivoire, Burkina Faso, Gambia, Cape Verde, Ghana, Sierra Leone, Liberia, Nigeria, Mali, Guinea, Niger, Guinea Bissau, Senegal and Togo (Jordaan, 2014; Shuaibu 2015, p.84). When ECOWAS was created, it was focused on improving the standard of living of its members through economic collaboration. Later, ECOWAS acknowledged the inextricable connection between economic growth, governance, and peace (AfDB/OECD/UNDP, 2017; African Union, 2019). It approved a security mandate to assist in handling conflicts among its members, which led to the creation of Economic Community of West African States Monitoring Group (AfDB/OECD/UNDP, 2017).

To achieve a respectable level of economic integration, ECOWAS approved a communal external tariff that became effectual in January 2015. The approval of the common external tariff was considered essential to decrease loss of revenue that could develop from competing with external tariff rates among member countries. Having a communal tariff helped the region reduce the complexities related to the requirements of the rules of origin, while assisting to protect some emerging industrial sectors (UNECA, 2017, p.38). Approximately 12% of its exports in 2015 went to its member states, 6% went to African countries outside the group, and 80% went outside the continent of Africa. ECOWAS has been recognized as the top-ranked regional economic community for easing the free

movement of individuals across borders; and the region was ranked third in the 2016 African Regional Integration Index (AfDB/OECD/UNDP, 2017, p.88; UNECA, 2017). Finally, weak execution capability is identified as a major factor that hinders progress in numerous ECOWAS regional integration strategies (AfDB/OECD/UNDP, 2017; African Union, 2019).

5) SOUTHERN AFRICAN DEVELOPMENT COMMUNITY (SADC)

SADC was created in 1992 (Mapuva, 2014). It comprises the following countries: Botswana, Lesotho, Angola, Democratic Republic of the Congo, Madagascar, Mozambique, Malawi, Namibia, Mauritius, Seychelles, Swaziland, Zambia, South Africa, Zimbabwe, and Tanzania (Jordaan, 2014; African Union, 2019). It is ranked in second place as the most integrated regional economic community in Africa by the African Regional Integration Index Report conducted in 2016 by the African Union, UNECA, and the African Development Bank (UNECA, 2017). In 2008, its member states declared a free trade area through continuous elimination of duties (AfDB/OECD/UNDP, 2017, p.88), and by 2012, 98% of duties on tariffs had been eradicated. This conduct attempted to further boost the liberalisation of intra-regional trade in products and services in the region (African Union, 2019, p.128).

The objectives of SADC are to boost social and economic growth through collaboration and economic integration, achieve monetary growth, and to advance and better the living standards of the overall populace of Southern Africa (Mapuva, 2014). Its other goals include propelling fundamental political value structures, advancing and ascertaining security and peace, building up and connecting with longstanding historic ties, and promoting cultural and social affinity links between the overall populace of the group (Enaifoghe & Asuelime, 2018). Hence, in April 2015, at the SADC Extraordinary Summit of Heads of State and Government, its members authorised the Southern African Development Community industrialisation scheme and road map 2015-2063 (AfDB/OECD/UNDP, 2017, p.88).

Notwithstanding its accomplishments, the Southern African Development Community has also encountered challenges. One of these consists of setting overambitious goals as a road map to regional economic integration (Mapuva, 2014). Another major challenge of the regional arrangement is that most of its member countries belong to

other regional trade blocs (African Union, 2019). This multiple membership of various regional communities poses a challenge of policy coherence as it hinders effective policy execution. A good example is the duplication emerging from the actions of SADC and SACU, which have compounded the application of the rules of origin. Furthermore, there is evidence of uneven economic environs due to the heterogeneity of the Southern African Development Community economies, as its member countries have diverse levels of economic growth. Moreover, the Southern African Development Community Tribunal has not rendered assistance in matters of justice or functioned as an integrative programme for member countries (Mapuva, 2014).

Another challenge is the incidence of xenophobic assault in South Africa, which has had a negative impact on the advancement of economic growth in the region. These assaults are committed by black South Africans who assault black non-South Africans from various parts of the continent, particularly from other South African Development Community countries, including Zimbabwe and Mozambique (Enaifoghe & Asuelime, 2018). These barbaric acts negate the goals of member countries, which are to encourage long-standing historic ties, collective and social likenesses, and establish relationships among the general populace of the region. They contravene the tenets of the Southern African Development Community (Enaifoghe & Asuelime, 2018).

Though SADAC attained a free trade area in August 2008 as anticipated, it did not create a customs union by 2010 as expected (Júnior, 2018). In the course of the 2015 Extraordinary Summit, SADAC discussed about a target date to transform the organisation to a customs union in the entire SADC region. However, this is yet to be realised (Enaifoghe & Asuelime, 2018).

6) COMMUNITY OF SAHEL-SAHARAN STATES (CEN-SAD)

In February 1998, the CEN-SAD was created, and two years later was recognized by the African Union as a Regional Economic Community (AfDB/OECD/UNDP, 2017). It comprises countries mainly in the Northern and Western parts of Africa, and some countries in Eastern and Central Africa. They are: Benin, Burkina Faso, Central African Republic, Chad, Comoros, Djibouti, Egypt, Eritrea, Gambia, Ghana,

Ivory Coast, Kenya, Liberia, Libya, Mauritania, Guinea, Guinea-Bissau, Morocco, Mali, Nigeria, Niger, Sierra Leone, Senegal, Somalia, Sudan, Togo and Tunisia (Jordaan, 2014). It is important to point out that the arrangement has remained moribund since its inception.

However, the political leaders of member countries came together to revive CEN-SAD in 2013, focusing on sustainable growth, infrastructure and regional security as priorities (African Union, 2019). Member states have often pointed out their seriousness towards regional integration through free trade areas and harmonisation of policy. However, there has been little success to show for the efforts. Their progress has been slow due to political imbalance in some member states, particularly in the northern parts, and because member countries are also committed to other regional alliances (AfDB/OECD/UNDP, 2017; African Union, 2019).

The Community of Sahel-Saharan States was recorded by the African Regional Integration Index in 2016 to have the least overall ranking, with notably low scores in the production and infrastructure aspects of integration, as well as in trade. For example, the CEN-SAD intra-regional exports were just 10% of their overall value in 2015, and its entire exports within Africa were 15%, while exports outside of Africa were 85% (AfDB/OECD/UNDP, 2017, p.89).

Despite its low development in some facets of integration, CEN-SAD is one of the top five regions with the lowest degree of restraint on free movement of individuals (AfDB/OECD/UNDP, 2017; African Union, 2019). Nonetheless, it has been argued that this success might be due to the elimination of travel restraints in regional economic communities that have overlapping memberships with the CEN-SAD (UNCEA, 2017).

7) ECONOMIC COMMUNITY OF CENTRAL AFRICAN STATES (ECCAS)

The ECCAS was formed on the 18 October 1983 and consists of the following member countries: Angola, Central African Republic, Burundi, Chad, Equatorial Guinea, Cameroon, Democratic Republic of the Congo, Republic of Congo, Gabon, and São Tomé and Príncipe (Jordaan, 2014; African Union, 2019). The ECCAS has suffered weak advancement because of prolonged disputes in the

Great Lakes area, especially in the Democratic Republic of Congo, that have grossly affected Rwanda and Angola (two strong member countries) (AfDB/OECD/UNDP, 2017). The revitalised ECCAS now concentrates on eliminating customs duties and promoting free movement of people, as well as advancing the formation of communal external tariffs, harmonising governmental policies, and other enterprises to promote collaboration among member states (AfDB/OECD/UNDP, 2017).

Furthermore, the Central African Economic and Monetary Community members within the CEN-SAD group have created visa-free travel, while the ECCAS member states need visas to travel within the region (AfDB/OECD/UNDP, 2017, p.89; African Union, 2019, p.45). Even so, the region enables trade among member states through methods such as one-stop border posts (UNECA, 2017).

8) INTERGOVERNMENTAL AUTHORITY ON DEVELOPMENT (IGAD)

IGAD was created in 1986 to address drought and geological process in Africa. It consists of the following countries: Djibouti, Eritrea, Ethiopia, Kenya, Sudan, Somalia, Sudan, Tanzania, and Uganda (Jordaan, 2014; African Union, 2019). As a result of poor advancement on its strategic objectives, its goals on regional economic integration were refocused in 1996 to coordinate sectoral and macro-economic policies. The new brief included food safety guarantees, environmental security, and ease of movement across the borders of member countries for products and services. It was also decided that the regional arrangements would focus on the harmonisation of infrastructural investments, and encourage the COMESA goals and those of other African regional economic communities (African Union, 2019).

The regional trade bloc aimed at market integration by practically involving the private sector, which led to the formation of the Intergovernmental Authority on Development. In 2010, its business forum was revived (this initiative utilises member countries' Chambers of Commerce to advance regional integration proposals). In addition, the Intergovernmental Authority on Development has prioritised the eradication of cross border restraints by concentrating on developing inter-state communication and transportation systems (AfDB/OECD/UNDP, 2017).

In 2016, the African Regional Integration Index ranked the Intergovernmental Authority on Development as best in the area of infrastructure. Regarding trade in 2015, over 12% of the Intergovernmental Authority on Development exports were sent to the regional group members, 26% of its exports remained in Africa, and 74% of their exports were sent to countries outside Africa. Furthermore, although the Intergovernmental Authority on Development agreement emphasises free movement of people, there is not any protocol in this regard; member states such as Uganda, Ethiopia, Djibouti, Kenya and Uganda have their own bilateral free movement accords (AfDB/OECD/UNDP, 2017, p.89; African Union, 2019, p.84).

Figure 3.3 below differentiates the four most favoured nation's (MFN) tariff features for the eight main RECs on the African continent. (i) the regional economic community with the second-lowest amount of 'nuisance' tariffs and the highest lines, at zero, is the SADC (between 0% and 10%). SADC also possesses the least simple average tariff, (ii) IGAD and UMA, both with stalled Free Trade areas, has the highest and second-highest proportion of MFN tariffs (over 10%). (iii) ECOWAS has the greatest amount of nuisance tariffs as well as the least amount of MFN tariffs at zero (Stuart, 2017).

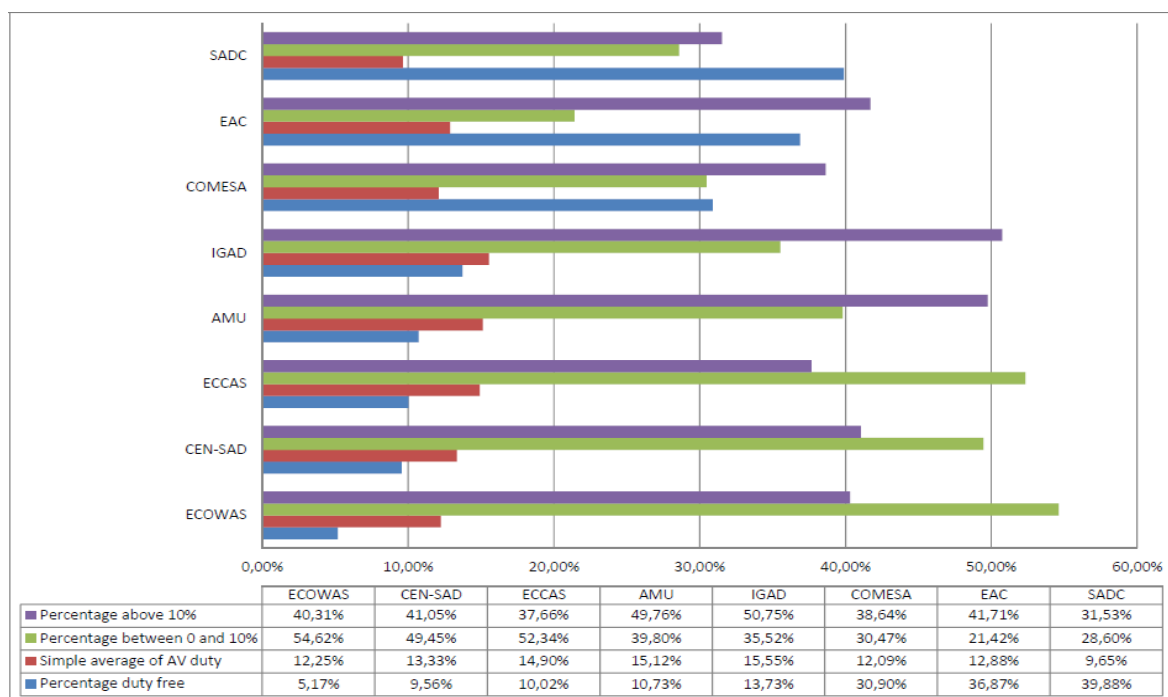


Figure 3.3: Regional Economic Communities Graded by the Proportion of their Duty-Free MFN Tariff

Source: Stuart, (2017, p.4).

Despite the great aspirations displayed at starting efforts towards trade liberalisation (both preferential and multilateral), the outcomes of such attempts have been weakened by exclusions, exceptions and sensitivities reflected in these agreements and as appraised in the negotiations. Though such sensitivities are required to reflect, for instance, economic size differences, such exceptions regarding developing countries' Free Trade Agreements, such as the Continental Free Trade Agreement, can have unintentional consequences of sabotaging trade liberalisation (UNCTAD, 2016).

