Do competition regimes matter in international trade? A case study of the Tripartite Free Trade Area

By

Cornelius Dube

(216076123)

A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in Economics

School of Accounting, Economics and Finance

College of Law and Management Studies

Supervisors: Professor Mabutho Sibanda

And

Professor Merle Holden

June 2021

Declaration

I, **Cornelius Dube**, declare that:

(i) The research reported in this thesis, except where otherwise indicated, is my original research.

(ii) This thesis has not been submitted for any degree or examination at any other university.

(iii) This thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.

(iv) This thesis does not contain other persons' writing, unless specifically acknowledged as being sourced from other researchers. Where other written sources have been quoted, then:

a) their words have been re-written but the general information attributed to them has been referenced; and

b) where their exact words have been used, their writing has been placed inside quotation marks, and referenced;

(v) This thesis does not contain text, graphics or tables copied and pasted from the internet, unless specifically acknowledged, and the source being detailed in the thesis and in the reference section.

Name of student: **Cornelius Dube**

Student number: **216076123**

Signature: 

Acknowledgements

I would like to begin by extending my appreciation to my two supervisors, Professor Mabutho Sibanda, Dean in the School of Accounting, Economics and Finance, and Professor Merle Holden. I am grateful for their guidance and patience, especially when I was lost along the way. I am beholden to my supervisors for guidance on the gravity model formulation under the bilateral trade context, especially as this was my first time to use the model. I would also like to thank them for all the effort they put into transforming the thesis from the poor state it was until this stage. The contribution and support of a number of people on the research methodology, especially econometric and model specification is also acknowledged. Special mention should be made of Dr Nicholas Masiyandima whose assistance with panel data was invaluable. I also acknowledge online videos, especially online lectures on panel data methodologies, which served as refreshers, especially in areas where my econometrics was getting rusty. Special thanks to Dr Ngozi Adeleye, Professor Ben Lambert and Dr Sayed Hossain.

I thank the officials working in the competition authorities in a number of countries who assisted with information on enforcing competition laws, which served as input into the modelling conducted in this study. They include Ellen Ruparanganda, Cecilia Mashava and Calista Dzenga from the Competition and Tariff Commission in Zimbabwe; Chilufya Sampa and Parret Muteto from the Zambia competition authority; Martha Kaukonde and Bertha Baloyi from the Competition and Fair Trading Commission in Malawi; Bonyana Ndubiwa from the Botswana Competition Commission; William Sukati and Thembelihle Dube from the Eswatini Competition Commission; Allan Mlulla, Julius Mduma and Philip Msafiri from the Fair Competition Commission in Tanzania; and Francis Lebon and Natasha Jumaye from the Fair Trading Commission, Seychelles. Your cooperation is highly valued.

I also thank my whole family, starting with my wife, Nomagugu Masuku as well as my three children for their support and understanding, especially when I was virtually locked up with this thesis and their priorities were ignored. To my children, Verity and Corleone,

thank you for the encouragement and assistance. Thank you little Cleodora, for understanding that you could not disturb me while I was busy with this study.

College of Law and Management Studies

Supervisors Permission to Submit Thesis/ Dissertation for Examination

Name: CORNELIUS DUBE	No: 216076123	
Title: Do competition regimes matter in international trade? A case study of the Tripartite Free Trade Area		
Qualification: PhD Economics	School: Accounting, Economics and Finance	
	Yes	No
To the best of my knowledge, the thesis/dissertation is primarily the student's own work and the student has acknowledged all reference sources	✓	
The English language is of a suitable standard for examination without going for professional editing.	✓	
Turnitin Report %*	6%	
Comment if % is over 10%:		
I agree to the submission of this thesis/dissertation for examination	✓	
Supervisors Name: MABUTHO SIBANDA		
Supervisors Signature:		
Date:		
Co- Supervisors Name:		
Co- Supervisors Signature:		
Date:		

Abstract

This thesis assesses the importance of competition policy and competition reforms in enhancing regional and continental integration processes. While using the envisaged Tripartite Free Trade Area (TFTA) as a case study, it assess competition reforms in the individual countries as well as bilateral trade flows between the countries that would become members of the TFTA. As strides are now being made towards continental integration, the role that competition policy adoption and enforcement can play in enhancing benefits from the integration remains largely unexplored. The thesis's objectives were threefold. Firstly, it aimed to demonstrate the need for competition reform to be part of the discussions on regional integration at the level of the envisaged TFTA by showcasing how existing bilateral trade flows between the countries were influenced by competition reforms in the countries. Secondly, the study investigated whether the existing competition regimes in the countries that would form the TFTA reflect a general belief in competition policy. Thirdly, it aimed to assess whether changes in levels of economic development over time within the African context, as reflected by members of the envisaged TFTA, influenced decisions to tighten competition regimes.

An index, the Competition Reform Index (CRI), which quantitatively measures the strength of competition regimes, was designed to assess the level of acceptance of the competition reform agenda among the countries constituting the TFTA. Such acceptance is inferred based on univariate methods, specifically how the levels of the mean CRI, the standard deviation of the CRI and the maximum CRI score, have evolved over time. CRI data for 23 countries over the period 1998 to 2018 is used for this purpose. The manner in which competition reforms impact international trade was estimated using panel data models, with a measure of the strength of competition regimes included among the explanatory variables. More specifically, the gravity models of international trade were estimated through random effects panel data models and Generalised Methods of Moment (GMM) models, using bilateral country exports and imports for countries that would be part of the envisaged TFTA. The estimation for the random effects and GMM

models was over the period 2001 to 2016 across 20 countries[1] that would all be part of the proposed TFTA. The extent to which adoption of competition reforms in the envisaged TFTA could have been the result of changes in economic performance in these countries was estimated using panel Granger causality methods, for 23 countries over the period 1998 to 2018[2]. More specifically, the study estimated the extent to which changes in Gross Domestic Product (GDP) levels in the proposed TFTA countries Granger cause changes in the CRI.

The mean score of the CRI shows that although only 20% of the countries in the TFTA have not yet embraced competition reforms, few countries have been subjected to high quality competition regimes for a long period of time. The standard deviation of the CRI reflects some attempts to improve competition reforms over time in the region, although only 44% of the countries in the TFTA have high quality competition regimes. This confirms earlier studies that showed that some competition laws were adopted among the countries in the envisaged TFTA, but were designed to ensure that other public interests are not compromised.

The study established that tightening competition reforms in the exporting country, reflected in an increase of 1% in the competition reforms variable will, on average, result in bilateral exports increasing by between 0.1% and 0.16%, holding other influencing variables constant. However, if the importing countries increase their competition variable by 1%, an average short-run decrease of 0.46% in bilateral exports would be expected, holding other things constant. With respect to imports, the results show that bilateral imports among countries in the proposed TFTA will increase by between 0.07% and 0.18% if the exporting countries increase their competition reforms by 1%, holding other influencing variables constant. The findings from the Granger causality tests of panel data do not produce statistically significant evidence that there is short-run causality from GDP to CRI. However, in the long run, this relationship is statistically significant.

[1] Botswana, Burundi, Comoros, DRC, Djibouti, Egypt, Eswatini, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Tanzania, South Africa, Zambia and Zimbabwe

[2] This gives N=23 and T=21, hence T was not considered significantly lower than N to cause significant estimation distortions

There are three major implications of these findings. Firstly, there is still room for countries to improve their competition regimes and enjoy more benefits from regional integration within the envisaged TFTA. Second, competition reforms should be enhanced in a quest to promote regional competitiveness and ultimately, global penetration rather than bilateral trade within the TFTA. This is due to the fact that an increase in bilateral exports in the TFTA is only apparent if other countries are lagging behind in competition reforms. Thus, if all countries in the TFTA were to adopt competition reforms, this added advantage would be neutralised. Third, the absence of short-run causality between GDP and competition reforms implies that regulatory capture and vested interests, which are characteristic of countries with low levels of development, are no longer a significant obstacle in the TFTA. This is encouraging from a policy perspective, as efforts to promote competition reforms at regional level can be continued across all countries with little fear of country vulnerability to capture by business and other vested interests.

Key Words

Competition policy; competition reforms; Tripartite Free Trade Area; International Trade

Publications

Published article

Dube, C. (2021). The Role of Competition Reforms in Unlocking International Trade: Evidence from Africa's Proposed Tripartite Free Trade Area. *The Antitrust Bulletin,* 66(2), 252–275

This article is based on Objective (ii) of this thesis.

Article accepted for publication

Dube, C., Holden, M., and Sibanda, M. (2021). Competition Reform Motivation in Africa: Does Economic Development Play A Role? *Interdisciplinary Journal of Economics and Business Law (IJEBL)* (forthcoming)

This article is based on Objective (iii) of this thesis

Table of Contents

List of figures

List of tables

List of Acronyms

ADF	Augmented Dickey Fuller
AfCFTA	African Continental Free Trade Area
ATLI	Antitrust Law Index
AU	African Union
CCPC	Competition and Consumer Protection Commission
CLI	Competition Law Index
CNC	National Competition Commission
COMESA	Common Market for Eastern and Southern Africa
CRI	Competition Reform Index
CUTS	Consumer Unity and Trust Society
DFID	Department for International Development
DRC	Democratic Republic of the Congo
EAC	East African Community
ECOWAS	Economic Community of West African States
ESCWA	Economic and Social Commission for Western Asia
GDP	Gross Domestic Product
GMM	Generalised Methods of Moment
GNI	Gross National Income
GNP	Gross National Product
IDRC	International Development Research Centre
IMF	International Monetary Fund
MENA	Middle East and North Africa
OECD	Organisation for Economic Co-operation and Development
PPF	Production Possibilities Frontier
REC	Regional Economic Cooperation
RICA	Rwanda Inspectorate, Competition and Consumer Protection Authority
SACU	Southern African Customs Union
SADC	Southern African Development Community
TCCPA	Trade Competition and Consumers Protection Authority

TFTA	Tripartite Free Trade Area
UNCTAD	United Nations Conference on Trade and Development
VAR	Vector Auto Regressive
VECM	Vector Error Correction Model
WTO	World Trade Organisation
ZCC	Zambia Competition Commission

CHAPTER 1: INTRODUCTION

1.1 Introduction

This chapter serves as the introduction to the thesis. This study is timely, as it was undertaken during a period in which debate on continental integration in Africa has gained considerable momentum. Strides are now being made to move beyond regional economic cooperation (REC) agreements to regional trade cooperation and a broader initiative targeting the whole continent (Kigwiru, 2020; Albagoury and Anber, 2018; Scholvin, 2018). It is, therefore critical to investigate the factors that will strengthen continental and regional integration in order that the participating countries can enjoy more international trade benefits. It is against this background that this thesis assesses the importance of competition reforms in enhancing regional and continental integration processes. In general, competition among firms creates several advantages, which are necessary to enhance economic growth. For example, competition is a critical tool in enhancing efficiency in resource allocation, creating firm dynamics that promote innovation, productivity and overall competitiveness (IMF, 2019), which determine international trade. Furthermore, since competition limits rent extraction opportunities among firms and helps to stabilise prices, it is generally welfare enhancing (IMF, 2019). However, competition does not come naturally and needs to be nurtured (Aydin and Büthe, 2016). One way of inculcating competition in the market is regulating firms' behaviour as well as creating favourable conditions for entry into markets. This is usually achieved by embracing competition policy.

Competition policy is generally intended to ensure fair competition among business enterprises so as to promote both consumers and producers' welfare (IMF, 2019; World Bank and OECD, 1999). Although competition can arise naturally, at times the process is thwarted when businesses resist competition as it erodes rent. This compels governments to introduce laws and policies to guide competition. However, businesses often resist such efforts (CUTS, 2006). This could explain why countries are at different stages in adopting competition reforms, depending on the extent to which resistance among some stakeholders has been thwarted.

The different stages in the competition reforms journey imply that any benefits accruing from intra-regional and intra-continental trade that would emanate from competition policy implementation would accrue differently among countries. Deeper understanding of how enforcement of competition reforms has facilitated improved trade flows could motivate countries that are lagging behind to move to higher levels of competition policy reform. Bringing all the countries in a region or continent to the same level would facilitate regional and continental integration, as the parties would be speaking from comparable positions.

This chapter comprises nine sections. Section 1.2 discusses the background to the study, focusing on the Tripartite Free Trade Area (TFTA) and the African Continental Free Trade Area (AfCFTA) processes, which the study aims to influence. Section 1.3 presents the problem statement, while the fourth section sets out the study's objectives. The research questions are outlined in section 1.5, and the rationale for the study and its significance in sections 1.6 and 1.7, respectively. Section 1.8 covers the scope of the study and section 1.9 concludes with its limitations.

1.2 Background to the study

The proposed TFTA is a very broad REC that will come into being through a merger of three African RECs, namely the East African Community (EAC) with six members, the Common Market for Eastern and Southern Africa (COMESA) made up of 21 members and the Southern African Development Community (SADC), which has 16 members (Table 1). Negotiations on the TFTA among the three regional groupings have been ongoing since 2008, when the first conference was held in Kampala, Uganda (Mold and Mukwaya, 2016; Albagoury and Anber, 2018). In June 2015, 26 members of the three trading blocs met in Egypt and agreed to step up momentum to bring the TFTA into force. The TFTA Agreement is only enforceable if it is signed and ratified by 14 member states. The June 2015 meeting was held when the number of countries to form part of the TFTA was 26; however, it has since grown to 29 following South Sudan's admittance into the EAC in April 2016 and the joining of Tunisia and Somalia into COMESA in January 2020 (COMESA, 2020). COMESA supplies the bulk of membership in the TFTA (Table 1),

although there are a lot of overlapping membership, especially between COMESA and SADC. For example, eight Member States of COMESA are also members of SADC[3], while two Member States of the EAC (Rwanda and Burundi) are also members of COMESA. However, if the envisaged TFTA were to take off, the overlapping membership issues would also cease to matter.

Table 1: Membership of the proposed TFTA arranged by REC

REC	Member states	Number of countries
COMESA	Comoros; Djibouti; Democratic Republic of Congo; Kenya; Rwanda; Egypt; Ethiopia; Eswatini; Burundi; Libya; Madagascar; Somalia; Malawi; Tunisia; Mauritius; Seychelles; Sudan; Zambia; Zimbabwe; Uganda; Eritrea	21
SADC	Angola; Democratic Republic of the Congo; Seychelles; Botswana; Namibia; Comoros; Eswatini; Lesotho; Malawi; Madagascar; Mauritius; Tanzania; Mozambique; South Africa; Zambia; Zimbabwe	16
EAC	Burundi; South Sudan; Kenya; Rwanda; Tanzania; Uganda	6

Source: Author's compilation using the respective RECs' membership websites

By June 2018, the Declaration setting up the TFTA had been signed by 24 of the 27 countries, with Libya, South Sudan and Eritrea remaining (Tralac, 2018). By April 2020,

[3] DRC, Eswatini, Seychelles, Madagascar, Malawi, Mauritius, Zambia and Zimbabwe

22 countries had signed the TFTA Agreement, while only eight[4] of the required 14 had ratified it[5].

The TFTA's overall objectives include[6]:

- The promotion of regional economic and social development;
- Promoting intra-regional trade by creating one market with free movement of goods and services;
- Enhancing integration processes at the regional and continental level; and
- Building a strong TFTA that will benefit the whole region and its people.

These objectives would be met by eliminating tariff and non-tariff trade barriers and the adoption of measures to facilitate trade. As specified in the TFTA Agreement, cooperation among the partners will be based on equality as well as fair competition (COMESA, EAC and SADC, 2015). It was also agreed that there is a need to negotiate protocols on trade related issues, including competition policy (COMESA, EAC and SADC, 2015). This implies that the member states' level of competition and its regulation in their markets have been identified as critical.

Although the TFTA is not yet in force, some empirical studies demonstrate the potential benefits that would accrue to member states from its implementation. Focusing on the manner in which industrial production and consumption affect trade flows, Mold and Mukwaya (2016) conclude that intra-regional trade would rise by around US$8.5 billion, a 29.2% increase. The study found that the benefits would be more pronounced in some segments of the manufacturing sector such as processed food, and light and heavy manufacturing. Walters, Bohlmann and Clance (2016) examined the impact of the TFTA focusing on South Africa, which is most of the member states' main trading partner. They found that South Africa's GDP and welfare will be boosted by the TFTA which would see

[4] Egypt, Kenya, South Africa, Rwanda, Uganda, Burundi, Botswana and Namibia.
[5] News item from Bilaterals.org of 23 April 2020 entitled 'SADC takes over Tripartite economic group leadership' at website https://www.bilaterals.org/?sadc-takes-over-tripartite accessed 14 June 2020.
[6] Article 4 of the TFTA Agreement.

its trade shift from non-TFTA members towards TFTA countries. Makochekanwa (2014) investigated the likely impact of the TFTA on the 26 participating members and established that nearly US$2 billion worth of new trade would arise, with the DRC and Angola being the main beneficiaries. The study also concluded that while about US$454 million worth of trade will be diverted, the net trade benefit would be positive at about US$1.5 billion. These studies demonstrate the TFTA's potential to deliver trade benefits to the participating countries. It is, therefore important to identify possible complementary measures that could further enhance the potential benefits of regional integration, for which undertaking competition reforms could be one such measure.

Like other regional economic communities, the rationale for the formation of the TFTA is to boost trade among member states, especially at the intra-regional level so as to facilitate the development of the region (COMESA, EAC and SADC, 2015). Facilitating trade would enhance the flow of goods and enable infrastructure development (Walters, Bohlmann and Clance, 2016; Albagoury and Anber, 2018; Scholvin, 2018). It is also envisaged that the TFTA will facilitate the establishment of the African Continental Free Trade Area (AfCFTA) (Abrego et al, 2019; Mold and Mukwaya, 2016). Given that discussions on continental integration are now centred on the AfCFTA, it is critical to identify the factors that enhance trade between the countries, with a view to taking corrective action for member states to realise full value from the process.

Although the TFTA is expected to facilitate its development, discussions at AfCFTA level are progressing well, with the potential to yield results earlier than the TFTA. After several years of negotiations, which date back to as early as 1980, in May 2019, the AfCFTA entered into force (Kigwiru, 2020). The decision taken at the Heads of State Assembly meeting of the African Union (AU) in Ethiopia in January 2012 to fast track the establishment of the AfCFTA created the necessary momentum to produce the AfCFTA Agreement in 2018 (AU, 2018) following a Heads of State meeting of the AU in Kigali, Rwanda. By 6 May, 2020, 30 countries had ratified the Agreement and all 55 AU members, except Eritrea, had signed it (Tralac, 2020). The aims of the AfCFTA include the establishment of a single goods and services market, which would deepen the

continent's economic integration and would serve as a foundation for a Continental Customs Union[7] (AU, 2018). Member states would be expected to progressively reduce tariff and non-tariff barriers while liberalising trade in services[8]. More importantly, the AfCFTA Agreement specifies that members should remain conscious of the need to, among other things, come up with rules to govern competition policy[9].

Thus, in general, both the TFTA and the AfCFTA processes are very much alive to the important role that competition policy would play in regional and continental integration. However, the countries which would form the TFTA and the continental body are not at the same level with respect to adopting and implementing competition reforms; hence priorities and attitudes towards coming up with the rules on competition policy ar regional and continental levels are expected to be different. This was one of the motivations for conducting this study.

1.3 Problem statement

Africa is making strides on the regional integration front, and the envisaged AfCFTA will be a significant milestone when implemented. At both the AfCFTA and the TFTA, member states would need to agree on competition policy protocols, as it is envisaged that such policy will play an influential role in international trade. However, countries are not at the same level with respect to adoption of competition reforms; while some countries such as Zambia and South Africa are now highly experienced in enforcing their competition regimes, others such as Lesotho and Uganda are still reluctant to undertake any meaningful competition reforms (Lipimile, 2018). Given that competition enforcement is a critical determinant of the nature of the competition prevailing in the national markets, the lack of competition reforms in some countries would imply that some countries have economies with low levels of competition compared to others (Aydin and Büthe, 2016). The former would lag behind in enjoying the benefits of competition, which matters in unlocking international trade advantages. While development partners, including the

[7] The objectives are set out in Article 3 of the AfCFTA Agreement.
[8] Article 4 of the AfCFTA Agreement.
[9] The preamble to the AfCFTA Agreement.

Department for Trade and Development (DFID); the World Bank, and the International Development Research Centre (IDRC), among others (Preston, 2005; Joekes and Evans, 2008; Khemani, 2007) have invested resources to support competition reforms, including in the countries to constitute the TFTA, the fact that some scepticism and reluctance persists is of concern. This suggests that further evidence is required of the benefits of competition reforms to countries that embrace them. Countries like Ghana, Uganda and Nigeria that received funding from their development partners to formulate competition laws in the early 2000s (CUTS, 2010; 2007) had not gone beyond the drafting stage of those Competition Bills by 2018. It is thus likely that the protocols on competition policy at continental level could fail to reach the minimum ratification threshold level required for passage, reflecting these differences in opinions. This underlines the importance of evidence to showcase that competition reforms are beneficial to international trade, especially bilateral trade between countries in a regional grouping. In sum, differences in the extent to which countries that are party to the same continental economic integration grouping have embraced competition reforms are a potential problem.

This study argues that such differences can be reduced by producing evidence of the benefits of adopting competition reforms by the countries in the TFTA in the context of regional integration. However, no comprehensive research has been conducted to produce such evidence, which could guide the discourse on competition policy protocols. In addition, development partner support towards competition reforms has not yielded results for some countries. There is also need for all critical variables that are likely to determine competition reforms acceptance to be known. This study assesses whether economic growth plays a role, such that the competition reform advocacy agenda could be properly targeted. The rationale for this study is thus to contribute in filling these gaps.

1.4 Objectives

The study's objectives were to:

(i) Assess the extent to which the competition reforms agenda has been accepted among the TFTA countries;

(ii) Analyse how the competition reforms undertaken by the countries in the proposed TFTA influenced bilateral international trade flow patterns among the countries; and

(iii) Examine whether the competition reforms processes that have been taking place in Africa were influenced by the level of economic performance.

1.5 Research questions

The following research questions were formulated to achieve these objectives[10]:

(i) Is there any evidence that the competition reforms agenda has been accepted in the proposed TFTA?

(ii) Are there regional or geographic factors that influence the trends and patterns of competition reforms acceptance among the TFTA countries?

(iii) How have trade patterns between the TFTA countries been influenced by the nature of competition reforms by the countries?

(iv) Are there any other factors that matter in the manner in which competition reforms affects bilateral trade among the proposed TFTA countries?

(v) To what extent can the level of economic performance be said to have influenced the decision to embrace competition reforms in the countries constituting the TFTA?

(vi) What are the policy implications emerging from the relationship between competition reforms, economic growth and international trade patterns?

1.6 Rationale for the study

The reasons for conducting this thesis are manifold. First, the thesis is intended to give input into the debate about the benefits of competition reforms. Debate continues on the role played by competition policies in the economy, even among stakeholders that are aware of the benefits of competition reforms (Evenett, 2015). Within the context of the

[10] Research questions (i) and (ii) help answer the first objective, while research questions (iii) and (iv) answer the second objective. Research question (v) answers the third objective, while research question (vi) draws from all the three objectives.

TFTA, some countries have not yet adopted competition laws[11], while others might have adopted laws, but have not yet introduced the necessary frameworks for implementation[12] or have rendered the competition regime ineffective by retaining conflicting policies. Identifying the positive role that competition reforms could play in international trade flows could encourage countries that are lagging behind to come on board. An examination of the countries across the three RECs points to differences in competition reforms that could negate the benefits of regional integration. For example, COMESA has an effective regional competition framework in the form of the COMESA Competition Regulations of 2004. However, as at December 2019, nine member states[13] did not have actively enforced national competition laws, making regional enforcement difficult. In the EAC, which adopted the EAC Competition Act of 2006, only two of its six members (Kenya and Tanzania) have significant competition enforcement experience, while it is emerging in Rwanda and Burundi. Countries in the SADC region have generally adopted competition laws except Lesotho, although Angola only adopted its competition law in 2018.

Second, the thesis would also help resuscitate the competition policy discussion within the trade discourse. Within the international trade context, competition policy was recognised as a critical issue early on in the World Trade Organisation (WTO) discourse. However, there has been little debate on this phenomenon at the global level. 'Trade and competition' was one of the four issues discussed during the ministerial conference organised by the WTO in Singapore in 1996 (Mehta and Chakravarthy, 2011)[14]. Although the Doha ministerial meeting of 2001 further prioritised the issue, there was strong opposition to negotiating it among developing countries during the 2003 ministerial meeting in Cancun (Mehta and Chakravarthy, 2011). A meeting in Geneva in July, 2004 eventually resolved to remove 'trade and competition' from the agenda, leaving trade facilitation as the critical issue for negotiations (Mehta and Chakravarthy, 2011). The current study thus focuses on an issue that is also relevant at the broader level of

[11] Eritrea, Lesotho, Libya, Somalia, South Sudan, and Uganda
[12] Examples include Burundi, Comoros, Djibouti, Mozambique, and Sudan.
[13] Burundi, Comoros, Djibouti, Eritrea, Lesotho, Libya, Mozambique, Somalia, and Sudan
[14] The other three issues were trade facilitation, transparency in government procurement, and trade and investment.

international trade, including the WTO, as its findings could inform competition policy within a multilateral context.

Third, the thesis would also help enrich empirical findings on the benefits of competition reforms within the African context. Competition enforcement has also been touted as a critical tool to enhance transparency and facilitate market entry which is essential to promote trade. However, there is limited evidence within the African context on whether the competition oriented reforms adopted thus far has yielded such benefits to the countries adopting them. This study comes at an opportune moment, especially when international trade discussions are now located at the TFTA and AfCFTA level.

Fourth, the study is also useful in giving input into the debate about the main drivers of competition reforms in Africa. While the study's central aim is to recommend competition policy reforms if they are advantageous to international trade, it is crucial to understand the main drivers of the adoption of competition laws in Africa, especially in shaping advocacy agendas. Assessing whether economic performance can influence competition reforms is also critical, as it might not be necessary to recommend such reform for those countries in nascent stages of development. Such countries could still be pursuing protectionist policies for domestic firm development, despite the various commitments under regional integration. Thus, depending on the findings, they might need to be given an opportunity to grow despite missing potential competition benefits, as the growth would eventually create the need for competition reforms.

These factors generally constitute the rationale for this study. Studies on the dynamics within the TFTA are important, as they would reveal some of the obstacles to trade which need to be addressed to make trade more beneficial when the TFTA eventually becomes operational. This study was construed as a potential input into the TFTA discourse; hence the selection of the TFTA as a case study. It is important to note that at the time of conducting this study, the TFTA is not yet in place, such the case study of the TFTA is focused on the countries to form the TFTA. At a stage when milestones have been

reached in the establishment of the AfCFTA, the study is timely as the findings are likely to be informative in guiding competition policy discourse within continental integration.

1.7 Significance of the study

The study is significant in four respects. Firstly, it measures the quality of competition regimes in Africa, which would be of interest to competition practitioners, including the competition authorities and governments in assessing their progress in creating institutions to promote competition in the market and to make the necessary improvements to be on par with their peers. Secondly, the study will assist development partners and other stakeholders interested in advocating for competition reforms to identify potential target countries. This mainly arises from the fact that there are some countries that are, on paper, deemed to have embraced competition reforms, while the assessment of the provisions of the competition laws adopted in this study could reflect some shortcomings that prevent the benefits of competition from being fully realised.

Thirdly, the study will be of interest to stakeholders in the continental and regional integration discourse. Its findings will enrich discussions on competition policy as well as competition policy protocol under the TFTA and the AfCFTA. In particular, the findings would be useful in encouraging countries that are lagging behind in competition reforms to catch up. Fourthly, the study's findings contribute to academic knowledge on the development of quantitative measures of competition reforms. Further refinement of the methodology would lead to the development of indicators that are more reflective of the realities of competition enforcement, strengthening policy research and analysis.

1.8 Delimitations of the study

The three objectives have been answered using different time frames depending on data availability in this thesis. The quantitative measure of competition reforms acceptance used in this study reflects competition policy and law in the countries constituting the TFTA countries up to 2018. Recent developments are thus not captured. The data employed to estimate the relationship between competition reforms and international trade using panel data models runs from 2001 to 2016. The reason is that there is a

component on competition enforcement which required gathering primary data, and this was gathered from the competition authorities in order to assemble the necessary inputs for the competition policy reform variable. This exercise was initiated in 2017 and completed in 2018. Thus, at the time of data collection, the most recent data available was for 2016. The starting date of 2001 was chosen based on historical international trade data availability. However, where descriptive statistics involving international trade flows in general are discussed, the period 2019 is used as this was the most recent data point at the time of concluding this thesis.

While the initial intention was to cover countries with competition authorities across the whole TFTA, some countries had to be dropped from the gravity equation model[15] due to the non-availability of primary data following unsuccessful attempts to obtain the necessary cooperation from the competition authorities. Kenya, Mauritius, Ethiopia and Egypt were omitted for this reason. Other countries that joined the TFTA (through membership of COMESA) after 2018 were also not included. Detailed analysis of some countries' competition legislation was not possible either due to language barriers or the lack of such legislation. Angola only adopted competition legislation in 2018, and it is available in a format that does not allow online translation. Tunisia's competition law, especially the first pieces of legislation, could not be accessed in a format that can be translated, and Sudan's competition law could not be accessed. These three countries were thus dropped from the TFTA countries whose competition laws were assessed in detail.