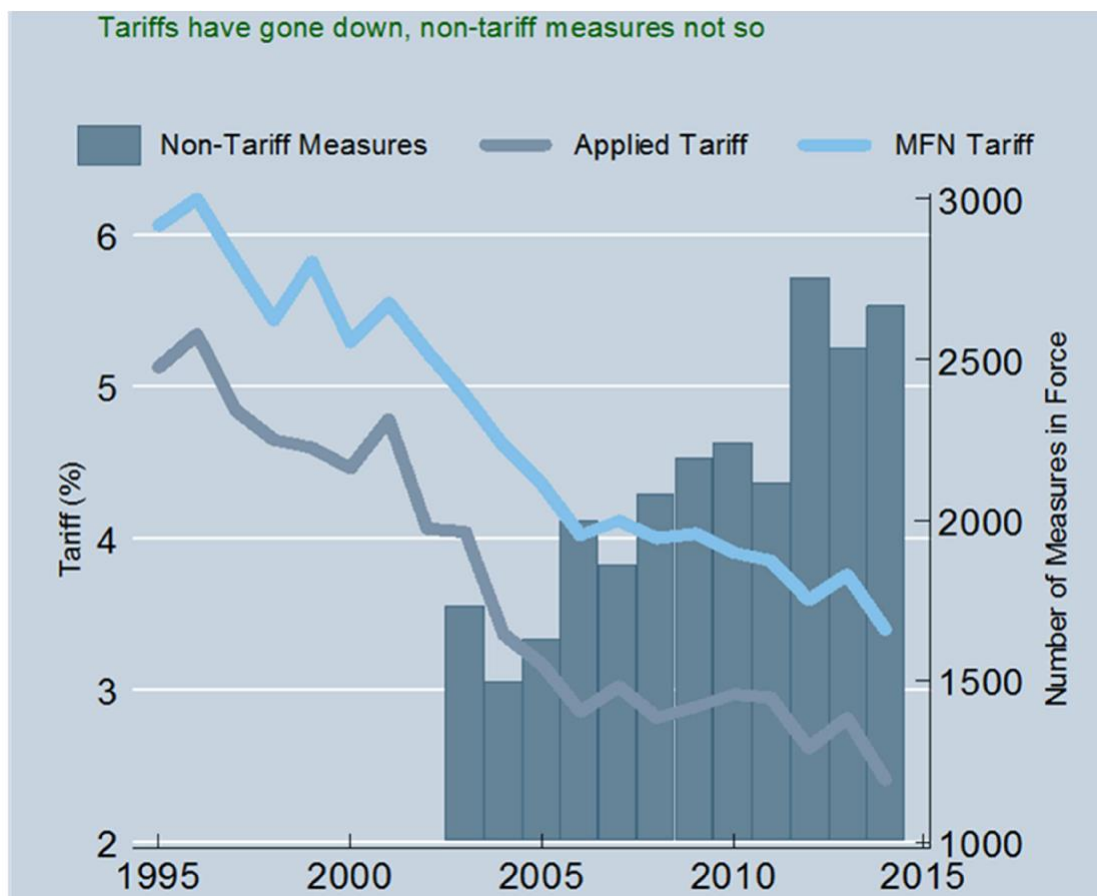


Figure 3.4: Trends in Tariffs versus Non-Tariff Measures
Source: UNCTAD, (2016, p.6).

It is also significant that the African continent has huge possibilities for augmenting the degree of intra-African trade within the RECs and in Africa in general (Mishra, 2018).

3.7 SOME INTRA-AFRICAN TRADE AND INVESTMENT INITIATIVES

Various African initiatives have embraced the goal of accelerating the procedure towards regional integration in recent years. They are:

I. NEW PARTNERSHIP FOR AFRICA'S DEVELOPMENT (NEPAD)

The Heads of State and Government Implementation Committee created NEPAD on the 23 October 2001 (Augustine & Abugu, 2018, p.58). The NEPAD plan originated from two initiatives: the Millennium Partnership for Africa's Recovery Programme (MARP), and from the Omega Plan of the then President of Senegal, Abdoulaye Wade (Badiru, 2016). It is a commitment made by African leaders on the basis of having a common vision and strong belief that they are responsible for eradicating poverty and to (jointly and individually) place their various countries on the path towards sustainable economic development and growth, and also actively partake in the global economy and the body politic (Hamad & Kitigwa, 2016). It renders an extensive integrated development scheme that would create a holistic social and economic development for the African continent. The purpose of the NEPAD is to change the relations Africa has with its development associates and to substitute the ineffectual sponsorship and tied aid received from Africa's northern associates (Mishra, 2018).

II. BOOSTING INTRA-AFRICAN TRADE (BITA)

In January 2011, the Heads of State and Government Summit of the African Union, agreed that the next summit to be held in 2012 would be themed "boosting Intra-African trade", to intensify integration of the African market and significantly augment intra-African trade volumes (Mishra, 2018). Boosting intra-African trade is a structure for regional economic growth that concentrated on enlarging the degree of intra-African trade and investment between 2012 and 2022, tackle the present restrictions, and encourage sustainable growth and development (Parshotam, 2018). A strategy was drafted to improve intra-African trade levels from its then present levels of 10%-13% to 25% or above, over the following ten years (Mishra, 2018, p.11). Thus, the BIAT programme defined several priority areas of action, such as: factor market

integration, trade policy, trade finance, production capacities, trade facilitation, infrastructure related to trade, and trade information (Hoekman & Njinkeu, 2017).

III. TRIPARTITE FREE TRADE AREA (TFTA)

On 10 June 2015 in Sharm El Sheikh, Egypt, the heads of state and governments of COMESA-EAC-SADC launched the Tripartite Free Trade Area (TFTA). This was to advance Africa's journey in attaining regional integration (Mishra, 2018, p.12). In 2005, the TFTA began negotiations that were anticipated to be enforced in 2016 and involved 26 countries (Walters *et al.*, 2016, p.3). It proposed a joint action plan among various heterogeneous countries by consolidating three divergent preferential trade plans into an integrated system. When completely enforced, the TFTA is anticipated to establish a larger marketplace with 626 million consumers and an emergent middle class (Mishra, 2018, p.12).

The TFTA is aimed at coordinating and improving regional trade agreements and programmes that would result in an African Economic Community achievement or realisation (Parshotam, 2018). It involves the advancement of trade facilitation to promote the reduction in cost of products, the joint formulation and implementation of infrastructural plans, and ensuring that business individuals move freely within the area. Furthermore, the TFTA tackles the problem of overlapping membership among these three Regional Economic Communities (Walters *et al.*, 2016).

IV. RELAXING VISA RULES

Some countries in Africa such as Ghana, Kenya, Namibia, Niger, and the Seychelles have done well in relaxing visa rules and issuing visas to individuals on arrival (AfDB, 2016). Though the African Union has established an electronic pan-African passport, presently, its availability is limited to only a few government functionaries (Mishra, 2018). African countries are required to establish easy ways of obtaining visas and decrease flight costs, lower airport fees and taxes, and enable liberalisation of air transport networks to aid travel across Africa (AfDB, 2016; AfDB/OECD/UNDP, 2017).

V. AFRICAN CONTINENTAL FREE TRADE AREA

In June 2015, the African Continental Free Trade Area negotiations were established by the heads of state and governments of the African Union. Towards the end of 2017, the negotiations intensified, accomplishing the draft of the agreement (African Union, 2017, p.5). On the 21 March 2018, 44 out of 55 African Union members signed the African Continental Free Trade Area (AfCFTA) agreement in Kigali, Rwanda (Draper *et al.*, 2018; Mishra, 2018). The basis of this agreement was that members would remove tariffs of trade within Africa by a minimum of 90%, with the choice of protecting 10%, permitting them to protect their domestic manufacturing and industrial policies (Mishra, 2018, p.3; Odijie, 2018, p.187).

The aim of this organisation was to ensure that by 2019, a continental customs union would be attained, which would enhance the creation of a communal market sometime in 2023, and ultimately result in the creation of a monetary and economic union by 2034 (Hoekman *et al.*, 2017). The agreement was not initially signed by Benin, Botswana, Burundi, Eritrea, Guinea-Bissau, Leone, Lesotho, Nigeria, Namibia, Sierra Leone, and South Africa (Dabrowski, & Myachenkova, 2018; Odijie, 2018; Parshotam, 2018). Although South African representatives stated that they did not sign because of technical and legal reasons, the Nigerian president stated that Nigerian representatives declined to sign initially due to fears that the free trade could weaken domestic business enterprises (Odijie, 2018).

The African Continental Free Trade Area is the first and only agreement to date in which 54 African countries were brought together under a single Free Trade Area, focusing on establishing a common market for services, products and investment and enabling free movement of individuals (Parshotam, 2018). Presently, various institutions are established to manage the execution of the African Continental Free Trade Area, such as a Council of Trade Ministers, a Secretariat, a senior trade functionaries committee, a council of African Union heads of state and governments, a body for dispute settlement, and committees for attending to several other issues (Odijie, 2018).

In a progressively globalised world, the African Continental Free Trade Area offers great possibilities for countries in Africa (United Nations Conference on Trade and

Development, 2015). This is because the removal of tariffs on products and services would assist in promoting economic development of African countries, reshape their economies and attain their sustainable developmental objectives (AU, 2017; Saygili *et al.*, 2018). The Tripartite Free Trade Area also complements the objectives of the African Continental Free Trade Area because it concentrates on the supply-side restraints to intra-African trade, while the African Continental Free Trade Area is tasked with handling market entry and demand-side restraints (Parshotam, 2018).

3.8 CONCLUSION

Numerous challenges still prevail, although some studies have detailed the perceived gains from establishing regional consolidation such as technology transfer, large markets, better allocation of resources, high living standards, new trade opportunities, and a host of other related benefits (AfDB/OECD/UNDP, 2017, Jordaan, 2014; UNECA, 2015). Studies also show that regional integration has resulted in substandard macroeconomic strategies and diverse rules and regulations (Standaert & Rayp, 2016).

Therefore, a critical demand for regional integration is to advance or improve its coordination and declaration of political will to enforce all that has been agreed on. This is essentially because aside from the deficiencies in funding and goals, it is the lack of factual measures that impede the progress of the RECs. For example, the harmonisation of common exterior tariffs between the West African Economic and Monetary Union and ECOWAS was postponed (Enaifoghe & Asuelime, 2018).

CHAPTER 4

METHODOLOGY

4.1 INTRODUCTION

In the previous chapter, the researcher focused on analysing regional integration as well as regional economic communities, and how they have impacted so far on the level of intra-regional trade and investment. The chapter also examined some intra-African trade initiatives that have been established over the years in attempting to boost African trade. Chapter 4 focuses on analysing the models and model estimations used in the study, the data gathered, and the methodology applied.

4.2 THEORETICAL FRAMEWORK

This research utilised endogenous variables such as economic growth, investment, technological progress, research and development, and institutional quality. Endogenous variables are variables that are explained by using models, and also double as the output of the models. Models try to display how exogenous variables are affected by endogenous variables in a statistical manner (Mankiw, 2010). The applications of these models are analysed using the Solow growth model and the Cobb-Douglas production function.

4.2.1 THE MODELS

This thesis made use of the Solow growth model and the Cobb Douglas production function. A significant model of economic endogenous growth is referred to as the Solow-Swan growth model, proposed in 1956 (Munguía *et al.*, 2019). Solow suggests that when studying economic growth, the researcher must begin by presuming a standard neoclassic production function that has diminishing marginal returns to capital. The exogenous variables should be the population growth and rates of saving, as these variables help to ascertain the degree of stability of income per capita (Mankiw *et al.*, 1992). This model attempts to explain the dynamics of economic growth in the long run, due to investment capital and population growth, which is assumed to grow at the same rate as the labour force. The Solow-Swan growth model

has a single non-linear ordinary differential equation that is known to model the process of per capita stock of capital (Munguía *et al.*, 2019).

Various methods have been employed in carrying out the parametric findings for the Solow growth model. For instance, Dwan and Gerdes (1997) utilised the stochastic frontier production function to simultaneously approximate the collective technical effectiveness with other production variables for firms in the United States, from 1970 to 1989. The findings showed a significant decrease in technological indices for that period (Munguía *et al.*, 2019). Balistreri, *et al.*, (2003) exploited time series to estimate in a consistent manner the economy of the United States, with a total set of capital-labour substitution elasticities. Their findings disclosed the existence of an aggregation bias and proposed a rethink on averaging techniques in flexible aggregation models (Munguía *et al.*, 2019).

The Cobb-Douglas function is a special form of production function that meets the demands of the Solow growth model (Munguía *et al.*, 2019). An article published by Charles Cobb and Paul Douglas in 1928, proposed that production results from capital and labour (Rahim *et al.*, 2019). The function is formulated as:

$$Q(L, K) = AL^\alpha K^\beta \quad (1)$$

where:

Q signifies total production,

L signifies labour input and

K signifies capital input.

A signifies total factor productivity

β and α signify the output elasticities of labour and capital, respectively (Dritsaki & Stamatou, 2018).

4.2.2 MODEL ESTIMATIONS

The capital accumulation equation is an applicable equation of the Solow model given by:

$$K = \frac{\partial K}{\partial t} = I - \partial K \quad (2)$$

Where:

K signifies the total capital over a time period,

$I \in (0, 1)$ signifies total investment in capital formation over that time period, and

∂K represents the depreciating rate of existing capital.

The model assumes that all savings are invested in capital formation (Munguía *et al.*, 2019).

Hence, $S = I$, where S signifies savings, and:

$$S = sY \quad (3)$$

Where:

Y represents the economic output and

$s \in (0, 1)$ represents the saving rate.

When equation (3) is substituted into equation (2), the rate of change of capital is stated as a ratio of the economy's output in terms of saving:

$$K = sY - \partial K \quad (4)$$

Production function $Y = F(.,.)$ associates the amounts of physical output of a production activity to the amounts of production factors. The aggregate of production functions in macroeconomics can be approximated to establish a structure, where one can differentiate the amount of economic growth that can be accredited to the accumulation of physical capital, and the amount that should be attributed to technological advancement and labour. The Solow model presumes that a production

function $F(L, K)$ that is dependent on labour L and capital K , would present constant returns to scale, which implies that: $F(\lambda L, \lambda K) = \lambda F(L, K)$ (Solow, 1956).

The Solow model also has additional assumptions regarding the production function that are significant for the model to be successful. Even though they are viewed as difficult to execute, they are made use of in order to simplify the execution process, especially given the specific trade and growth imperatives of the study (Munguía *et al.*, 2019).

Assuming constant returns to scale means that the production function can be written in intensive form or in per capita terms:

$$Y = LF\left(\frac{K}{L}, \frac{L}{L}\right) \quad (5)$$

Let:

$k = \frac{K}{L}$; $y = \frac{Y}{L}$; Then $y = f(k) = F(k, 1)$, hence only capital-intensive k matters for production.

The other assumption is that INADA conditions hold

$$\lim_{k \rightarrow 0} F_k = \lim_{L \rightarrow 0} F_L = \infty \quad (6)$$

$$\lim_{k \rightarrow \infty} F_k = \lim_{L \rightarrow \infty} F_L = 0 \quad (7)$$

where, $F_k = \frac{\partial F}{\partial K}$, $F_L = \frac{\partial F}{\partial L}$

Following from (4), substituting for the fixed savings rate, and assuming labour grows at a constant rate $n = L/L$

$$\dot{K} = sY - \partial k \Rightarrow \frac{\dot{K}}{L} = sf(k) - \partial k \quad (8)$$

$$\text{Substituting for } \dot{k} = \frac{\dot{K}}{L} - nk; \quad \dot{k} = sf(k) - (n + \partial)k \quad (9)$$

The Solow growth model postulates that economies grow until they reach a steady state at which they are incapable of growing due to the diminishing marginal product

of capital. At the steady state, $\dot{k}=0$. There is no growth in production per capita. Technological progress is assumed to be exogenous to the model.

However, endogenous growth models postulate that economies that are capable of growing post-steady state, are able to do so because of advances in technological progress. Technological progress is assumed to be labour augmenting, thereby enhancing efficiency of labour. Such technological progress is achieved through research and development. These theoretical frameworks guide the selection of variables for model specification and estimation. Variables such as economic growth, gross fixed capital formation, technological progress and labour are selected to be part of the model, based on the Solow and endogenous growth models. Again, from a national income accounting point of view exports and imports are part and parcel of economic growth through net exports. These variables are supplemented by intra-African trade variables and measures of multilateral trade agreements, both tariff and non-tariff measures.

4.3 DATA

In accordance with the theoretical framework, data from the World Bank and the United Nations Conference on Trade and Development (UNCTAD) were used in this study, employing annual data from the year 2000 to 2018. The sources and definitions of the variables are detailed in Table 4.1. The same variables were used for both the SADC and ECOWAS regions. The dependent variable, intra-African trade, is measured by the level of openness of each country to trade in Africa. This is computed as the sum of exports from each country to Africa, and imports from Africa to each country as a ratio to GDP (World Bank, 2018).

A key aspect of trade that multilateral agreement relates to are tariff and non-tariff measures. Thus, in this study, the role of multilateral agreement is captured by the variables that measure both tariff and non-tariff agreements (Yilmazkuday & Yilmazkuday, 2014; Gnanon, 2018). Consistent with the existing literature, tariff measures are represented by the applied tariffs of the most favoured nations, while non-tariff measures are captured by export and import trade cost. Export trade cost is a composite variable created by a combination of the export costs of border and documentary compliance. Similarly, import trade cost is a composite variable created

by the combination of import costs from border compliance and documentary compliance (UNCTAD, 2018). The estimation includes non-tariff measures and uses data from 2014 to 2018, due to data limitations. Economic growth is represented by annual percentage growth in GDP (World Bank, 2018). In line with growth theory, investment is measured as gross fixed capital formation as a percentage of GDP, while labour force is measured by the level of employment as a ratio to the total population (ILO estimate) of economically active people 15 years and above (Solow, 1956; World Bank, 2018). Technological progress is measured as the number of mobile phone subscriptions per 100 people. Table 4.1 below introduces the sources and gives a definition of the variables.

Table 4.1: Sources and definition of variables

	Variable	Source	Definition
<i>iAt</i>	Intra African trade	UNCTAD	Exports and imports to and from Africa as a ratio to gross domestic product.
<i>apptar_mfn</i>	Applied tariffs, most favoured nation	UNCTAD	Simple mean most favoured nation tariff rates, which is the unweighted average of most favoured nation rates for all products subject to tariffs calculated for all traded goods.
<i>exptrcosts</i>	Export trade costs	UNCTAD	Composite variable combining border compliance and documentary compliance costs for exports.
<i>imptrcosts</i>	Import trade costs	UNCTAD	Composite variable combining border compliance and documentary compliance costs for imports.
<i>tech</i>	Technology	World Bank	Number of phone lines per 100 people.
<i>gfcf</i>	Investment	World Bank	Gross fixed capital formation as a percentage of GDP.
<i>emp</i>	Labour	World Bank	Employment to population ratio of people 15 years and older.

Source: Author's compilation from various sources

4.4 ESTIMATION TECHNIQUE

The methodology for this study is categorised into three stages. First, the panel data characteristics of the dataset are explored. This informs the type of model to be specified and the empirical approach to be used to estimate the dataset. The second phase involves the estimation of the dataset, which is determined by the panel data

characteristics of the dataset, and the third phase employs checks and balances to authenticate the validity and reliability of the results obtained.

4.4.1 CHARACTERISTICS OF THE DATASET

Exploration of the characteristics of the dataset involves two phases. The first phase explores the time series trends in the dataset. This includes a visual inspection of the relationship between intra-African trade and multilateral agreement using a scatter diagram, descriptive statistics, and pairwise correlation analysis of all the variables in this study. The scatter diagram gives us an initial impression of how the two key variables in this study, intra-African trade and multilateral agreement, trend together. The focus of the descriptive statistics is on the mean, minimum and maximum levels of each variable, and an understanding of what drives such trends. Cross-correlation analysis reveals the direction and strength of the relationship between intra-African trade and multilateral agreement as well as the other variables, and how consistent that is with the expectations of the theoretical framework. A positive correlation would imply a direct relationship between variables, while a negative correlation implies an inverse relationship. The strength of the relationship is depicted by the absolute value of the magnitude of the correlation coefficient. The outcome of this first phase informs our *a priori* expectations in terms of how the variables are likely to relate to each other in the specified model.

The second phase explores the panel data characteristics of the dataset. In this second phase, we establish whether it is necessary to control for individual country characteristics or any time-specific experiences unique to any of the countries in the dataset. Although the countries in the datasets used in this study belong to two Regional Economic Communities (RECs), each of the countries has individual characteristics that are not common to the rest of the sample. These country-specific experiences may also have happened at specific times. In addition, spillover effects of domestic and external shocks, cross border trade, common cultural and religious practices and the implementation of regional protocols, empirically create interdependencies between the countries in each REC. Empirically, this translates into cross-sectional dependence of the error term, which has to be controlled for in the estimation process (Baltagi, 2009). Furthermore, consistent with panel data econometric models, is the issue of endogeneity. Endogeneity emanates from

simultaneity or omitted variable bias, or the measurement errors in variables used (Baltagi, 2009). This leads to multicollinearity between the lag of the dependent variable on the right-hand side of the model, or other independent variables, and the fixed effect error term, or the idiosyncratic error term. This also must be tested and controlled for in the estimation of the dataset.

4.4.2 MODEL SPECIFICATION AND ESTIMATION TECHNIQUE

There are two types of models in panel data econometrics: one-way or two-way error component models. A one-way error component model is used only if country-specific or time-specific effects are valid, but not both.

Assume a basic dynamic panel model as in (1)

$$Y_{it} = \delta Y_{it_1} + \beta' X'_{it} + \varepsilon_{it} \quad (10)$$

where Y_{it} is an $NT \times 1$ vector of dependent and endogenous variables, X'_{it} represents an $NT \times k$ vector of independent variables other than the lag of the dependent variable, β denotes a $k \times m$ vector of slope coefficients and ε_{it} the error term (Baltagi, 2009).

In cases where only country-specific effects are valid, the error term takes the form

$$\varepsilon_{it} = \mu_i + v_{it} \quad (11)$$

where μ_i represents country-specific effects and v_{it} the idiosyncratic error term.

In cases where only time-specific effects are valid, the error term takes the form

$$\varepsilon_{it} = \lambda_t + v_{it} \quad (12)$$

where λ_t represents time-specific effects (Baltagi, 2009). If both individual effects are valid, requiring the specification of a two-way error component model, the error term takes the form

$$\varepsilon_{it} = \mu_i + \lambda_t + v_{it} \quad (13)$$

Initial diagnostic tests that explore the panel data characteristics of the dataset determine the type of model to be specified. The results of these initial diagnostic tests also determine which characteristics of the dataset need to be controlled for, and consequently, which estimation technique should be applied to estimate the dataset. Each estimation approach has further checks and balances in place to ensure that no assumptions of the classical linear regression model have been violated in the estimation process, e.g. serial correlation and heteroscedasticity.

4.4.3 POST-ESTIMATION DIAGNOSTICS

There are checks and balances in each estimation approach to establish whether the results are robust and acceptable. These are further explained based on which estimation approaches were used to estimate the dataset.

4.5 SADC REGION: DATA AND STYLIZED FACTS

SADC was formed in 1992 (Mapuva, 2014), and comprises of the following countries: Botswana, Lesotho, Angola, Democratic Republic of the Congo, Madagascar, Mozambique, Malawi, Namibia, Mauritius, Seychelles, Swaziland, Zambia, South Africa, Zimbabwe, and Tanzania (Jordaan, 2014; African Union, 2019). The objectives for the creation of SADAC was to boost socioeconomic growth and political alliance through collaboration and economic integration, achieve monetary growth, and to advance better living standards of the overall populace of Southern Africa (Mapuva, 2014). Other goals include propelling fundamental political value structures, advancing and ascertaining security and peace, building up and connecting with longstanding historic ties, and promoting cultural and social affinity links between the overall populace of the group (Enaifoghe & Asuelime, 2018).

In 2008, its member states declared a free trade area through continuous elimination of duties (AfDB/OECD/UNDP, 2017, p.88), and by 2012, 98% of duties on tariffs had been eradicated. This conduct attempted to further boost the liberalisation of intra-regional trade in products and services in the region (African Union, 2019, p.128). In April 2015, at the SADC Extraordinary Summit of Heads

of State and Government, its members authorised the Southern African Development Community industrialisation scheme and road map 2015-2063, which is meant to promote growth and broaden regional commonwealth (AfDB/OECD/UNDP, 2017, p.88).

4.5.1 MULTILATERAL AGREEMENT – TARIFF MEASURES

4.5.1.1 DESCRIPTIVE STATISTICS OF SADC REGION

Descriptive statistics of the variables for the SADC region are detailed in Table 4.2. The mean applied tariff rate for all products is 10.12 with a minimum of 0.73, attributable to Mauritius in 2016, and the maximum applied tariff of 21.88 in Zimbabwe in the year 2000. In 2016, along with other African countries, Mauritius was coping with a deteriorating external position and the sharp decline in exchange rates that occurred in 2015. Mauritius thus established ways to further ease and stimulate the economy by continuing with accommodative financial policies (*African Economic Outlook*, 2016). In the case of Zimbabwe, the country was in crisis due to land conflicts, and in February 2000 it lost its constitutional referendum. This resulted in political instability and economic meltdown in Zimbabwe, its neighbouring countries, and within SADC (Isaksen, 2002). It damaged the global reputation of SADC member countries, negatively impacted on their stock markets and exchange rates, and negatively affected foreign direct investment. Trade protocols and regulations became difficult, and investors were scared away by the crisis (Peters-Berries, 2002).

In 2008, the lowest GDP growth of -17.68% on the African continent was in Zimbabwe, due to increase costs of production, foreign exchange depreciation, cash-flow problems, insufficient spare parts and raw materials for equipment and machinery, and high levels of inflation and price deformation, all resulting from the foreign exchange market and extensive restrictions on goods (Kavila & Le Roux, 2017). The highest GDP growth across the sample period was 19.67% and again was attributed to Zimbabwe, in 2010. This can be explained by the mining sector becoming the country's most dynamic and major export sector on account of the high prices in minerals and expanded gold, platinum, and diamond production output (Kanyenze *et al.*, 2017).

An average of 63.29% of adults above 15 years is employed in the SADC region, with the lowest percentage employment of 36.50% being in Eswatini (Swaziland) in 2007, driven mainly by the inability of its economy to establish new jobs compared to the high rate at which their youth was entering the labour market, and by the HIV prevalence rate (Meyers, 2019).

The highest level of employment of adults 15 years and older was in Madagascar, in 2012. The country's working age consisted of females and males between the ages of 15 to 64 (Stocker *et al.*, 2019). Half of this country's population was under the age of 20. A labour market survey on their households carried out in 2010, showed that the unemployment rate was low (3.8%), while the under-employment rate was extremely high, due to job instability (42.2%) (*African Economic Outlook*, 2012). The level of technological progress in SADC was at its lowest in the DR Congo in the year 2000, during which time there was political conflict, while the highest level of technological progress was found in Botswana, in 2015. In that year, the Botswana government allocated a large part of their budget to infrastructural development. Its economic growth was supported by the availability of vast mineral reserves, reliance on a market-based economy, and sound administration and governance (Mbulawa, 2017).

Table 4.2 shows the descriptive statistics of the SADAC region, while Table 4.3 summarises the mean levels of exports, imports, and tariffs per each SADC country in the panel. It can be observed from Table 4.3 that South Africa is the largest exporter to African countries in SADAC. This is because South Africa has the most diversified productive capacity in the region, accounting for 60% of intra-African trade (Sandrey, 2013; Mold & Mukwaya, 2016; African Trade Report, 2018). Angola, an economy solely dependent on oil, is the largest importer from African countries, due to the absence of any non-oil production capacity (African Trade Report, 2018).

Table 4.2: Descriptive statistics, SADC region

Variable	Obs.	Mean	Std. Dev.	Min	Max
Apptar_mfn	266	10.12	3.69	0.73	21.88
Gdp	266	4.25	4.27	-17.67	19.67
Gfcf	266	23.61	9.44	1.53	53.99
Tech	266	48.74	44.04	0.03	163.88
Emp	266	63.29	15.89	36.50	87.82

Source: Author using STATA 13

Table 4.3: Mean exports, imports, and tariffs across SADC countries

Country	Mean exports	Mean imports	Mean tariff_mfn
Angola	1214658	8.89e+07	8.57
Botswana	841184.3	3882763	8.02
DR Congo	827393.1	1797307	10.55
Eswatini	1077363	1411703	7.62
Lesotho	232102.4	1266346	7.87
Madagascar	110071.8	316514.9	10.05
Malawi	256259.4	832358.1	13.30
Mauritius	294904.2	516496.7	6.34
Mozambique	677026.2	1662067	10.69
Namibia	1362431	3525213	7.88
South Africa	1.56e+07	6540713	7.83
Tanzania	959263.2	1050255	13.21
Zambia	1567224	3196108	13.86
Zimbabwe	1296438	2214473	15.96

Source: Author's compilation using STATA 13

The specific country analysis presented in Table 4.3 suggests that Zimbabwe has the highest applied tariffs in the SADC region, followed by Zambia, Malawi, and Tanzania. This represents high levels of trade restriction in a region striving towards higher levels of regional integration through trade.