1.9 Limitations of the study

Although every effort was made to ensure that the study is of the highest possible standard, limitations inherent in the data could affect the quality of the results. For example, the competition policy variable used in assessing study objective (ii) is a blending of the strength of competition policy on paper as well as the enforcement history of the competition authority. Thus, there are two dimensions that are simply summed

[15] This is the model used to estimate the relationship between competition reform and international trade. See Chapter 6 for more details.

across, although a weighting is used to take into account the different sizes of the country. However, adding across a measure of competition strength and cases concluded has limited theoretical justifications, which could affect the quality of the variable. However, since it is whether the changes in the variable explains changes in the trade variables that the model is assessing, the impact of the construction errors that could arise was considered minimal. Secondly, cases concluded in a given year are used. However, the case might have taken years to investigate and prosecute, such that firm behaviour would not be confined to the year in which the case was eventually concluded. Thus, using only the year in which a case was finalised might underestimate the impact that its investigation might have had on the market. Nonetheless, the year the case was finalised was used, as in most cases, only after a case has been finalised will the correction measures identified be applied. Using the period when the investigation was launched might have led to the inclusion of cases which were abandoned in the early stages due to lack of evidence. Thus, despite the limitations, the year in which a case was finalised was considered the most appropriate to capture the impact of the authorities' decision on the market. Section 6.3 gives more details about this issue.

The study also relied on case data reported by the competition authorities either on their websites or in response to a questionnaire; hence, this data is basically self-reported. In general, self-reported data is limited, as it can rarely be verified independently. It could suffer from attribution and exaggeration (Althubaiti, 2016), which would affect the findings. However, the risk was considered minimal in this study, as the reported data was mainly a compilation of historical data which the competition authorities compile over time. Thus, the researcher is confident that the data used is good enough to model the relationship between competition reforms, trade and economic growth.

The review of competition legislation also spanned different languages. As I am only fluent in English, I relied on secondary sources for detailed assessment of competition regimes, which in some cases left a number of gaps. This resulted in reliance on online translation platforms, specifically Google Translate, PROMT and DeepL Transate. While this risk is considered minimal as the main focus was to check the depth of coverage of

competition cases, it is possible that some meaning might have been lost in translation. However, the use of different online translation platforms as a verification exercise is expected to have minimised the risk.

1.10 Chapter summary and structure of the thesis

This chapter set the context by presenting the background to the study, the problem statement, and the study's objectives and research questions. It discussed the rationale for the study, its significance and scope, and the delimitations and limitations.

The remainder of this thesis is structured as follows:

Chapter 2 sets the context by defining competition reforms and competition policy. An overview of trade and competition laws among the TFTA countries is presented in Chapter 3. Total trade flows between countries in the TFTA and the rest of the world are summarised before focusing on TFTA members' trade patterns with one another (referred to as intra-TFTA trade). The evolution of competition laws in the region is traced, describing all the countries with competition reforms in the region in chronological order with respect to the time of adoption. The chapter concludes by discussing developments at the regional level.

Chapter 4 presents the study's theoretical literature review, which is the study's theoretical frameworks. It discusses market structure theories and international trade theories and their evolution, as well as regulation theories, leading up to a general discussion on how the level of economic development affects regulatory decisions. This discussion locates the role of competition policy within the various theories, which informed expectations of the causal channels investigated.

Chapter 5 presents a review of the empirical literature relevant to this study. The review mainly focuses on empirical studies related to the study's three major areas of investigation. The gaps in the existing literature, which the study sought to fill are also identified.

Chapter 6 describes the methodological approaches adopted by this study and the data employed. It also provides a detailed description of the models and justifications for their selection. The various sources of data are also discussed.

Chapter 7 presents the estimation results and diagnostic tests that were conducted to come up with the findings. It also discusses the implications of the results with respect to the theoretical expectations.

Finally, Chapter 8 provides an overall summary, conclusions, recommendations and suggestions for further research. It also highlights the study's contribution to the existing body of knowledge.

Having laid the foundation in this chapter, Chapter 2 defines competition reforms and competition policy in relation to the context of this study. This is a preparatory step towards the assessment of competition regimes, which is based on the defined elements of a strong competition regime as discussed in the Chapter.

CHAPTER 2: DEFINING COMPETITION POLICY AND COMPETITION REFORMS

2.1 Introduction

Given that this thesis measured the quality of competition regimes based on predetermined variables, it is important to discuss competition policy and competition reforms as used within the context of the study. This Chapter sets the context for the remainder of the study by defining and outlining the key features that a competition regime would be expected to have. It provides definitions and discusses various anticompetitive practices which enforcement of competition policy would help to regulate. This includes a discussion on the manner in which competition enforcement affects firm behaviour and market structures, which is the channel through which the impact on international trade would be expected to occur. By describing the key tenets of competition regimes, this Chapter enables conceptualisation of what an ideal competition regime should look like and, more specifically, the key attributes of the elements that could be expected to be found in a good competition regime, as well as what would constitute a quality competition regime. These elements are used as yardsticks to assess the quality of competition regimes for the thesis, whose measurement criteria is described in detail in Chapter 6.2.

Section 2.2 discusses the drivers of competition reforms in the envisaged TFTA, while also defining competition reforms, competition policy and competition regimes as used in the thesis. Section 2.3 identifies various categories of anticompetitive practices that are regulated by competition laws, together with the institutional framework that is considered ideal for effective competition enforcement. Section 2.4 concludes by giving a Chapter summary.

2.2 Drivers of competition reforms

During the 1990s and 2000s, many development partners and competition practitioners lobbied developing countries to adopt competition reforms (Mehta, 2006; Waked, 2016). This affected the pace at which African countries adopted such reform. Competition reforms have many facets, including new or amended policies, facilitating a level playing field, a well-designed and adequately-resourced regulatory framework and a competition

law whose enforcement results in fair competition (UNCTAD, 2010; CUTS, 2015). For the purposes of this study, competition reforms is defined to include the initial adoption of competition policies and laws, the revision of existing competition laws as well as putting in place institutions to ensure active enforcement of existing laws. The inclusion of the initial adoption as part of competition reforms under this study mainly emanates from the fact that competition oriented measures are always part of the broad industrial policy, hence a stand-alone competition legislation or policy would be sharpening the already existing framework. The competition law, policy and the enforcement institutions that have been put in place would constitute what is referred as a 'competition regime' in this study. It is the status of competition regulation and enforcement institutions at a given time. The level and extent to which competition reforms are embraced differs among countries. While one might have enacted a competition policy and competition laws as well as established institutions to enforce them, another might have promulgated laws without an implementing institution, while yet another could have done both. While all three are regarded as having embraced competition reforms in this study, the quality of the competition regimes would differ. This is discussed in more detail later in this study.

Differences in the manner in which competition reforms have been adopted and implemented across developing economies could reflect ideological differences and a lack of shared belief in the associated benefits. Such differences could also explain why some countries have yet to adopt competition reforms. Globally, the number of countries with competition laws increased significantly from about 20 in 1990 (OECD, 2014) to about 130 in 2016 (Aydin and Büthe, 2016). Thus, approximately 33% of countries had not embraced such reform by 2016[16]. There was a noticeable increase in the number of African countries adopting and enacting competition laws from only 13 in 2000 (World Bank, 2016) to 30 in 2017 (Lipimile, 2018), meaning that about 45% of the continent had no competition laws by 2018[17]. Given that calls have been made to adopt competition reforms in more or less every country, the fact that some have not done so suggests a lack of appreciation of the anticipated benefits. The proportion of African countries with

[16] Assuming that there are 195 countries in the world.
[17] Assuming there are 55 African countries.

no competition laws is higher than that at the global level, suggesting that there is greater reluctance among the continent's governments to go this route. Empirical evidence on the benefits of tighter competition reforms could motivate them to adopt a different attitude.

It has also been argued that the adoption of competition laws was inspired by structural adjustment programmes in some African economies in the late 1980s and 1990s (World Bank, 1994; Waked, 2016). In addition, in the year 2000, an international consumer rights non-governmental organization, Consumer Unity and Trust Society (CUTS) International, launched an ambitious project which focused on advocacy and capacity building to support the adoption of competition laws and policies in three Asian and four African countries (Kenya, South Africa, Tanzania and Zambia) (CUTS, 2003). The so-called 7-up project was extended to 19 more countries in Africa and Asia from 2004 to 2010[18] (CUTS, 2006; 2007; 2010). Development partners associated with CUTS International also launched programmes to lobby for the adoption of competition reforms, including DFID, the World Bank, the United Nations Conference on Trade and Development (UNCTAD) and the IDRC.

Regional bodies in Africa, including COMESA, ECOWAS, SADC and the EAC have also embraced competition law enforcement (Lipimile, 2018; World Bank, 2016), putting pressure on individual countries to embrace competition reforms. It is thus clear that pressure on African countries to adopt competition reforms has emanated from a myriad of sources.

2.3 Key tenets of competition policy

For the purposes of this study, competition policy is defined as the measures and instruments to promote and preserve competition in national markets (Cook, 2001; CUTS, 2001; Khemani, 2007; UNCTAD, 2010). Such measures may take the form of industrial, trade, investment or other policies at national level. However, being a tool for determining

[18] Including Bangladesh, Cambodia, Lao PDR, Nepal, Vietnam, Botswana, Malawi, Namibia, Mauritius, Mozambique, Ethiopia, Uganda; Burkina Faso, The Gambia, Ghana, Mali, Nigeria, Senegal, and Togo.

the overall picture in terms of competition conditions in the market, including structural issues which a competition law cannot handle, a stand-alone competition policy whose focus is not diluted by other considerations is bound to be more effective (Cook, 2001; Gouri, 2020). In such a case, a competition policy can be regarded as a strategic action plan which spells out the steps that government will take to ensure fair competition in the market. Thus, while industrial, investment and trade policies can promote competition; countries also need a stand-alone competition policy to drive the competition agenda. In this study, only countries with distinct pronouncements or strategies spelling out how competition is to be promoted in the market are classified as having adopted competition policies.

The features associated with competition policy include transparency, non-discrimination, legal and implementation frameworks for enforcement, and mechanisms for evaluation and communication within the different government institutions whose activities impinge on competition in the market (OECD, 2012). In terms of transparency, the policy should clearly state how the competition law will be applied, and its objectives as well as the general approach to enforcement. Non-discrimination implies equal treatment without undue favour based on ownership structure and location (foreign versus domestic) (OECD, 2012). Enforcement requires that the necessary support be provided to the enforcing authorities, as well as adequate resources and political support to ensure their independence. Evaluation checks whether there are other policies which could affect entry and competition, while communication and cooperation among the implementing government institutions promote policy harmony. Laws that are found to be contrary to the general thrust of promotion of competition might need to be reviewed (UNCTAD, 2011). Ensuring that competition policy is consistent with other laws is critical, as in most cases it is introduced when sector regulation already exists, creating the potential for turf wars and overlapping mandates (CUTS, 2003). Competition policy should thus provide for interface with other regulatory authorities and facilitate the review of any conflicting laws and regulations (CUTS, 2003). This helps to ensure that competition promotion objectives are not negated by conflicting policies.

Competition policy generally signals government's intention to ensure fair competition in the different economic sectors. However, legislation in the form of a competition law[19] is more effective in enhancing competition outcomes in the market. A competition law has binding rules, which regulate firms' behaviour, thereby forcing them to act in a manner that enhances competition in the market (Khemani, 2007; UNCTAD, 2010). It is enforced to limit the harm that would be done to the economy if firms were allowed to exercise market power in their goods transactions (Peters, 2006). Three categories of behaviour are usually regulated by competition law; cases where dominant firms abuse their position; those where firms enter into anticompetitive agreements; and anticompetitive mergers and acquisitions (Peters, 2006; CUTS, 2001). The main focus of this thesis is how regulating activities affects trade. As discussed in detail in Chapter 5, the extent to which activities that violate competition principles are accommodated can differ among countries, as some might pursue objectives which are in conflict with free market principles. This reduces the level of competition in the economy, with potential to negate some of the anticipated benefits from competition enforcement. Allowing such activities thus works against a country, and when the competition regime is quantitatively measured in this study, this accommodation of these other objectives is regarded as a negative contribution.

It is necessary to understand the various activities that competition laws seek to regulate in order to appreciate what competition enforcement would entail. The basic tenets of competition law and the issues that are subject to regulation are well covered in the literature, especially since the 1990s. While enforcement techniques and methods may have undergone some changes, the basic tenets of competition law have remained the same. The basic literature that unpacks competition law and violations includes the World Bank and OECD (1999); CUTS (2001); Motta (2003); Khemani, 2007; UNCTAD (2008) and the Competition and Consumer Protection Commission (CCPC) and CUTS (2012). A review of this and other literature helps to contextualise how the enforcement of

[19] Also known as antitrust law in some jurisdictions.

competition law regulates firm behaviour and market structures, which are the basis for influencing international trade outcomes.

Generally, violations of the principle of competition take the following three forms:

2.3.1 Anticompetitive agreements

Anticompetitive agreements refer to situations where firms enter into agreements that specify the manner in which they will act in the market so as to enjoy better returns than they would gain if they were to operate independently (World Bank and OECD, 1999; UNCTAD, 2008; World Economic Forum, 2019). In other words, the agreement intends to reduce the prevailing level of competition. Such agreements can be vertical or horizontal. In vertical agreements, the parties are at different levels but one is, or has the potential to be, a supplier or the customer to the other (Motta, 2003; CCPC and CUTS, 2012; DLA Piper, 2020). The agreement would involve an upstream firm and a downstream one in terms of supplying or producing a product. For example, in the production process, one party would be a supplier of a raw material while the other would be a user. In the retail business, one party could be a manufacturer while the other is a wholesaler or a retailer. Vertical agreements can be efficiency enhancing rather than anticompetitive (World Bank and OECD, 1999; UNCTAD, 2008), hence are generally not prohibited *per se* but under a rule of reason assessment. However, where either party favours the other over its competitors in procuring a product, this becomes anticompetitive, especially when the product concerned is in limited quantities.

Vertical agreements can be split into four categories as follows:

(i) Resale price maintenance

Under this arrangement, the manufacturer seeks to control the retail price of the product, even though the retailing is done by another party. The manufacturer and the retailer agree that retailers or distributors can only sell the product at a predetermined price range (Chakravarty, 2019; UNCTAD, 2008). Resale price maintenance can be minimum or maximum. If the retailer is required to ensure that

products are above a certain price, the retail price maintenance is classified as minimum while if given a price ceiling, it is classified as maximum. Most competition laws do not punish maximum resale price maintenance, mainly because it has advantages for the public (Gabrielsen, Johansen and Lømo, 2018). However, if the price margins allowed by the manufacturer are too low, some smaller firms or those with limited economies of scale will incur higher costs per unit, and could find such prices less lucrative. Resale price maintenance that targets the minimum price restricts competition if it is binding, as in most cases it ends up being the ruling price in the market, thus killing price competition.

(ii) Exclusive dealership or exclusive distribution agreements

There are also instances where the agreement does not allow the producer to sell to other retailers or distributors before ensuring that the other party receives adequate stock (UNCTAD, 2008; CCPC and CUTS, 2012). In worst-case scenarios, the distributor would be the only concern allowed to market the product, even though there are many other distributors with the capacity to do so. Alternatively, a big retailer or distributor with extensive networks can enter into an arrangement with particular manufacturers, such that the products of those that are not party to the agreement will not be prioritised in the distributor's network. These agreements are known as exclusive dealership arrangements (Kazmerzak and Sandrock, 2020). They restrict competition at both the supplier and customer levels. Competitors of the manufacturer and the distributor will have limited choices as their traditional business channels accord them less priority. A competition law would seek to ensure that the market is rid of such anticompetitive behaviour.

(iii) Tie-in agreements

A firm can also use a vertical agreement to ensure that some product lines that do not move at high volumes are purchased through tie-in arrangements. A firm that supplies a critical or much sought after product would require firms that want to purchase it to purchase other products that they would not have bought under normal circumstances (World Bank and OECD, 1999; CUTS, 2001). Normally,

these products would be complementary, but the other party would have preferred to source them elsewhere were it not for the agreement. This usually arises because the party supplying the desired product is in a dominant position; hence, it is also an example of abuse of dominance.

(iv) Quantity forcing

Firms can also try to move large volumes by inducing buyers to buy a pre-determined minimum quantity (Schwartz and Vincent, 2008). Only large firms or those that work together would be able to do so. This restricts competition in that it limits the number of potential competitors at any given time, especially small scale businesses (World Bank and OECD, 1999; Schwartz and Vincent, 2008).

Horizontal agreements involve firms that operate at the same level in the value or supply chain agreeing to act in a coordinated manner to avoid competing with one another as the profit that each would make in a competitive market would be lower (Motta, 2003; UNCTAD, 2008). Since they involve coordination among firms that would be expected to compete, they are regarded as the most serious among competition law violations as they cause direct harm to consumers and downstream firms (World Bank and OECD, 1999). In most competition legislations, horizontal agreements are prohibited *per* se; proving their existence is sufficient for prosecution without considering any possible merits. These arrangements, which also include hard core cartels, can take the following five forms:

(i) Price fixing agreements

Competition among firms is mainly reflected in the prices charged for products. A firm that charges less is likely to attract more buyers than one that charges more. Firms try to avoid price competition by agreeing to coordinate their pricing mechanisms. These arrangements are referred to as price fixing agreements. There are various ways through which cartels engage in price fixing, including:

- Agreeing on the exact price they will charge customers;
- Agreeing on the margin or band within which price increases will be made;

- Agreeing on the frequency with which they will adjust their prices, for example, monthly;
- Agreeing on a common standard formula for price adjustments or computations;
- Agreeing on common credit terms or discounts offered to customers (Motta, 2003; CUTS, 2001).

(ii) Bid-rigging agreements

Tendering constitutes the most significant source of business, especially tenders from the public sector. Firms that win tenders are likely to win more in future as they gain experience. However, the winner takes all scenario is very risky to competitors; hence, they try to spread the risk evenly by colluding in the tender process. This is known as collusive tendering or bid-rigging (CUTS, 2001; Motta, 2003). The winner and the losers set terms that ensure that they all stand a chance to benefit. Collusive tendering is very harmful in that projects costs are inflated, which increases the cost of doing business with implications for user charges to recover the costs. It can take place in four ways:

- Bid rotation

The parties to a bid rigging plot take turns to ensure that each firm stands a chance of winning the tender. Tenders that are designed to lose are submitted so as to give a pre-determined winner the chance. This process occurs over a cycle so that all the parties to the agreement get a chance at winning (Motta, 2003; CUTS, 2001).

- Bid suppression

In this arrangement, some parties do not respond to the tender so as to give others a higher chance of winning against those that are not party to the deal (CCPC and CUTS, 2012; Lin and Fung, 2008).

- Complementary bidding

The parties to a bid-rigging cartel can also try to create the impression that the process is very competitive by all bidding differently, but having arranged beforehand how they will do so. In this case, all the members would be fully aware of one another's bid, including the actual tender amounts and specifications. Those designed to win bid lower or those designed to lose add conditions that they know are unacceptable (CCPC and CUTS, 2012).

- Sub-contracting agreements

Members can also bid after agreeing beforehand who the winner will be. However, the winner agrees to give the losing parties sub-contracts to implement the project, such that all the parties to the agreement benefit from the tender (CCPC and CUTS, 2012).

(iii) Market allocating agreements

Firms can undermine competition by deciding how they will coordinate their operations in specific markets. One way is for cartel members to agree on geographic locations in which each will be more visible than the others (World Bank and OECD, 1999; UNCTAD, 2008). This limits direct competition as each member has some control over the price in the allocated territory. These are known as market allocation arrangements.

(iv) Output restricting agreements

In general, if a firm reduces the available quantity of a product, this creates excess demand, which causes the price to rise. However, if an individual firm reduces output, its rivals can sell more by increasing theirs to match excess demand. Cartel members can agree to reduce their output at the same time, creating excess demand and allowing them to increase their price. This is known as an output restricting arrangement (CCPC and CUTS, 2012). If the cartel markets a monitored or controlled product, it can also create artificial shortages as a way of increasing prices by selling through the parallel or unofficial (black) market.

(v) Joint boycott

When firms buy individually in an uncoordinated manner, they have limited control of supply conditions. This mainly applies to the price as well as the terms of supply. If firms come together, they can force the supplier or buyer to agree to their terms by threatening to refuse to buy or sell the product unless such conditions are met. Known as a joint boycott (Lin and Fung, 2008), this tactic aims to manipulate the market or to whip suppliers into line, with the end goal of enhancing the profit of the parties to the agreement.

2.3.2 Abuse of dominance

Although the market is normally characterised by a number of players, one large firm or a group of large firms could be in a position to control the market price. There are several reasons why a firm might enjoy such dominance, including being more efficient than its competitors. Thus, being dominant is not punished by competition laws. However, when a firm in a dominant position uses strategies aimed at reducing competition in the market or exploiting customers, this is known as abuse of dominance and is regulated by the competition authorities (CCPC and CUTS, 2012; Lin and Fung, 2008). As a result, abuse of dominance is also regulated using a rule of reason approach. Abuse of dominance can be designed to exploit customers (exploitative practices) or to remove weaker or smaller players from the market (exclusionary practices) (World Bank and OECD, 1999). Exclusionary practices include the following two categories:

(i) Refusal to deal

A dominant firm could deny other firms' access to its products in order to increase its long-term profit. While this is not regarded as anticompetitive since firms mainly deal with downstream firms rather than their competitors, competition laws intervene if an essential facility is involved (CCPC and CUTS, 2012). Market conditions could be such that the dominant firm has access to infrastructure which cannot be easily replicated but can be used by competitors to provide the service to other areas where it is lacking. This normally occurs in network industries, where the competition authorities would compel the dominant firm to grant its rivals access. When firms become vertically integrated, a dominant firm might also

refuse to deal with a subsidiary of its competitor, in this way stifling the competitor's growth. The competition laws would treat such behaviour as abuse of dominance and impose sanctions on the dominant firm.

(ii) Predatory pricing

A dominant firm has an incentive to chase off rivals in the market. Such a firm can survive a price war. One way is to charge below the marginal costs of production, knowing full well that smaller rivals cannot afford such pricing. When a firm charges prices below production costs, where marginal costs are normally used as a benchmark, this is referred to as predatory pricing. The predator would suffer losses in the interim, which would be recovered by raising prices once the rivals have been chased out of the market (CCPC and CUTS, 2012; Lin and Fung, 2008).

Examples of practices designed to exploit customers include the following:

(i) Excessive pricing

Normally, firms are free to charge the maximum price they can, given the level of demand. However, with no competition, a firm in a dominant position can charge excessively high prices to a level where the competition authority will intervene. This is known as excessive pricing (CCPC and CUTS, 2012). Downstream firms that use excessively priced raw materials will struggle to market their products as they become uncompetitive in relation to imported goods. Excessive pricing is difficult to prove, but competition laws offer guidelines on how the competition authorities should investigate cases, based on a rule of reason approach.

(ii) Discrimination

A dominant firm can decide to punish some firms while offering others favourable terms, depending on the relations that have been built over the years. When a dominant firm applies different trading terms to different customers for similar transactions, it is known as discrimination (CCPC and CUTS, 2012). This practice distorts the market as firms that are favourably treated will have an advantage over

their competitors that have not received the same treatment, as they can price their products better. The practice is, therefore, prohibited by competition law when the practice is found to have caused significant lessening of competition under a rule of reason assessment.

(iii) Tie-ins

Tie-ins can fall under vertical agreements or abuse of dominance depending on whether there is a dominant firm in the transaction, as well as whether the activity is restricted to only one or a few selected firms. If tie-ins are taking place uniformly across all customers, the firm in the dominant position is abusing its dominance. In most cases, the practice of making the sale of a product conditional on the purchase of another succeeds if the firm is dominant in supplying the tie-in goods (CUTS, 2001). In this scenario, the firm faces little competition in the sale of one product, but there is significant competition in the other (usually complementary) product; hence, the decision to force customers to purchase a product they would not have desired. This would constitute abuse of dominance if the practice is established to have no economically justifiable reasons.

2.3.3 Anticompetitive mergers

One way of reducing competition in the market is to merge with a rival firm or to acquire one that supplies critical products for vertical integration and thus control how the critical product is distributed to rivals. Mergers and acquisitions in the market are therefore regulated under competition law to ensure that the principles of fair competition are not violated. Only when a merger is found to be substantially lessening competition would it be stopped, or approved only subject to some conditions aimed at reducing the negative impact on competition being accepted. The nature of competition concerns that arise from mergers differ across merger types. Mergers and acquisitions can be classified into three types, and the associated competition fears differ depending on the type.

(i) Horizontal mergers

Horizontal mergers occur when firms that are party to the merger are at the same level in terms of producing or selling products that are similar or close substitutes (CCPC and CUTS, 2012; Lin and Fung, 2008). Such mergers reduce the number of independent competitors and are hence classified as the most harmful (CCPC and CUTS, 2012). Concerns related to horizontal mergers arise from two possible outcomes. In the first place, they increase the possibility of unilateral effects or coordinated behaviour post-merger (World Bank and OECD, 1999; CCPC and CUTS, 2012). The reduced number of players in the market makes it easier for firms to coordinate their behaviour rather than competing, which would negate the benefits of free competition. The likelihood of horizontal agreements is enhanced if competitors merge. If the market is already highly concentrated, a merger of two players can create a very big firm that can act independently of competitors in terms of increasing prices and dictating trading terms. A horizontal merger can thus facilitate unilateralism in the market (CCPC and CUTS, 2012). Secondly, it is possible for a horizontal merger to create a monopoly situation if a market characterised by a duopoly sees the two players merging. Competition laws thus take a very firm stance on horizontal mergers, allowing them to proceed subject to an undertaking that the merging firms will not engage in behaviour that would facilitate market coordination.

(ii) Vertical mergers

A firm can also become more competitive by acquiring a critical supplier or customer to create vertical integration (CCPC and CUTS, 2012; OECD, 2019). These are known as vertical mergers. They can enhance efficiency in the market, which would be reflected in better pricing and other benefits to the consumer (OECD, 2019). However, it is also possible for such mergers to be a strategic decision to ensure that rivals are disadvantaged, which would reduce competition. Thus, when the competition authorities assess vertical mergers, they are mainly interested in assessing the possibility of market foreclosure taking place post-merger (CCPC and CUTS, 2012). The possibility that some upstream or downstream businesses may fold if their critical supplier or customer is tied to one of their rivals would need to be checked, as this

could result in some firms closing shop, creating a more concentrated market structure.

(iii) Conglomerate mergers

In order to expand and participate in several product lines, a firm can acquire or merge with another firm that is involved in a business line that is not related to it. These mergers are often referred to as conglomerate mergers (OECD, 2019). Since the market structure will remain the same after the merger, with only ownership patterns changing, these mergers are the least harmful to competition. They only raise concern if it is suspected that the merger will enable a large firm to use its financial muscle to engage in anticompetitive practices (CCPC and CUTS, 2012). However, such mergers' impact on the market is so minimal that they can even be exempted from investigation under competition laws.

The above practices generally constitute the key conduct regulated by competition laws. As firms are prevented from engaging in all these practices, a competitive market structure would be expected to result. Enforcement of competition laws therefore, acknowledges that imperfect market structures are not desirable; regulation aims to transform the market by mimicking perfect competition models which is discussed in Chapter 4. As markets are transformed through regulation, it is expected that the changes would have implications for how firms make production decisions, which affect their productivity and hence international trade.

However, as will be covered in detail in Chapter 5, governments also seek to accommodate other interests in competition regimes so as to achieve social objectives. Some allow anticompetitive practices that are harmful to competition if correcting them is not seen as being in line with other public interests, or if it can be argued that the anticompetitive behaviour can promote efficiency (Nicholson, 2004). Regardless of the justification, competition is undermined when competition regimes accommodate anticompetitive behaviour. Thus, for the purposes of this study, tolerance of anticompetitive behaviour in pursuit of other objectives is considered competition

restricting and a negation of expected competition benefits regardless of the justification on other social grounds.

2.3.4 Institutional framework for a strong competition regime

In addition to ensuring that the law deals effectively with all the identified anticompetitive practices, a strong institutional framework is required for a competition law to be fully effective. The different institutions responsible for enforcement need to coordinate their efforts. The manner in which roles and responsibilities are shared among these institutions differs across the world (Arezki et al, 2019; Fox and Trebilcock, 2012; Mahmood and Ait Ali Slimane, 2018). While there are differences as well as overlaps, in general, there is need for a competition authority that conducts the investigation, but relies on another body for adjudication and prosecution (Arezki et al, 2019). Adjudication also extends to the courts, such that if both the competition authority and the courts lack capacity and independence, it would be difficult to ensure a competitive market. Enforcement should be balanced and fair. Three different enforcement models have been adopted around the world (Fox and Trebilcock, 2012; Jenny, 2016), and these are differentiated based on not only the role of the competition authorities and the courts, but also the structure and number of institutions that are involved in competition case handling. These are the integrated agency model; the bifurcated agency (tribunal) model; and the bifurcated judicial model. Under a bifurcated judicial model, after investigation, the competition authority has to go to the courts for enforcement of the decision (Fox and Trebilcock, 2012; Jenny, 2016). This means that there is only one competition authority, whose role is to investigate, but it has no enforcement power.

Under a bifurcated agency model, a specialised tribunal is established to enforce the competition authority's decisions, as well as to hear any appeals that may arise (Fox and Trebilcock, 2012; Jenny, 2016). This implies that there would be two competition authorities, but with clearly defined roles and specialisations. In the integrated agency model, the competition authority would have two arms, namely, an investigating arm and a commission that undertakes first level adjudication (Fox and Trebilcock, 2012; Jenny, 2016). The two main institutional models found in Africa are the integrated agency model

and bifurcated agency model (Burke et al, 2017). Under the integrated agency model, which is the most common, the competition authority investigates and adjudicates cases, although these functions are carried out by different specialised units within the competition authority. The competition authority directorate investigates and comes up with a conclusion, while its Board of Directors/Commissioners is called upon for adjudication (Burke et al, 2017).