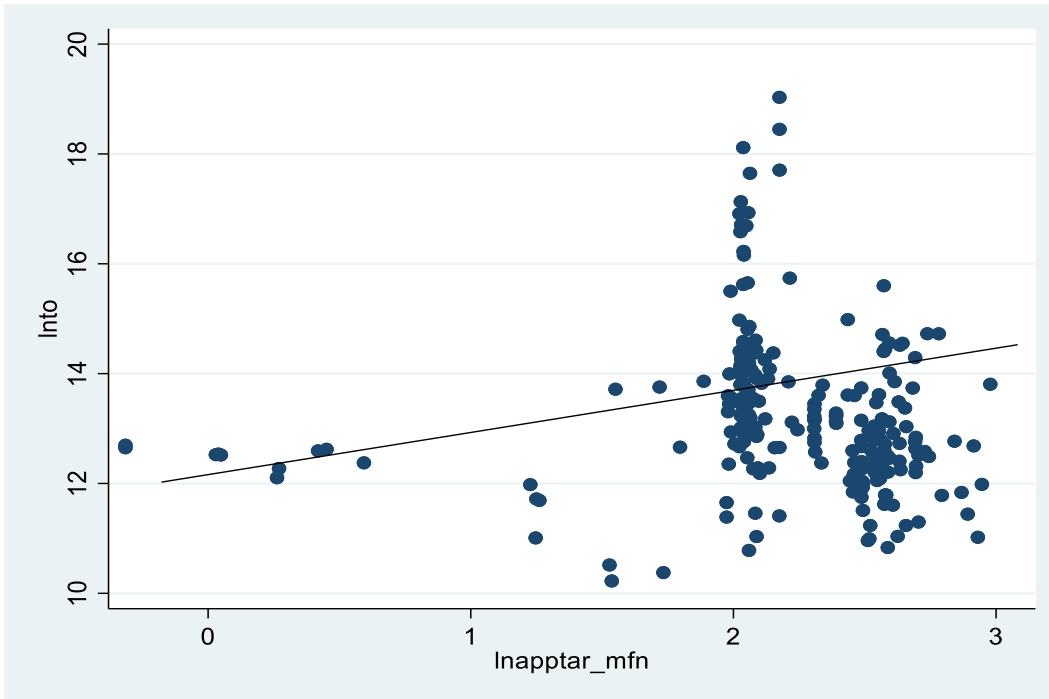


Figure 4.1: Scatter diagram of intra-African trade and applied tariffs in SADC countries

A scatter graph of intra-African trade (measured by the level of each country’s Africa specific trade openness) and applied tariffs shows a mild positive relationship between the two variables, as depicted by the fairly flat upward slope of the trend line in Figure 4.1 above. The cross-correlation matrix in Table 4.4 below shows how the variables relate.

Table 4.4: Cross correlation analysis SADC region dataset – Tariff measures

Variables	iAt	Exp	Imp	Apptar_mfn	Gdp	Gfcf	Emp	Tech.
iAt	1							
Exp	0.27***	1						
Imp	0.77***	-0.01	1					
Apptar_mfn	-0.08	-0.14	-0.04	1				
Gdp	-0.02	-0.09	0.08	-0.01	1			
Gfcf	0.05	-0.07	0.08	-0.12	0.28***	1		
Emp	-0.05***	-0.34***	0.06	0.54***	0.12	0.10	1	
Tech	0.05	0.46***	-0.09	-0.42***	-0.05	0.11	-0.39***	1

Note: ***/* significant at 1% and 10% respectively

The analysis contained in Table 4.4 indicates that intra-African trade has a strong positive correlation with imports and exports, since it is a composite variable of exports and imports as a ratio to GDP. Contrary to the trend shown in the scatter diagram of Figure 4.1, intra-African trade and applied tariffs measure of multilateral agreement have a low and negative relationship. Table 4.4 further suggests that exports and imports also have a low and negative relationship with the applied tariffs and the multilateral agreement variable. This is an early indication that multilateral agreement in SADC are not trade-enhancing.

Intra-African trade again has a low negative correlation with employment, while exports have a strong negative correlation with employment. Thus, the implication is that openness to trade with African countries and exports to African countries reduce employment in SADC countries. Imports from African countries have a low positive correlation with employment, indicating a mild positive effect on job creation in SADC countries, and are most likely to be services related to import facilitation. This position is strengthened by a strong positive correlation between applied tariffs and employment, indicating the probable use of tariffs to protect infant industries, or to ward off external competition from imports, aimed at protecting jobs. Consistent with growth theory, economic growth has a positive correlation with gross fixed capital formation. Technological progress has a negative correlation with employment, indicating the adverse effects technology could have on the labour-intensive sectors that produce the primary commodities traded between African countries.

Table 4.5 details the results of tests for the panel data characteristics of the SADC dataset. The results show country-specific effects that need to be controlled for in the estimation process, however, the time-specific effects are not valid. Hence, we needed to specify a one-way dynamic panel model to estimate the data on SADC countries.

Table 4.5: Panel data characteristics of the dataset – SADC –Tariff measures

Test	Test Statistic	Critical/Prob. Value	Inference
Joint Validity of cross-sectional individual effects $H_0: \mu_1 = \mu_2 \dots \mu_{N-1} = 0$ $H_A: \text{Not all equal to } 0$	F Stat = 1.99	F(0.05, 13, 232) = 1.76	F stat > F critical: There are country-specific effects.
Joint validity of time (period) fixed effects $H_0: \lambda_1 = \dots \lambda_{T-1} = 0$ $H_A: \text{Not all equal to } 0$	F-Stat = 1.28	F(0.05, 17, 228) = 1.66	F stat < F critical: There are no time-specific effects.
Hausman test: Nickell (1981) Bias $H_0: E(X_{it}, u_{it}) = 0$ $H_0: E(X_{it}, u_{it}) \neq 0$	$\chi^2_5 = 0.87$	Prob = 0.97	We fail to reject the H_0 that there is no endogeneity between the lag of the dependent variable and the error term.
Hausman specification test: Other $H_0: E(X_{it}, u_{it}) = 0$ $H_0: E(X_{it}, u_{it}) \neq 0$	$\chi^2_5 = 3.11$	Prob = 0.68	We fail to reject the H_0 that there is no endogeneity between the regressors and the error term.
Pesaran (2004) CD Test for Cross-sectional dependence $H_0: \text{corr}(\mu_{i,t}, \mu_{j,t}) = 0$ for $i \neq j$ $H_A: \text{corr}(\mu_{i,t}, \mu_{j,t}) \neq 0$ for some $i \neq j$	CD = 9.31 (0.42)	Prob = 0.00	Cross sections are interdependent

In the results of the Hausman tests for endogeneity, we failed to reject the null hypothesis of no endogeneity. The Pesaran (2004) test for cross-sectional dependence shows that the cross sections are interdependent, with a correlation coefficient of 0.42 across the cross sections of the SADC dataset.

Consequently, in estimating the model, there was a need to control for country-specific effects and cross-sectional dependence of the error term, in addition to other assumptions of the classical linear regression model such as heteroscedasticity and serial correlation, which are given in the estimations of datasets of this nature.

4.5.1.2 MULTILATERAL AGREEMENT – NON-TARIFF MEASURES

A shorter sample period, from 2014 to 2018, was used for the estimation that includes non-tariff measures, due to data availability constraints. Non-tariff measures used to

represent multilateral agreement are export trade costs and import trade costs. Export trade costs are a composite variable created by principal component analysis combining export costs of border compliance and documentary compliance. Import trade costs were created from a combination of import costs of border compliance and documentary compliance.

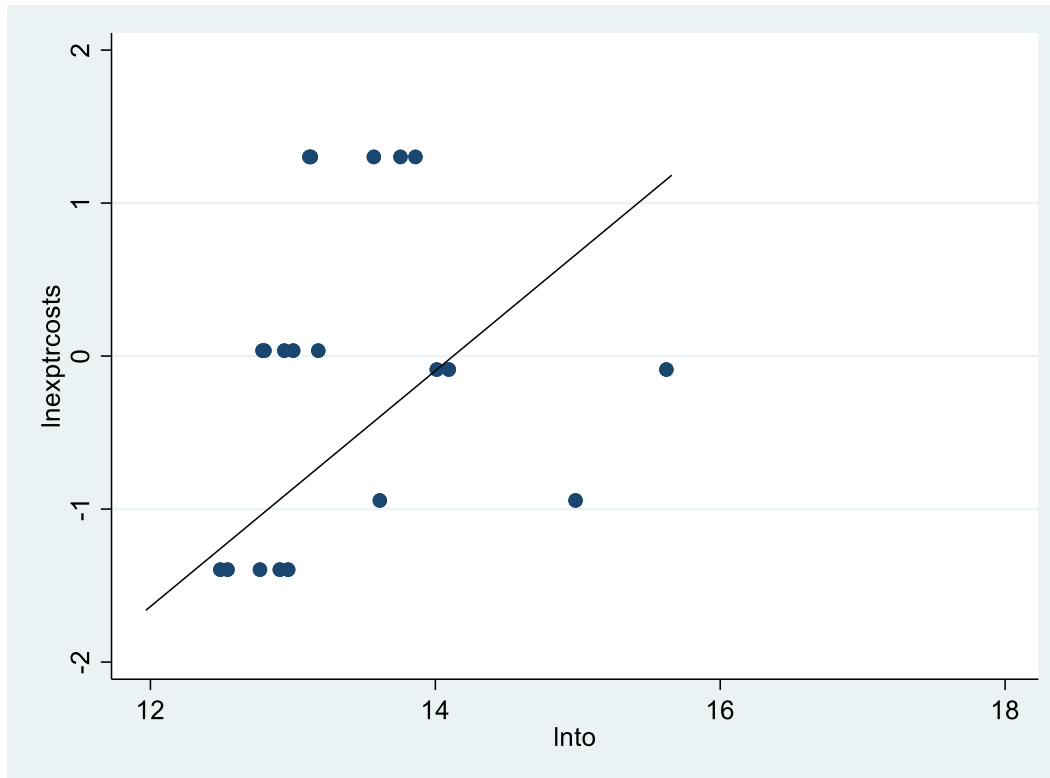


Figure 4.2: Scatter diagram of trade openness and export trade costs in SADC

The scatter graph in Figure 4.2 (above) between export trade costs and intra-African trade in SADC countries in this study, shows a general upward sloping co-movement between the two variables. Conversely, in Figure 4.3 (below) a clear trend cannot be observed between import trade costs and intra-African trade in SADC. The correlation matrix is shown in Table 4.6. Contrary to the scatter graph trends, export and import trade costs are negatively correlated with intra-African trade in SADC.

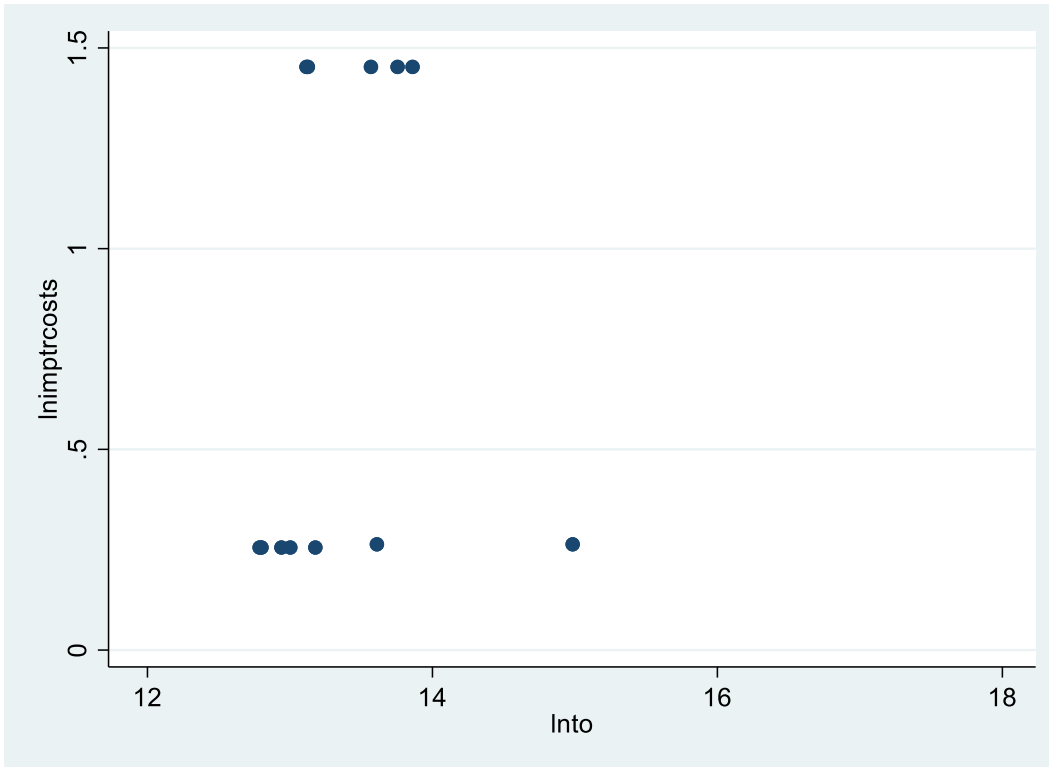


Figure 4.3: Scatter diagram of trade openness and import trade costs in SADC

It can be observed from Table 4.6 below that export trade costs are positively correlated with import trade costs, economic growth, employment, and investment. This is because export trade costs could be a source of revenue for governments, as border enforcement and documentary compliance creates jobs, and thus some level of cross-border infrastructure is required for exporting (OECD and World Trade Organisation, 2015; World Trade Report, 2018). Export trade costs were negatively correlated with technology.

Table 4.6: Cross-correlation analysis SADC region dataset – non-tariff measures

	iAt	exptrcosts	imptrcosts	gdp	gfcf	emp	tech
iAt	1						
exptrcosts	-0.06	1					
imptrcosts	-0.09	0.86***	1				
gdp	-0.14	0.33***	0.29	1			
gfcf	-0.10	0.16	0.13	0.28**	1		
emp	-0.36***	0.17	0.22	0.37***	0.20	1	
tech	0.38***	-0.38***	-0.43***	-0.21*	-0.07	-0.62***	1

Note: ***/* significant at 1% and 10% respectively

This is because automation through technological progress reduces bricks and mortar processes and improves efficiency, thereby reducing the burden of documentary and border compliance (World Trade Report, 2018). Import trade costs also have a positive correlation with investment, economic growth, and employment, but a negative correlation with technological progress, most probably for the same reasons.