The challenge in most developing countries is that the courts are generally weak (Fox and Trebilcock, 2012). Court systems are characterised by delays, mainly due to a lack of specialised jurists who are knowledgeable about competition matters. A disadvantage associated with the integrated agency model is that when a party has a grievance concerning an order issued by the competition authority, the appeal process takes place in the normal courts, where the issue might take a long time to be heard. The introduction of a competition tribunal would save time. Having separate investigation and adjudication arms is an advantage, as the tribunal would serve as the first line of appeal, enabling cases to be disposed of without going to the courts. The bifurcated agency model promotes independence and also reduces the time taken to reach decisions compared to reliance on the courts (Mahmood and Ait Ali Slimane, 2018). The integrated agency model could be challenged on the grounds of partiality with respect to adjudication, as the separation of the commission and the directorate can be blurred, resulting in confusion between the investigation and adjudication roles housed in the same institution (Mahmood and Ait Ali Slimane, 2018). Concentration of power in one agency, as in the integrated agency model, which is poorly capacitated can become a key governance vulnerability, which, in the absence of adequate checks and balances, can compromise impartiality and effectiveness (Arezki et al, 2019). The bifurcated agency model helps improve decision making quality in that adjudication lies in the hands of a small, specialised group of expert judges; hence administratively, it is the most efficient enforcement scheme (UNCTAD, 2019). Kovacic and Hyman (2012) also argue for more than one enforcement agency, as this insures against poor decisions due to lack of resources, sloth, state capture or political influence. Court proceedings are generally costly and time consuming as the courts deal with many other cases (Arezki et al, 2019).

Thus, a bifurcated agency model can be considered superior to the integrated agency model in the long run, as both the competition authority and the tribunal would be expected to build expertise over time.

For the purposes of this study, competition enforcement by two independent institutions, one with investigating and some enforcement power (the competition authority) and the other with adjudicative power (the tribunal) is considered ideal[20]. As will be shown in Chapter 3, a number of countries which will be part of the TFTA are now shifting to a bifurcated model. Thus, a competition tribunal should complement the competition authority rather than duplicating its efforts. This thesis argues that a critical characteristic of a strong competition regime is a competition tribunal that serves as an appellate platform, with powers to reverse or confirm decisions made by the competition authority, to impose fresh orders if considered necessary, and the power to impose fines even in areas where the competition authority might not have done so.

Competition authorities need to be autonomous in order to spur competition in the economy (Kovacic and Hyman, 2012) and to ensure that in investigating and prosecuting infringements, they are not subjected to political pressure. The competition authority should not be established as a branch or unit in a government ministry, where the minister would influence its activities (Mahmood and Ait Ali Slimane, 2018; Kovacic and Hyman, 2012). Rather, it should be a standalone body that has the ability to decide and adapt to changing circumstances without needing approval from the minister. Although competition authorities would still rely on support from government and thus cannot be truly independent, independence in functions is critical, while they remain accountable to the government (Arezki et al, 2019). The day-to-day running of the competition authority should not be among the roles assigned to ministers, political bodies and government agencies in general.

[20] Each model has its own advantages and weaknesses, as the competition tribunal might also have capacity challenges and cause delays. In addition, even after passing through the tribunal, cases could still eventually go to the courts, meaning that the tribunal would be an unnecessary layer (Jenny, 2016). However, these weaknesses only occur if sufficient expertise is not built in the adjudicative body over time. The number of appeals to the tribunal, coupled with capacity building programmes, would address capacity challenges with time.

The powers bestowed on a competition authority determine the effectiveness of competition enforcement. If competition regimes have embraced private enforcement, such that when the competition authority has established an anticompetitive practice, third parties can launch private litigation for damages, this serves as a deterrent (Nicholson, 2004). Competition authorities have wide powers to facilitate enforcement. UNCTAD (2015) identifies a number of areas where the power of the competition authority needs to be expanded to ensure that enforcement results in the desired outcomes. First, they should be able to impose fines that relate to the gravity of the offence or the gains enjoyed. Second, they should be able to imprison the leaders of firms in situations where the violation of the law is flagrant or intentional. Third, the competition authority should be given powers to order damages or provide restitution to consumers who suffered from price hikes due to anticompetitive behaviour. Fourth, where parties engage in unauthorised mergers, the competition authority should have the power to order a divestiture.

Some transactions take place outside the jurisdiction of the competition authorities, but impact the economy, especially among multinational corporations. For example, two competitors in the domestic market that are subsidiaries of international companies, could find themselves merged if their parent global companies merge. The competition authority should have the power to investigate such cases, even though the merger took place outside its jurisdiction (Phan, 2016; UNCTAD, 2017). Extraterritoriality provisions should be adopted to ensure that the competition authority could guard against reduced market competition due to activities outside the borders.

As competition enforcement gathered momentum, it became apparent that successfully prosecuting cartels was a difficult task (OECD, 2018). Hard core cartels are difficult not only to detect but also to successfully prosecute if there is no cooperation from one of the members or from an insider. Thus, competition laws also provide for incentives to members of cartels to confess and aid in the prosecution of the other members (UNCTAD, 2016). Provisions in the competition laws for immunity for cartel members that cooperate

are widely known as the corporate leniency programme. Under this arrangement, members of a cartel escape punishment or receive reduced fines if they provide information as well as evidence that would assist in the prosecution of the other members. Thus, in the early 2000s, a leniency programme became embedded in many competition laws around the world and it is now regarded as the single most effective weapon for cartel detection (OECD, 2018). For example, the detection of about 45-55% of the cartels exposed in Canada, Germany, New Zealand and Korea by 2015 can be attributed to leniency programmes, while in the EU about 80% of cartels were detected through the programme (OECD, 2018). South Africa recorded marked improvement in busting cartels following the adoption of the corporate leniency programme in 2004 and its amendment in 2008 (Muzata, Roberts and Vilakazi, 2017). Thus, in this study, provisions on corporate leniency are considered a critical attribute of a strong competition regime.

2.4 Chapter Summary

This Chapter has provided the definitions for the key terms as used in this study. This makes it easier to understand the context under which the terms are used in subsequent chapters. More importantly, the Chapter has also given the definitions and discussions of the anticompetitive practices which a competition authority would be expected to enforce once established, as well as the institutional framework that is considered ideal for effective competition enforcement. This has also helped set the context for the assessment of competition regimes in the TFTA countries under focus, as the presence of these attributes will be the basis upon which quality of competition regimes is measured as explained in Chapter 6.

This discussion on the key aspects of competition policy sets the context for the discussion on the key issues under investigation in this study, as competition policy is a central pillar for the study. However, given that the TFTA was used as a case study and trade patterns for the countries that will form the TFTA were of interest, there is also a need for an overview of the level of trade taking place among the TFTA countries as well as with the rest of the world. The thesis also focuses on how changes in competition regimes affected trade; there is thus a need to trace the evolution of competition regimes

in the countries to form the TFTA and the main factors behind these changes. An overview of the trade patterns and competition regimes that exist in these countries is therefore discussed in the next chapter. It is important to note that only an overview of the competition regimes is given, the purpose being to appreciate the scores that each country will be assigned based on measures discussed in Chapter 6.

CHAPTER 3: OVERVIEW OF TRADE AND COMPETITION LAWS IN THE TFTA COUNTRIES

3.1 Introduction

This study aimed to understand the trade and competition dynamics of the countries in the envisaged TFTA and to assess whether the current trade flow patterns among the countries that will form the TFTA could be enhanced by adopting competition reforms. In order to contextualise these issues, this chapter presents an overview of the current size of the envisaged TFTA trade with the rest of the world by adding the individual TFTA country trade data[21] . The chapter also assesses bilateral trade patterns among the countries that will form the TFTA. The trade patterns and their evolution over time would also help to reveal whether the volumes have been sufficient to allow for an assessment of their main drivers, for which competition reforms in the countries is a candidate. In the same vein, understanding how the competition regimes in these countries have evolved over time helps to set the context for the study. The discussion on competition reforms in the TFTA countries enables an examination of whether such reforms could be expected to shape the nature of competition in the market. Only competition reforms that are enforced would be expected to facilitate competition outcomes in the market, which would in turn influence trade patterns.

This chapter outlines TFTA country trade patterns using data for the period 2001 to 2019. The discussion focuses on intra-TFTA trade flow patterns (total bilateral trade between the countries that will form the TFTA) as well as trade with the rest of the world. In addition to total trade volumes, Section 3.2 covers import and export trends among the countries, which will be the basis for reflecting on whether the levels of imports and exports have been influenced by the competition reforms adopted by member countries over time. The discussion on intra-TFTA trade also helps reflect whether the current levels of bilateral trade among the countries could be large enough to fit the estimation models employed in this study.

[21] TFTA trade with the rest of the world is therefore the total sum of each of the TFTA countries' trade with the rest of the world

Section 3.3 discusses the evolution of competition laws in the TFTA countries. The adoption period is split into four phases[22], namely, the first countries to adopt competition reforms, countries that adopted them during the structural adjustment phase (1990-2000), those that embraced them in the new millennium (2001-2010), and late adopters (post-2010). The factors that caused member countries to adopt competition reforms are examined as this would also affect the manner in which the reforms are likely being enforced. The discussion on individual countries is extended to the REC level to establish how the dynamics at this level would have influenced countries to adopt competition reforms. Tracing the evolution of competition reforms over time will reveal whether there have been significant variations that would be captured by the model. A summary of the implications of the trade patterns as well as the evolution of competition reforms across the member countries is presented in section 3.4.

3.2 TFTA countries' trade flow patterns

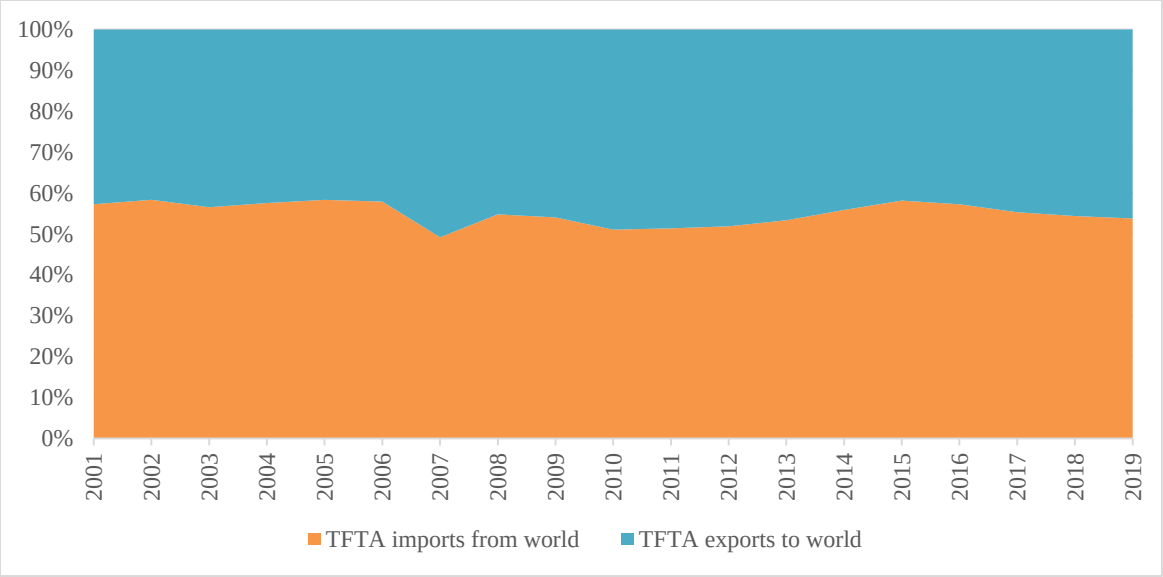
Variations and patterns in international trade among the countries constituting the TFTA is the central issue of this study, as this enables an understanding of the region's status in terms of global and continental trade.

3.2.1 TFTA countries' trade patterns with the world

In nominal terms, total trade[23] between the TFTA countries and the rest of the world grew significantly during the period 2001 to 2019. Data from the International Trade Centre's Trade Map shows that total trade between the TFTA countries and rest of the world increased from about US$123 billion in 2001 to about US$543 billion in 2019. This demonstrates the region's importance in global trade. On average, total TFTA countries' trade with the world grew by about 9.9% per annum. The share of imports in total trade in the TFTA averaged about 55% between 2001 and 2019, while the remainder is the share of exports (Figure 1). Thus, based on trade patterns, the envisaged TFTA is generally a net importer.

[22] The basis for splitting into these categories is just arbitrary and not based on any predetermined formula

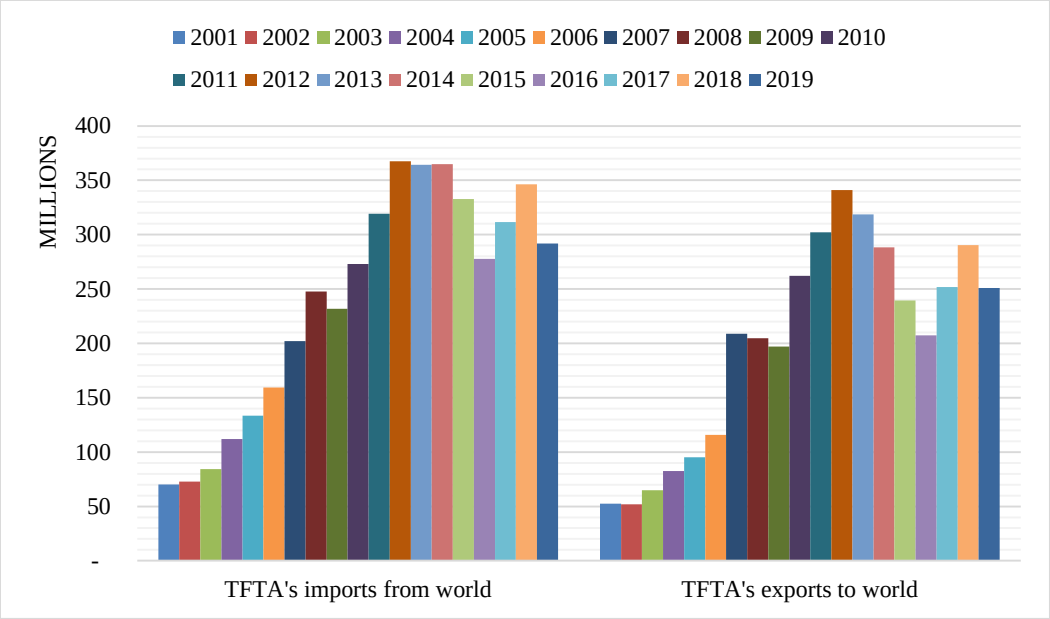
[23] That is, total exports by all the TFTA countries plus their total imports.



Data Source: Trade Map database

Figure 1: Exports and imports share in total trade between the TFTA and rest of world, 2001-2019

Exports from the TFTA countries to the rest of the world, which increased from about US$52.4 billion in 2001 to about US$250.9 billion in 2019 (Figure 2), grew by an average of about 11.1% per annum over the period. If this momentum is maintained, the region could eventually become a net exporter. Imports by the TFTA countries from the world were valued at about US$70.3 billion in 2001 and increased to US$292 billion by 2019, growing by an average of about 9.2% per year. This generally shows that there is a significant level of trade which is worth analysing in terms of main drivers. The trends show that there is general similarity between the movement in exports and imports between 2001 and 2019 (Figure 2), with the two appearing to fluctuate in a similar pattern. This is confirmed by a simple correlation coefficient between exports and imports, which for the period under review was a high positive of about 0.97.



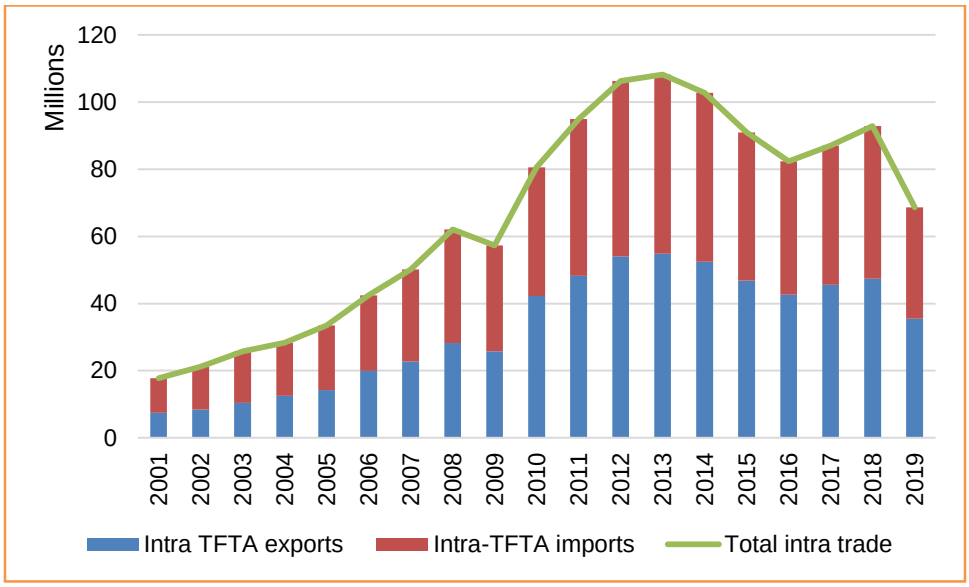
Data Source: Trade Map database

Figure 2: Value of exports and imports between countries in the TFTA and rest of world, 2001-2019 (US$ 000)

3.2.2 Trade among the proposed TFTA members

Given that the focus of the thesis is on whether competition reform drive bilateral trade, it is also important to discuss the trade patterns among the countries to form the TFTA. Trade among TFTA members (intra-TFTA) also increased between 2001 and 2019 in nominal terms. Total intra-TFTA trade increased from about US$18 billion in 2001 to about US$69 billion in 2019. Imports and exports are equally important in determining total intra-TFTA trade trends. Prior to the global financial crisis in 2009, intra-TFTA imports were higher than intra-TFTA exports; however, exports were higher from 2010 (Figure 3). The slowdown in economic activity in developed countries might have caused shifts in import behaviour among TFTA members, which has been sustained since then. Intra-TFTA imports increased from about US$10 billion in 2001 to about US$33 billion in 2019, having peaked at about US$53 billion in 2013. Intra-TFTA exports increased from about US$7 billion in 2001 to over US$35 billion in 2019, with a peak of US$55 billion in 2013. On average, intra-TFTA exports grew by more than 11% per year while imports grew by about 9%; hence, exports overtook imports in terms of volume. However, a worrying trend is that between 2013 and 2016, intra-TFTA trade was on a sustained

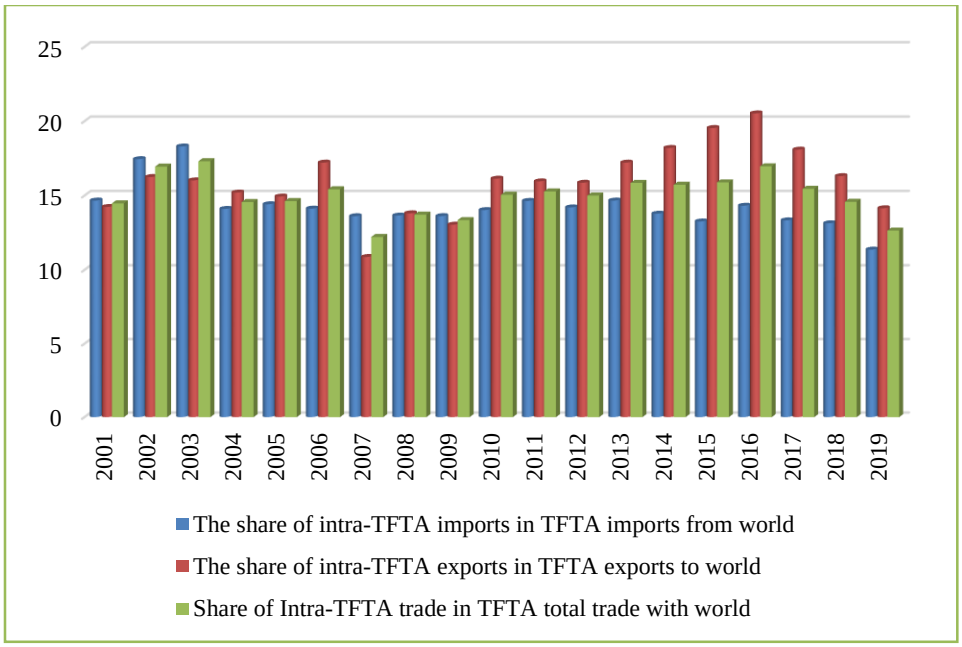
downward trend. While it recovered slightly in 2017 and 2018, the recovery was not sustained into 2019.



Data Source: Trade Map database

Figure 3: Intra-TFTA imports and exports, 2001-2017 (US$ thousands)

The extent to which the countries to fall under the proposed TFTA prioritise trade among themselves rather than with non-TFTA members is also important. On average, total intra-TFTA trade constituted only about 15% of total trade conducted by TFTA members with non-TFTA members around the world between 2001 and 2019 (Figure 4), peaking at about 17.3% in 2003. Expressed as a percentage of total TFTA global exports over the period, intra-TFTA exports averaged about 16%, peaking at about 21% in 2016 (Figure 4). Intra-TFTA imports averaged about 14% of TFTA members' total imports. This implies that TFTA members' main trade partners are generally outside the TFTA; hence, much remains to be done if the TFTA is to achieve its key objectives.



Data Source: Trade Map database

Figure 4: Intra-TFTA trade compared with TFTA members' trade with non-TFTA members (percentage), 2001-2019

These trade patterns have three implications with respect to this study's objectives. Firstly, the trade volumes and interactions to be estimated are a small but significant market, with the potential to increase further based on rising international trade volumes. The study is thus timely as embracing competition reforms and discussions within the TFTA could promote further improvement in trade volumes. Secondly, the bulk of trade is conducted with countries outside the region. There is, therefore, a huge potential market that could be tapped through trade diversion from non-TFTA members to TFTA countries. This should be a motivation to pursue regional integration to ensure that more resources are localised. Thirdly, the export and import patterns among TFTA members are a significant proportion of total trade. Thus, if competition reforms matter, they have a potential to be a significant influencer of trade volumes, whether through imports or exports. It was thus important that the methodology should enable the impact of competition reforms to be separately assessed with respect to whether the adopting country is the exporter or importer.

3.3 The evolution of competition laws in the TFTA

Although many countries in the TFTA now have competition laws, this was a somewhat lengthy journey. It also included weak attempts to produce competition laws in some countries, resulting in some legislations that lacked the basic provisions required to adequately regulate anticompetitive behaviour. In chronological order[24], the evolution of competition reforms among the TFTA countries can be described as having been initiated by the Democratic Republic of the Congo (DRC) and ending with Angola, which adopted its first competition legislation in May 2018.

3.3.1 The first countries to adopt competition reforms (before 1990)

Four countries, the DRC, South Africa, Kenya and Tunisia moved to adopt competition laws prior to 1990.

a) Democratic Republic of the Congo

The DRC can be regarded as the first TFTA member to embrace competition reforms, even though it took a long time to promulgate effective legislation. The DRC constitution empowers the president to promulgate laws as well as to issue decisions by ordinances. Competition laws were mainly by ordinances. The first attempt at regulating competition in the DRC was the Ordinance-law on Unfair Competition (No 41-3) which was passed in February, 1950. However, it merely allocated responsibilities in matters of unfair competition and listed activities that could be deemed to be contrary to honest practice in trade and industry (WTO, 2016). It therefore did not adequately cover anticompetitive practices.

In 1961, the DRC introduced another ordinance, the Decree-Law of March 1961 which, together with its amendment in 1983 (Ordinance-Law No. 83-026) defined offences relating to prices and supply. Anticompetitive practices were still not adequately covered. A Ministerial Order in 1987[25] established a Competition Commission to investigate and

[24] The discussion in this study ends in December 2018 and there have since been further developments.
[25] No. DENI/CAB/06/013/87.

sanction restrictions on free competition and empowered it to regulate a number of restrictive business practices, including[26]:

- Agreements imposed by manufacturers on retailers
- Concerted practices or similar agreements among competitors
- Vertical agreements
- Abuse of dominance, including excessive pricing and inappropriate conditions
- Price discrimination
- Vertical, horizontal and diagonal mergers and acquisitions.

However, the Competition Commission never functioned in practice (WTO, 2016) and it was only in 2018 that a law, which can be deemed to contain provisions that keep up with modern competition law, was passed. The Law on Pricing Freedom and Competition[27] that was promulgated in July 2018 regulates key anticompetitive practices. It provides for the setting up of the Competition Commission as the enforcement authority, although the regulations have yet to be issued[28] (Sorinas et al, 2018); hence, the law remains unenforced to date[29].

Thus, despite early signs of attempting to introduce competition laws, the DRC lags behind other countries which only adopted competition reforms in the 1990s.

b) South Africa

South Africa was the second country in the TFTA to embrace competition reforms through the Regulation of Monopolistic Conditions Act of 1955. However, this was largely a 'feeble piece of legislation' (Mokoena, 2012) in that it was administered by the Board of Trade

[26] The law can be found at https://www.droitcongolais.info/files/9.3.4.1.-Arrete-du-26-mai-1987_Commission-de-la-concurrence.pdf accessed 07 March 2019.

[27] Organic Law No. 18.020.

[28] Herbert Smith Freehills Legal Briefings, at https://www.herbertsmithfreehills.com/latest-thinking/the-democratic-republic-of-congo%E2%80%99s-new-pricing-freedom-and-competition-act, accessed 13 November 2019.

[29] As at November 2018.

and Industry which was mainly inactive. Indeed, the only case that was acted upon was one referred to the Minister of Economic Affairs by the board (Mokoena, 2012). The Maintenance and Promotion of Competition Act, 1979 was introduced to address some of the identified challenges. This law was implemented by the Competition Board, but was ineffective due to the weaknesses of the law as well as the limited powers granted to the Competition Board. It was only in 1998 that a strong competition regime came into force in the form of the Competition Act, 1998, which became effective in September, 1999.

The Competition Act was the result of an internal process initiated in 1995, spearheaded by the Department of Trade and Industry, which included negotiations among business, labour and government to settle on competition policy principles (Mokoena, 2012). This could explain why South Africa is more successful in enforcing its competition laws than other countries in the TFTA where the process was largely imposed on business.

South Africa's competition legislation introduced the Competition Commission, an independent body, as the enforcement authority. It also created the Competition Tribunal, where parties aggrieved by the Competition Commission's decisions can appeal. The tribunal also serves as the adjudication institution. The Competition Appeal Court was established to review decisions of the Competition Tribunal and hear appeals against its decisions.

Although the Act has been amended a number of times[30], the 2009 amendments introduced significant changes to the manner in which competition law is enforced in South Africa. The 2009 Competition Amendment Act introduced concurrent jurisdiction, spelling out how regulatory roles relating to competition would be shared between sector-specific regulators and the Competition Commission. It also promulgated the Competition Commission's Corporate Leniency policy, which had been prepared in 2004. Finally, the Commission was empowered to deal with complex monopolies and criminal cartel conduct, although this did not become effective until 2016.

[30] For example, the Competition Amendment Act, No 35 of 1999; Competition Amendment Act, No 15 of 2000; Competition Second Amendment Act, No 39 of 2000; and Competition Amendment Act No 1 of 2009.

c) Kenya

Kenya promulgated the Restrictive Trade Practices, Monopolies and Price Control Act in 1988, which became effective a year later. The Monopolies and Prices Commission was established within the Ministry of Finance to enforce the Act, together with a Restrictive Trade Practices Tribunal to hear appeals against the Commission's decisions (Mehta, 2006). The Commission's powers included regulating defined restrictive trade practices, correcting unwarranted concentration of economic power, and overseeing price controls. The law defined conduct associated with abuse of dominance and anticompetitive agreements as 'restrictive trade practices' and rendered them illegal. However, liberalisation of the economy in 1993 saw the abolition of price controls (Mehta, 2006).

The Competition Act that was passed in 2010 introduced an independent competition authority as an enforcement agency and also introduced criminal penalties for violations (Mudida, Ndiritu and Ross, 2015). It provided for the establishment of a Competition Tribunal, although its members were only sworn in on 7 June, 2017 and the rules to ensure that the tribunal becomes operational have not yet been formulated and gazetted [31]. A 2016 amendment strengthened penalties relating to mergers and introduced provisions to empower consumers.

d) Tunisia

Tunisia, which is a recent entrant to the TFTA, having joined COMESA in 2018, was the first Middle East and North African country to adopt a competition law (Gani, 2012). Law No. 64 of 1991 was passed on 29 July, 1991 as part of the country's shift from a highly regulated and controlled economy to a market economy (Mehta, 2006). Its promulgation followed the adoption of the World Bank and IMF sponsored structural adjustment programmes that commenced in 1986 (Mehta, 2006). Tunisia's competition law was modelled on France's 1986 Ordinance, which mainly aimed to abolish price controls (Mehta, 2006). It also conformed to EU standard as 80% of the country's trade was with

[31] As at the end of 2018. See https://www.bowmanslaw.com/legal-updates/kenyas-competition-tribunal-members-sworn/ accessed 7 March 2019.

the EU (Gani, 2012). The Tunisia Competition Council was established as the regulatory body.

By 2012, competition legislation in Tunisia had undergone five amendments (Gani, 2012; Hammed, 2006) as the government sought to strengthen it by addressing a number of identified deficiencies. These included Law No. 93-83 of 1993; Law No. 95-42 of 1995; Law No. 99-41 of 1999; Law No. 2003-74 in 2003; and Law No. 2005-60 of 2005. One reason for the amendments was that the law had not differentiated between vertical and horizontal agreements and had also not provided much detail, such that a number of agreements were not regulated. The 1995 amendment prohibited all exclusive agreements (Mehta, 2006) and regulated mergers. The 1999 amendment mainly catered for other public interest provisions and bestowed power on the Minister of Trade to authorise such agreements under exceptional circumstances (Mehta, 2006). The 2003 amendment accommodated various international commitments that the government had entered into (Mehta, 2006).

The amendments strengthened Tunisia's competition law, which now covers all types of anticompetitive practices (Gani, 2012). The Competition Council was also bestowed with powers to impose sanctions, including administrative as well as judicial measures and imprisonment (Economic and Social Commission for Western Asia (ESCWA), 2015). Tunisia was also among the first African countries to embrace the corporate leniency programme (ESCWA, 2015).

The most comprehensive and significant change to Tunisia's competition law was Law No. 36 of 2015 (Youssef and Zaki, 2019) which, to a large extent, replaced the 1991 competition law in total. Article 78 provides that the law repeals all provisions of Law No. 91-64 relating to competition and prices, including amendments. Thus, anticompetitive practices, the power of the competition authority to impose sanctions, the corporate leniency programme and administrative operating procedures are now all regulated through Law No. 36 of 2015, which is a modern competition law whose provisions are in line with those required to ensure fair competition in the market.

3.3.2 Countries adopting competition laws during the market liberalisation phase (1990-2000)

Some countries adopted competition laws in response to the actual and anticipated effects of the market liberalisation phase between 1990 and the year 2000. This includes the period when structural adjustment programmes spearheaded by the IMF and the World Bank were adopted by many countries in the TFTA. Competition laws were either adopted as part of the reform package or during the period following the reforms to address anticompetitive conduct.

a) Tanzania

Trade liberalisation in the early 1990s rendered Tanzania's economy vulnerable to shocks, including anticompetitive practices by both local and international firms, which found themselves at an advantage following liberalisation and privatisation of state-owned firms (Ringo, 2012). A government taskforce was established in the early 1990s, which eventually came up with recommendations for competition reforms, including the need for competition law (Ringo, 2012).

Parliament passed the Fair Trade Practices Act in 1994, which was to be implemented by a Trade Practices Commissioner, together with a secretariat. The law also provided for a Trade Practices Tribunal, an appellate platform, to hear appeals from parties aggrieved by the commissioner's decisions. However, the Act was not effectively implemented due to a number of challenges. These included too much discretion being granted to the Minister, including price control functions, which compromised the independence of the commissioner (whose appointment process was also not specified) and too broad provisions which also disallowed pro-competitive conduct (Ringo, 2012). In 2001, the Fair Trade Practices Act was amended and the Trade Practices Commissioner was replaced by a Chairman, while a new enforcing authority was introduced in the form of the Fair Competition Commission.

The Fair Competition Act which was promulgated in 2003 remains in force. This modern competition law regulates all competition violations as well as maintaining the original institutional set up, namely the Fair Competition Commission as the enforcing authority and the Fair Competition Tribunal[32]. The Act also enhanced the independence of the regulating institutions.

b) Zambia

Zambia and Tanzania established their first competition laws in the same year, both in response to liberalisation. Zambia's decision can also be said to have been motivated by structural adjustment programmes. The Zambian Parliament passed the Competition and Fair Trading Act in 1994 and it came into force in 1995. Although the Act provided for the Zambia Competition Commission (ZCC) as the enforcement institution, it was only operationalised in May, 1997 (Ng'ona, 2015). The Competition and Fair Trading Act remained in force for 13 years, during which time some challenges were identified, including the fact that it:

- Did not adequately cover critical competition issues, including the manner in which cartels and vertical agreements would be interpreted and treated, as well as the definition of mergers and their notification process;
- limited the ZCC's investigative powers and the administrative penalties it could impose on businesses;
- made it difficult to prosecute cartels due to the lack of a leniency programme (Ng'ona, 2015).

In 2009, Zambia launched the Business Licensing and Regulatory Reform Programme (BLRP), which was spearheaded by a BLRP Committee. The Committee's mandate was to simplify the licencing regime and make it more transparent, focusing only on the necessary regulation processes (Ng'ona, 2015). The Competition and Fair Trading Act,

[32] The 2001 Amendment to the 1994 Act also renamed the Trade Practices Tribunal the Fair Competition Tribunal.

1994 was among the legislation identified for reform to enhance the manner in which businesses operate.

In 2010, the Competition and Consumer Protection Act, 2010 (CCP Act) replaced the 1994 legislation. The ZCC was renamed the Competition and Consumer Protection Commission (CCPC). Among the changes brought about by the 2010 legislation were:

- It gives the CCPC the mandate to impose fines, which can go up to 10% of the annual turnover of the guilty party, especially for abusive and cartel conduct, which was not provided for under the old Act;
- the Act makes it easier to prosecute cartels by introducing a leniency programme, where a party to a prohibited agreement that voluntarily discloses its existence and co-operates with the CCPC in investigating it may be exempted in full from paying the fine or pay a reduced fine;
- the CCP Act introduced the Competition Tribunal to hear appeals from businesses against decisions of CCPC, which was not provided for in the earlier legislation;
- the merger enforcement regime was enhanced to make notification of all mergers mandatory as long as a threshold is reached, unlike the old Act which provided for notification only with respect to horizontal mergers.

c) Zimbabwe

Following the IMF/World Bank inspired Economic Structural Adjustment Programme (1991-1995), Zimbabwe saw the need to regulate restrictive business practices that would ensue from the process. In 1992, a team of local and foreign consultants undertook a study which concluded that there was a high level of market concentration and entry barriers which facilitated restrictive business practice (UNCTAD, 2012).

The Competition Act (No. 7 of 1996) was adopted in 1996 and created the Industry and Trade Competition Commission as the competition regulator. It came into force in 1998. In 2001, it was decided to merge the Industry and Trade Competition Commission and the Tariff Commission as a cost saving strategy. The Competition Act was amended,

largely to accommodate the merger. The 2001 amendment also made merger notification mandatory. The regulatory authority was renamed the Competition and Tariff Commission (Mehta, 2006). There has been no major amendment to the Act since 2001, making Zimbabwe one of the few countries to go for a long time without amendments to factor in new developments and enforcement challenges.

The Competition Act is very weak, although some of its provisions have been used to regulate all three main anticompetitive practices since inception. However, there is no general prohibition on anticompetitive agreements which are covered under 'restrictive practices' and 'unfair business practices' (UNCTAD, 2012). The enforcement institutions include the Commission and the Board of Commissioners, with appeals being made through the Administrative Court, which also handles non-competition issues.

Due to these weaknesses, initiatives are[33] underway to amend the Competition Act. In 2017, a Competition Policy was adopted to usher in a new approach to competition enforcement, but it has yet to be implemented, pending amendments to the Act. The amendments are largely in line with the recommendations from the 2012 UNCTAD Peer Review exercise on competition laws.

d) Malawi

Following liberalisation in the 1990s, Malawi identified the need to control the transition from public to private monopolies. In response to observed imperfect market structures which would give rise to restrictive business practices, the country's Competition Policy was approved in 1997 (Government of Malawi, 1997). It provides for the enactment of legislation on competition as well as an autonomous regulatory authority to administer the law.

Promulgated in 1998, the Competition and Fair Trading Act only entered into force two years later (Mehta, 2006). It provides for a Competition and Fair Trading Commission to

[33] As at December 2019.

implement the law, although it was only established in 2005. Prior to this, an Interim Secretariat under the Ministry of Trade and Industry was tasked with administration of the law. Despite being established in 2005, the Commission only became a fully-fledged statutory corporation in October, 2012 (Competition and Fair Trading Commission, 2013). Thus, enforcement of competition law in Malawi by an independent body only commenced in 2012 even though the law was promulgated in 1998.

3.3.3 Countries adopting competition laws during the new millennium period (2000-2010)

Countries in the TFTA that embraced the competition reforms agenda during this period included some that adopted such reforms as a continuation of the liberalisation agenda initiated in the late 1990s.

a) Mauritius

On the one hand, Mauritius can be regarded as the third country after the DRC and South Africa to adopt competition reforms. The Fair Trading Act was enacted in 1980 and amended in 1988 (Mehta, 2006). On the other hand, this Act lacked the basic aspects of a competition law. Administered by the Ministry of Industry, Commerce and International Trade, it mainly targeted consumer protection, especially conduct that misleads or confuses consumers.

The Competition Act of Mauritius was passed in 2003, but due to a lack of political will and opposition from the business sector, it never entered into force (CUTS, 2007). It provided for a Competition Commission together with a Competition Appeal Tribunal to hear appeals.

In 2007, Mauritius enacted the Competition Act of 2007 which repealed the 2003 law before it had been enforced. The Act provided for the Competition Commission of Mauritius, which was established in 2009 to enforce the Act. Unlike the 2003 legislation, there is no provision for a separate appeal institution with the Board of Commissioners

being the adjudication arm whose decisions can be appealed in the High Court. Thus, implementation of competition legislation in Mauritius only began in 2009.

b) Namibia

Like Mauritius, Namibia adopted a competition law in 2003. A Steering Advisory Committee on Competition was constituted following assistance from the EU, which resulted in the development of a Competition Bill in 1996 (Mehta, 2006). The rationale for adopting competition law in Namibia was largely its proximity to South Africa, at a time when many South African firms had subsidiaries in the country. It was felt that such firms would engage in anticompetitive practices given their dominance (UNCTAD, 2014).

Despite the law being promulgated in 2003, the Namibia Competition Commission was only established as an enforcement agency in 2008. The secretariat was formed in September 2009 (UNCTAD, 2014). The Board of Commissioners determines cases and appeals are heard at the High Court of Namibia.

c) Ethiopia

Ethiopia also adopted its competition law in 2003. The Trade Practices Proclamation No. 329/2003 was enacted as part of the groundwork for the country's membership of the World Trade Organisation (Mehta, 2006). The Trade Practices and Consumer Protection Authority, which was accountable to the Minister, was tasked with implementation (Mehta, 2006).

The 2003 legislation was replaced by the Trade Practice and Consumer Protection Proclamation (No. 685/2010) in 2010. It introduced merger controls and an autonomous competition authority (UNCTAD, 2018). The law was, however, repealed by the Trade Competition and Consumer Proclamation, which was promulgated in 2013 and came into force in March, 2014. It strengthened the powers of the competition authority, which was renamed the Trade Competition and Consumers Protection Authority (TCCPA). It also introduced a separate appellate body, the Federal Trade Competition and Consumer Protection Appellate Tribunal.

d) Egypt

Although articles that deal with monopolistic and anticompetitive behaviour were embedded in Egypt's criminal law for more than a century, it was only in 2005 that the country adopted a legislation solely focusing on competition in the form of the Competition and Prevention of Monopolies Law (Mehta, 2006). Prior to this, 17 draft laws were formulated (Mehta, 2006). Successful promulgation of the 2005 legislation is attributed to the change in government in 2004.

The Egyptian Competition Authority was established in 2006 together with a board vested with central administration and decision making (OECD, 2016). In 2008, the law was amended by Law No. 190 of 2008. The amendments increased fines for anticompetitive practices, made notification of mergers compulsory and introduced other fines (El Fadl and Hashish, 2009). Further amendments in 2010 through Prime Minister's Decree No. 2957/2010 and in 2011 through Prime Minister's Decree No. 1410/2011 granted independence to the competition authority.

Law No. 56 of 2014 resulted in significant changes to competition enforcement in Egypt, as it amended almost 60% of the extant law (OECD, 2016). The executive director was now appointed by the board rather than the Prime Minister, while full leniency was to be granted to a first violator who took the initiative to inform the competition authority of an offence and submitted supporting evidence. The main weakness is with respect to merger notifications, where notification can be made to the competition authority after the parties have already merged, rendering merger regulation less effective.

e) Madagascar

Madagascar promulgated Competition Law No. 2005-020 in 2005. However, it was only in July 2008 that Decree No. 2008-771 was issued which was intended to enable enforcement of the legislation. The law could not be enforced given that the necessary statutes to establish the enforcement institution, the Madagascar Competition Council had not been passed (World Bank, 2015).

A political crisis (2009-2014) as well as lobbying by industry slowed momentum and the implementing decrees were only approved in 2014 (World Bank, 2015), with the Madagascar Competition Council established in 2016 (Lipimile, 2018). This implies that despite adopting competition law in 2005, Madagascar is among the countries in the TFTA with the least experience in competition enforcement.

f) Eswatini

Eswatini's decision to adopt a competition law was largely driven by external factors, especially pressure from regional groupings of which the country is a member, particularly the Southern African Customs Union (SACU), although there was also pressure from SADC and COMESA (Mehta, 2006). In 2004, Eswatini and Lesotho requested a consultative workshop from UNCTAD to identify the main cross border trade and anticompetitive practices affecting SACU intra-trade. Following this workshop, the country requested assistance from the Zambia Competition Commission to draft a Competition Bill (Mehta, 2006).

Parliament passed the Eswatini Competition Act in 2007, with the Eswatini Competition Commission as the enforcement authority. However, it only became operational in 2010 (OECD, 2015). A Board of Commissioners is the adjudicative and policy making body.

g) Djibouti

Djibouti can be classified among the countries without competition legislation. However, law No. 28/AN/08/6th L of 2008 on the Protection, Repression of Fraud and Consumer Protection has some provisions which would be expected in competition law. Section 2 regulates agreements, abusive conduct and other competition violations, while section 3 deals with market transparency and restrictive practices. Part One of the Law, which focuses on freedom of competition and prices, also has some competition law provisions. There is, however, no provision for a competition institution to enforce it, with authority to enforce the law being vested in the Ministry of Commerce (Lipimile, 2018). Thus, despite

having legislation with some competition provisions, Djibouti does not have any experience in competition enforcement.

h) Botswana

Botswana was among the few countries on the African continent to formally adopt a competition policy before introducing a law. In July 2005, the Botswana National Competition Policy was introduced to establish the parameters and create the environment for the drafting of a competition law (Government of Botswana, 2005). The need to adopt the policy was highlighted by two studies on economic mapping and a legislative inventory through a process spearheaded by UNCTAD. Studies were conducted on the market structure, firm conduct and existing laws which were harmful to consumer welfare (UNCTAD, 2018b).

The Competition Act, 2009 was passed four years after the policy statement. It introduced two institutions, namely the Competition Authority of Botswana, which is the investigative institution and the Competition Commission of Botswana, the adjudicating authority. The Competition Authority was established in April, 2011 and started operating in October, 2011 when the regulations governing its operations were gazetted. The Competition Commission was put in place a year later in 2012.

Although the competition enforcement regime is only a few years old, there are already initiatives to amend it. In 2017, a new Competition Bill was passed in Parliament which was assented to by the president in May, 2018 (UNCTAD, 2018). As at November, 2018, no further progress had been made.

i) Sudan

Sudan passed the Competition (Organisation) and Monopoly (Prevention) Act in 2009 in response to economic liberalisation and anticipated anticompetitive practices. It provides for a Competition and Prevention of Monopoly Practices Council as the enforcement institution. The Council's board was appointed in 2013 as well as a chair and secretary, and it held its first meeting (UNCTAD, 2015b). However, by 2018 the secretariat had yet

to be appointed, which implies that although there is a competition law, it is not being implemented (African Law Business, 2018). Thus, Sudan is among the countries that have adopted laws but do not prioritise their implementation.

j) Seychelles

The Seychelles government adopted the Fair Competition Act in 2009. It is enforced by the Fair Trading Commission, which was established by a separate piece of legislation, the Fair Trading Commission Act of the same year. The Fair Competition Act became operational in April, 2010, which also implies that the enforcement history is fairly new. It provided for the establishment of an Appeal Tribunal, an independent platform through which the Fair Trading Commission's decisions can be appealed. However, the Appeal Tribunal was only established in February, 2013 (UNCTAD, 2014b). It was thus four years before businesses were able to appeal. In December, 2014, Seychelles adopted a National Competition Policy to guide the overall competition environment[34].

k) Burundi

Burundi enacted the Competition Act in 2010 through Law No. 1/06. It provides for the Competition Commission as the enforcement authority. However, the Burundi government did not develop any legislative mechanisms to enforce the law, including relevant statutes to create the enforcing authority (Karanja-Ng'ang'a, 2017). By 2018, no further progress had been made[35].

3.3.4 Late adopters of competition laws: Post-2010

The TFTA includes some countries where adoption of competition reforms is very recent. This implies that there are a number of countries that are still in the early stages as far as gaining competition enforcement experience is concerned.

a) Rwanda

[34] The Fair Trading Commission at http://ftc.sc/fair-competition/national-competition-policy/ accessed 30 March 2019.

[35] US Bureau of Economic and Business Affairs, 'Burundi 2018 Investment Climate Statements Report' at www.state.gov/e/eb/r/s/othr/ics/2018/af/281392.htm

Although Rwanda enacted competition legislation during the post-2010 period, the initial steps were taken in 2010 when the government formulated a Competition and Consumer Protection Policy (Government of Rwanda, 2010). A Competition and Consumer Protection Unit was also established under the Ministry of Trade and Industry. Law No. 36/2012, which was passed in October, 2012, contains provisions on mergers, abuse of dominance, and anticompetitive agreements and is generally in line with modern competition laws. It also provided that the implementing institution would be established by a separate law.

Law No. 61 /2013 of 2013 established the National Standards Inspectorate, Competition and Consumer Protection Authority (NICA), which, among other legislation, was intended to implement the 2012 competition law. It was to be supervised by a supervisory authority to be determined by a Prime Minister's Order. Delays were caused by the government's efforts to merge the NICA with other institutions performing similar functions and it was only in July, 2017 that Law No. 31/2017 was passed, establishing the Rwanda Inspectorate, Competition and Consumer Protection Authority (RICA).

This legislation repealed Law No. 61/2013 which established NICA and thus made RICA the new competition enforcement authority. However, RICA could not commence operations until August, 2018 when Prime Minister's Order No. 116.03 that set out the organisational structure, and salaries and fringe benefits for members of the executive organ of RICA was passed. Thus, while the law was passed in 2012, it could not be enforced until August, 2018. The Competition Unit at the Ministry of Industry and Commerce was generally in charge of competition matters during this period.

b) Mozambique

The journey towards competition reforms in Mozambique started in 2007 when the country adopted a competition policy (Pereira and Saraiva, 2018). Competition law was adopted through Law No. 10/2013 of 11 November, 2013. Its provisions are those expected in modern competition law, as it regulates all the main anticompetitive practices. In August, 2014, Decree No. 37/2014 was issued to provide for the Mozambican

Competition Authority to enforce the law. Decree No. 97/2014 followed in December, 2014 which provided for the competition law to become effective.

Mozambique's competition law closely follows the Competition Act of 2003 in Portugal, the country's former coloniser (Pereira and Saraiva, 2018) However, although Decree 79/2015 was issued to set out the various charges imposed by the competition authority for different services, the Mozambique Competition Authority was not operational by 2018 (Pereira and Saraiva, 2018). This implies that only the courts can prosecute violations using the Competition Act. Without a dedicated institution to undertake investigations, the competition law generally remained unenforced by 2018.

c) Comoros

Comoros adopted Law No. 13-014/AU in 2016 that established the National Competition Commission (CNC) as the enforcement authority. While the law contains modern competition provisions, it does not provide for merger notification despite including administrative penalties if parties to a merger provide incorrect information to the CNC[36]. However, by January, 2018, the competition authority was not yet in force in Comoros[37].

d) Angola

Angola enacted its first competition law in May, 2018. Law No. 5/18 creates a competition regulatory authority to enforce it. The competition fraternity will be monitoring how the law will be implemented[38].

3.3.5 Countries yet to adopt competition laws

Countries in the TFTA without competition laws include Eritrea, Lesotho, Libya, Somalia, South Sudan and Uganda. Of these, Uganda stands out given that in 2004, the country

[36] See the African Antitrust and Competition Law Bulletin of March 2016 entitled "Comoros Gets Competition Law" available online at https://africanantitrust.com/2016/03/17/comoros-gets-competition-law/ accessed 14 November 2018.

[37] See the African Antitrust and Competition Law Bulletin of January 2018 entitled "Second Non-Merger Investigation Opened By COMESA Enforcer" available at https://africanantitrust.com/2018/01/23/resale-price-maintenance-in-comesa/ accessed 14 November 2018.

[38] The author was not able to locate the new competition law to closely analyse the provisions.

produced a Competition Bill but an Act had not been promulgated as at 2018. The decision to draft the Bill can largely be attributed to efforts by development partners and civil society organisations. The subsequent lack of action suggests that government was not convinced about the need to develop competition law.

3.3.6 Developments at the regional level

Developments at the regional level with respect to competition regimes also affect the nature of competition in the TFTA countries. Both COMESA and the EAC adopted regional competition regulations that are superior to national competition laws (Lipimile, 2018). However, at SADC, it is Article 25 of the SADC Trade Protocol of 2000, where member states are required to implement measures prohibiting unfair business practices and promote competition (Lipimile, 2018). The Declaration on Regional Cooperation and Consumer Policies of 2009 also calls upon Member States to take the necessary steps to adopt, strengthen and implement the necessary competition and consumer protection laws. Thus, there are is no regional competition law at the SADC level. The COMESA Competition Regulations and the COMESA Competition Rules were adopted in 2004 although the COMESA Competition Commission, the enforcing authority, only became operational in 2013 (Lipime, 2018). The EAC Competition Act, which was adopted in 2006 and is enforced by the EAC Competition Authority, has not yet been fully operationalised. The regional competition laws largely apply to transactions with a cross border effect, which prevents possible overlap in mandates with national competition laws. Thus, since 2013, even in countries that have yet to adopt competition law, the COMESA Competition Commission has conducted some competition investigations. This also affects the behaviour of economic agents, which could have an effect on trade.

3.4 Implications from the evolution of competition regimes among the TFTA countries

The evolution of competition regimes across the TFTA countries has revealed about five critical issues. First, there are quite some differences in terms of competition experiences, as some countries have quite a lengthy experience with competition enforcement, while others are still at the nascent stages. The benefits of competition are, therefore, expected

to have differently accumulated among the countries. Second, the competition regimes adopted in the countries are not the same. There are only six countries that have competition policies in addition to competition laws. This shows that despite the benefits associated with a competition policy, there are still some reservations in having the commitment to prioritise competition reforms being explicitly expressed through a competition policy. Third, there are countries that adopted competition laws, but took a long time before the enforcement institutions of the law could be in place. This could reflect that the commitment to embracing competition reforms was not quite pronounced, as the reluctance to have the competition regime enforced is quite apparent. Fourth, while South Africa and Zambia significantly amended their competition regimes to take into account the developments that they encountered in their enforcement history, there are also some countries such as Zimbabwe and Malawi that have gone over a long period of time without significantly altering their competition regimes. Fifth, there are different motivations for adopting competition reforms, including internally generated reasons as well as external pressure. The different motivations could also explain the different paces of the competition reforms.

In sum, there are a lot of differences between the countries' competition regimes, which would be expected to have also created differences in associated benefits from the enforcement of the regimes. The different pace of competition reforms across the countries offers an opportunity for the models used in the study to capture differences among them and to assess whether these differences would explain differences in trade volumes. The differences also offer an opportunity to explore whether economies in countries that improved the quality of their competition regimes at a faster pace were able to extract more benefits from bilateral trade than those whose competition reform journey proceeded at a sluggish pace.

3.5 Chapter Summary

This chapter demonstrated that there are large trade volumes that take place within the proposed TFTA, which have generally trended upward since 2001. Total trade volume with the world of about US$543 billion by 2019 will make the TFTA an important player in

the global trade discourse. Bilateral trade volumes between the countries to form the TFTA are also large at about US$69 billion by 2019, highlighting the role that regional integration measures will play in cementing this relationship. It is important to ensure that these trade volumes are maintained and to explore other measures to create more trade opportunities among the member countries. The adoption of competition reforms is one such potential avenue which this study explored.

The chapter also traced the evolution of competition reforms among countries in the TFTA between 1950 and 2018. This was a sluggish journey and the quality of the competition regimes differs significantly. While some countries took a long time to enforce their competition regimes after adopting them, others have yet to embrace competition reforms. Furthermore, some laws have remained static while other countries have amended their laws periodically to remain relevant in the dynamic market environment. The Chapter thus set the context to empirically examine the relationship between competition reforms and international trade.

The following chapter presents the theoretical review of literature in order to understand the theoretical framework for this study.

CHAPTER 4: THEORETICAL LITERATURE REVIEW

4.1 Introduction

Before undertaking a review of the empirical literature, it is important for the theoretical framework of the study to be comprehended. The three objectives that this study is exploring need to have some theoretical basis, which would inform how expectations are formed with respect to the issues to be assessed. As stated in Chapter one, this study has three objectives. All of these are engrained within different theoretical foundations. The first objective is to assess the level of acceptance of competition reforms in the countries to constitute the TFTA. The rationale for adopting competition reforms is influenced by the theoretical benefits of competitive markets, which is what competition policy would be seeking to attain. The second objective was to investigate whether the differences in the level of the adoption of competition regimes in the African countries under review can explain trade flows between the countries. This would imply that competition policy can be located within international trade theories. The third objective was to determine whether differences in economic growth could explain the different pace at which competition reforms has been adopted among TFTA members, which would also explain why they could be losing out from any benefits from competition enforcement. Thus, a discussion of regulation theories would be instrumental in explaining the rationale for having existing forms of regulation in an economy, including competition policy.

This chapter presents the theoretical framework adopted for this study. Section 4.2 focuses on theories of market structure. The way in which markets are structured influences a firm's expected behaviour in the market. In general, four types of market structures would be expected to arise across different sectors of an economy. These are briefly discussed, with the main intention being to showcase the major characteristics and concerns of each type of market structure. Enforcement of competition reforms is generally expected to create the conditions similar to those of a perfect competition model, which has desirable characteristics in terms of consumer welfare. If markets are not competitive, they would fall under one of three categories, namely, monopoly,

oligopoly or monopolistic competition. Thus, the motivation for the TFTA countries to adopt competition reforms is related to the need to transform the market structures.

Section 4.3 briefly focuses on theories of international trade, classified into founding and contemporary theories. It discusses their evolution as well as their main focus and implications. The founding theories of the international trade that are discussed were developed during the 18th and 19th centuries[39]. Each theory is discussed in relation to the main issue under investigation, namely, how competition (which competition policy seeks to influence) relates to international trade. It should be noted that several theories are not discussed as they are not relevant to the issue under investigation. The main objective is to unveil each theory's implications with regard to competition.

Section 4.4 presents the theoretical framework which would set the context for the discussion on whether competition reforms can develop naturally as the economy grows. The primary motivation for exploring this argument stems from Waked (2016), who established that the level of economic development in African countries appeared to have a causal effect on the decision to adopt competition laws. The theoretical framework are the regulation theories, especially how economic development would be expected to influence the type or model of regulation to be adopted.

4.2 Motivations for competition policy adoption decision

Theories of market structure generally influence the decision to embrace competition reforms, where the intention is to transform the structure of the market from one considered to be less favourable for the promotion of consumer and societal welfare to a market structure that is more conducive. Thus, a discussion on market structure theories demonstrates the rationale for adopting competition reforms. According to Hattori (1975), the origins of the term market structure lie in a discussion on early industrial organisations by the Harvard Group after the 1930s. Prior to this, discussions on market structure were

[39] One exception is the protectionist theory by Richard Schuller, published in 1905, which falls in the 20th century. However, like many economists at the time, his published work followed many years after the original idea was in the public domain.

generally informed by pricing theories. Hattori (1975) adds that although Edward H. Chamberlin is credited with the original formulation, Mason (1939) and Bain (1956) from Harvard were responsible for the further development of market structure theories. Bain (1956) introduced the famous Structure-Conduct-Performance model, which holds that the market structure determines firm behaviour, which also influences performance.

The market structure can be defined as the environment in which a firm is subjected to competitive discipline, that is, it is the setting in which the principle of competition can be made effective (Hattori, 1975). As such, the critical environmental factors that affect the basic decisions made by an individual firm shape the market structure. Hatorri (1975) identifies three main elements of market structure which emerged from the various market structure theories over the years. The first is the number, size and distribution of the buyers and the sellers participating in a market, while the second is the degree or extent of product differentiation. Finally, ease of entry to the market determines the market structure, as this would also determine the number and size of players. In addition, the extent to which any individual firm is able to exercise control over prices affect the market structure (Viljoen, 1998).

The market structure has significant influence on the level of competition in a market. Competition can be classified into two categories, namely, commodity competition and enterprise competition (Hatorri, 1975). The former focuses on the extent to which different varieties of the same product compete. These varieties or characteristics would differ based on buyers' preferences and tastes, to which producers would react by changing production techniques. Enterprise competition focuses on the extent to which an enterprise can increase its profit by either working to gain more transactions or by obstructing its competitors' transactions (Hatorri, 1975). Thus, the decision matrix of an enterprise is dependent on the behaviour of its competitors. Commodity competition is, therefore, a precondition for entrepreneur competition as products need to be considered as substitutes before producers compete to produce them.

Since market structures are different, there would also be differences in the manner in which firms compete, which also depends on the structure of the market. Four competition models have emerged over the years based on market structure characteristics, which provide the basis for explaining how market structure affects firm behaviour. These include perfect competition and monopoly on the one hand and monopolistic competition and oligopolistic competition on the other. The first two are generally extremes and opposites of each other, while the last two share some similarities. Under perfect competition, there would be no government intervention in the market to influence buyers or sellers (Viljoen, 1998). The presence of a number of producers selling identical goods implies that there is price competition until the forces of demand and supply determine an equilibrium price. Thus, each firm is not a price setter, but a price taker since it cannot influence market prices individually (CUTS, 2001; Simpson, 2010; Rosenburg and O'Halloran, 2014). A perfect competition model would be preferable for consumers, as prices are low because firms can only extract enough to meet their costs rather than to exploit consumers. Thus, competition policy will aim to create conditions which mimic perfect competition, where firms compete fairly and the consumer benefits through reduced prices. At the other extreme of a perfect competition model is a monopoly. Producing a product with no close substitutes, where competition is prevented by significant natural and artificial barriers, the only limitation on a monopolist's ability to extract as much as possible from consumers is consumers' budgets, as reflected by demand (Viljoen, 1998). Although the monopolist is the only seller, high prices may cause consumers to shift consumption habits to other products. Thus, competition policy would aim to ensure that only natural monopolies as well as those arising out of production efficiencies would be allowed, while those that emerge due to behaviour aimed at squeezing out potential rivals are regulated. This implies that concerns about increasing monopolisation of some sectors of the economy could motivate the adoption of competition reforms.

However, it is not likely that markets in the TFTA would be characterised by perfect competition or monopoly, but would be somehow in between. This means that markets are likely to have more than one player, even though the number might not be as large

as that envisaged by the perfect competition model to the extent that each player would fail to influence the market price (Chamberlin, 1949). For example, the market structure could be monopolistic, where the main distinguishing feature is product differentiation. However, in a monopolistic competition market structure, there are incentives to overcome competition constraints through collusion and creating artificial barriers, calling for regulation. Countries might adopt competition regimes in order to ensure that a monopolistic market structure does not gravitate towards monopolies in the long run through anticompetitive behaviour.