Table 4.7a: Panel data characteristics of the dataset – SADC – export trade costs

Test	Test Static	Critical/Prob. Value	Inference
Joint Validity of cross-sectional individual effects $H_0: \mu_1 = \mu_2 \dots \mu_{N-1} = 0$ $H_A: \text{Not all equal to } 0$	F Stat = 7.14	F(0.05, 13, 37) = 1.99	F stat > F critical: There are country-specific effects.
Joint validity of time (period) fixed effects $H_0: \lambda_1 = \dots \lambda_{T-1} = 0$ $H_A: \text{Not all equal to } 0$	F-Stat = 2.00	F(0.05, 3, 46) = 2.81	F stat < F critical: There are no time-specific effects.
Hausman test: Nickell (1981) Bias $H_0: E(X_{it}, u_{it}) = 0$ $H_0: E(X_{it}, u_{it}) \neq 0$	$\chi^2_4 = 9.10$	Prob = 0.06	We fail to reject the H_A that there is endogeneity between the lag of the dependent variable and the error term.
Hausman specification test: Other $H_0: E(X_{it}, u_{it}) = 0$ $H_0: E(X_{it}, u_{it}) \neq 0$	$\chi^2_5 = 1.87$	Prob = 0.87	We fail to reject the H_0 that there is no endogeneity between the regressors and the error term.
Pesaran (2004) CD Test for Cross-sectional dependence $H_0: \text{corr}(\mu_{i,t}, \mu_{j,t}) = 0$ for $i \neq j$ $H_A: \text{corr}(\mu_{i,t}, \mu_{j,t}) \neq 0$ for some $i \neq j$	CD = 0.74 (0.51)	Prob = 0.04	Cross sections are interdependent.

Table 4.7b: Panel data characteristics of the dataset – SADC – import trade costs

Test	Test Statistic	Critical/Prob. Value	Inference
Joint Validity of cross-sectional individual effects $H_0: \mu_1 = \mu_2 \dots \mu_{N-1} = 0$ $H_A: \text{Not all equal to } 0$	F Stat = 6.92	F(0.05, 13, 36) = 2.00	F stat > F critical: There are country-specific effects.
Joint validity of time (period) fixed effects $H_0: \lambda_1 = \dots \lambda_{T-1} = 0$ $H_A: \text{Not all equal to } 0$	F-Stat = 2.00	F(0.05, 3, 46) = 2.81	F stat < F critical: There are no time-specific effects.
Hausman test: Nickell (1981) Bias $H_0: E(X_{it}/u_{it}) = 0$ $H_0: E(X_{it}/u_{it}) \neq 0$	$\chi^2_4 = 8.68$	Prob = 0.12	We fail to reject the H_0 that there is no endogeneity between the lag of the dependent variable and the error term.
Hausman specification test: Other $H_0: E(X_{it}/u_{it}) = 0$ $H_0: E(X_{it}/u_{it}) \neq 0$	$\chi^2_5 = 1.76$	Prob = 0.88	We fail to reject the H_0 that there is no endogeneity between the regressors and the error term.
Pesaran (2004) CD Test for Cross-sectional dependence $H_0: \text{corr}(\mu_i, t, \mu_j, t) = 0$ for $i \neq j$ $H_A: \text{corr}(\mu_i, t, \mu_j, t) \neq 0$ for some $i \neq j$	CD = 0.84 (0.52)	Prob = 0.04	Cross sections are interdependent.

The results of tests on the panel data characteristics of the dataset are shown in Table 4.7a for the model using export trade costs, and Table 4.7b for the model using import trade costs. In both models there was a need to control for country-specific characteristics. The F statistics values are greater than the F critical values, indicating the validity of cross-sectional specific effects. Hence, we failed to reject the alternative hypothesis that individual country experiences need to be taken into consideration in the estimation process. Using the same criteria, we failed to reject the null hypothesis that there was no need to provide for time-specific effects in the estimation process, because in both cases the F critical values were less than the F stat values. There is endogeneity, specifically in the case of the Nickell (1981) bias, indicating a correlation between the lag of the dependent variable on the right-hand

side of the model and the fixed effects error term in the export trade costs model (see Table 4.7a).

However, results in Table 4.7b show no endogeneity in the import trade costs model. The results of the Pesaran CD (2004) test for cross-sectional dependence show that the countries in the SADC dataset are interdependent in both the export trade costs model (Table 4.7a) and the import trade costs model (Table 4.7b). Similar to the estimation using tariff measures, the estimation approach used must control for country fixed effects, endogeneity, and cross-sectional dependence of the error term in addition to the given assumptions of the classical linear regression model.

4.6 ECOWAS REGION – DATA AND STYLIZED FACTS

ECOWAS was created in 1975 and is comprises of 15 member states. They are: Benin, Côte d'Ivoire, Burkina Faso, Gambia, Cape Verde, Ghana, Sierra Leone, Liberia, Nigeria, Mali, Guinea, Niger, Guinea Bissau, Senegal and Togo (Jordaan, 2014; Shuaibu 2015, p.84). ECOWAS was initially established to focus on improving the standard of living of its members through economic collaboration. Later, ECOWAS acknowledged the inextricable connection between economic growth, governance, and peace (AfDB/OECD/UNDP, 2017; African Union, 2019). To that extent, it approved a security mandate to assist in handling conflicts among its members, which led to the creation of Economic Community of West African States Monitoring Group (ECOMOG - AfDB/OECD/UNDP, 2017).

ECOWAS approved a communal external tariff that became effectual in January 2015. Approximately 12% of its exports in 2015 went to its member states, 6% went to African countries outside the group, and 80% went outside the continent of Africa. ECOWAS has been recognized as the top-ranked regional economic community for easing the free movement of individuals across borders in Africa. (AfDB/OECD/UNDP, 2017, p.88; UNECA, 2017).

4.6.1 MULTILATERAL AGREEMENT – TARIFF MEASURES

4.6.1.2 DESCRIPTIVE STATISTICS

Descriptive statistics for the ECOWAS region using applied tariffs as a measure of multilateral agreement, are detailed in Table 4.8 below. The mean applied tariff for

all products for ECOWAS is 43.55 which is more than quadruple the mean applied tariff for the SADC region of 10.12. This shows that tariffs are much higher in ECOWAS than in SADC. This is because in 2008, SADC formed a free trade area that included the members of the Southern African Customs Union (SACU), which allowed tariff-free imports from other members of SADC. They agreed to liberalise 85 per cent of intra-trade within SADC and proposed to create ways to discontinue tariffs imposed on trade in sensitive products (Anber, 2018; Júnior, 2018). The ECOWAS region registers a higher level of mean growth and a slightly lower level of unemployment than SADC, while SADC has a slightly higher level than the ECOWAS region of gross fixed capital formation as a percentage of GDP (23.61) and technological progress (48.74).

Table 4.8: Descriptive Statistics ECOWAS Region

Variable	Obs.	Mean	Std. Dev.	Min	Max
Apptar_mfn	266	43.55	21.09	1	98
Gdp	266	13.3	76.93	1	266
Gfcf	266	22.25	9.35	1.10	52.66
Tech	266	45.97	40.77	0.02	139.53
Emp	266	62.79	9.63	42.58	79.34

Source: Author, using STATA 13.

Table 4.9: Mean exports, imports and tariffs across ECOWAS countries.

Country	Mean exports	Mean imports	Mean tariff_mfn
Benin	534564.6	240752.8	36.42
Burkina Faso	206033.2	868195.4	38.84
Cape Verde	3580.52	18716.77	12.89
Côte d'Ivoire	2739441	2037681	36.74
Gambia	15301.76	62252.49	68.16
Ghana	1476924	1722197	49.74
Guinea	138378.2	200521.5	74.63
Liberia	17553.78	15194.57	37.47
Mali	685643.3	1189779	38.84
Niger	169208.1	353288	47.79
Nigeria	5907995	1839134	39.74
Senegal	861118	838245.7	50.95
Sierra Leone	31158.25	255269.7	38.58
Togo	497287.9	230074.5	38.84

Source: Author's compilation using STATA 13

Table 4.9 shows the mean levels of exports, imports, and applied tariffs. Guinea levies the highest mean applied tariffs of 74.63 on all products, followed by Gambia (68.16), Ghana (49.74) and Senegal (50.95). This shows different levels of trade restrictions in the ECOWAS region. In the ECOWAS regions Nigeria is the biggest exporter to the rest of Africa, followed by Côte d'Ivoire, Ghana, Senegal and Mali in that order. In terms of imports, Côte d'Ivoire imports are higher than other African countries, followed by Nigeria, Ghana, Mali and Senegal, in that order.

A scatter graph of intra-Africa trade and applied tariffs in ECOWAS in Figure 4.4 below shows a much steeper positive relationship between trade openness and applied tariffs than in the SADC region. However, this is not corroborated by the correlation analysis in Table 4.10 (below). The correlation analysis shows a weak negative correlation coefficient between exports, applied tariffs and trade openness in the ECOWAS region. On the contrary, imports are positively correlated with intra-African trade in ECOWAS, statistically significant at the 1% level. This can be attributed to the fact that eight countries in the ECOWAS dataset import more than they export (WDI, 2018)

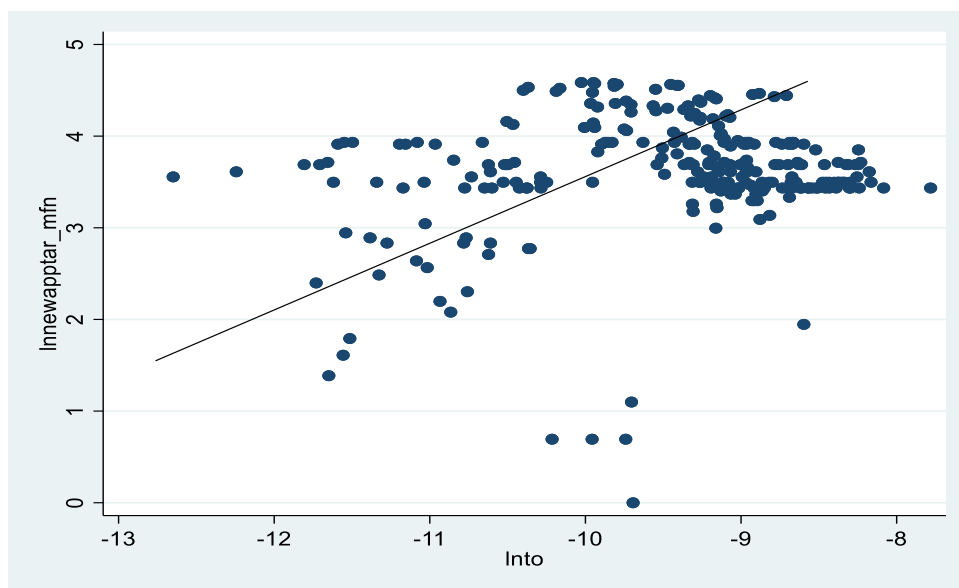


Figure 4.4: Scatter diagram of trade openness and applied tariffs_mfn in ECOWAS

Economic growth and intra-African trade have a weak negative correlation that is not statistically significant. This is underscored by the trade deficits that are run by most of the countries in the ECOWAS dataset (WDI, 2018).

Table 4.10: Cross correlation analysis ECOWAS region dataset – Tariff measures

Variables	iAt	Exp	Imp	Apptar_mfn	Gdp	Gfcf	Emp	Tech
iAt	1							
Exp	0.003	1						
Imp	0.33***	0.75***	1					
Apptar_mfn	-0.08	-0.13	-0.13	1				
Gdp	-0.02	0.14	0.20***	-0.04	1			
Gfcf	0.23***	-0.16***	-0.15	-0.27***	0.09	1		
Emp	0.33***	-0.29***	-0.31	0.01	-0.01	-0.17***	1	
Tech	0.01	0.23***	0.38***	-0.02	0.10	0.10	-0.27***	1

Note: ***/* significant at 1% and 10% respectively

Gross fixed capital formation and employment are both positively correlated with intra-African trade in ECOWAS and are significant at the 1% level, respectively. Technological progress has a positive correlation with both export and imports and is

statistically significant at the 1% level but is negatively correlated with the rate of employment.

Table 4.11: Panel data characteristics of the dataset – ECOWAS – tariff measures

Test	Test Statistic	Critical/Prob. Value	Inference
Joint Validity of cross-sectional individual effects $H_0: \mu_1 = \mu_2 \dots \mu_{N-1} = 0$ $H_A: \text{Not all equal to } 0$	F Stat = 5.19	F(0.05, 13, 232) = 1.76	F stat > F critical: There are country-specific effects.
Joint validity of time (period) fixed effects $H_0: \lambda_1 = \dots \lambda_{T-1} = 0$ $H_A: \text{Not all equal to } 0$	F-Stat = 1.45	F(0.05, 17, 228) = 1.66	F stat < F critical: There are no time-specific effects.
Hausman test: ¹ Nickell (1981) Bias $H_0: E(X_{it}/u_{it}) = 0$ $H_0: E(X_{it}/u_{it}) \neq 0$	$\chi^2_5 = 69.67$	Prob = 0.00	We fail to reject the H_0 that there is no endogeneity between the lag of the dependent variable and the error term.
Pesaran (2004) CD Test for Cross-sectional dependence $H_0: \text{corr}(\mu_{i,t}, \mu_{j,t}) = 0$ for $i \neq j$ $H_A: \text{corr}(\mu_{i,t}, \mu_{j,t}) \neq 0$ for some $i \neq j$	CD = 3.71 (0.33)	Prob = 0.00	Cross sections are interdependent.

¹ Results of endogeneity tests without the lag of the dependent variable were inconclusive.

The panel data characteristics of the dataset are shown in Table 4.11 above. Similar to the SADC dataset using tariff measures of multilateral agreement, the results show the importance of controlling for country-specific characteristics for countries in the ECOWAS dataset; however, time-specific effects are not valid. The Hausman test for endogeneity shows that there is endogeneity, and a Nickell (1981) bias, emanates from a correlation between the lag of the dependent variable on the right-hand side of the model and the fixed effects error term. Results of the Pesaran test (2004) for cross-sectional dependence show that the ECOWAS countries are interdependent. This was expected, due to several regional protocols, cross-border trade, common

social and cultural practices, and similar economic structures and fundamentals (Pesaran, 2004).

4.6.1.3 MULTILATERAL AGREEMENT – NON-TARIFF MEASURES

Figure 4.5 and 4.6 below present scatter diagrams of intra-African trade and the export trade costs and import trade costs for ECOWAS. They do not show a clear covariation between the variables.

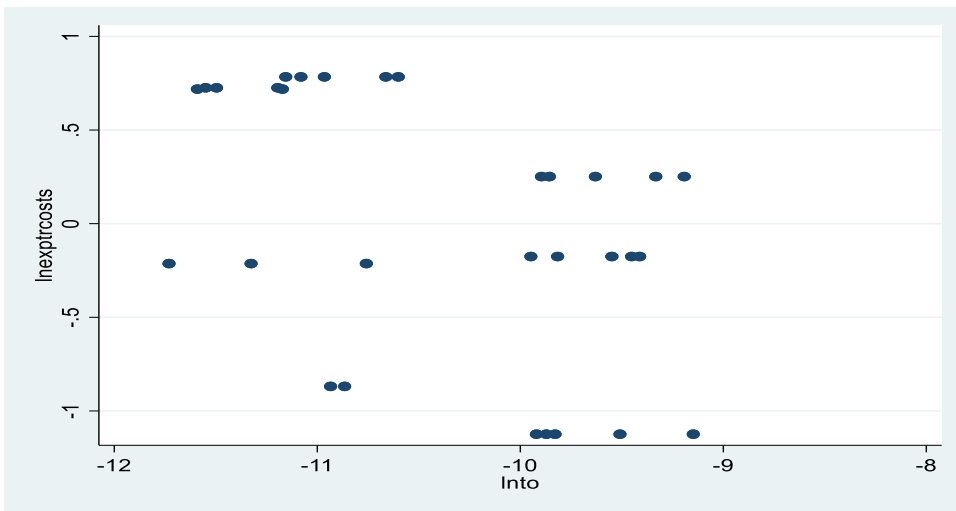


Figure 4.5: Scatter diagram of export trade costs and trade openness in ECOWAS

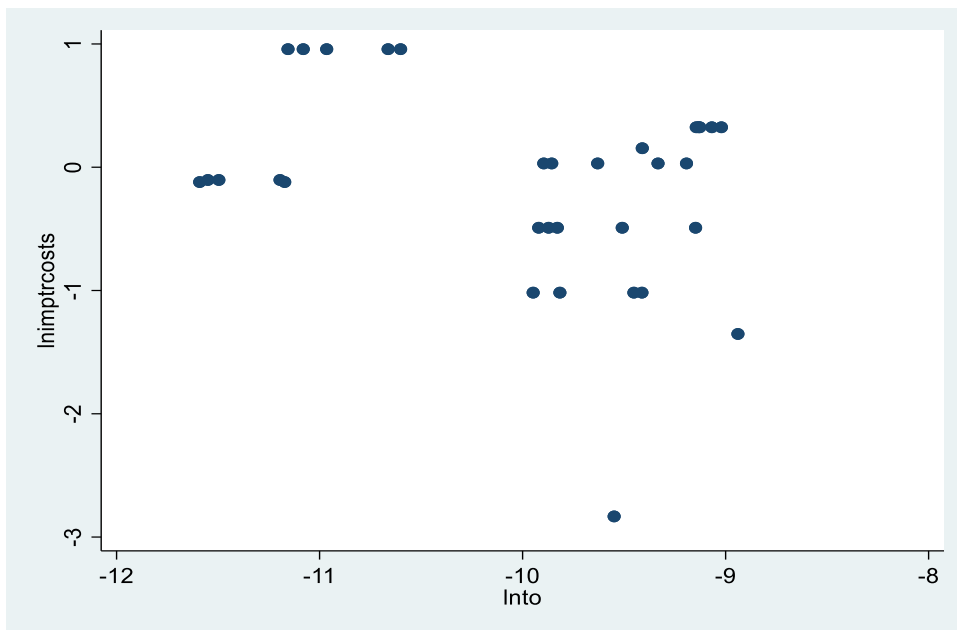


Figure 4.6: Scatter diagram of important trade costs and trade openness in ECOWAS

Cross correlation analysis of the ECOWAS region dataset is detailed in Table 4.12 below.

Table 4.12: Cross correlation analysis of ECOWAS region dataset – non-tariff measures

	iAt	exptrcosts	imptrcosts	gdp	gfcf	emp	tech
iAt	1						
exptrcosts	-0.81***	1					
imptrcosts	-0.46***	0.66***	1				
gdp	0.37***	-0.37***	-0.21**	1			
gfcf	0.06	-0.33***	-0.16	0.26**	1		
emp	0.42***	-0.61***	-0.53***	0.06	0.12	1	
tech	0.08	-0.05	-0.30	0.15	-0.18	-0.31***	1

Note: ***/**/* significant at 1%, 5% and 10% respectively

Intra-African trade and the export trade costs and import trade costs are strongly negatively correlated and are statistically significant at the 1% level, respectively. Export and import trade costs are also negatively correlated with employment. This can be explained by the fact that trade barriers (non-tariff measures in this case) inhibit trade, which then constrains the ability of trade to create jobs (Anyanwu, 2014; Jordaan, 2014; UNCTAD, 2019). Inhibiting trade also negatively affects economic growth, as depicted by the negative correlation between the non-tariff barriers (export and import trade costs) and economic growth.

However, intra-African trade has a positive correlation with economic growth, as trade is supposed to enhance productivity and growth (Akinsola & Akinsola, 2019). Trade openness is supposed to create jobs, as denoted by the strong positive correlation between intra-African trade and employment, statistically significant at the 1% level. Technology has a negative correlation with employment, depicting the labour-intensive nature of employment in the ECOWAS region, and therefore the likely impact of technology on jobs in the region (Ekpo & Saka, 2017). Gross fixed capital formation has a positive impact on economic growth, which is consistent with the theoretical framework and growth theory (Solow, 1956).

**Table 4.13a: Panel data characteristics of the dataset – ECOWAS –
export trade costs**

Test	Test Static	Critical/Prob. Value	Inference
Joint Validity of cross-sectional individual effects $H_0: \mu_1 = \mu_2 \dots \mu_{N-1} = 0$ $H_A: \text{Not all equal to } 0$	F Stat = 8.45	F(0.05, 13, 36) = 2.00	F stat > F critical: There are country-specific effects.
Joint validity of time (period) fixed effects $H_0: \lambda_1 = \dots \lambda_{T-1} = 0$ $H_A: \text{Not all equal to } 0$	F-Stat = 2.61	F(0.05, 3, 47) = 2.81	F stat < F critical: Time-specific effects are not valid.
Hausman test: Nickell (1981) Bias $H_0: E(X_{it}/u_{it}) = 0$ $H_0: E(X_{it}/u_{it}) \neq 0$	$\chi^2_4 = 182.83$	Prob = 0.00	We fail to reject the H_A that there is endogeneity between the lag of the dependent variable and the error term.
Hausman test: Other: $H_0: E(X_{it}/u_{it}) = 0$ $H_0: E(X_{it}/u_{it}) \neq 0$	$\chi^2_5 = 55.64$	Prob = 0.00	We fail to reject the H_A that there is endogeneity from other regressors and the idiosyncratic error term.
Pesaran (2004) CD Test for Cross-sectional dependence $H_0: \text{corr}(\mu_i, t, \mu_j, t) = 0$ for $i \neq j$ $H_A: \text{corr}(\mu_i, t, \mu_j, t) \neq 0$ for some $i \neq j$	CD = 4.79 (0.48)	Prob = 0.00	Cross sections are interdependent.

**Table 4.13b: Panel data characteristics of the dataset – ECOWAS –
import trade costs**

Test	Test Statistic	Critical/Prob. Value	Inference
Joint Validity of cross-sectional individual effects $H_0: \mu_1 = \mu_2 \dots \mu_{N-1} = 0$ $H_A: \text{Not all equal to } 0$	F Stat = 10.39	F(0.05, 13, 36) = 2.00	F stat > F critical: There are country-specific effects.
Joint validity of time (period) fixed effects $H_0: \lambda_1 = \dots \lambda_{T-1} = 0$ $H_A: \text{Not all equal to } 0$	F-Stat = 4.04	F(0.05, 3, 46) = 2.81	F stat > F critical: There are time-specific effects.
Hausman test: Nickell (1981) Bias $H_0: E(X_{it}/u_{it}) = 0$ $H_0: E(X_{it}/u_{it}) \neq 0$	$\chi^2_3 = 104.40$	Prob = 0.00	We fail to reject the H_A that there is endogeneity between the lag of the dependent variable and the error term.
Hausman test: Other: $H_0: E(X_{it}/u_{it}) = 0$ $H_0: E(X_{it}/u_{it}) \neq 0$	$\chi^2_3 = 5.76$	Prob = 0.33	We fail to reject the H_0 that there is no endogeneity from other regressors and the idiosyncratic error term.
Pesaran (2004) CD Test for Cross-sectional dependence $H_0: \text{corr}(\mu_{i,t}, \mu_{j,t}) = 0$ for $i \neq j$ $H_A: \text{corr}(\mu_{i,t}, \mu_{j,t}) \neq 0$ for some $i \neq j$	CD = 4.11 (0.50)	Prob = 0.00	Cross sections are interdependent.

The results of tests on the panel data characteristics of the dataset are shown in Table 4.13a for the model using export trade costs, and Table 4.13b for the model using import trade costs. In both models, there is the need to control for country-specific characteristics and for time-specific effects in the import trade costs model. This is because the F stat values are greater than the F critical values, indicating the validity of cross-sectional specific and time-specific effects. Hence, we fail to reject the alternative hypothesis that individual country-specific experiences and time-specific effects (for the import trade costs model) need to be taken into consideration in the estimation process.

Furthermore, the results of the Hausman tests for endogeneity show that there are multiple sources of endogeneity in the export trade model, and a case of Nickle (1981) bias in the import trade costs model. This indicates a correlation between the lag of the dependent variable on the right-hand side of the model and the fixed effects error term (see Table 4.13a and 4.13b). The results of the Pesaran CD (2004) test for cross-sectional dependence show that the countries in the ECOWAS dataset are interdependent in both the export trade costs model (Table 4.13a) and the import trade costs model (Table 4.13b). Thus, in the case of non-tariff measures of multilateral agreement for ECOWAS, the estimation approach used must control for country-specific effects, time-specific effects, endogeneity, and cross-sectional dependence of the error term, in addition to the given assumptions of the classical linear regression model i.e. serial correlation and heteroscedasticity.

4.7 MODEL SPECIFICATION AND ESTIMATION TECHNIQUES

The results of the panel data tests conducted on the SADC and ECOWAS tests speak to the need to specify a one-way error component in most cases, and a two-way error component model for import trade costs in ECOWAS. Two main sets of estimations are done in this study: 1) tariff measures and 2) non-tariff measures. For tariff measures the model specified is:

$$LniAt_{it} = LniAt_{it-1} + LnApptar_mfn_{it} + LnGdp_{it} + LnGfcf_{it} + LnEmp_{it} + LnTech_{it} + \mu_i + v_{it} \quad (5)$$

For the estimation of non-tariff measures, two models are estimated, one for export trade costs (*exptrcosts*) and another for import trade costs (*imptrcosts*).

$$LniAt_{it} = LniAt_{it-1} + LnExptrcosts_{it} + LnGdp_{it} + LnGfcf_{it} + LnEmp_{it} + LnTech_{it} + \mu_i + v_{it} \quad (6)$$

$$LniAt_{it} = LniAt_{it-1} + Lnimptrcosts_{it} + LnGdp_{it} + LnGfcf_{it} + LnEmp_{it} + LnTech_{it} + \mu_i + v_{it} \quad (7)$$

$$LniAt_{it} = LniAt_{it-1} + Lnimptrcosts_{it} + LnGdp_{it} + LnGfcf_{it} + LnEmp_{it} + LnTech_{it} + \mu_i + \lambda_t + v_{it} \quad (8)$$

where, μ_i represents individual country effects, λ_t time-specific effects and v_{it} the idiosyncratic error term. Equation (8) applies to the import trade costs estimation under non-tariff measures of multilateral agreement.

As per the panel data characteristics of both SADC and ECOWAS datasets, this study employs methodologies that control for country-specific effects, time-specific effects (or not), endogeneity, and cross-sectional dependence of the error term. In the process, serial correlation and heteroscedasticity are also addressed.

Several estimation approaches address these characteristics of the dataset. The Least Square Dummy Variable (LSDV) with the Bruno (1995) correction control for country-specific effects, and the endogeneity emanating from a Nickell (1981) bias are characteristic of this dataset. In addition, the LSDV with Driscoll and Kraay (1981) corrected standard errors, also control for individual effects and moderate levels of cross-sectional dependence of the error term, as well as for heteroscedasticity and serial correlation within and between cross-sections.

To further strengthen robustness, the Feasible Generalised Least Squares (FGLS) of Parks (1967) and Kmenta (1986) are employed in the estimation process. These estimation techniques are perfectly suited to data with country-specific effects, time-specific effects, heteroscedasticity, serial correlation and cross-sectional dependence (Hicks, 1994; Kmenta, 1986), as characteristics of the dataset in this study. The FGLS estimation technique is always suitable even if the individual effects are time-specific, cross-sectional specific, or normally distributed random variables.

CHAPTER 5

EMPIRICAL RESULTS

5.1 INTRODUCTION

This chapter details the empirical results of estimating the SADC and ECOWAS datasets using the dynamic panel data estimation approaches as described in the previous chapter. In each REC, two estimations are done: 1) using tariff measures of multilateral agreement, and 2) using non-tariff measures of multilateral agreement. The first estimation entails the results of the SADC region followed by results of the ECOWAS region.