Oligopoly markets are generally characterised by rivalry, as each producer's behaviour is determined by the actual and potential actions of the other players. Thus, the possible reaction of other producers keeps the behaviour of each firm in check (Chamberlin, 1949; Viljoen, 1998; CUTS, 2001). Given firms' interdependence, it would be expected that similarities in strategy would be common. This is often referred to as tacit collusion/agreement when firms engage in similar strategies but there is no specific agreement to adopt a common strategy (Chamberlin, 1949). However, the fact that there are only a few firms and the need to be aware of their rivals' strategies, create the need for collaboration. Thus, cartels are likely to emanate from oligopolistic industries (Viljoen, 1998).

The ease with which firms in an oligopoly market structure can collude and collaborate would also be a theoretical reason for the adoption of competition reforms. Competition policy would aim to ensure that even when oligopolistic markets exist, similarity in pricing behaviour among firms is the result of conscious parallelism rather than cartelised behaviour. It also aims to ensure that other behaviour, which seeks to prevent an oligopolistic market from transitioning towards a market with perfect competition conditions characteristics, is regulated.

In summary, market structure theory goes some way in explaining why countries would adopt competition laws. Deviation from perfect competition is expected to undermine social welfare (Semmler, 1982). According to Semmler (1982), such deviations include

leading firms gaining a larger share of the market through industrial concentration; collusion among competing market participants; and limited flow and mobility of resources across different industries due to restrictions on market entry. Competition policy aims to devise tools to control deviations from a perfect competition model, which would be detrimental to consumer welfare. This is the context in which the adoption of competition regimes by the countries in the TFTA could be expected to have unfolded. Market conditions, influenced by market structures, would give rise to the need to introduce competition reforms so that such conditions would at least resemble those of perfect competition, which offer benefits in terms of consumer and societal welfare.

4.2 Implications from trade theories about impact of competition reforms

International trade theories, which can help contextualise the relationship between competition and international trade, date back to the 18th century. As they evolved, the role of competition came under the spotlight.

4.3.1 Founding international trade theories

Among the many founding theories of international trade, six are relevant to a discussion on competition and international trade.

4.3.1.1 Mercantilism theory of international trade

This is among the oldest international trade theories, having emerged during the 17th century. Adam Smith (1776) identified Thomas Mun as an advocate of the 'mercantile system'. According to Mun (1664), national wealth increases through foreign trade by selling (exporting) to strangers more than what they consume (importing) from strangers. Smith's (1776) critique of Mun (1664) resulted in the former's theory of international trade. Other mercantilists identified by Reinert (2004) include Jean-Baptiste Colbert and Friedrich List. Central to the mercantilism theory is a favourable trade balance, achieved by encouraging exports while discouraging imports (Mun, 1664). However, this situation cannot occur naturally, calling for state intervention. The mercantile system promoted merchants and manufacturers at the expense of consumers (Smith, 1776). Therefore, international trade was mainly dependent on the ability to manufacture products that

would be competitive in the export market and earn a return for the merchant and the manufacturer (Smith, 1776). State intervention under mercantilism also took the form of protective measures. According to Reinert (2004), Colbert argued that protective duties were like crutches, which manufacturers could use to learn to walk but throw away as soon as they mastered walking. Manufacturers were central to the theory and mercantilists encouraged the importation of raw materials for manufacturing as a strategy to avoid more expensive finished products (Smith, 1776). However, where raw materials were native to the country, export taxes or bans were imposed to ensure that they become very expensive for competing producers in other nations (Reinert, 2004).

Therefore, under the mercantilism ideology, low levels of competition could be expected in the domestic manufacturing sector as a result of state intervention and this would be the basis for increased international trade. If this theory were to hold in the present day, adopting competition policy, which would promote competition in all markets, would slow rather than promote international trade.

4.3.1.2 Theory of absolute advantage

The theory of absolute advantage is a foundation for most contemporary international trade theories. It can be traced back to the 1770s, when Adam Smith, who is credited with its development, observed that trade flows naturally depending on which country produces a product cheaper or faster (or both) (Smith, 1776). This ability became known as the measure of absolute advantage. According to Smith (1776), if a country has some advantage in producing a product and other countries want that product, it will always be to the advantage of these countries to buy rather than to make the product. However, free importation of products that local manufacturers did not enjoy an advantage in producing would be preferable, even if local manufacturers might suffer. Given that trade restrictions are argued to be ineffective in preventing the flow of goods, allowing free trade and importing such goods would be the solution rather than trying to protect inefficient industries (Smith, 1776).

Though not explicitly stated, the trade and competition relationship was also embedded within the absolute advantage theory from three perspectives. First, the market system upon which the theory was based was a perfectly competitive market, where demand and supply determine prices. Competition laws and policies also seek to ensure reliance on market forces by prohibiting behaviour that stifles competition. Second, Smith noted that monopolies generally harm the welfare of the citizenry. When a country specialises in the production of specific products for sale to those without such advantages, there would be more competition among the domestic firms producing the product, which would result in a surplus for trade. Therefore, absolute advantage would mainly be determined by the level of competition in the domestic market. Third, as observed by Schumacher (2012), production of surpluses for trade under Smith's theory was mainly attributed to specialisation and hence increased efficiency. As countries increased their levels of specialisation, associated technical and organisational innovations would be reflected in increased productivity, which would become the basis to increase the scope of international trade. Therefore, based on the absolute advantage framework, competition policy would facilitate international trade through productivity driven channels.

4.3.1.3 Comparative advantage theory

The comparative advantage theory of trade is related to the absolute advantage one, with its origins attributed to David Ricardo. Ricardo (1817) observed that even though an absolute advantage might not exist in producing a product, a country can still produce the product more efficiently than other goods. It can thus have a relative productivity advantage even though it might not have an absolute advantage.

While the theory's emphasis is mutually beneficial trade between two countries, it relates well to competition. For example, Ricardo (1817) points out that since payment is likely to be in the form of gold and silver rather than barter, the distribution of trade gains would depend on the 'competition of commerce' within each country. For any two countries with the same population, the same quality of land and the same knowledge of agriculture, the distinguishing factor would be the price of raw produce. The price tends to be highest where considerable skills and better machinery are concentrated, which would be

determined by the level of competition within the domestic market. Like Smith (1776), Ricardo assumed a perfect competition market structure, which is generally what competition policy and laws seek to mimic.

4.3.1.4 Gains from trade theories

Among those that are identified as gains from trade theories are three which are relevant to competition policy. Firstly, comparative advantage was further refined by John Stuart Mill in a series of essays written between 1829 and 1830 and published in 1844 (Murphy, 2013). In an essay on the laws of interchange between nations and how trade gains would be distributed among the trading countries, Mill (1844) observed an error (which he called an oversight) in the comparative advantage theory. This occurred because Ricardo did not focus much on how the trade gains could be shared among the trading countries. His main point was that it is possible for trade to benefit only one country when the other one does not gain anything. In addition to pointing out this error, Mill's significant contribution to trade theory was to note the important role played by demand and supply in international trade dynamics by influencing prices. Specifically, Mill introduced the importance of demand for a foreign product relative to demand for a local product as a central factor in influencing international trade. Thus, markets need to be structured in such a way that local firms are able to respond to meet demand, as the higher the demand for a foreign produced product, the less favourable the resultant terms of trade to that country. Competition policy generally serves to ensure that behavioural induced barriers to commerce, which could be a result of anticompetitive practices, be reduced to facilitate more competition in the local market, which is a tool towards reducing demand for foreign products by expanding choices.

Second, Augustin Cournot's (1838) contribution to international trade theories also falls within gains from trade theories. He demonstrated that international trade between two countries will cause variations in their national income by affecting prices in the domestic market. In the domestic market, there would either be producer gains or consumer losses as prices change in response to international trade. However, the central issue in Cournot's model, which influenced trade between the two countries, was the extent to

which competition conditions are different. In other words, the equilibrium price in the two countries, which was influenced by supply and demand, had to be different to yield price differentials, which would promote trade. This role of supply and demand fits well with the theoretical foundation of this study. Differences in competition conditions across countries would be expected, given the different degree of competition reforms adopted. This is expected to create price differentials which determine trade flows.

Third, while it is argued that Alfred Marshall's main contribution was to translate Mill's version of the comparative advantage into mathematics (Murphy, 2013), the offer curves developed by Marshall were a significant contribution to international trade theory. The offer curves also fall within gains from trade theories. Marshall (1930) acknowledged that his essay, '*The Pure Theory of Foreign Trade'* was almost complete by 1875-7 and had already been used by economists interested in trade theory. It thus fits well within the founding international trade theories, although the first print under his name was only in 1923 (Murphy, 2013). Like most of the classical economists, Marshall focused on how unrestrained trade under perfect competition would influence trade. If the classical view of international trade holds true, then those markets with more competition or that are more exposed to conditions of perfect competition would be expected to have more trade compared to those characterised by many restrictions in the domestic market. Thus, the adoption of competition reforms, which try to mimic the conditions of perfect competition, would be expected to result in improved trade. The gains from trade theories, therefore, identify a country that is more competitive as gaining more from international trade.

4.3.1.5 The infant industry protection theory

The infant industry protection theory is another founding theory of international trade. It is mainly seen as having arisen as a critique of the free trade theory, which was central to the absolute and comparative advantage theories. This school of thought justified the imposition of tariff duties as a way of controlling free trade, although this was qualified protection rather than general protectionist trade. The infant industry protection theory is attributed to Friedrich List through his published work of 1841. However, Alexander

Hamilton raised a similar argument as early as 1791 when he was concerned that firms in the US could not adequately compete with Great Britain (Shafaeddin, 2000).

The argument was that if there is a possibility that in the future, a newly developed industry could capably compete with foreigners if allowed to thrive, the government should encourage the manufacture of the product (Dimand, 1998). This was deemed necessary because some foreign industries had outpaced local ones in manufacturing (Shafaeddin, 2000). It was, therefore, not ideal for an industry that has not yet matured to be exposed to uncontrolled competition with superior competitors from other countries. However, there was emphasis on the need for protection to be temporary, such that as the industry matures, it should be removed.

The infant protection industry argument thus also has implications for the relationship between competition policy and international trade. It sought to limit or reduce competition between domestic and foreign firms through protection, even though the objective was to enable the development of local industries. Competition policy is also cognisant of the important role of import competition in influencing market outcomes, especially domestic firms' behaviour in the presence of competition from foreign markets. In particular, if protection creates monopolies, it would be difficult to stop the anti-competitive behaviour normally associated with them. Thus, it is not expected that countries that are still interested in protecting their industries would adopt competition laws that would discourage protection of individual firms rather than the market. However, since trade would be limited through protection, the expectation is that such countries would also have limited trade flows, especially imports. Therefore, countries that subscribe to the infant industry protection argument are expected to be characterised by limited competition reforms as well as low trade levels.

4.3.1.6 Schuller's protectionist theory

Although the early classical economists believed in free trade without restrictions, this view became increasingly questioned as allegations that they were more interested in servicing the interests of the more advanced Great Britain at the expense of the less

advanced US gained prominence (Shafaeddin, 2000). Richard Schuller (1905), as cited in Murphy (2013), argued that there are some idle resources in most countries. Resource underutilisation mainly occurs because private firms and capital do not adequately exploit resources (including labour) without state intervention. In this regard, foreign competition can retard domestic production, as it prevents the full utilisation of unexploited forces of production. The negative impact of foreign competition, therefore, justifies the imposition of tariffs on trade.

The implication of Schuller's theory for competition mainly lies in local industry's ability to respond following the imposition of a tariff. A local market characterised by imperfections with barriers to production would not respond fast enough to any restrictions on foreign competition. Thus, only a local market operating under conditions of competition or at least with limited restrictions is bound to enjoy the gains from the trade restrictions envisaged by Schuller. Competition also needs to be maintained in the domestic market to enable firms to seize opportunities that would arise from the imposition of tariffs.

4.3.2 Contemporary theories of international trade

Modern theories of international trade that were developed in the 20th century continue to shape the international trade discourse. This section focuses on those that are most relevant to the competition policy-international trade relationship. These theories are generally either firm-based or embrace firm-based variables rather than only country-based factors. Modern theories of trade fit well with the general focus of this study, as competition policy generally focuses on firm behaviour, which would influence international trade in the long run. Five modern theories of international trade are discussed in this section.

4.3.2.1 Factor proportions theory

This theory is generally referred to as the Heckscher-Ohlin (H-O) theory and is classified among the modern theories of international trade even though it builds on the comparative advantage theory. It was developed in the early 20th century by Eli Heckscher and Bertil Ohlin and published by Ohlin in 1933 (Ohlin, 1933). It extends comparative advantage

analysis by considering two factors of production rather than one to showcase the vital role of factor endowment in determining comparative advantage and hence trade (Leamer, 1995). Using a two-country, two-product, and two-factor model as an example, the model shows that relative differences in factor endowments and factor prices can be the key determinants of international trade.

While this basic theory mainly focused on factor prices and endowments, it has several implications for competition. Firstly, among the assumption of the H-O model are perfect competition model conditions in the commodities market (wheat and cloth) as well as in the factor markets (capital and labour), including free entry and exit, free information availability, no trade restrictions and pricing decisions based on price equalling marginal costs (Pal, 2017). In other words, production efficiencies and pricing are the result of free competition among the various producers in the countries. While the production factors would move freely within the country, movement is not free across borders, which shows that existing firms would have to compete for raw materials and factors of production for the model to work. Assuming perfect competition also implies that producers, traders, consumers, and factor owners do not individually influence market prices and outcomes. Thus, the H-O theory would only work provided there are no barriers to free trade or high concentration levels in markets, which would create monopolistic behaviour that destroys competition. Competition is therefore also embedded within modern trade theories. The theory postulates that international trade can benefit both countries if competition is maintained in both.

4.3.2.2 Country similarity theory

The country similarity theory is mainly attributed to Staffan Burenstam Linder (1961). According to Linder (1961), home demand for a product is considered a critical determinant of comparative advantage. This is mainly because a product passes through learning phases as the producer receives feedback from the market in order to respond to consumers' tastes and preferences. It would be difficult for a firm to produce a product destined only for foreign demand as it is hard to obtain feedback from a distance. New products always go through a trial and error phase; hence, internal demand determines

which products should be produced. An entrepreneur that tries to satisfy foreign demand for a product with no domestic demand is likely to be unsuccessful due to lack of information and learning between consumers and the producer. Lam (2015) describes Linder's explanation as an expansion of the trade horizon, that is, a firm's trade horizon can only extend across national boundaries rather than originating across them.

It therefore follows that producers that have been able to perfect the product to meet domestic demand are better positioned to gain international competitiveness. This implies that international trade will only be intense among countries with similar demand structures; hence, the country similarity theory. This is mainly because foreign demand will be residual, with domestic demand being the primary motivation for developing a product. Thus, a foreign market where demand matches domestic demand is easier to penetrate through exports. Linder (1961) identifies the existence of 'representative demand'[40] as a critical determinant of a product's export potential.

Linder's argument implies that competition policy would influence international trade. Success at home is a result of perfecting production processes under a defined market structure. The ability to overcome foreign competition becomes easier for firms that would be accustomed to rivalry at the domestic level. Since competition policy would intend to create fair competition conditions, firms in such an environment that are successful at the domestic level are more likely to successfully penetrate export markets with similar demand.

4.3.2.3 Product Cycle Theory

This international trade theory was introduced by Raymond Vernon in 1966. It departs from the comparative costs theory by placing more emphasis on innovation, scale economies and uncertainties in influencing trade patterns (Vernon, 1966). The theory postulates that a product generally passes through three stages in its development. The first is the product location (or product introduction) stage. At this stage there is need for

[40] He defines representative demand as demand at the ruling price in the world market for a product to be consumed in a country.

communication and feedback between producers and customers, and competitors and suppliers, as much uncertainty still surrounds the direction which the market will take. The second stage is the product maturing stage, where, after being introduced and reacting to market signals, product standardisation emerges, while competition also calls for product differentiation. The third stage in the product cycle theory is the product standardisation stage. As the product becomes standardised, production is possible in all countries and the original producer might relocate or expand to other countries.

The theory focuses on a newly-introduced product, rather than existing products. This implies that the extent to which the characteristics of the home market promote innovation that is critical for sustaining the introduction of the product is the foundation of the model. Given that production is always characterised by high product costs during the first stage, Lam (2015) identifies low price elasticity of demand and monopoly power as implied. This suggests that the level of competition matters, including whether the incumbent is protected by entry barriers or property rights to prevent rivals from producing the product while the costs of innovation and marketing are not yet recovered.

4.3.2.4 Economies of scale-based trade theories

The critical role played by economies of scale in explaining specialisation and international trade emerged in 1979 and 1980 through the writings of Paul Krugman and Kelvin Lancaster. They argued that economies of scale, rather than factor endowment differences explain international trade. As explained by Krugman (1979), other models, especially factor proportion-based ones such as the H-O theory, generally assumed that economies of scale would be external to a firm, such that firm operating conditions would be in perfect competition. By identifying economies of scale as external, Krugman (1979) argued that firms operate under conditions of imperfect or monopolistic competition. In other words, they operate under conditions of increasing returns.

If economies of scale are the main determinant, even countries with the same tastes, technology and factor endowments can trade to their mutual benefit. This is mainly because the combined market enables the production of a greater variety of goods at a

larger scale of production. Thus, the main determinant is demand beyond what one country can supply. Similar demand across any two countries enables firms to produce beyond local demand. This point was also emphasised by Lancaster (1980) who demonstrated that under conditions of perfect monopolistic competition, even those economies that are identical in all aspects can engage in mutually beneficial trade. Indeed, Lancaster (1980) concludes that similar economies can generate more mutually beneficial trade than those that are dissimilar. Thus, Krugman and Lancaster's economies of scale theories were in line with Linder's country similarity theory in that similar demand would be critical in unlocking trade. A firm producing for the local market would eventually find it easier to satisfy the international market provided that conditions are similar. However, without increasing returns, it would be difficult for the firm to increase production beyond local market requirements.

Therefore, like the other modern trade theories, the main market structure under which economies of scale would be enjoyed is identified as monopolistic competition. This implies that the models postulate that in cases where conditions of perfect competition have eroded all scale advantages, trade would not arise. Thus, the manner in which competition reforms has shifted the market structure from monopolistic competition would have a bearing on international trade.

4.3.2.5 National Competitive advantage theory

The National Competitive Advantage trade theory was introduced to the trade discourse by Michael Porter (1990). It states that competitive advantage matters more than comparative advantage in influencing trade. According to Porter (1990) the capacity of a country's industries to innovate is the main determinant of its competitiveness, which is a critical determinant of trade. Strong domestic rivals, demanding customers and aggressive home-based suppliers are critical for companies to gain advantage over their international rivals (Porter, 1990). Differences in nations' level of competitiveness thus reflect differences in economic structures and institutions, among others.

The degree of competitiveness is different across nations, as each country will have some industries that are more successful than others. Competitive advantage is gained at company level through innovation, including new technologies as well as new ways of operating. A firm that does not innovate will be overtaken by its competitors. Porter (1990) defines competitiveness in relation to productivity; the value of output which can be produced by one unit of labour or capital. International trade is also a critical determinant of productivity as it exposes industries to international standards such that an industry that does not have high levels of productivity loses out to foreign rivals. International trade can facilitate specialisation in industries which are competitive, while imports will replace products produced by local industries that are less competitive. Countries with a favourable home-base for companies to become competitive and compete internationally, thus tend to perform better, reflected by trade volumes.

The country's position in terms of 'factor conditions' determines its competitiveness. This focuses on factors which affect the ability to compete in a given industry, including infrastructure, skilled labour, and factors of production. The nature of demand for products and services in the home market is also critical (demand conditions). The nature of the market structure under which firms operate is also an important influencing variable. This includes how firms are created, regulated and organised, in addition to the level of rivalry.

Thus, rivalry is critical in influencing competitiveness. This trade theory fits well within the context of this study. It suggests that TFTA economies with high levels of rivalry through the enforcement of competition laws are likely to gain competitiveness and advantages over those with low levels of competition.

4.4 Theoretical framework and motivation for economic regulation

As explained in the chapter introduction, one of the objectives of the study is to assess whether differences in economic growth could explain the different pace at which competition reforms has been adopted among TFTA members. While competition and international trade is the central theme, a critical issue in understanding why some countries might not have fully embraced competition reforms, and hence are missing out

from the associated trade benefits, would be to explore the theories of regulation since competition policy is generally part of economic regulation. A review of regulation theories would, therefore, give the context under which motivations for adoption of competition reforms could be better understood.

Regulation can be broadly defined as intentional, direct, binding intervention by public sector actors in the private sector's economic activities involving standard-setting, monitoring and sanctions (Koop and Lodge, 2015). It can be split into two classes, namely economic regulation and social regulation. Social regulation focuses on issues such as the environment, consumer protection, labour, and health and safety (den Hertog, 2010), which lie outside the realm of competition policy. Competition policy falls under economic regulation, which regulates the conduct and behaviour of economic actors. Economic regulation can also be classified into structural regulation and conduct regulation. Structural regulation seeks to govern the structure of the market (den Hertog, 2010). It thus focuses on market exit and entry requirements and, hence, influences how many players can participate in the market. Conduct regulation controls the behaviour of producers and consumers. However, the main targets of economic regulation are natural monopolies as well as economies with imperfect competition, where adverse effects on welfare are expected from uncontrolled firm behaviour (den Hertog, 2010).

In general, economic regulation theories can be classified into two; public interest and private interest (den Hertog, 2010). At the heart of public interest theories is market failure, which calls for government intervention. Markets that are left to operate on their own do not promote social welfare (den Hertog, 2010). The regulatory capture theory is at the heart of the theory of private interest regulation. Under this theory, the private sector is always strong enough to influence regulatory outcomes. The main issue of interest in this study is the extent to which the level of economic development influences the nature of regulation adopted in an economy. This would also be the theoretical basis for expecting the level of economic development to influence the decision to adopt competition reforms.

4.4.1 Public interest regulation theory

Posner (1974) states that the public interest theory dates back to the period between 1887 and 1958. It assumed that economic markets that are left alone are fragile and inefficient. Government regulation was regarded as bearing no costs when intervening in the market (Posner, 1974). Later variants of the public interest theory aimed to address observed limitations. For example, despite sound arguments, empirical research later established that there was no correlation between regulation and the presence of market imperfections (Posner, 1974). Regulation tended to include areas where no market failure could be found.

One criticism levelled against the theory was the assumption that regulation was without costs and was also able to correct market inefficiencies. This led to the development of new variants of the theory in the 1980s, which took into account transaction as well as information costs, such that regulation was no longer cost free (den Hertog, 2010). It was concluded that government regulation was *comparatively* more efficient in dealing with market failure. Thus, even though some inefficiencies could be embedded within regulation, market failure requires regulation to enhance the public welfare.

den Hertog (2010) identifies the causes of market failure which regulation seeks to address. First, imperfect competition implies that firms can price their products well above their marginal costs. Imperfect competition could be due to many reasons, including agreements between producers on prices and only a few competing firms, resulting in dominant firms dictating prices (den Hertog, 2010). Second, market failure can arise due to the existence of unstable markets. These are characterised by dynamic inefficiencies, especially concerning the speed with which the market will stabilise following a shock. Thus, if an event temporarily causes supply shocks, products will be priced high, and even when the shock is over, there is no guarantee of return to stability. Unstable markets thus require regulation. Third, market failure exists where there are missing markets. These are markets where socially valuable products and services have to be produced, but such markets do not develop naturally to provide the required services at affordable prices. Examples include some public utilities which offer services at below cost recovery

prices. These features are generally expected in less developed rather than developed economies.

Given that market failure is the main reason for regulation on public interest grounds, this is the basis for the discussion on the relationship between economic growth and regulation. According to Stiglitz (1989), less developed countries continue to lag behind their developed counterparts because market failures are more prevalent in less developed countries. When countries are still developing, relevant institutions that are critical in regulating economies will lack the capability and means to do so. Thus, differences in economic growth between less developed and developed economies result from differences in economic organisation, the interaction of factors of production, and differences in the quality of institutions established to mediate these interactions. This view is echoed by Datta-Chaudhuri (1990), who intimates that market failure is a serious obstacle to growth in less developed economies. Such failure emanates from the limited capacity of various institutions, which are gradually improved through learning processes.

From this perspective, it would be expected that some relationship will exist between competition reforms and economic development. Competition reforms generally seeks to mimic free markets by addressing general impediments to fair competition in the market. However, given that multiple market failures characterise less developed economies, they might consider protection measures that are not necessarily in the interests of fair competition. For example, where state-owned enterprises are operating in competition with privately owned firms, policy decisions might be taken to protect the former, which would violate the neutrality principle of competition policy. Thus, it is likely that competition reforms would not be considered a priority in countries with low economic growth levels due to market failure. Based on the public interest theory of economic regulation, the decision to adopt competition reforms would thus also be influenced by a country's GDP. In other words, countries that are still at low GDP levels, expected to have a preference for market control, are unlikely to adopt competition reforms. Furthermore, it could be expected that African countries with high GDP will adopt competition reforms faster than those with low GDP, in line with what Waked (2016) established.

4.4.2 Private interest regulation theories

Stigler (1971) is among the theorists associated with private interest regulation. These theorists argued that regulation was designed to promote the private rather than the public interest. Stigler's theory centred around the government's coercive power (Posner, 1974) and identified regulation as a product, whose allocation in a market can be decided through supply and demand. This is because economic regulation was defined as simply an expression of power over the economic sphere (Posner, 1974). Unlike products that are consumed, the structure of and need for regulation in Stigler's theory are also determined by the political process (Carrigan and Coglianese, 2015). Since regulation is based on demand and supply, it is more likely to be applied on behalf of those in society that want it the most (Posner, 1974). This is where private or business interests come in.

Stigler posited that businesses try to influence the use of coercive authority to their advantage in four areas of regulation, namely, subsidies, entry, product substitutes or complements, and price controls (Carrigan and Coglianese, 2015). Firms lobby for subsidies as they offer direct monetary benefits. However, since subsidies are shared among all firms, and the benefit thus depends on the number of firms, businesses prefer regulations that serve as entry barriers to competitors (Carrigan and Coglianese, 2015). They also support regulations that limit the availability of substitute products while supporting complementary ones (den Hertog, 2010). Thus, the primary purpose of regulation is to promote private rather than public interests.

Stigler's work followed similar theories already in existence, although they were referred to as capture theories (Posner, 1974). While Stigler did not use the term 'capture', the issue of regulatory capture had long been the subject of discussion. The foundation of capture theories was that capitalists generally control institutions in society, including regulators (Posner, 1974). Regulatory capture exists where a clique of powerful businesses tries to influence regulation to their advantage. Thus, regulation is intended to advance private interests, as political leaders prioritise industry over public interests.

Posner (1974) notes that private interest theories of regulation generally pointed to the need to deviate from the principles of fair competition as being the central aim of private interest regulation. Thus, regulations that promote private interests specifically restrict entry, limit output, and mainly serve the interests of the few. Cartels and highly concentrated markets would result. Such a process where rents are mainly confined to one group, would not result in economic development.

Thus, most economies that are characterised by regulatory capture or regulations that mainly serve the interests of business have low levels of economic development. Countries that deregulate register economic growth (Stankov, 2010; Alesina et al., 2003; Acharya, 2004) as economic regulation curtails development. The introduction of competition reforms can be seen as an attempt to remove regulatory power from powerful interest groups. It can thus be expected that only countries with reasonable levels of development, to the extent that the hold of businesses and other powerful actors over regulators is weaker, can undertake such a bold initiative. This would also imply that countries that have reached a conducive development stage would make the bold decision to undertake competition reforms that opens up markets to competition. Therefore, only when countries in the TFTA have reached a level of development where regulation capture has slackened, will competition reforms be expected to emerge. A positive correlation between GDP and the decision to adopt competition reforms would be expected if the countries have not yet reached this level.

4.5 The implications of the study's theoretical framework

This discussion on the theoretical framework provides the context for the analysis of the issues assessed in this study. First, the study argues that the quest to transform market structures would prompt the decision to adopt competition reforms. However, it is not easy to transform market structures and this might not be in line with other government priorities. Thus, it is expected that some TFTA countries would be reluctant to embrace competition reforms. This study assesses whether the existing trajectory and trends confirm this expectation.

Second, the study argues that competition is embedded within the various trade theories. In turn competition policies affect trade. Therefore, a blend of the founding trade theories and the modern firm-based trade theories is employed to explain the impact of competition reforms on international trade. Mercantilism focused on state assistance for merchants and manufacturers of exports, who required protection before non-exporters. This is a departure from the fair competition norms which competition policy seeks to enhance, as it is the process of competition rather than specific firms, which is protected. Protection through tariffs, which was part of mercantilism, infant industry protection, and general protectionist theories, also limits competition in the economy, which is against the spirit of competition policy. Thus, the founding theories of trade based on imperfect competition models reflect low trade flow levels.

However, competition policy is well-engrained in the absolute and comparative advantage theories, which are based on free rather than restricted trade under perfectly competitive markets. Competition policy seeks to ensure that market conditions mimic those of a perfect competition model, where barriers to market entry are removed to facilitate free trade. Thus, firms would need to optimise their production decisions based on their comparative advantages but under conditions of competition and rivalry in the domestic market. This study's thrust also finds relevance within the founding theories of trade, where competition policy would be expected to result in improved trade flows.

Modern trade theories also resonate well with this study, including those based on monopolistic competition. This is mainly because modern international trade theories tend to be firm-based and highlight the importance of competition in facilitating international trade. Modern international trade theories underline the importance of rivalry in the home country in stimulating capabilities to match international competition. This generally forms the channel which this study is also exploring. Competition regimes affect firm performance in the domestic market in particular, which, as modern theories of international trade postulate, also affects their performance in the export market. Competition reforms are introduced to influence firms' conduct, which in turn affects market structures and output, which would be available for domestic and international

trade. Competition policy eliminates strategic entry barriers and opens the economy to trade.