5.2 SADC REGION RESULTS

5.2.1 TARIFF MEASURES OF MULTILATERAL AGREEMENT

The results of the estimation of the SADC dataset using tariff measures to represent multilateral agreement are shown in Table 5.1a below. The estimation in model 1 is done using the Bruno (1995) endogeneity correction for the Nickell (1981) bias (1981). However, the Bruno correction corrects only for endogeneity emanating from a Nickell bias and not from other regressors (Bruno, 1995). Thus, the conclusion of this study does not dwell on the results emanating from the Bruno (1995) correction, which also does not correct for cross-sectional dependence. To effectively address these outstanding characteristics of the dataset, model 2 uses the Driscoll and Kraay (1998) corrected standard errors, while the estimation in model 3 uses the feasible generalised least squares (FGLS) by Park (1967) and Kmenta (1986).

Consequently, the results of the Driscoll and Kraay, (1998) and FGLS estimation, as presented in Table 5.1a below, form the basis on which inference is drawn in this study. Intra-African trade shows significant levels of persistence, as depicted by the coefficient of the lagged dependent variable on the right-hand side, with the significance determined at the 1% level. This merits the need for a dynamic panel model specification in the estimation of the data. It is also important to point out that multilateral agreement on applied tariffs enhance intra-African trade in the SADC countries in this panel. This is denoted by the positive and statistically significant

coefficient of applied tariffs, as contained in Table 5.1a. This is because the SADC region has a customs union that has agreed to liberalise 85% of intra-trade within SADC, and also wants to create ways to discontinue tariffs imposed on trade in sensitive products (Anber, 2018; Júnior, 2018). This result aligns with earlier findings by Stuart, (2017) who looked at market access between countries in the African Union and focused on the eight regional economic communities. The aim of Stuart's study was to elucidate on the accessibility of African markets to trading partners in a non-free trade area. Findings showed a less restrictive Most Favoured Nation tariff regime in the Southern and Eastern regions in Africa, compared to the Eastern and Western parts of Africa with a more restrictive regime (Stuart, 2017).

Another important result from Table 5.1a is the reality that economic growth in the SADC countries in this dataset does not enhance intra-African trade. This is depicted by the negative coefficient of GDP, with a statistical significance at the 1% level. This can be attributed to the fact that the SADC region trades in primary commodities, which are mostly exported to international commodity markets outside the African continent. These commodities form a negligible component of intra-African trade (Fall & Gasealahwe, 2017; Khumalo & Tsegaye, 2018).

Furthermore, investment as measured by gross fixed capital formation has a positive impact on intra-African trade. This is consistent with *a priori* expectations, as significant levels of infrastructure are required to facilitate trade. According to Table 5.1a, the coefficient of employment is negative and statistically significant at the 1% level in the FGLS estimation. This can be attributed to trade, largely in primary commodities and natural resources, without any value addition. Trade in such commodities is known to lead to jobless growth (Geda & Seid, 2015; Redda *et al.*, 2017; Carroll & Obscherning, 2019).

Table 5.1a: Results of FGLS for SADC region [(Dependent variable Intra-Africa trade (*LniAt*))]

Dep. Var. <i>LniAt</i>	Model 1	Model 2	Model 3
<i>LnlagiAt</i>	0.46*** [0.02]	0.64*** [0.06]	0.57*** [0.04]
<i>Lnapptar_mfn</i>	-0.10* [0.05]	0.25** [0.11]	0.32*** [0.07]
<i>Lngdp</i>	0.79*** [0.02]	-0.64*** [0.05]	-0.64*** [0.06]
<i>Lngfcf</i>	0.37** [0.18]	0.25** [0.11]	0.27*** [0.08]
<i>Lnemp</i>	2.27 [1.72]	-0.25 [0.22]	-0.44*** [0.17]
<i>Lntech</i>	0.15*** [0.04]	0.15*** [0.04]	0.18*** [0.03]
Constant		4.95*** [1.08]	6.31*** [0.90]
R squared		0.74	
F Stat prob.		0.00	
Wald X ² (6)			0.00

Note: ***/**/* denote 1%/5%/10% level of statistical significance. Standard errors in []. Model 1 uses Bruno, (1995) correction; Model 2 used LSDV with the Driscoll and Kraay (1998) corrected standard errors; Model 3 uses Feasible Generalised Least Squares by Parks (1967) and Kmenta (1986).

In Table 5.1a it can be seen that technological progress has a positive effect on intra-African trade. This is expected, as technology enhances efficiency, border and documentary compliance, and platforms for financial flows and payments (World Trade Report, 2018; Carroll and Obscherning, 2019). This finding is consistent with the findings of earlier studies by Bankole *et al.* (2015). The goodness of fit (R squared) of 0.74 in the Driscoll and Kraay (1998) estimation is good, indicating that the model estimated fits the data appropriately. The Wald test Chi-squared probability and F stat probability are both statistically significant, indicating that the independent variables play a role in determining changes in intra-African trade.

5.2.2 NON-TARIFF MEASURES OF MULTILATERAL AGREEMENT

Two non-tariff measures are used in this study, namely, export trade costs and import trade costs. These two non-tariff measures of multilateral agreement were created by principal component analysis. It is important to note that export trade cost is a composite variable created from a combination of export costs of border compliance and documentary compliance. Import trade costs were created from import border

compliance and documentary compliance. The results using export trade costs are detailed below in Table 5.1b and import trade costs in Table 5.1c.

Table 5.1b: Results for SADC region. Dependent variable Intra-African trade (*LniAt*). Export trade costs as a non-tariff measure of multilateral agreement

Dep. Var. <i>LniAt</i>	Model 1	Model 2
<i>LnlagiAt</i>	0.70*** [0.09]	0.72*** [0.19]
<i>Lnexptrcosts</i>	0.14** [0.03]	0.13** [0.05]
<i>Lngdp</i>	-0.90*** [0.04]	-0.89*** [0.03]
<i>Lngfcf</i>	0.17* [0.10]	0.18 [0.16]
<i>Lnemp</i>	-0.31 [0.17]	-0.29 [0.41]
<i>Lntech</i>	0.53*** [0.06]	0.50*** [0.12]
Constant	4.07* [1.82]	3.89 [3.94]
R squared	0.96	
F Stat prob.	0.00	
Wald X ² ₍₆₎		0.00

Note: ***/**/* denote 1%/5%/10% level of statistical significance. Standard errors in []. Model 1 uses LSDV with the Driscoll and Kraay (1998) corrected standard errors; Model 2 uses Feasible Generalised Least Squares by Parks (1967) and Kmenta (1986). The estimation results using the Bruno (1995) correction under no-tariff agreements did not yield meaningful results.

Results from Table 5.1b indicate that multilateral agreement that improve export trade costs (border and document compliance for exports) have a positive effect on intra-Africa trade in the SADC region. This is depicted by the positive coefficient on export trade costs, which is also significant at the 5% level in both estimations. Again, economic growth does not enhance intra-Africa trade in the SADC countries in this panel. This may be because intra-Africa trade in the region is challenged by a deficiency in diversification of goods, competitiveness, and insufficient complementary imports and exports (Redda *et al.*, 2017). The region's trades are principally in mineral and agricultural products and are traded in their raw state (Chibira & Moyana, 2017).

Although economic studies have long concluded that market openness results in economic growth, assessment has shown the presence of a feeble correlation between merchandise trade and economic growth (Geda & Seid, 2015; Carroll and

Obschering, 2019). As in the tariff measures results, gross fixed capital formation is positively related to intra-African trade. Employment is not statistically significant, and technological progress once again enhances intra-African trade for the SADC countries in the region. This is depicted by the strong positive coefficient of technological progress, which is significant at the 1% level.

Table 5.1c: Results for SADC region. Dependent variable Intra-African trade (*LniAt*). Import trade costs as a measure non-tariff measure of multilateral agreement.

Dep. Var. <i>LniAt</i>	Model 2	Model 3
<i>LnlagiAt</i>	0.75*** [0.04]	0.86*** [0.08]
<i>Lnimptrcosts</i>	-1.3** [0.36]	-0.69 [0.07]
<i>Lngdp</i>	-0.72** [0.08]	-0.87*** [0.14]
<i>Lngfcf</i>	1.52* [0.45]	1.11 [0.80]
<i>Lnemp</i>	-1.53** [0.34]	-1.10* [6.00]
<i>Lntech</i>	0.44** [0.10]	0.44** [1.89]
Constant	4.71** [1.02]	3.10* [1.73]
R squared	0.98	
F Stat prob.	0.01	
Wald $X^2_{(6)}$		0.00

Note: ***/**/* denote 1%/5%/10% level of statistical significance. Standard errors in []. Model 1 uses LSDV with the Driscoll and Kraay (1998) corrected standard errors; Model 2 uses Feasible Generalised Least Squares by Parks (1967) and Kmenta (1986). The estimation results using the Bruno (1995) correction under no-tariff agreements did not yield meaningful results.

In terms of the results for import trade costs, there is a negative coefficient that is statistically significant at the 5% level in the results of the Driscoll and Kraay (1998) corrected standard estimation, as presented in Table 5.1c. This can be explained by a combination of factors such as non-tariff barriers and poor infrastructure. If SADC does not embrace a robust easing of non-tariff measures in the region as well as outside the region with other countries, this quasi-protective approach may negatively impact on trade generally in the region (Fall & Gasealahwe, 2017). As with the rest of the estimation, economic growth does not enhance intra-African trade. Gross fixed capital formation is positively related, while employment is negatively related, and statistically significant at the 5% and 10% level respectively. Technological progress

has a positive impact on intra-African trade, and it is statistically significant at the 5% level.

5.3 ECOWAS REGION RESULTS

5.3.1 TARIFF MEASURES OF MULTILATERAL AGREEMENT

The results of the ECOWAS region are depicted in Table 5.2a, 5.2b and 5.2c respectively. Table 5.2a reports the results on tariff measures of multilateral agreement, while 5.2b and 5.2c report the results of non-tariff measures of multilateral agreement for the ECOWAS region.

Table 5.2a: Results for ECOWAS region. Dependent variable Intra-African trade (*LniAt*)

Dep. Var. <i>LniAt</i>	Model 1	Model 2	Model 3
<i>LnlagiAt</i>	0.68*** [0.06]	0.92*** [0.01]	0.93*** [0.01]
<i>Lnapptar_mfn</i>	-0.003 [0.07]	0.02 [0.02]	0.02** [0.01]
<i>Lngdp</i>	0.03 [0.03]	0.02 [0.02]	0.02*** [0.01]
<i>Lngfcf</i>	-0.01 [0.06]	-0.05 [0.05]	-0.06*** [0.02]
<i>Lnemp</i>	0.57 [0.77]	-0.25 [0.22]	0.14*** [0.05]
<i>Lntech</i>	0.01* [0.01]	-0.002 [0.01]	-0.01 [0.01]
Constant		-1.37*** [0.18]	-1.25*** [0.36]
R squared		0.88	
F Stat prob.		0.00	
Wald $X^2_{(6)}$			0.00

Note: ***/**/* denote 1%/5%/10% level of statistical significance. Standard errors in []. Model 1 uses the Bruno (1995) correction; Model 2 uses LSDV with the Driscoll and Kraay (1998) corrected standard errors; Model 3 uses Feasible Generalised Least Squares by Parks (1967) and Kmenta (1986).

Similar to the SADC region results as per the FGLS estimation results contained in Table 5.2a, multilateral agreement that improve tariff measures enhance intra-Africa trade in the ECOWAS region. This is denoted by the positive coefficient of applied tariffs, and its statistical significance at the 5% level. In addition, it is found that economic growth enhances intra-Africa trade in the ECOWAS region as depicted by the positive coefficient of GDP, which is statistically significant at the 1% level. This

contradicts the results of the correlation analysis in Table 4.10, which showed a negative correlation between intra-African trade and economic growth in ECOWAS.

Economic growth in ECOWAS is driven by a more diversified spectrum of tradable goods than in the SADC region, hence the positive results obtained (Agbahoungba & Biao, 2019). The nature of infrastructure or gross fixed capital formation in ECOWAS does not enhance intra-African trade in the region. The negative and statistically significant coefficient of gross fixed capital formation illustrates this phenomenon. More so, the state of technology in ECOWAS is not trade-enabling, as depicted by the non-significance of technology. However, intra-African trade in ECOWAS enhances employment in the region as shown by the positive coefficient of employment, which is significant at the 1% level.

5.3.2 NON-TARIFF MEASURES OF MULTILATERAL AGREEMENT

Table 5.2b: Results for ECOWAS region. Dependent variable Intra-Africa trade (*LniAt*). Export trade costs as a non-tariff measure of multilateral agreement.

Dep. Var. <i>LniAt</i>	Model 1	Model 2
<i>LnlagiAt</i>	0.73*** [0.08]	0.79*** [0.08]
<i>Lnexptrcosts</i>	-0.01 [0.10]	-0.02 [0.11]
<i>Lngdp</i>	0.39*** [0.05]	0.35*** [0.09]
<i>Lngfcf</i>	0.08 [0.15]	0.11 [0.15]
<i>Lnemp</i>	-1.93** [0.64]	-2.14** [0.94]
<i>Lntech</i>	-0.39*** [0.06]	-0.45 [0.06]
Constant	5.88 [3.09]	7.71 [4.78]
R squared	0.89	
F Stat prob.	0.00	
Wald $X^2_{(6)}$		0.00

Note: ***/**/* denote 1%/5%/10% level of statistical significance. Standard errors in []. Model 1 uses LSDV with the Driscoll and Kraay (1998) corrected standard errors; Model 2 uses Feasible Generalised Least Squares by Parks (1967) and Kmenta (1986). The estimation results using the Bruno (1995) correction under no-tariff agreements did not yield meaningful results.

Table 5.2c: Results for ECOWAS region. Dependent variable Intra-Africa trade (*LniAt*). Import trade costs as a measure of non-tariff measure of multilateral agreement.

Dep. Var. <i>LniAt</i>	Model 2	Model 3
<i>LnlagiAt</i>	0.68*** [0.05]	0.67*** [0.07]
<i>Lnimptrcosts</i>	-0.12 [0.09]	-0.08 [0.06]
<i>Lngdp</i>	0.20** [0.05]	0.25** [0.08]
<i>Lngfcf</i>	0.19 [0.20]	0.17 [0.14]
<i>Lnemp</i>	-1.37** [0.25]	-0.95*** [0.30]
<i>Lntech</i>	-0.21* [0.09]	-0.14 [0.14]
Constant	2.31** [0.61]	0.13 [1.78]
R squared	0.94	
F Stat prob.	0.00	
Wald $X^2_{(6)}$		0.00

Note: ***/**/* denote 1%/5%/10% level of statistical significance. Standard errors in []. Model 1 uses LSDV with the Driscoll and Kraay (1998) corrected standard errors; Model 2 uses Feasible Generalised Least Squares by Parks (1967) and Kmenta (1986). The estimation results using the Bruno (1995) correction under no-tariff agreements did not yield meaningful results.