The theoretical framework for this study fits the African economic context. African economies are characterised by market imperfections, which create entry barriers that protect incumbents from competition, especially foreign competition. For example, the World Bank (2016) argues that a number of factors necessitate the adoption of competition laws in Africa. First, compared to other parts of the world, African economies have lower levels of competition, with more than 70% ranked in the bottom half of the World Economic Forum's local competition intensity index. Second, policies in Africa impose restrictions and distortions which create entry barriers, resulting in a high prevalence of monopolies, duopolies, and oligopolies. For example, in the telecommunication and transport sector, a single operator holds more than a 50% share of the market in more than 40% of African countries. In line with Porter's national competitive advantage theory, it can be argued that this does not promote competitiveness and, hence, trade.

Where dominant firms charge high prices, foreign firms are attracted and will either export to the economy or set up new investments. Levinsohn (1994) identifies what he calls the 'imports-as market-discipline hypothesis', where import competition tends to be low in competitive market structures as prices would have been competed downwards. If competition policy has successfully removed barriers and facilitated the entry of more domestic firms, the level of competition could reduce the market's attractiveness for imports. This also suggests that exports tend to fall as countries tighten their competition regimes and their markets become more competitive[41].

Third, the study's theoretical expectation is that economic growth, reflected by improvement in GDP, will also be a critical factor in the decision to embrace competition

[41] In line with monopolistic competition theories of international trade (Krugman, 1980), this points to the level of trade that is induced by imperfect market structures. Multinational firms with a competitive edge can easily take advantage of the high prices that result from limited competition.

reforms. To the extent that many African countries are still characterised by market failures and regulatory capture and influence were still an issue in the period under review, the level of economic development would play a role. The theoretical expectation is that low levels of economic development still characterise such economies. Thus, an economy's level of development would be expected to influence the adoption of competition reforms. However, the influence of external factors, including regional integration and lobbying by international bodies, could invalidate this theoretical expectation. This study assesses whether this is indeed the case.

4.6 Chapter summary

This chapter set out the theoretical context for this study in relation to three main research objectives. First, the market structure theories describe the main motivation for countries to adopt competition reforms. Economies, including those in the TFTA, are characterised by monopolies, and monopolistic and oligopolistic market structures, and competition reforms are intended to transform these markets to mimic conditions of perfect competition. This is expected to be the driving force behind competition reforms in the TFTA countries.

Second, the chapter explored international trade theories, which were classified into founding theories and contemporary ones. It showed that competition is embedded within these theories, as the nature of the competition prevailing in the market would influence the manner in which trade would take place. It is, therefore, expected that the differences in the structures of economies would be reflected in differences in the nature of competition reforms adopted to suit the trade policies. Third, the chapter explored regulation theories to situate the decision matrix on competition reforms adoption. An economy's stage of development, which is reflected in the level of GDP, would influence the nature of the regulation adopted. Economies with low levels of development would prioritise public interest issues and would hence be reluctant to open up to the forces of supply and demand. Thus, it is expected that competition reforms might be resisted when economies are in the early stages of development and that GDP and competition reforms would be related.

The following chapter presents a review of the literature relevant to this study.

CHAPTER 5: EMPIRICAL LITERATURE REVIEW

5.1 Introduction

Chapter 4 presented the theoretical literature upon which the basis for the thesis stemmed from. This chapter reviews the existing literature to provide the context for each of the three main research objectives. The first section focuses on the literature on uptake of the competition reform agenda in Africa, while the second reviews the literature on the relationship between competition policy and international trade. Studies that tested the relationship between competition policy and other variables which have been traditionally shown to affect international trade are also reviewed. The third and final section reviews the literature on the relationship between economic growth and the adoption of competition reforms and the extent to which different forms of regulation in developing countries shape the causality between GDP growth and competition reforms adoption.

5.2 Acceptance of the competition reforms agenda in Africa

Acceptance of competition reforms in Africa can be examined using both quantity and quality dimensions. The quantity dimension mainly focuses on changes in the number of countries adopting competition reforms during given time periods. One critical indicator is the adoption of competition law. Although this is not sufficient, it is a critical step as amendments as well as refinements of a law that has already been adopted are easier than convincing governments to come up with legislation. Adopting a competition law is a critical step towards full-fledged competition reforms. The quality dimension goes deeper and examines underlying support as well as institutional capacity to enforce the law. While countries can adopt a law, it is ineffective if there are limitations in the institutional setup and support framework. Quality therefore, refers to the absence or presence of inhibitors to the effective enforcement of the regime.

5.2.1 The quantity dimension measure of acceptance

With respect to the quantity dimension, competition reforms in Africa started gathering momentum in the 1990s (Lipimile, 2018; Waked, 2016), although, as noted in Chapter 3, some countries already had competition laws. In the early 1990s, only four countries among the countries to constitute the TFTA had such laws (Lipimile, 2018). However,

given their different economic structures as well as regulatory thrust, these economies would not be expected to move at the same pace. The 1990s' wave of liberalisation as well as the shift to market oriented policies (CUTS, 2006) would have been expected to result in a significant increase in the number of countries with tighter competition regimes, as competition reforms would be needed to regulate market conduct following liberalisation (Gal, 2004). However, by 2007, only 18 African countries (34%) had competition laws (Waked, 2016). This was lower than the number of Asian developing countries, which stood at 59%, and also lower than developing economies in the Americas, which had an adoption rate of about 53% (Waked, 2018). By 2010, 28 African countries had adopted competition laws (Kigwiru, 2020), which implies that 10 adopted new laws within a two-year period. By 2018, 23 countries among the countries to constitute the TFTA had competition laws (Lipimile, 2018) while the number for Africa as a whole stood at 37 out of 55 by January 2020 (Kigwiru, 2020). This means that over the 13-year period between 2007 and 2020, 19 countries adopted competition reforms.

Based on the number of countries adopting competition reforms, there is evidence that countries are promulgating competition laws. However, this was also the result of pressure from external institutions. For example, Hazel (2015) notes that the IMF and World Bank's Washington Consensus required that countries adopted competition laws. The consequence was that, although a number of developing countries adopted such laws, they were not enforced as they clashed with other socio-economic ideologies, limiting government support (Gal, 2004). Generally, economies with government induced barriers to competition do not adopt competition laws. Of the 23 countries in the TFTA with competition laws, six had no enforcement mechanisms, including an institution to enforce them (Lipimile, 2018). Thus, while the quantity dimension would consider these countries to be among those that have accepted competition reforms, in reality, many are far from convinced of the benefits of implementing these laws.

Acceptance of competition reforms in Africa is also reflected at REC level based on the increasing number of regional economic cooperation institutions that have competition regimes. Although the main focus is cross border transactions, competition laws have

been passed at COMESA, the West African Economic and Monetary Union (WAEMU), the Central African Economic and Monetary Community (CEMAC), ECOWAS, as well as at EAC level (Kigwiru, 2020). The COMESA Competition Regulations and Competition Rules were adopted in 2004, with amendments in 2014 and 2015 to supplement merger control rules. The COMESA Regulations were made superior to the competition laws at national level and the COMESA Competition Commission has the mandate to investigate anticompetitive practices in member countries that have a cross border dimension (Lipimile, 2018). Regional competition framework under the EAC is governed by the EAC Competition Act of 2006 as well as the Protocol on the Establishment of an EAC Customs Union, especially Article 21 of the Protocol. Provisions governing competition in the EAC are generally similar to those of COMESA (Lipimile, 2018), as the regional law has some supremacy over national laws when it comes to competition issues with a cross border dimension. The ECOWAS Supplementary Act A/SA.1/06/08, introduced in 2008 is the main legislation governing the enforcement of competition law at the ECOWAS level. However, unlike COMESA and EAC, the regional law is not superior to the national laws, as competition issues that are purely domestic are handled by national competition authorities, while only anticompetitive practices that have a direct impact on regional trade and investment flows would be subject to regulation at ECOWAS (ECOWAS, 2007). The WAEMU competition regime was adopted in 2002, and became operational in 2003. Although it has a supranational character like COMESA, the WAEMU regime is worse as it requires member states to partially give up their sovereignty on competition enforcement in its favour (Lipimile, 2018). At CEMAC, Regulation 1/99-UEAC-CM-639, passed in 1999 is the main competition regulation. The CEMAC regional competition law does not generally have supremacy over national competition laws, for example, the regional competition authority has power to investigate only those which are deemed to have a “community” dimension (Lipimile, 2018).

However, the number of competition laws does not reflect the degree of conviction or belief in competition policy. Acceptance should also be measured by the quality of the competition reforms.

5.2.2 The quality dimension of competition reforms acceptance

Nicholson's (2004) Antitrust Law Index (ATLI) includes the critical components that a competition law should have to reflect the quality of the law. Thus, the quality of a law focuses on how the law appears in the books but does not embrace its enforcement. An observed attribute is given a binomial score and the sum of the scores reflects the strength of a competition law. If all the identified attributes are present, then a country would have an ATLI of 32. Among the 52 countries that were assessed were three African countries, Kenya, South Africa and Zambia. Only South Africa achieved a score above the midpoint of 17, with Kenya's index being 16 and Zambia's 14 based on the situation as at 2003. However, since the average index for the three countries is just about at the midpoint, it follows that their competition regimes were not strong. Miroudot, Pinali and Sauter (2007) used the ATLI to assess competition regimes and added more countries, including Algeria (with an ATLI of 17), Cameroon (18), Cote d'Ivore (12), Ethiopia (9), Senegal (9), Tanzania (15) and Zimbabwe (13). In addition to the scores of the three countries already assessed by Nicholson (2004), the average for the 10 African countries can be calculated at 14, which is below the midpoint of the total score. Thus, Nicholson (2004) and Miroudot, Pinali and Sauter (2007) demonstrate that despite the presence of laws, they were not sufficiently stringent to address all kinds of anticompetitive behaviour in the market. Based on this measure of quality, by 2005, the competition reform agenda cannot be argued to have been widely accepted in these African countries.

Hylton and Deng (2007) refined the ATLI and produced the Scope Index which shows the 'size of the competition law net' by making some additions to reflect critical aspects. One area they included was whether the 'public interest' provisions in merger assessment favour the merging partners or the competition authority. Based on the 2004 reference period, they produced a Scope Index for 102 countries, with 17 from Africa. While the top score, which was assigned to countries such as Australia, Barbados and the US, was 25, the average score for all the African countries was 16. This confirms that the laws suffered from shortcomings which could be expected to affect these countries' competitiveness.

Bradford and Chilton (2018) modified the ATLI and the Scope Index to produce the Competition Law Index (CLI). The most significant improvement is that CLI takes into account both the substance of the competition law (similar to the ATLI and Scope Index) as well as the quality of the competition authority. Bradford and Chilton (2018) capture provisions on the competition authority separately from the substance of the competition law. They analyse competition regimes in 122 countries including 24 African countries during the period ending 2010. With a score of 1 showing that a country has a more stringent competition law in place, the average score for the 24 African countries was about 0.56. This also shows that by 2010, the quality of competition regimes in African countries had not moved significantly from the mid-point. However, exceeding the average score is commendable, as this reflects that on average, the laws would be expected to at least inculcate a culture of competition in the region.

In conclusion, there is evidence that some African countries have strong competition regimes, while a number have relatively weaker regimes. However, the number of countries adopting competition laws continues to increase. There is a paucity of research on the strength of competition laws based on recent data. The observed difference in the quality of competition laws, and the fact that some countries have yet to adopt competition reforms, implies that the positive impact of competition policy on international trade will not be shared equally among TFTA countries. This study sought to test this hypothesis.

5.3 Competition policy's impact on international trade

The empirical literature on how competition policy influences international trade can be divided into two categories. The first is direct assessment where different measures of competition are used to establish whether the adoption of competition policy or other pro-competition measures resulted in increased trade flows. Competition policy aims to ensure fair competition in the market. It may thus reduce some players' hold on the economy, making the market easier to penetrate. This mainly arises because the introduction of competition policy as well as its implementation has been empirically found to significantly increase competition (Vagliasindi, 2001; Kee and Hoekman, 2003; Krakowski, 2005; Pekarkiene et al, 2018). Thus, the first part of this section reviews the

literature on how competition was found to directly affect international trade. Secondly, competition policy can impact productivity and innovation at firm level, which would create competitiveness at industry and country level, and hence international trade. This can be regarded as an indirect effect. Thus, the second part of the literature review in this section showcases studies that demonstrates the impact of competition on innovation and productivity, which would be the basis through which a nation's competitiveness is enhanced thereby facilitating international trade.

5.3.1 Impact of competition policy on international trade: Direct effect

The genera expectation is from classical as well as modern theories of trade is that emphasis on the need for competition in domestic markets is to enable firms to become competitive in foreign markets. In other words, where there is high market concentration, exports would tend to be low, which would explain why the implementation of competition policy would help. Studies conducted in the early 2000s demonstrate the importance of competition in enhancing exports. Hollis (2003) assessed the relationship among concentration, output and trade by comparing 82 firms in the manufacturing sector of seven countries. The findings show that where the domestic market is highly concentrated, firms would have fewer net exports. Zhao and Zou (2002) reached a similar conclusion after surveying 1700 highly concentrated firms in manufacturing and the service sector in China. They established that such firms are less likely to export. Clougherty and Zhang's (2008) findings were also similar. The study covered the airline industry and highlighted the importance of domestic rivalry in improving exports. These studies all point to the important role that enforcing competition regimes would play in promoting exports, especially outside of the natural resources sector. The expectation is, therefore, that those countries in the TFTA that have been effectively implementing their competition regimes would have an export advantage over their counterparts yet to embrace competition reforms. If these studies hold for the TFTA, a positive relationship between competition enforcement and export promotion would be established by this study.

The importance of competition in influencing international trade is the central issue of this thesis. It is expected that although some countries have not fully embraced competition reforms, those that have might have been able to ensure competition in their markets, which would be instrumental in facilitating international trade. Recent studies confirm that competition influences international trade. Opoku, Yan and Hynes (2020) use data from 139 countries to examine how competition affects productivity and exports at firm level. Their evidence shows that a domestic market with strong competition promotes not only productivity, but also firms' propensity to export. Babuscu et al (2019) explore how exports are affected by sector level competition and establish a non-linear relationship between these variables. For export sectors that are less competitive, exports would decrease as competition increases, while among those that are relatively competitive, increased competition would generate an increase in exports. This implies that markets in the TFTA that have achieved some level of competitiveness would benefit from the increased competition induced by competition reforms and would export more. The net effect of the adoption of competition reforms would thus depend on the extent to which competitive sectors outweigh those that are not competitive in the TFTA.

Some studies also empirically tested the relationship between competition reforms and international trade variables. One way in which competition policy can influence international trade is by influencing exporters' decision matrix. Decisions made by exporters can change depending on the expected influence of competition policy on their ability to extract maximum returns from the market. Generally, exporters would expect to extract more in countries that do not have competition laws by engaging in anticompetitive behaviour, for example establishing exclusive dealership arrangements and engaging in tie-ins. Clarke and Evenett (2003) conclude that following the establishment of the international vitamins cartel in 1990, exports from countries that are part of the cartel to countries without competition laws grew faster than those to nations with such laws. This implies that markets with competition regimes were considered less lucrative, mainly arising from the fear of prosecution. The introduction of competition regimes saw a significant reduction in overcharging on vitamins by the cartel due to fear of the anti-cartel laws of the 1990s. Since international cartels command a significant share of international

trade (Clarke and Evenett, 2003), the mere adoption of competition laws can influence the trade patterns in developing countries. If a large volume of cartelised products is imported by African nations, a negative relationship can be expected between imports and the adoption of competition law[42].

One of the benefits of embracing competition policy is that entry barriers, which could be policy induced, are addressed as the government's commitment towards competition takes precedence. An OECD report estimates the macroeconomic benefits of reducing barriers to market entry in the OECD region (OECD, 2005). Such barriers include government controls over companies, and government's involvement in business operations, as well as barriers to competition. The report shows that overall, pro-competition reforms in the OECD region would increase trade by almost 40%, with all countries benefiting. Reforms which improve the competitiveness of the exporting country while easing market access were found to be the most influential on trade patterns. Furthermore, policies that increased competition were significant drivers of trade, and countries that adopted policies to restrain anti-competitive practices gained more from the reforms. The implication for the current study is that competition in the TFTA, which is driven by enforcement of competition policy, would be expected to boost exports. It would also imply that the trade benefits of competition reforms would be higher in those countries that adopted and implemented such reform at a time when their markets were still characterised by a number of market imperfections arising from the pre-reform period. However, this would depend on the extent to which the introduced reforms are implemented.

Babool et al (2007) investigated whether a country's export competitiveness could be positively impacted by competition policy, using the manufacturing sector as a case study. They employed panel data estimation models and established that manufacturing exports tended to be positively related to the nature of the competition policy adopted in the source countries. These findings are in line with classical trade theories. The manufacturing sector requires competition in order to facilitate specialisation as well as

[42] Exports by foreign suppliers would be reflected as imports in the country that adopts competition reform.

to prepare for competition from foreign suppliers. Thus, an effectively implemented competition regime and competition at sector level render it easier to penetrate foreign markets. As competition regimes adopted in the countries to constitute the TFTA over the years begin to be implemented, it is expected that the level of manufactured exports from the region will increase.

The influence of competition regimes on trade flows can also be deduced from Miroudot, Pinali and Sauter's (2007) assessment of the joint impact of investment and competition policies on trade in the developing world. Their findings show that countries with less competitive markets have lower levels of trade than those with more competitive markets. More specifically, a 1% improvement in competition in the market would result in a 0.33% increase in exports and a 0.76% rise in imports. The finding that both imports and exports are positively related to a competitive environment would not be generally expected. A competitive environment generally drives prices down to the extent that the market becomes unattractive to foreign firms. Thus, Miroudot, Pinali and Sauter's (2007) finding that competition and imports are positively related might not hold within the envisaged TFTA, unless the importation of raw materials is a significant driver of imports. Furthermore, their research included 26 OECD countries among the 82 countries under study, which have different conditions from countries in the envisaged TFTA. Finally, in striving to remain ahead of their rivals, firms that operate in a competitive environment can become competitive to such an extent that they are able to achieve global competitiveness, which is reflected in increased exports. It is expected that this positive relationship can be anticipated between competition policy implementation and exports in the proposed TFTA.

In line with the country similarity theory, promoting competition can also be critical in preparing a firm for exports to similar economies. Luniku (2014) employed data on Canadian manufacturing firms to show that a strict competition policy regime would positively affect a country's exports. More specifically, he establishes that competition policy has a greater effect in more concentrated industries than in those that are competitive. Two implications arise from Luniku's (2014) findings. The first is that highly

concentrated industries stifle exports, such that when competition policy is introduced and market concentration is reduced, the increased number of firms would create conducive conditions for exports. Secondly, a positive relationship can be expected between strong competition policy and exports. Therefore, if the competition reforms adopted in the TFTA have succeeded in enhancing competition in its markets, competition policy will be found to have positively influenced exports.

A recent study by Pekarskiene et al (2018) uses two countries, Lithuania and Latvia, to assess how competition policy would impact economies with a developing competition culture. They establish that competition policy enforcement would be manifested in innovation, investment and international trade. These findings are in line with the expectations from this study's theoretical framework. This would imply that improved competition policy in the envisaged TFTA would result in improved trade flows, spurred by innovation and investment. It is therefore expected that competition reforms would be found to have positively influenced international trade.

5.3.2 Impact of competition reforms on international trade: Indirect effect

In line with the study's theoretical framework, competition reforms can also affect international trade through productivity driven growth. A number of studies have established that competition positively influences innovation and productivity in both developed and developing economies. For example, Backus (2019) uses the US Census of Manufacturers database to assess the correlation between competition and productivity in the ready-mix concrete industry. He establishes that productivity tends to respond directly to the nature of competition. This is attributed to specialisation as well as managerial input. Since productivity is central to competitiveness and hence international trade, it would be expected that firms operating under conditions of competition in the TFTA would tend to be more productive, enhancing their scope for participation in the international market. Backus' (2019) findings concur with those of Wolszczak-Derlacz (2014) who assessed how competition has affected total factor productivity in 18 OECD countries, focusing on 21 manufacturing sectors. The findings reflect that a more stringent domestic competition landscape would be associated with higher sector productivity.

Productivity is a critical input in competitiveness, which is trade enhancing. This also supports the expectation of a positive relationship between competition policy enforcement and international trade.

Friesenbichler (2014) used data for EU members in Central and Eastern Europe between 2002 and 2013 to assess the impact of the implementation of competition policy on market structures. The study found that less concentrated markets tended to be associated with higher productivity levels. Correa and Ornaghi (2014) assessed how competition affected productivity growth among 85 industries during the period 1987 to 2008. Their findings show that total factor productivity tended to grow more in industries that are more competitive than in those characterised by market power. Based on data for 22 industries in 12 OECD economies from 1995 to 2005, Buccirossi et al (2013) establish that competition policy indicators positively affect total factor productivity growth. This conclusion concurs with Bourlès et al *(*2013), who found that eliminating anti-competitive practices would result in a growth in total factor productivity per annum of between 1 and 1.5 percentage points. These four studies suggest that where competition policy has been effectively implemented in the TFTA, it would facilitate productivity, which would be the basis for expecting improved exports. However, productivity also depends on other facilitating factors, which might not necessarily exist across all TFTA countries. Thus, the current study focuses on whether this conclusion applies across all economies irrespective of the constraints and challenges they could face.

The discussion on trade theories also revealed that in addition to productivity, firms in domestic markets can escape increased competition through innovation, which gives them an edge over their rivals and creates scope for exports. A number of studies have investigated the relationship between competition and innovation across countries at different levels of development. Moen, Tvedten and Wold (2018) used a database of 363 small and medium size Norwegian enterprises that were involved in exporting. They established that competition is positively correlated with innovation. This finding is consistent with Lim, Trefler and Yu (2018) who used data for 77,000 Chinese exporting firms spanning seven years to study the effects of competition and innovation. They

established that firms can innovate so as to escape competition at their level by moving to a higher level where competition is less intense. If trade barriers are lowered, increased competition among firms that have innovated to escape competition at the lower level will lead to further innovation. Therefore, competition is required to induce firms to innovate so as to compete with foreign firms in the absence of trade barriers. An earlier study by Clarke (2011) based on data from 27 developing countries in Europe and Asia found that stricter competition laws tended to increase the chances of firms introducing new products. These studies create the impression of competition's unconditional effect on innovation. If this holds true, it would imply that an effectively enforced competition regime in the TFTA would be expected to facilitate trade through its impact on innovation. However, market conditions as well as firm characteristics also play a role in shaping firms' ability to innovate following conditions of competition. This is mainly because competition erodes profit, which would be one of the sources to finance innovation. A recent study by Aghion et al (2018) indicates that the impact of increased competition on innovation might not be unconditionally positive.

Aghion et al (2018) analyse the extent to which increased competition causes an increase in step by step innovation. They establish that with increased competition, only those firms that operate at the same technological level (neck-to-neck firms) would invest significantly in research and development (R&D), which is a proxy for innovation. Firms that are lagging behind would decrease investment in R&D when competition increases. Tomohiko, Atsushi and Tsutomu's (2008) earlier study also established that only when the technology used by existing firms is close to the technology frontier in their industry would the entry of new firms generate efforts to increase their productivity through innovation. Where existing firms are operating at technological levels that lag behind the industry's' technology frontier, increased competition would not result in innovation and increased productivity.

It therefore follows that innovation is conditional on existing firms' ability to differentiate themselves from new entrants as competition increases. This is critical within the TFTA context, where markets can be characterised by firms that are not operating at efficient

scales, and a number of market imperfections make it difficult to afford significant R&D budgets. Thus, it is possible that enforcement of competition policy in Africa could create an environment which is not necessarily conducive to increased innovation and hence international trade. In this sense, the study builds on the existing theoretical and empirical foundation by assessing whether this holds true within the African context.

5.4 Causal effect of economic development on competition law adoption

To set the context for estimating the third objective of the study, it is also critical to review literature that would help set the context about whether economic growth can be expected to influence the decision to engage in competition reforms. There are only a few studies that have, however, investigated the extent to which economic development can have a causal effect on competition law adoption. Nicholson (2004) established that economic development measured by GNP was a statistically significant explanatory variable for the ATLI. In a later study, he established a nonlinear relationship between the ATLI and GDP as well as GDP per capita (Nicholson, 2008). Dalkir (2009) concluded that macroeconomic stability as well as growth were positively associated with an effective competition policy. Based on the Pearson Chi^2 and Fisher exact tests, Waked (2016) found evidence that income levels had a strong effect on the decision to adopt a competition regime. The findings from these four studies generally confirm the theoretical expectations which this study investigates. As economies grow, this could ultimately impose pressure on governments to embrace competition reforms.

Although they did not empirically test it, many studies have sought to explain why a relationship would be expected between economic development and the adoption of competition reforms. Waked (2016) notes that developing countries would generally be reluctant to embrace competition reforms as this reduces their ability to shield domestic firms, which could be positioned as national champions or regarded as infant industries, from competition. This is in line with public interest regulation theories. Gal and Fox (2015) also identify characteristics of developing countries which would not favour the adoption of competition reforms. Firstly, their markets are not well developed, as reflected by low GNI per capita which, in turn reflects consumers' low purchasing capability and hence

potential markets for competition. This would generally imply that competition policy might not be a priority for economies. Secondly, many developing economies are transitioning from planned to market economies and thus have yet to fully embrace free market principles, which competition laws would seek to uphold. Thirdly, there are both artificial and natural barriers to trade in developing countries which would not fit well with the general principles governing the adoption of competition laws. It could be expected that a number of developing economies in the TFTA would still be at the stage where they are prioritising other aspects of development over competition reforms. They would be expected to make a shift as their economies develop, which creates the scope for this study to capture these dynamics.

Resistance to competition reforms in developing countries would also emanate from incumbent elites, who would lobby against reforms for fear of losing their rents (Waked, 2016). Gal (2004) established that some groups in developing countries resist the adoption of competition laws due to regulatory capture. This supports the regulatory capture theoretical framework discussed earlier, where a group of businesses could have a hold on policy makers and influence the direction which the economy would be expected to take. This problem would be more pronounced in Africa than on other continents. Waked (2016) established that Africa had a larger number of low and middle lower developing countries compared to Asia, Oceania, the Americas and Europe. Thus, market imperfections which do not favour the adoption of competition laws would be expected to be more pronounced in Africa. Waked (2016) confirms this by establishing that only about 37% of low income countries globally had competition laws. This suggests that economic development can indeed play a role in influencing the decision to adopt competition reforms.

As per the theoretical framework discussed, the causal effect of economic growth on competition law is more likely than not to stem from the regulatory path that a country pursues as it seeks to transform itself into a developed economy. Fox (2016) identifies developing countries, including African economies, as generally characterised by markets which do not work perfectly, as the majority of big businesses were originally state owned

and enjoy some privileges. Gal (2004) also notes that developing countries tend to be characterised by institutional design challenges as well as complex government regulations. In addition, the capitalist market system would not work well for businesses except for those with connections (Fox, 2016). Thus, high entry barriers and inequalities would not favour the free market conditions that competition policies in more developed economies seek to achieve (Fox, 2016). Economies that still have government induced barriers to competition will not adopt competition law as it would not function (Gal, 2004). Thus, the expectation would be that there is a stage in the economic development of developing countries where competition laws would be considered, but not in the early stages where market imperfections are common. This would imply that an economy's level of development indeed influences the adoption of competition reforms.

Furthermore, developing countries' primary goal might not be economic growth but inclusive sustainable development, with a focus on redressing inequality and unemployment among the masses historically neglected by the system (Fox, 2016). As these groups become absorbed into the system and new enterprises emerge to serve their interests and the economy expands, a shift can be expected towards more open markets. This would be the stage where competition reforms would be expected to be accommodated. Some developing economies adopted competition laws but could not enforce them as they clashed with other socio-economic ideologies, which eventually eroded government support (Gal, 2004). Pressure from external sources can lead to the non-implementation of laws. This study therefore offers an opportunity to empirically establish whether this relationship holds within the TFTA context.

The quality dimension focuses on the strength of the competition regime. However, countries that are still at low levels of development also tend to accommodate public interests in regulation. This implies that while competition reforms can be adopted, it would incorporate public interest provisions, which would tend to reduce the quality of the competition regime. However, when public interest provisions are accommodated in competition policy, some restrictive clauses, which would normally be expected, would have to be omitted (Obradović et al, 2019). Pursuance of other objectives related to the

public interest could explain why developing countries tend to score poorly when the strength of their competition regime is assessed. Ezrachi (2016) identifies non-competition objectives which were included in competition legislation in different countries to cater for other priorities. Namibia protects the empowerment of minorities, while public interest objectives are included in competition laws in India, Taiwan and South Africa. Smith and Swans (2014) also identify public interest considerations in Botswana, Zambia, Kenya, Eswatini, and Malawi's competition laws. In addition, where there are transaction costs, information asymmetries and coercion, competition policy would embrace some normative judgements (Ezrachi, 2016). The expectation is, therefore, that the economy's level of development, measured by GDP, would exhibit some correlation with the strength of its competition policy regime. The study offers an opportunity for such an assessment.

According to Roberts, Vilakazi and Simbanegavi (2017), advocacy for the adoption of competition laws in African developing countries often disregards political and institutional realities. More specifically, it is often overlooked that weak institutions are not able to overcome strong business interests. Firms that benefit from an anti-competitive landscape would work to subvert the competition regime. In the absence of some compromises, competition reforms could be rejected. Economic regulation can also fall short of addressing market failure and natural monopolies due to lobbying by powerful businesses, such that regulation ends up reflecting the balance of power between different interests (Roberts, Vilakazi and Simbanegavi (2017). In such a scenario of market capture, it is not expected that a strong competition regime would emerge. Regulatory capture is thus expected to play a role in the TFTA context, and the level of economic development of a country would likely determine its extent.

5.5 Gaps in the existing literature

This study sought to fill a number of gaps in the existing literature. Firstly, while the reviewed studies provide an overall picture of the adoption of competition laws in Africa at a given point in time, no study has traced how this has evolved over time. Legislation is often amended and changes occur in the manner in which competition laws are enforced. This study develops a time series competition variable for each country which

changes as the competition legislation is introduced or amended. This helps to ensure that changes to the variables are captured in assessing the impact of the reform, which reduces the likelihood of conjecture and incorrect attribution. In addition, previous studies focus on the presence or absence of competition law, without examining its quality or using it as a basis to show whether competition reforms have generally been accepted in Africa. This study is a comprehensive examination of the TFTA countries that traces the evolution of competition reforms over the years. The approach used, where the manner in which competition regimes have been evolving is based on a time series variable which captures improvements in quality at any given time, is the first of its kind in the African context.

Secondly, no existing studies empirically test the competition policy-international trade relationship focusing exclusively on African countries. While competition reforms has been found to matter in international trade, the context might change when the assessment is narrowed to only African countries. The study aimed to fill this gap by focusing on countries in the region, which allows for the capturing of issues that are specific to the region with regard to competition enforcement and are critical within the continental integration discourse.

Thirdly, no study has empirically tested whether economic growth can influence the decision to adopt competition reforms within the African context, as postulated by Waked (2016). Most studies that focused on economic growth-competition policy dynamics assessed the impact of competition reforms on economic growth. Reverse causality has not been investigated. This study aimed to fill this gap, enabling an assessment of whether there should be targeted or indiscriminate lobbying for competition reforms.

5.6 Chapter Summary

Many issues emerge from this literature review. First, a number of factors might slow down acceptance of competition reforms in Africa. While the number of countries adopting competition laws has increased, the need to incorporate other objectives is likely to result

in weak competition regimes. Second, there are many channels through which enforcement of competition laws would be expected to affect international trade. It is therefore likely that evidence will be found of competition reforms in the TFTA having helped to enhance international trade. However, given that other factors can affect firms' ability to produce and export goods, such impact could be diluted within the TFTA context. Third, although the literature review supports the view that competition reforms can be adopted as economies progress, the role of external pressure, including lobbying by development partners as well as conditionalities within the regional integration discourse could see countries whose economies have not yet developed also embracing competition reforms. Thus, there is no clear indication whether such a relationship is likely to be established by the study.

Many gaps remain in the literature, some of which this study sought to fill. Firstly, while some studies have investigated the direct relationship between competition policy and international trade, they did not properly trace the quantitative evolution of the competition reforms variable so as to isolate the competition policy aspect from other related measures. This calls for a variable that reflects the true state of competition. Secondly, innovation in quantifying competition regimes as they evolve over the years has not yet been effectively utilised to study the effects of competition regimes. The use of static measures of competition reform variables when amendments and revisions are ongoing might not reflect the true status of competition regimes at any given time.

By focusing exclusively on Africa, this study ventures into a new empirical field on competition policy enforcement and its benefits. In introducing a competition reforms variable that is not only innovative but also encompasses issues already tested, it improves on currently available evidence. These issues are highlighted in the following chapter, which provides a detailed description of the methodology employed and how the approach differs from the reviewed studies.

CHAPTER 6: DATA AND RESEARCH METHODOLOGY

6.1 Introduction

Having discussed the theoretical framework and presented a literature review, this chapter discusses the data and estimation methods used to achieve the research objectives. Quantitative methods were employed to fulfil each of the three objectives Thus, positivism rather than interpretivism is the research paradigm. According to Ryan (2018), positivism is based on objectivity as well as the belief that a hypothesis can be proved or disproved. Data interpretation can be relied on to reach conclusions, which are generally dependent on quantifiable observations. Positivism is mainly based on the use of tools, including mathematics (Gavrilov, 2020); hence, a quantitative approach would be the basis for assessment. By adopting a positivist approach, the study is able to empirically analyse data using inductive reasoning to develop a testable hypothesis on the issues subject to investigation. A quantitative approach was deemed suitable due to two reasons. Where variables can be measured objectively, quantitative approaches are desirable (Mehrad and Zangeneh, 2019). Firstly, the quality of competition laws is bound to be objectivity interpreted if the analysis is confined to some quantitative measurements. Quantifying the quality of competition regimes using internationally accepted variables introduces objectivity in the research, as this can easily be independently verified. Secondly, using secondary data from reputable public sources to assess whether competition reforms have helped to unlock trade flows ensures that methodological issues rather than data usage is the main focus, limiting data bias and sampling.

This chapter comprises three sections, in line with the study's three main objectives. The first section outlines the estimation methods and methodologies used to assess acceptance of competition reforms among the TFTA countries. The methodology largely draws on the discussion on competition policy and its key tenets in Chapter 2, especially the principles of a sound competition regime. The methods for both the quantity and quality dimensions of competition regime acceptance discussed in Chapter 5 are included, with the quality of the competition regimes given more prominence. In other words, while acceptance of competition regimes in the TFTA is demonstrated by the

increase in the number of countries adopting such regimes, it is the improvement in the quality of the existing regimes that would be expected to create more competition in the economy. The variable which traces the quality of the competition regime for each country over the years is named a Competition Reform Index (CRI). Since the assessment is only based on one variable, univariate assessment techniques are utilised rather than regression with respect to this objective of assessing acceptance. The main basis of assessment is existing methodologies established by Nicholson (2004) and Bradford and Chilton (2018). However, following the discussion on elements of competition policy and law in Chapter 2, some additional elements are included to form the CRI. The justification for their inclusion and the value which such inclusion is expected to bring to measurement of the quality of competition regimes is also presented.

Section 6.3 describes the methods used to estimate whether existing evidence demonstrates that improvement in competition regimes in the TFTA over time, as well as their enforcement, have unlocked additional international trade flows. This means that in addition to the quality of the laws measured by the CRI, enforcement realities are included. Thus, the competition reforms variable embraces both the quality of the competition regime and the manner in which it is being enforced. The enforcement dimension is measured by the number of cases handled per year in each country. Where a country has adopted a competition regime but has not implemented it, its competition policy variable will not change over time, which would differentiate it from countries that might also have a strong competition regime but are actively enforcing it. The data sources for the estimation, as well as its relevance, are also discussed in this section.

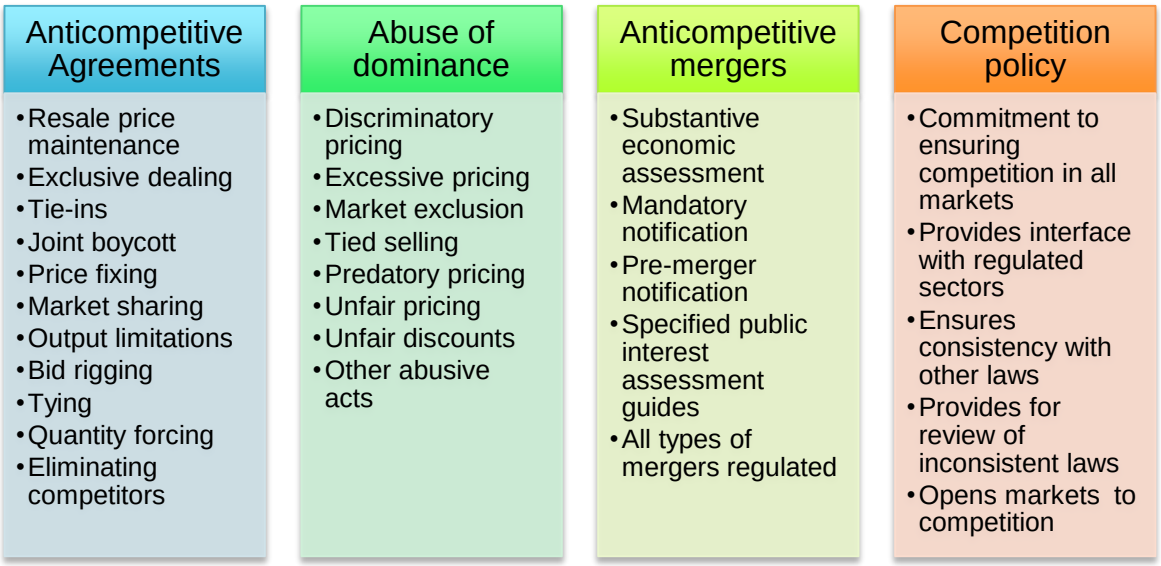
Section 6.4 explores the extent to which existing evidence shows that improvement in the quality of competition laws is in response to improvements in the level of economic development. The main focus is whether the decision to adopt a competition regime and the manner in which the regime is designed to curb anticompetitive behaviour without exception, are a reaction to changes in the level of economic development. This means that the CRI is of interest rather than enforcement of the law. As discussed in the theoretical framework, the public interest doctrine as well as regulatory capture are

associated with low levels of economic development. Inclusion of other objectives, which compromises the effectiveness of the competition regime would lessen its strength, measured by the CRI. The aim is to demonstrate whether the competition law together with the institutions put in place to enforce it are likely to be more relaxed when the economy is still developing, only to become tighter as the economy progresses. Thus, assessment framework for the relationship between the CRI discussed in section 6.2 and each country's economic performance, measured by GDP, is discussed in this section.

6.2 Objective 1: Assessing acceptance of the competition reform agenda in Africa

6.2.1 General approach

Acceptance of the competition reform agenda in the TFTA, is generally reflected in both the number of countries adopting competition reforms, and an increase in the quality of the competition regimes over time. Objective assessment of the quality of a competition regime calls for an analysis of the various elements that constitute such a regime. A competition regime's strength depends on the substance of the law as well as the powers bestowed on enforcing institutions (Bradford and Chilton, 2018). The substance of the law focuses on the extent to which it embraces the key tenets of competition regimes discussed in Chapter 2. To recap, competition law regulates anticompetitive practices which can be split into three categories, with violations taking various forms. The main provisions expected in a strong regime are shown in Figure 5. It was also noted earlier that competition policy that complements the competition legislation is required to create the necessary environment for the competition law to be effective, and it would become part of the substance of the law.



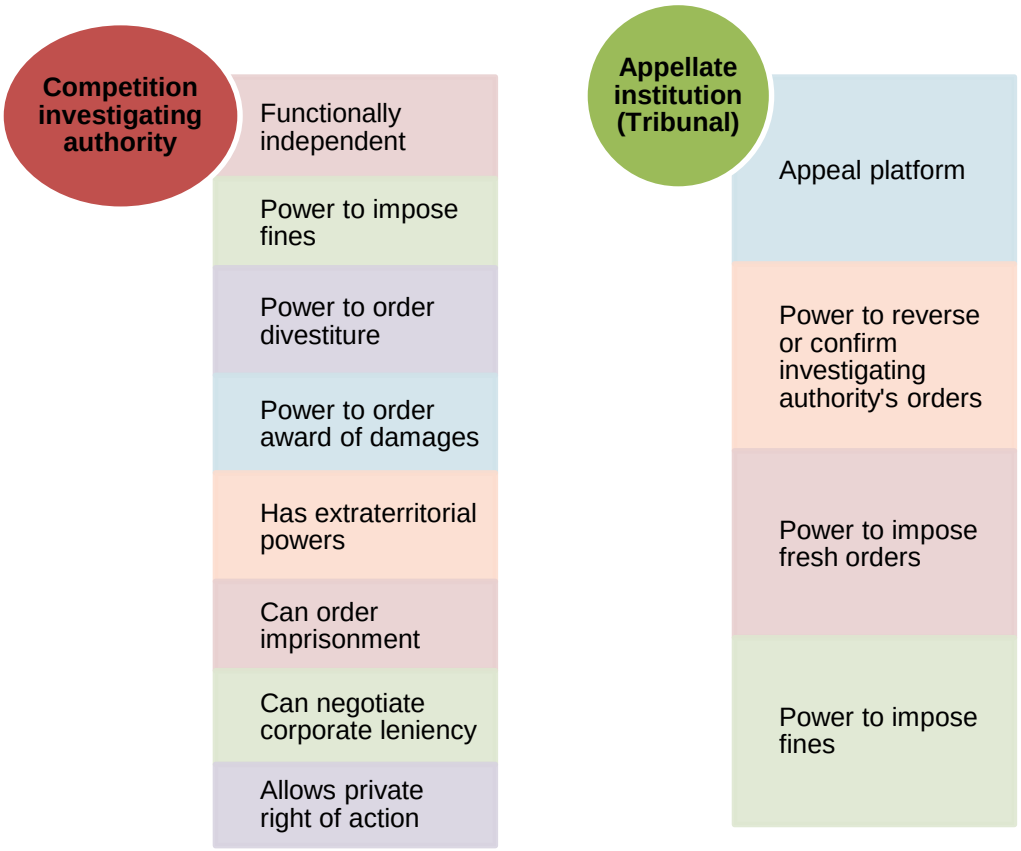
Source: Author's compilation[43]

Figure 5: Measures of the substance of a competition regime

Thus, a review of all the competition laws for each country would reveal the extent to which each has all the above provisions in its competition policy and laws. Legislations and policies that includes all these provisions is considered a very strong regime in terms of the substance of the law.

While the substance of the law matters, the powers bestowed on the enforcing authorities also determine the extent to which enforcement would create competition outcomes in the market. The attributes of competition institutions were discussed in detail in Chapter 2, with a bifurcated agency model being considered more desirable for this study. A competition investigating authority and an appellate institution constitute the competition authorities, and their desired attributes include those listed in Figure 6.

[43] The basis for this construction has been discussed in Chapter 2

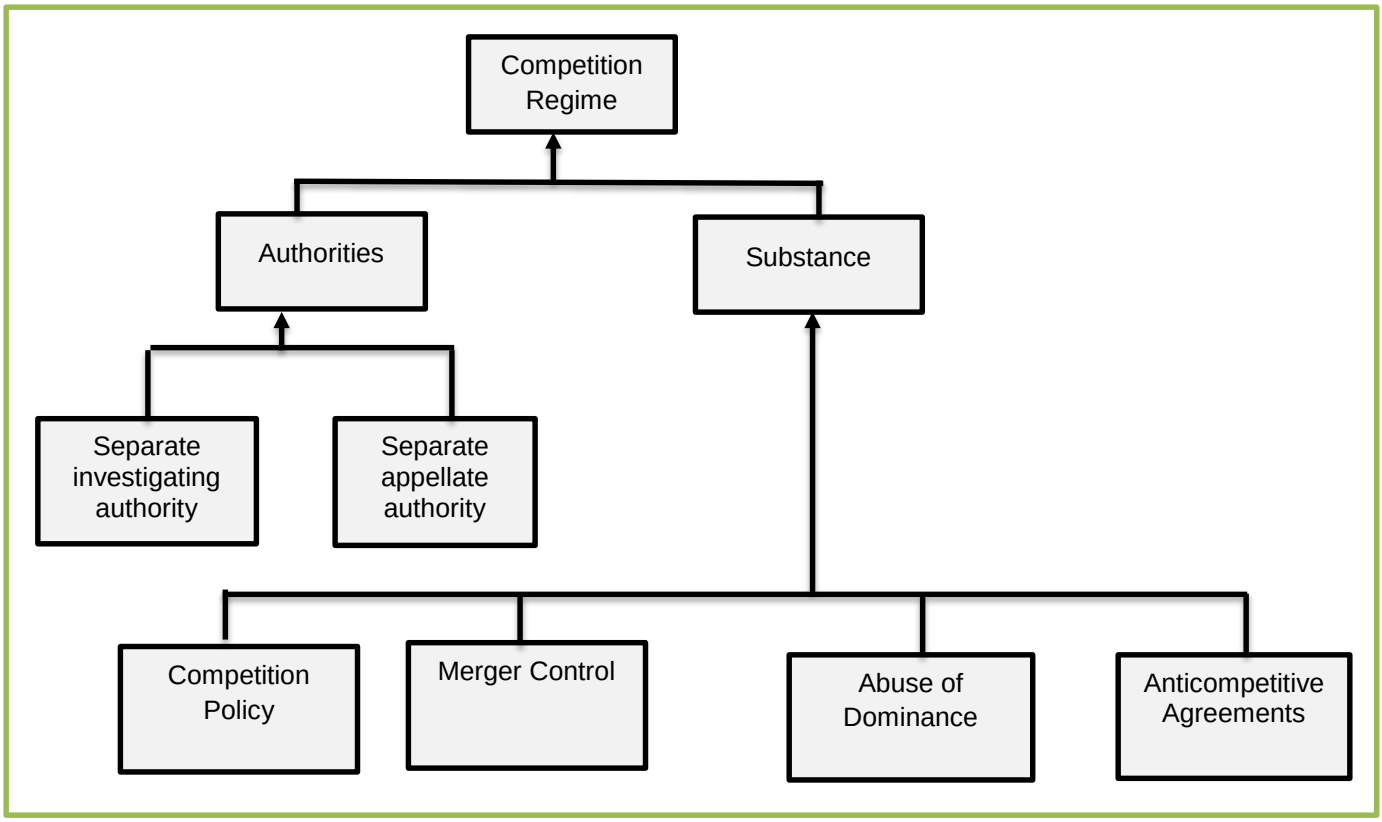


Source: Author's compilation based on various sources[44]

Figure 6: Enforcing authorities' attributes in a competition regime

A competition regime can thus be disaggregated into two; the substance of the law and the enforcing institutions (Bradford and Chilton, 2018). These can be further disaggregated into various components; hence, differences among competition regimes can be explained by variations in these different components (Figure 7).

[44] These attributes are as discussed in Chapter 2.



Source: Author's modification of Bradford and Chilton (2018) (page 34)

Figure 7: Disaggregation of a competition regime into its various components

Figure 7 is a modified version of Bradford and Chilton (2018) in two respects. First, a distinct competition policy has been included as part of the substance of competition law, based on the critical role such a policy performs in line with the discussion in Chapter 2. A separate appellate authority has also been added to the 'authorities', as a bifurcated agency model has been argued to be more appropriate to this study. Thus, the assessment of the substance of the law and the effectiveness of the institutions would be the basis upon which acceptance of competition reforms in the region is assessed. This would be deduced from the extent to which each country's CRI is improving over time. The CRI is determined as a simple aggregation of these desired attributes.

6.2.2 Data, data sources and measurement criteria

The data sources employed for the assessment are the respective countries' competition laws and policies where they exist. Although there are 29 countries in the region,

competition laws for a total of 20 countries were reviewed. Five countries[45] in the TFTA had competition policies, and these were also reviewed. The competition law and policy for each country was used as the data source. This meant examining the country's competition laws and policies, and then assessing the extent to which the identified attributes were either present or missing. In addition to the laws, any amendment which resulted in an improvement in these desired attributes was used. For example, if a law had weaknesses but amendments were made to address them, this was reflected in improvement in the quality of the law in the year when it was amended. Where the law was repealed, the new law became the basis for assessment starting with the year in which it became effective.

The data collected with respect to each competition law and policy were the desired attributes. The presence of a desired attribute was reflected in a numerical score, and differences in the total scores reflect differences in the quality of competition regimes. The value of the scores awarded for each law generally followed Nicholson (2004), Hylton and Deng (2007) and Bradford and Chilton (2018) as described in Chapter 5. However, although the methods of scoring remained the same, a number of quality indicators that were not included by these authors were factored into this study, based on the basic tenets of competition regimes described in Chapter 2.

Each desired attribute was assigned a numerical score, which generally ranged from 0 when the attribute was missing, to 1 when it was present. However, as one category could have more qualifying factors than the others, this should not give rise to a higher score ahead of the others. For example, the substance of the law categories related to anticompetitive practices, namely abuse of dominance, merger control and anticompetitive agreements should ideally contribute equally to the overall score as they are all equally harmful to competition. However, abuse of dominance could have more sub-categories compared to the other competition violations, hence the need for ensuring that the three have an equal weight. The scores for the substance of the law and its elements are shown in Table 2. There are five critical attributes for competition policy and

[45] Botswana, Malawi, Mozambique, Seychelles and Zambia.

five for merger control regulation, which give them a highest possible score of 5 each. However, abuse of dominance and anticompetitive agreements have ten attributes. Thus, in order to avoid giving these measures a higher weight than the other two categories, the total should remain 5, meaning that the presence of an attribute was assigned a score of 0.5. The extent to which the laws accommodated some anticompetitive practices under public interest or efficiency defences was also penalised (Nicholson, 2004; Bradford and Chilton, 2018), as the level of competition in the market would still be reduced even if such exemptions are required on welfare grounds.

A comparison of Table 2 with the attributes identified by Bradford and Chilton (2018) reveals three modifications that aimed to make the assessment of anticompetitive practices more complete. Firstly, Bradford and Chilton (2018) did not include competition policy as a desired attribute. As noted earlier, a competition policy sets the necessary groundwork for the smooth operation of the competition law by addressing policy-induced entry barriers (Khemani, 2007; UNCTAD, 2010). Second, there are some dimensions in qualifying anticompetitive practices which were not included by Bradford and Chilton (2018) but are all forms of anticompetitive practice. These include excessive pricing as an abuse of dominance and joint boycotts and quantity forcing as anticompetitive agreements (Lin and Fung, 2008; Schwartz and Vincent, 2008). They have now, therefore, been included in Table 2.

Table 2: Decomposition of the CRI based on attributes for the substance of the law

Attribute	Value	Attribute	Value
(i) Competition policy		**(ii) Merger Control**	
Government commits to competition in the market	1	Mandatory notification	1
Interface with other regulators	1	Pre-merger notification	1
Consistency with other laws	1	Substantive assessment: Public interest	1
Provides for review of laws in conflict	1	Substantive assessment: Economic interest	1
Opens up markets to competition	1	Regulates all types of mergers	1
Highest Possible: Competition Policy	**5**	Efficiency defence	-0.5
		Failing firm defence	-0.5
(iii) Abuse of dominance		Public interest defence	-0.5
Definition of dominance	0.5	**Highest possible**	**5**
Excessive pricing	0.5		
Market access	0.5	**(iv) Anticompetitive Agreements**	
Tying	0.5	Bid rigging	0.5
Discounts	0.5	Price fixing	0.5
Unfair pricing	0.5	Market sharing	0.5
Retail price maintenance	0.5	Output limitation	0.5
Discriminatory pricing	0.5	Joint boycott	0.5
Predatory pricing	0.5	Tying	0.5
Retail price maintenance	0.5	Exclusive dealing	0.5
Other abusive acts	0.5	Resale price maintenance	0.5
Efficiency defence	-0.5	Eliminate competitors	0.5
Public interest defence	-0.5	Quantity forcing	0.5
Highest possible	**5**	Efficiency defence	-0.5
		Public interest defence	-0.5
		Highest Possible	**5**

Source: Author's modification of Bradford and Chilton (2018) (page 35)

The same template can be extended to the competition enforcement authorities, based on the identified attributes presented in Figure 6. However, as explained in Chapter 2, while a separate appellate institution has its advantages, it does not necessarily follow that it might not also have some inherent weaknesses. In general, only half of the cases go on appeal to the tribunal, and cases can be handled without any party appealing. In addition, there is high probability of a case being referred to the courts after the tribunal (Fox and Trebilcock, 2012). The existence of a dedicated competition appellate institution is therefore important, but in this study, it was assigned a score which equals half that of the competition investigation institution[46] (Table 3). The corporate leniency programme, which is a useful tool in cartel busting, was not among the attributes identified by Bradford and Chilton (2018). This programme generally enhances the effectiveness of the competition authority and this variable was thus added to the attributes on the effectiveness of the competition authority. It is also argued that functional independence is a critical attribute (Mahmood and Ait Ali Slimane, 2018; Kovacic and Hyman, 2012), and it was added as an attribute of the competition investigating authority, as it enhances its effectiveness.

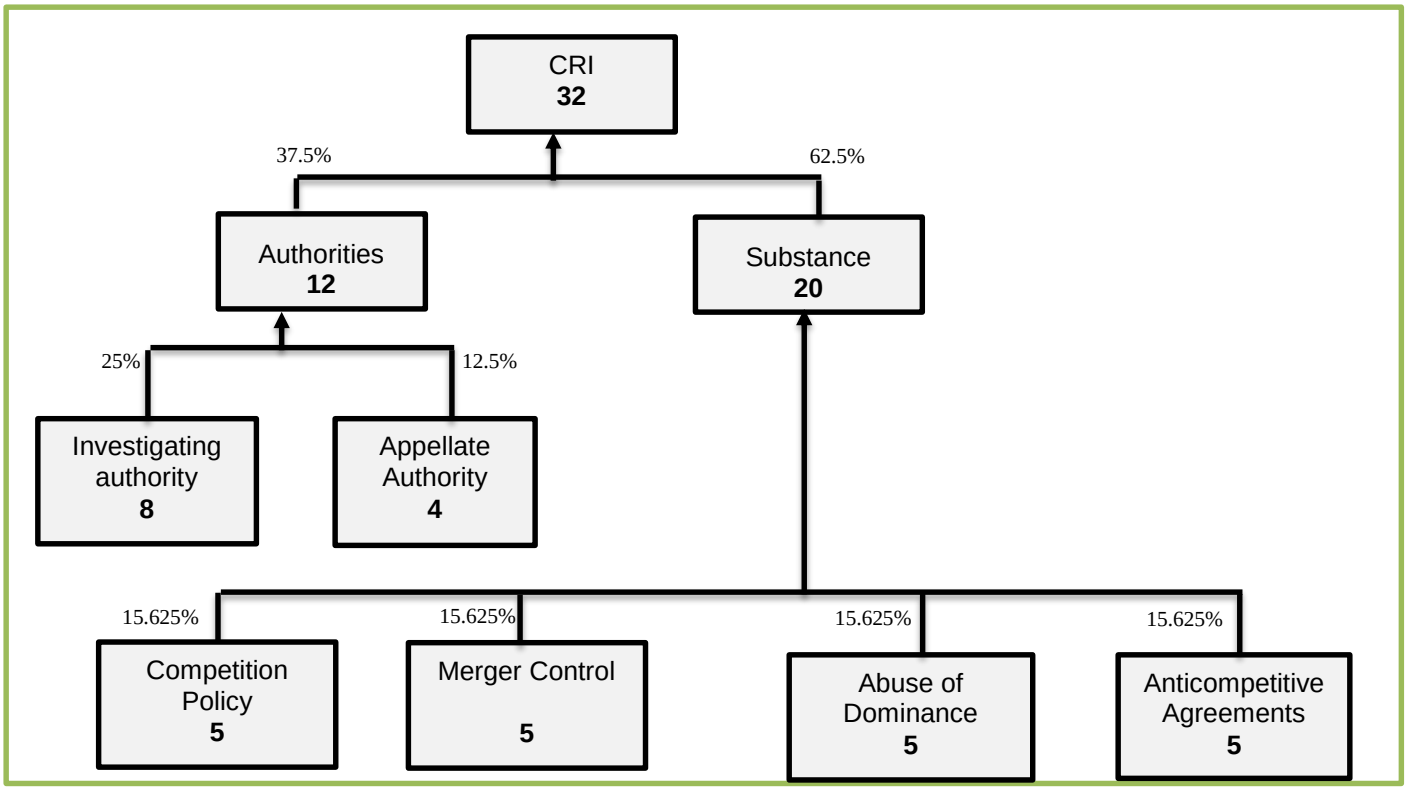
[46] This is based on the probability of a case being appealed to the Tribunal being estimated at 50%

Table 3: Decomposition of the attributes of competition authorities and their scores

Attribute	Value
a) Competition investigating authority	
Functionally independent	1
Private right of action	1
Fines	1
Imprisonment	1
Divestitures	1
Damages	1
Extraterritoriality	1
Corporate leniency	1
Industry exemptions	-0.5
Enterprise exemptions	-0.5
Highest possible: Competition investigating authority	**8**
b) Separate appellate institution	
Appeal platform	1
Power to reverse or confirm orders	1
Power to impose fresh orders	1
Power to impose fines	1
Highest possible: Appellate institution	**4**

Source: Author's modification of Bradford and Chilton (2018) (page 35)

These scores generally constitute what was termed the CRI in this study. A regime with all the desired attributes will have a score of 32, which also happens to be Nicholson's (2004) highest possible score. The substance of the law has a higher weight than the authorities, given that the highest possible score for the substance is 20, constituting 62.5% of the total score. Thus, the weights are simply each attribute's contribution to the overall score. The CRI, together with its subcomponents and the weights of each is diagrammatically represented in Figure 8.



Source: Author's Construction

Figure 8: Decomposition of the CRI and its weights

Annual movement in the CRI which is constructed in the above manner demonstrates the extent to which competition reforms have been accepted in Africa. This implies that the extent to which competition reforms have been accepted on the continent would be shown as the extent to which the difference between each country's overall score and 32 narrows with time. In other words, the extent to which the competition regimes in the TFTA can be argued to be of high quality, together with a noticeable increase in countries with competition regimes, would reveal their acceptance in the region. In addition, the study explored whether the trends and patterns in competition reform adoption show that there are regional or geographic factors that favour the adoption of competition reforms in Africa. Thus, in addition to the entire TFTA, the analysis based on the CRI was extended to the REC level (SADC, COMESA and EAC) in addition to individual country level to reflect whether regional specific issues affect acceptance of the competition reform agenda.

6.2.3 Assessment techniques and software

This analysis on how competition reforms have been accepted in the proposed TFTA was based on univariate statistical analysis, using the STATA package. The maximum score, mean and standard deviations of the CRI, whose construction is as defined in the previous subsection, and their evolution over the years reflect the pace at which competition reform was accepted in the region. It is generally expected that countries would have gradually improved their competition regimes from 1998 to 2018. A country that invested much effort in improving its competition regime over time would be characterised by very high standard deviation. This means that the standard deviation will reflect the frequency with which a country tried to improve its competition regime during the period 1998 to 2018. Given that most countries started at a zero score, even countries that adopted their competition regimes in later periods but managed to come up with strong regimes, would still have a high standard deviation. However, a country that has never changed its regime over the period, or a country that is yet to embrace competition reforms, would have a very low standard deviation. The mean score provides a measure of the expected average quality of the competition regime over the period. A high mean score would be a good indication of the extent to which markets in the economy were subjected to a high quality competition regime for a long time period. While the mean scores and their evolution over the years are critical, the final situation in 2018 (the maximum score) matters most in shaping the current state of competition regime acceptance in the TFTA.