Observing the results on the effects of non-tariff measures of multilateral agreement on intra-African trade in ECOWAS as contained in Table 5.2b and 5.2c, it is evident that agreements on both export trade costs and import trade costs do not enhance intra-African trade in ECOWAS. Despite the tremendous progress has ECOWAS has made in the area of tariff controls, very little has changed in respect of non-tariff barriers to trade in the region (*African Economic Outlook*, 2019; Agbahoungba & Biao, 2019). For instance, border procedures and documentary compliance in the region are still cumbersome in terms of movement of goods and trade related services across borders. Border checkpoints differ from one country in the region to the next, and this clearly points to the lack of an implementing body as well as inadequacy of a well-structured regional policy (Santos *et al.*, 2018). Consequently, employment creation through trade is inhibited in that sense, as can be seen by the negative and statistically significant coefficient of employment in both Tables 5.2b and 5.2c. The state of technology and investment still inhibits intra-Africa trade, while economic growth enhances intra-Africa trade in ECOWAS.

5.4 SYNTHESIS OF THE FINDINGS

The results of this study highlight some similarities as well as significant differences in terms of the role of multilateral agreement in intra-African trade in SADC and ECOWAS.

Table 5.3 below compares and contrasts these two regions in light of the empirical results of this study.

Table 5.3. Enablers and disablers of intra-African trade in SADC and ECOWAS

Intra-African trade in SADC		Intra-African trade in ECOWAS	
Tariff measures of MLA		Tariff measures of MLA	
<i>Enablers</i>	<i>Disablers</i>	<i>Enablers</i>	<i>Disablers</i>
Applied tariffs Investment Technology	Economic growth Employment	Applied tariffs Economic growth Employment	Investment Technology
Non-tariff measures of MLA		Non-tariff measures of MLA	
<i>Enablers</i>	<i>Disablers</i>	<i>Enablers</i>	<i>Disablers</i>
Export trade costs Investment Technology	Economic growth Employment Import trade costs	Economic growth	Import trade costs Export trade costs Technology Employment Investment

Source: Author's compilation from empirical results

First, multilateral agreement on tariff measures enhance intra-African trade in both ECOWAS and SADC. This is because significant progress has been made in the area of tariffs through several trade protocols and regional programmes to enhance regional trade. However, while economic growth and employment are positive enhancers of intra-African trade in ECOWAS, they are the disablers of intra-African trade in SADC. This can be explained by the fact that economic growth in SADC is mostly jobless growth on the back of bullish commodity prices, while ECOWAS has a more diversified productivity base that drives economic growth, although both regions export primary commodities. Again, while investment and technology enhance intra-African trade in SADC, the state of infrastructure investment and technology are not trade-enabling in ECOWAS.

5.5 CONCLUSION

It can be suggested from the results generated in this study that while non-tariff measures of multilateral agreement are used, the differences are stark. In ECOWAS for instance, none of the non-tariff measures enhance intra-African trade in the region. This is due to the small amount of progress made in the region to remove bottlenecks and bureaucracy in the physical movement of goods and services across borders. Border and documentary compliance are still extremely cumbersome for both imports and exports in the ECOWAS region. These hurdles serve as impediments to regional integration through trade.

In addition, poor technology exacerbates the inefficiency of manual bricks and mortar processing of trade across borders in ECOWAS. Investment and employment also do not promote intra-African trade using non-tariff measures of multilateral agreement. However, consistent with the results of tariff measures, economic growth is a positive driver of intra-African trade in the ECOWAS region.

In SADC export trade costs, investment and technology are the main drivers of their intra-African trade, while economic growth, employment, and import trade costs are disablers of intra-African trade in SADC. This can be attributed to the fact that SADC member states consist of countries with huge differences in economic growth, geography, size, and low-income to lower-middle income to upper-middle income economies. In addition, SADC has low skill levels and high unemployment rates compared to some highly skilled ECOWAS regions (Júnior, 2015; Fall & Gasealahwe, 2017). SADC also has strong barriers to imported goods entering the SADC region, as their non-tariff measures are highly restrictive (Peters *et al.*, 2015).

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1 SUMMARY

The motivation of this study is to investigate the role of multilateral agreements in intra-African trade and investment in the SADC and ECOWAS regions in Africa. The study tests a number of hypotheses:

1. H1: Multilateral agreement enhances intra-African trade in SADC and ECOWAS;
2. H2: Drivers of economic growth should also drive intra-African trade in SADC and ECOWAS;
- H3: There are country-specific differences that need to be included into regional trade agreements in terms of differences in policy pathways, implementation trajectories and trade policy outlook.

Even though intra-African trade consolidation has always been a tactical goal for Africa, and regardless of successfully disposing of some tariffs inside regional societies, African markets are still extremely fragmented. Non-tariff and restrictive trade barriers still increase transaction costs and restrain the movement of services, products, capital, and individuals across African countries (Standaert & Rayp, 2016). Several secondary questions emerge from the motivation, such as: what are the contributions of regional economic communities in enhancing the level of intra-African trade and investment in Africa? How can regional economic integration between member states be eased? How can sustainable economic growth and development be attained for the continent? The choice of ECOWAS and SADC as the basis for comparison is driven by the fact that SADC is known for its technological advancement and ECOWAS has made tremendous progress in the area of tariff controls and has high levels of economic and employment growth. Additionally, among the eight regional economic communities, SADC and ECOWAS are dominant, and significantly contribute to Africa's economy. Still, the level of intra-African trade remains low.

Annual data from 2000 to 2018 and dynamic panel data econometric techniques were used in this study, controlling for individual country characteristics, endogeneity,

serial correlation, heteroscedasticity and interdependencies between the countries in each region. Two estimations were done, the first using tariff measures of multilateral agreement and the second using non-tariff measures of multilateral agreement. As a result of the characteristics of the dataset, the Bruno (1995) correction was used to address endogeneity emanating from a Nickell (1981) bias, while LSDV of Driscoll and Kraay (1998) corrected standard errors and the FGLS of Parks (1967) and Kmenta (1986) were used to control for serial correlation, heteroscedasticity and cross-sectional dependence of the error term as characteristics of the datasets used in the study.

6.2 CONCLUSION

The results of the empirical analysis show that SADC region has a slight edge over ECOWAS in the areas of technological progress and investment, especially in trade infrastructure. However, ECOWAS has higher levels of employment and economic growth than the SADC region. Hence, we fail to reject the null hypotheses (H2) that drivers of growth should drive intra-African trade though their impact on economic growth. However, this holds for the ECOWAS region and not SADC, indicating the relevance of hypothesised country or regional level differences. These differences further translate into differences that drive intra-African trade in each of these regions, and how that relates to the role of multilateral agreement in intra-regional trade in each of these regions. While technology and investment are the key drivers and enhancers of intra-African trade in SADC, economic growth and employment stand out as key enhancers of intra-regional trade in ECOWAS, especially when multilateral agreement is represented by tariff measures. Hence, we fail to reject the null hypotheses (H3) that country, or rather regional specific differences apply in terms of what drives intra-regional trade and therefore the trade policy pathway and outlook to enhancing intra-regional trade will differ between the regions.

However, when non-tariff measures are used to represent multilateral agreement, export trade costs, in addition to investment and technology, are the key drivers of intra-African trade in SADC. As explained in the text, the enabling role of export trade costs for SADC is due to a combination of non-tariff trade barriers and poor infrastructure. Customs strategies in the region are usually focused on revenue mobilisation rather than on trade facilitation (Fall & Gasealahwe, 2017). For

ECOWAS, under non-tariff measures of multilateral agreement, only economic growth drives intra-African trade. The cumbersome nature of cross-border movement of goods and services, border compliance, documentary compliance, poor infrastructure and poor technological progress in relation to trade is a reality which stands out strongly as detrimental to intra-African trade in ECOWAS. Hence in terms of Hypotheses H1, the results show that how multilateral agreements is measured or implemented determines what the impact on intra-regional trade will be. In addition, there are regional specific differences.

The findings of this study not only align with the existing literature but also highlight the realities on the ground in these two RECs. This study findings are also in line with the earlier findings of Chibira and Moyana (2017), who did not apply estimation techniques in their study but compiled by using stakeholder consultations and environmental assessment. Their findings showed that products exported by African countries are traded in their raw form, non-tariff barriers hinder intra-regional trade, and that there is inadequate integration and lack of a communal approach with regard to trade strategies, policies and legislation. It also aligns with the study by (Guei & le Roux, 2019) who applied the autoregressive distributed lag (ARDL) bounds testing approach and the pool mean group (PMG) model in their estimation process, and concluded that trade openness impacts negatively on GDP per capita in the long run in the ECOWAS region. Although trade liberalisation could be of huge benefit, removal of trade barriers among ECOWAS members in all sectors would not impact its growth. ECOWAS member countries must determine which sectors to liberalise and improve upon their product production and services to aid poverty alleviation and increase their income.

Firstly, this study adds to the scant literature on intra-African trade by controlling for country-specific effects, time-specific effects in one instance, and serial correlation, heteroscedasticity, endogeneity, and cross-sectional dependence of the error term. Secondly, the findings of this research confirm the initial hypotheses stipulated in this study, and by failing to reject the null hypotheses that, barring all unexpected circumstances and developments, multilateral agreement should enhance intra-African trade. Secondly, other factors that impact on trade through its relationship with economic growth further enhance intra-African trade. These are gross fixed

capital formation and technological progress factors, and labour as represented by the rate of employment. Thirdly, there are country-specific differences in each REC, which point to the need of accommodating country-level heterogeneity in regional trade agreements and policy outlook.

6.3 RECOMMENDATIONS

To attain effective regional trade agreement outcomes, this study has shown the need for incremental and sustainable growth in trade among members of the RECs by lowering trade tariffs between its members, and by lowering non-tariff trade barriers that originate from policies and evoked rent seeking extraction. Lastly, by intensifying regional integration through the constituents of trade facilitation such as: hard infrastructure (roads, telecommunications, ports etc) and soft infrastructure (business environments, transparency, customs governance), and other institutional aspects that impact negatively on trade.

After recognising the challenges faced by ECOWAS, this study contributes to the existing knowledge by pointing out strategies that would assist key actors involved in the integration process in this region that should enhance proper enforcement of integration within ECOWAS. Thus, ECOWAS must implement the following: i) accelerate full and effectual execution of the Customs Union and the ECOWAS Common External Tariff; ii) simplify their application approval processes and coordinate approvals that are issued by ECOWAS and the intergovernmental organisation by establishing a common recognition scheme and setting up joint cooperation between organisations; iii) intensify the mutual connection of customs schemes of its member states; iv) speed up the growth of ECOWAS standards to ease intra-regional trade; v) follow a policy that would advance border control and border posts; vii) quicken the launch of ECOVISA (Schengen visa); viii) create a medium for having consultations with private sectors, political officials, and civil associations prior to conferences and meetings of heads of state; ix) by organising regional integration events and inviting ECOWAS member countries to them.

Regarding SADC, the region has attained major progress in several key areas such as infrastructural improvement in protecting natural resources, food security, and so on, which have been realised through sectoral collaboration. However, since most

economies of the SADAC member countries are small and mainly export primary commodities with only emerging industrial growth, the SADC economies cannot individually attract the needed technological and financial transfers to aid their industrialisation and development. Establishing regional funds would impart social coherence and economic harmony and assist in overcoming supply-side constriction in the region.

This study contributes to the existing knowledge by indicating that deeper regional integration in SADC will occur when other goals are reached, such as economic and political stability, gradual integration into global markets, and mobilising investments and savings. Hence, its member should: i) resolve the problem of overlapping and multiple membership to prevent duplication, confusion and competition, to decrease the financial load on the taxpayer; ii) align a national plan of action, priorities and policies for the regional schemes, and coordinate policies and legal schemes with regional strategies; become more dedicated to the agenda of regional integration and be willing to sign and adapt protocols; iii) agree on regional legislation and an institution that coordinates policies and oversees the integration plans, legal strategy, and institutional integration; iv) involve national stakeholders to augment their knowledge and ownership.

In terms of policy recommendations, it is clear from the findings of this study that the policy pathway to enhancing intra-African trade differs between RECs. Different factors block or promote intra-African trade in each REC. This explains why previous regional trade agreements, which adopted a one-size-fits-all approach, have not worked and why such little progress has been made in improving intra-African trade. This calls for a review of existing regional trade agreements as well as recent ones such as the African Continental Free Trade Area, which has just been ratified by 54 African states. The findings of this study highlight the need for accommodating regional heterogeneity in terms of drivers and inhibitors of intra-African trade, in the policy formulations and implementation of these RTAs. This should be done if they are to be successful in enhancing intra-African trade in order to realise their anticipate benefits, and achieve the mantra of the sustainable development goals of “leaving no one behind”.

6.4 FUTURE RESEARCH

In terms of future research, other RECs in Africa are worth looking into to further enrich the required policy heterogeneity needed to make regional trade agreements successful in realising their intended development goals.

6.5 DELIMITATIONS AND ASSUMPTIONS

6.5.1 DELIMITATIONS

- I. This research focuses specifically on trade between African countries, and the role of multilateral agreement with regard to such trade.
- II. The researcher chose to use only secondary sources of data collection for this research from reliable and time-tested sources, which are kept by global organisations such as the World Bank and the United Nations Conference on Trade and Development. This data had already been confirmed by other researchers as sound, knowledge-derived and accumulative (Tustin, *et al.*, 2005).
- III. The researcher did not use questionnaires.
- IV. Stata software was be utilised to run the data.

6.5.2 LIMITATIONS

- I. Inadequate availability of previous studies in this research area was a limitation for this thesis.
- II. By using secondary data, the researcher usually did not have full control of the data collected.
- III. Since the study was set within a time frame, the research outcomes could have been affected by the activities of society during such time frame.

6.6 ETHICAL IMPLICATIONS

The researcher avoided bias and plagiarism and followed the ethical code of conduct of the University of South Africa. The candidate was granted approval to carry out this study by the University of South Africa.

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