The CRI value can be disaggregated into four equal quadrants, and the extent to which the total regional average score, sub-regional score (SADC, COMESA and EAC) and individual country scores fall within the quadrants would reflect whether competition reforms acceptance could be regarded as very low, low, good or very good. The maximum score of 32 divided into four quadrants gives an 8-point basis classification. Thus, a score of less than 8 is very low, one of less than 16 is low, less than 24 is good and a score above 24 is classified as very good. The quality of the competition laws that have been embraced can also be determined by narrowing the focus to only those countries that have embraced competition reforms, with the aim being to show how the regional averages, which are not weighed down by countries without competition laws, would fare.

Projections are also done using the linear trend assumption to reflect the likely timeframe into the future when the region's average quality of competition regimes would be expected to become very good.

6.3 Objective 2: Analysing how intra-TFTA international trade flows are influenced by countries' competition regimes

To achieve the study's second objective, the impact of competition adoption on international trade is estimated using the gravity model, which has continued to be useful in estimating international trade relationships. The theoretical underpinnings which motivated the choice of the gravity model are threefold. First, according to Bergstrand (1989), the gravity model is implied from Krugman's (1980) monopolistic competition model as a determinant of trade. The implementation of competition regimes would determine whether economy's markets are characterised by monopolistic competition. This fits well with the focus of this study. Second, researchers such as Chaney (2008), and Helpman, Melitz and Rubinstein (2008) show that the theoretical foundation shaping the gravity model is how differentiated goods produced under firm heterogeneity affect trade. The nature of the competition that the firms are subjected to also affects firm heterogeneity, making the enforcement of competition regimes matter. Third, the original model developed by Tinbergen (1962) factored in a number of variables, including regional integration measures, which are likely to explain the manner in which trade in the TFTA takes place.

The gravity model was formulated by Jan Tinbergen in the 1960s to explain bilateral trade relationships between any two economies. Tinbergen (1962) sought to establish the manner in which standard trade patterns would take place under conditions where there are no impediments. His model can be used to show the volume of trade that a country would be expected to achieve were it not for impediments that arise from various causes. A comparison of this ideal volume with the actual volume of trade would reveal whether a country is being discriminated against (trade volumes lower than expected) or receiving

preferential treatment (higher than expected). The gravity model underlines the importance of the trading partners' size, measured by nominal Gross National Product (GNP) and how far apart they are as critical variables that explain trade patterns between countries. Tinbergen (1962) also acknowledged that several other factors are also critical, although their contribution would be limited.

A country's ability to generate exports depends on the size of its economy; hence, Tinbergen's inclusion of GNP as an explanatory variable. It also depends on the size of the market of the destination country; hence, the importing country's GNP matters. Moreover, transportation costs are critical determinants of trade and they vary with the distance between the countries. Information about a market also depends on distance. The volume of trade would be expected to be positively related to the trading partners' GNP while being negatively related to the distance between the two economies.

The relationship was given in as an equation as follows:

$$E_{ij} = \alpha_0 Y_i^{\alpha_1} Y_j^{\alpha_2} D_{ij}^{\alpha_3} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where:
Y_i and Y_j are the GNP for the two trading countries;
D_{ij} is the distance between them;
α_0 is a constant.
α_1, α_2 and α_3 can be regarded as elasticities between exports, E_{ij} with respect to changes in the three variables in a transformed log form model.

Other variables considered by Tinbergen (1962) include political and semi-economic factors, specifically trade agreements (membership of the Commonwealth and the Benelux preference) and whether countries are adjacent to each other (neighbours). Despite initial resistance by economists based on the perception that this was more of a physics analogy than a useful tool for economic analysis (Head and Mayer, 2014), the gravity theory has since dominated the literature on international trade policy evaluation

(De Benedictis and Taglioni, 2011). Thus, the gravity model remains a good one to estimate international trade dynamics, fitting well with the theoretical framework for this study.

The gravity model has been widely used in studies on trade flows to the extent that in empirical trade analysis, it is now regarded as a critical tool to analyse international trade (Shahriar et al, 2019). However, the model has been greatly modified from its earlier form, with researchers adding other variables that they consider important.

6.3.1 Variables and their relationships

The competition adoption variable described in the previous sections reflects the law on paper and measures the extent to which it has been implemented. The CRI is thus the first component of the competition policy variable, as it shows the quality of the competition reforms as they exist on paper. However, while a good law can be produced, its implementation is likely to steer firm behaviour towards more competitive outcomes. Thus, the second component includes the implementation indicators. For the purpose of estimating the second objective of the study, namely the impact of competition reforms on international trade, a competition measure that reflects both the law as it exists on paper as well as the extent to which it has been enforced, was used.

The number of competition cases finalised per year reflects how active the competition authorities have been in the market. This is used as the implementation indicator. However, since bigger economies would tend to handle more cases than smaller economies because of the large number of business units, an unweighted case load would advantage bigger economies. This study rests on the assumption that the size of the staff in the competition investigating authority would relate to the size of the economy to be regulated. This means that competition authorities would strive for a staff complement that is sufficient to match demand for their services across the country. Thus, the number of cases handled per staff member would reflect the extent to which resources

are devoted to competition enforcement, and this would be economy size neutral[47]. It would also reflect staff effort in handling competition cases and hence, includes some measure of employee productivity. The overall competition variable used in the gravity model is a combination of the CRI and the implementation indicator as follows:

$$Comp = CRI + \frac{number\ of\ cases\ completed\ in\ a\ year}{number\ of\ employees\ in\ the\ institution\ per\ year} \text{ ----------(2)}$$

A country that has a good law on paper (CRI) and actively implements its competition laws would tend to have a higher score. This is basically the basis for summing the two components, so that there is a balance between design attributes (CRI) and enforcement attributes. This competition reforms variable is used as an explanatory variable in the gravity model. As noted earlier, Tinbergen (1962) used five variables to explain international trade, namely, the respective countries' GNP; their distance; a measure of regional integration and a measure of whether countries are neighbours. Based on theoretical reasoning, researchers have added other variables in the gravity model. For example, Wang and Badman (2016) and Karamuriro and Karakuza (2015) added absolute values of differences in per capita GDP, the real exchange rate between countries and language. Other researchers' gravity models included a competition policy related variable in the equation. For example, Evenett (2002) applies a modified gravity model to estimate how merger control regimes affect mergers and acquisition. Miroudot, Pinali and Sauter (2007) also apply a modified gravity model, with a competition reforms variable among the independent variables, to explain international trade.

Similarly, in this study, given that the model estimated by Tinbergen (1962) (equation 1) specified the distance variable as negatively related to trade, the model to be estimated can be given as:

[47] This was calculated as the number of cases concluded each year divided by the total staff complement of the competition authority, including support staff (excluding the appellate platform).

$$X_{ijt} = \frac{KY_{it}{}^{\alpha} Y_{jt}{}^{\beta} \boldsymbol{Z}_{it}{}^{\gamma}}{D_{it}{}^{\delta}} \quad \text{---------- (3)}$$

Where:

X_{ijt} is the international trade variable. The focus of the study is to assess whether adopting competition reforms can be beneficial to the adopting country, which can occur through both imports and exports. Thus, the international trade variable X_{ijt} represents either exports or imports by country i to country j at time t;

K is a (gravitational) constant;

Y_{it} captures the nominal GDP of exporting country i at time t;

Y_{jt} captures the nominal GDP of importing country j at time t;

D_i is the estimated distance between the two trading partners, which in this case is the distance between their capital cities;

$\boldsymbol{Z_{it}}$ is a vector of other variables that also negatively or positively affect trade flows.

The WTO and UNCTAD (2012) identify what are known as multilateral resistance terms, which are not directly observable, as forming $\boldsymbol{Z_{it}}$. It is usually a composite term which measures trade barriers, and trade incentives as well as other variables that can create trade costs in addition to the distance between the countries (WTO and UNCTAD, 2012). Several variables have been empirically found to be statistically significant in affecting bilateral trade between countries (WTO and UNCTAD, 2012). Countries can trade with each other because they belong to the same regional trade arrangement, share borders, have a common former coloniser, or have a common language.

This study thus uses a common border as well as regional integration measures from Tinbergen's (1962) specification. These also serve as both trade incentives as well as measures to reduce trade costs. Regional integration variables were part of Tinbergen's (1962) original model and are thus also factored into this study. In the TFTA, regional integration can mean membership of SADC, COMESA, EAC and SACU and these are all introduced into the study. While SACU is not part of TFTA negotiations and is also not a recognised REC by the African Union, it is included because bilateral trading

relationships between South Africa, Botswana, Eswatini, Namibia and Lesotho could be highly influenced by measures instituted under SACU. Adding SACU as an explanatory variable helps ensure that the effect of SACU is accounted for. However, one of the critical concerns with respect to regional trade agreements is commitment by member countries to implement them even after they join. To ensure that commitment is factored in, only those member countries that have gone a step further and become a member of the Free Trade Area (FTA) in SADC, COMESA, EAC and SACU (customs union) are considered, rather than simply belonging without full commitment. In particular, the year which a country became an FTA member (or customs union in the case of SACU) is considered as the year in which it joined SADC, COMESA, EAC and SACU. For example, although Angola and DRC are members of SADC, they had not yet joined the SADC FTA by 2018[48] and are hence not considered members in this study. It is also critical to note that there are overlapping membership on regional integration among the countries. However, given that it is the period when a country became an FTA member that has been used, changes in trade that are explained by the decision to become a member can still be captured by the model even if it belongs to two FTAs. Thus, it was not considered necessary to account for overlapping membership. In addition, as established by the WTO and UNCTAD (2012), a common language and a common border are introduced as part of the multilateral resistance terms. They also explain trade costs, hence are included in the model.

This study thus embraces all the original variables used by Tinbergen (1962) and adds some of the multilateral resistance terms based on the WTO and UNCTAD (2012). It is also argued that the nature of competition prevailing in the countries matters, as per the study's theoretical framework; hence, competition policy is also part of the multilateral resistance terms. In addition, since the multilateral resistance variables include trade barriers, competition policy is a good proxy for the manner in which trade in the markets is free without behavioural induced barriers. However, since having a good competition regime affects a country's ability to import and to export, it is also important to assess

[48] The last period of the data set used.

whether it is the competition variable of the importing or exporting country that is significant in explaining bilateral international trade patterns. Thus, two competition variables, one for the exporting and another for the importing country were used.

The equation is estimated in a linearized manner by using natural logarithms. The advantage of using natural logarithms is that the parameters become elasticities in interpretation. The linearized form of the gravity model estimated in this study with the specified variables can therefore can be given as follows:

$$lnX_{ijt} = \beta_0 + \beta_1 lnY_{it} + \beta_2 lnY_{jt} + \beta_3 lnDist_{ij} + \beta_4 lnComp\_exporter_{it} + \beta_5 lnComp\_importer_{it} + \beta_6 COMESA_{iit} + \beta_7 SADC_{ijt} + \beta_8 EAC_{ijt} + \beta_9 SACU_{ijt} + \beta_{10} Border_{ij} + \beta_{11} Lang_{ij} + \varepsilon_{it} \text{---------(4)}$$

Where:

X_{ijt} = exports (or imports) of country i to country j at time t;

Y_{it} = nominal GDP of exporting country i;

Y_{jt} = nominal GDP of importing country j;

$Dist_{ii}$ = bilateral distance between countries i and j;

$Comp\_exporter_{it}$ = competition variable for exporting country i at time t;

$Comp\_importer_{jt}$ = competition variable for importing country j at time t;

$COMESA_{ijt}$ = dummy variable, taking the value 1 if the two countries are members of the COMESA FTA at time t and 0 otherwise;

$SADC_{ijt}$ = dummy variable, taking the value 1 if the two countries are members of the SADC FTA at time t and 0 otherwise;

$SACU_{ijt}$ = dummy variable, taking the value 1 if the two countries are members of SACU at time t and 0 otherwise;

EAC_{ijt} = dummy variable, taking the value 1 if the two countries are members of the EAC FTA at time t and 0 otherwise;

$Border_{ij}$ = dummy variable, taking the value 1 if the two trading countries share a border and 0 otherwise;

$Lang_{ij}$ = dummy variable, taking the value 1 if the two trading countries share a common language and 0 otherwise;

ε_{it} is the stochastic term.

6.3.2 Data and data sources

Data for exports and imports was sourced from Trade Map and is given as annual statistics over the period 2001 to 2016[49]. Trade Map data is sourced from UN Comtrade as well as official national statistics. UN Comtrade is a trade statistics database, which is maintained by the UN Statistics Division and is among the world's largest databases showing comprehensive national and regional statistics on trade. The choice of Trade Map was influenced by the need to ensure that all trade data across the countries was obtained from one source to avoid challenges associated with data bias. Data for the nominal GDP for the countries was extracted from World Bank Indicators (WDI). WDI is a compilation of data by the World Bank sourced from officially recognised sources. It was selected in preference to each country's national statistics to ensure that only one source of data was used for all the countries and thus ensure that the same measurement base was employed. Given that the World Bank has programmes and operations in almost all the countries in the TFTA, the data is also dependable in terms of accuracy. The time period for time series data on GDP was 2001 to 2016 to coincide with the Trade Map data as well as the primary data for the competition reforms variable. Trade Map yearly data lists 2001 as the first year for which data is available. Data for the distance variable was downloaded from GeoDist, a database of the CEPII (French Centre d'Etudes Prospectives et d'Informations Internationales)[50]. Mayer and Zignago (2011) note that GeoDist is one of the most comprehensive databases that has been widely used in gravity model estimation and is also an improvement on several existing data sources. This data source was also selected because it covers all the countries in the study and bias was thus avoided. The distance measure used in the model is the estimated distance in kilometres between the two countries' capital cities.

[49] Primary data collection with respect to competition enforcement was initiated in early 2017; hence 2016 was the end period for which the data was requested. However, Trade Map data is already available beyond 2016, although for model estimation 2016 is considered to be the end point.

[50] At http://www.cepii.fr/CEPII/en/bdd_modele/inscription.asp?id=6, accessed 16 November 2019

The data sources for the competition law variable for the CRI have already been described (the respective competition laws and policies). Annual reports of the competition authorities were used to ascertain the number of cases handled each year as well as the size of staff. Where gaps were observed, primary data was used, with a standard questionnaire being forwarded to the competition authorities to collect information pertaining to cases handled per year as well as the size of their staff between 2001 and 2016. Thus, the data on the number of competition cases handled as well as the size of the workforce was obtained from secondary sources (especially the competition authorities' annual reports) and primary sources (the competition authorities) if the data was not available from secondary sources. Of the 11 competition authorities engaged following the discovery of noticeable gaps in their published online annual data, seven provided detailed information regarding the cases handled and their staff complement. The remaining four countries had to be dropped from the analysis due to the observed data gaps. These include Kenya, Mauritius, Ethiopia, and Egypt. In addition, other countries such as Angola, Tunisia and Sudan were dropped due to failure to gain access to their competition legislation. A summary of the data and data sources for all the variables is presented in Table 4.

Table 4: Data and data sources

Variable	Data to be used	Data source
X_{iit}	Exports from country i to country j at time t	TradeMap
Y_{it} and Y_{jt}	Nominal GDP for country i and country j	World Bank economic indicators
$Dist_i$	Distance between the capital cities of the trading partners	GeoDist database of the CEPII
$Comp\_exporter_{it}$ and $Comp\_importer_{it}$	Absence or presence of attributes in country competition laws and policies as well as annual number of cases handled by competition authority	Existing secondary data sources, submissions from the competition authorities and a review of competition laws and amendments
$SADC_{ijt}$, $COMESA_{ijt}$, $EAC_{ijt,}$ $SACU_{ijt}$	Value of 1 if members are part of the same FTA at time t and 0 otherwise	COMESA, SADC, SACU and EAC membership list, as well as identification of the year in which each country joined the FTA from the literature review
Language	Value of 1 if the two countries share a common language and 0 otherwise	Country profiles from the CIA World Factbook on the CIA website
Border	Value of 1 if the two countries share a common border and 0 otherwise	Map of Africa

Source: Author's construction

Having described the data and data sources, the model can now be specified.

6.3.3 Model specification and estimation methods

The model is estimated using panel data methods. Panel data estimation has two main advantages. First, control of individual heterogeneity is possible with panel data. Individual heterogeneity would introduce bias in regression if the data is treated as a pooled regression using ordinal least squares (Baltagi, 2013). Second, panel data minimises the risk of collinearity among the variables as a combination of cross sectional

and time series data introduces more variability and helps to address the problem of multi-collinearity that characterises time series data in general (Baltagi, 2013).

Panel data methods of estimation fall into two classes, static and dynamic panel data models. Both were estimated in this study. Whilst the dynamic models of panel data can be considered an improvement, the study found that the static panel data model was also adequate in explaining the relationship between competition reforms and bilateral trade. Static panel data models assume that the estimated variables are generally static, while dynamic panel data models acknowledge that some of the variables in the models can be endogenous (Labra and Torrecillas, 2018). In this case, endogeneity would be arising due to some correlation between the error term and the dependent variable, which would be due to some causality between explanatory variables, data quality inadequacy, autocorrelated errors, as well as omitted relevant variables in the model (Labra and Torrecillas, 2018). Static panels are limited in that they might fail to account for a number of challenges which affect their efficiency. The explanatory variables are assumed to be exogenous, but in most cases there are some endogeneity elements that cause them to correlate with either the past or current realisations of the disturbance term. This also results in serial correlation. Second, static panel data models may fail to overcome the problems of heteroscedasticity and autocorrelation that could exist within individuals rather than across them (Roodman, 2009).

In general, the static panel data model estimated within the gravity model context takes the form:

$$lnX_{ijt} = \partial + \alpha lnY_{it} + \beta lnY_{jt} + \gamma \boldsymbol{Z_{ijt}} - \delta D_{ij} + \varepsilon_{it} \text{----------(5)}$$

However, unlike ordinary least squares (OLS), the disturbance term ε_{it} (assumed to be independently and identically distributed with a zero mean and constant variance) is composed of two components (Vijayamohanan, 2016), namely:

$$\varepsilon_{it} = \mu_i + \lambda_t + \upsilon_{it} \text{----------(6)}$$

In this regard, μ_i measures the individual (cross section) unobservable heterogeneity, which in this case is the different country characteristics that are time invariant. On the other hand, λ_t measures the unobservable time heterogeneity brought about by changes in time, while v_{it} is the random white noise error term remaining. Assumptions about how μ_i and λ_t are distributed generally determine the static panel data model to be employed. If the unobserved individual heterogeneity component (μ_i) is assumed to be correlated with any of the model's explanatory variables, the first difference approach and the fixed effect panel data model would be the more suitable method for estimation. However, if the component is not correlated with the explanatory variable because individual heterogeneity has been adequately captured by the explanatory variables included, the random effects model is suitable. The random effects model would also be considered as the best model when the individual heterogeneity component is assumed to be very small.

The first difference approach to panel data estimation (which takes the first differences and estimates the differenced equation) as well as the fixed effects model (which is a time demeaned regression, where the mean of each variable is deducted as a way of getting around the unobserved individual effects (Giesselmann and Schmidt-Catran, 2018)) both eliminate all the time invariant variables from the model. Given that the gravity equation to be estimated has some time invariant variables, including the distance variable, then gravity models estimated using fixed effects or first difference panel data models would drop the distance variable from the result, thereby distorting the original theoretical basis for the model. Based on this fact, both the fixed effects and the first difference estimation methods were not considered for this study, as they would not fit properly to the dimensions of the data, which has time invariant characteristics. Thus, the use of commonly applied tests, for example the Hausman Test, to decide whether to employ the fixed effects or the random effects model was not necessary as the random effects model was selected by default. It was also on this basis that a dynamic panel data model based on the Generalised Methods of Moments (GMM) was used to augment the findings.

The presence of time invariant variables in the gravity equation implied the adoption of the random effects model, as it allows all variables to be captured. Individual heterogeneity which is unobserved, is treated as part of the disturbance term, v_{it} in the random effects model. The model adopts a transformation to eliminate serial correlation of the residuals (which captures a combination of unobserved individual and time heterogeneity). This transformation results in an estimation through feasible generalised least squares methods, which generally cater for heteroscedasticity (Dieleman and Templin, 2014). It is achieved by adjusting the model with an adjustment factor λ which is defined based on equation (6) by Dieleman and Templin (2014) as:

$$\lambda = 1 - \frac{{\sigma_v}^2}{\sqrt{{\sigma_v}^2 + T{\sigma_\mu}^2}} \text{ ---------- (7)}$$

Where:

σ^2_μ and σ^2_v reflect the variance of the residual terms as already defined in equation (6);

T = time periods.

Unlike the fixed effects model, the random effects regression is a regression of the time demeaned variable adjusted for λ as follows:

$$\left(lnX_{ijt} - \lambda ln\bar{X}_{ijt}\right) = \alpha\left(lnY_{it} - \lambda ln\bar{Y}_{it}\right) + \beta\left(lnY_{jt} - \lambda ln\bar{Y}_{jt}\right) + \gamma(\boldsymbol{lnZ_{ijt}} - \boldsymbol{\lambda \ln \bar{Z}_{ijt}}) - \delta(D_{ij} - \lambda D_{ij}) + (\mu_i - \lambda\mu_i) + (\Lambda_t - \lambda\bar{\Lambda}_t) + (v_{it} - \lambda\bar{v}_{it}) \text{ ---------- (8)}$$

The random effects transformation thus retains the individual heterogeneity component but assumes no correlation between this component and the explanatory variables. This implies that in the model, the error term would be:

$$\varepsilon_{it} = \mu_i - \lambda\mu_i + \Lambda_t - \lambda\bar{\Lambda}_t + v_{it} - \lambda\bar{v}_{it} \text{ ---------- (9)}$$

Since the random effects model was adopted, it was critical to ensure that country specific, time invariant factors that could affect trade between countries were included so as to minimise autocorrelation problems associated with the individual heterogeneity term μ_i which remains a component in the error term. However, the random effects model was also subjected to autocorrelation tests to ensure that the problem had been addressed. More specifically, the Wooldridge Test for serial correlation (Wooldridge, 2002) which is based on residuals obtained from a first-differences regression to remove individual effects (Drukker, 2003) was run to confirm if the autocorrelation problems had been addressed. If the autocorrelation problems persisted, these would be addressed by the GMM model.

The study thus also estimated a dynamic panel data model using GMM estimation techniques to complement the findings from the static random effects model. GMM methods are useful in addressing the problems associated with heterogeneity of the individuals. For example, while GDP can be a significant variable in influencing exports, an increase in exports also increases GDP. GMM models are designed to take into account such endogeneity. Another advantage that GMM models have is that they also take into account the hysteresis effect by including the lagged dependent variable. Hysteresis occurs when a variable exhibits path-dependency, that is, when history is also plying a critical role in explaining a variable's behaviour (Dosi et al, 2017). In other words, international trade decisions in any given time period are also influenced by past trade deals, such that it is easier for economic agents that have exported or imported from one economy to prefer to do so again in the subsequent time period. GMM models thus are important as they capture the hysteresis effect. However, since dynamic panel data methods also have limitations, the random effects model can be retained to allow the two models to complement each other.

The Arellano–Bond model introduced in Arellano and Bond (1991) and the Arellano-Bover/Blundell-Bond model (Arellano and Bover, 1995) together with the Blundell and Bond (1998) approach are often identified as the foundation of dynamic panel data methods (Roodman, 2009). The models introduce 'instruments' into the static panel data

models to deal with endogeneity associated problems. The Arellano-Bond and Arellano-Bover/Blundell-Bond models use lagged endogenous terms to avoid problems of correlation between variables, which include the lagged dependent variable values. As a starting point, they can be specified as follows (Labra and Torrecillas, 2018):

$$Y_{it} = \alpha Y_{it-n} + \boldsymbol{\beta_i X_{it}} + \omega_{it} \text{----------(10)}$$

Where

Y_{it} = dependent variable measuring characteristics of i at time t;

Y_{it-n} = lag of dependent variable for n lags;

α = a constant;

β_i= a coefficient vector;

$\mathbf{X_{it}}$ = a matrix of explanatory variables;

$\omega_{it} = \varepsilon_i + \mu_{it}$ is the composite error terms capturing individual effects and disturbance terms.

The lagged variables are also used as instruments to deal with serial correlation problems. However, while equation (10) is the basic dynamic panel model, there are many variations depending on the type of GMM model used. GMM models can be estimated as difference panel data models, with the instruments and models being run as first differences. Given the use of the dummy variables as well as the distance variable which is fixed and does not vary within country pairs, this study generally preferred the use of instruments mainly in levels as this would not result in the omission of some important variables in the model. In particular, System GMM methods that allow for the use of instruments in levels were preferred to Difference GMM methods. The dataset is also characterised by a short time period, which would be reduced further by differencing (Roodman, 2009). This study utilised the Systems GMM developed by Roodman in 2006, known as the xtabond2 (Labra and Torrecillas, 2018), which introduces more options for instruments while also allowing for accounting of the endogeneity of dependent and independent instruments. Generally, the xtabond2 estimator is suitable for panel data characterised by a short time period and large panels (Labra and Torrecillas, 2018). In

particular, a two-step System GMM was employed in preference to a one-step System GMM as general conventional theory identifies a two-step estimation as performing better in large samples (Hwang and Sun, 2015). With a bilateral trade dataset for 20 countries over a 16-year period resulting in 4,666 observations, the sample was considered large enough to use a two-step estimation procedure rather than a one-step one to reap the associated benefits.

The coefficients of the GMM model would generally be short-run coefficients, which would show the variables' short-run relationships. However, there is also need to assess whether the relationships are statistically significant over the long run. From the GMM model in equation (10), α and β_i are short-run coefficients. As specified in Bruno et al (2017), the long-run coefficients (LRC) are given as:

$$LRC = \frac{\boldsymbol{\beta_i}}{1-\alpha} \quad \text{----------(11)}$$

Using Stata, the long-run coefficients were generated and their statistical significance was tested. This allowed for the modelling of the impact of competition reforms in both the short and long run. As noted previously, the random effects and GMM models are based on a 16-year period, covering 2001 to 2016 across 20 countries, which resulted in an unbalanced panel, from which 4,666 observations were captured by the model in running the regression.

6.3.4 Model diagnostics and software

Stata software was employed for the estimation of the model. The choice of Stata was mainly influenced by the ease with which the software handles GMM and other panel data methods, especially through built-in commands. For example, the Arellano-Bond and Arellano-Bover/Blundell-Bond model already have built-in commands which are available in the Stata package, making it easier to run the models.

The estimation of the static and the dynamic panel data models required linearization of the model by taking natural logarithms. The linearized model transforms the observed

data for all variables into logarithms except for the dummy variables. However, an examination of the dataset revealed that there were many zero observations for exports and the two competition reforms variables. Thus, transforming the data into natural logarithms would have resulted in missing values and a significant portion of the dataset for these variables would have been excluded from the estimation.

The literature identifies three approaches to deal with zero values within the context of the gravity model (Linders and de Groot, 2006; WTO and UNCTAD, 2012; Kareem, Martinez-Zarzoso and Bernhard, 2016), namely:

- dropping all the observations with zero trade from the model (truncation), which implies estimating the model without any regard to these observations;
- adjusting by a very small constant (e.g., one dollar) to the values to facilitate the taking of logarithms; and
- running the model in levels.

In this study, the zero observations for bilateral exports reflect the absence of trade and this critical information would have been lost if these zero values were omitted from the model. This is equally true for the competition variables, which generally reflect the fact that many countries had, for a significant time period, not yet instituted competition reforms. Dropping these observations would have generally distorted the model. Estimating the data in levels would have required non-linear estimation methods whose interpretation and specification might depart from the general linear approaches used in estimating gravity models. Thus, this study adopted a model of transforming the zero values by adjusting by a very small constant which does not change the general pattern of the data. In particular, an adjustment factor of 0.001, which is equivalent to one dollar in the case of bilateral exports, was adopted before transforming into logarithms[51].

[51] Since the bilateral exports are given in thousands by Trade Map, a dollar is equivalent to 0.001, which is very insignificant and was not expected to distort the general trade patterns between countries. However, a one-unit adjustment to a competition variable could be large enough to alter the picture of the adoption of competition reforms, given that the average competition reform score is about 9.4. An adjustment factor of 0.001 was also extended to the competition variable to ensure that there were no distortions in the dataset as the value remains (almost) zero but allows for the logarithms of the observations to be defined and maintained in the model.

Non-stationary panels are generally considered a concern for data that is characterised by a large number of groups (N) as well as having been collected over a long time period (T), where there is a risk of spurious regression (Baltagi, 2013). In general, there is a risk of non-stationary panels if the time period, T is large enough that each country's regressions can be performed separately (Baltagi, 2013). However, with the data used in the model, where N>T, with T being small (only 16), it is not expected that non-stationarity challenges could arise. As a result, panel unit root tests were not considered necessary for the transformed variables.

Both the random effects and the GMM model were tested for goodness of fit to ensure that they were suitable for explaining the data. The Wald Chi-square test statistic was used to check the extent to which the random effects method adequately explained the relationship. In addition, as serial correlation is often expected with the use of static panel data methods, serial correlation tests were conducted. In particular, the null hypothesis that there is no serial correlation was tested using the Wooldridge autocorrelation test in panel data (Wooldridge, 2002) which is based on the residuals from a first-differences regression to remove individual effects (Drukker, 2003). For the GMM model, the F-statistic was used to confirm if the explanatory variables in the model adequately explained the relationship (fitness), while the Hansen statistic was used to indicate whether the model had been over-identified due to the use of instruments in the presence of heteroscedasticity (Roodman, 2009; Labra and Torrecillas, 2018). The Arellano-Bond test was also used to check whether there were any autocorrelation problems with the GMM model (Roodman, 2009). These diagnostic tests were considered sufficient to ensure sound statistical interpretation. In addition, given that the gravity model had a pre-conceived stipulation (trade being positively related to the size of an economy and negatively related to distance), the extent to which the results confirmed the theoretical expectations from the gravity model were used as a system check for relevance of the models.

6.4 Objective 3: Assessing the influence of economic development on adoption of competition reforms

6.4.1 Theoretical formulation and rationale

As discussed in Chapters 4 and 5, there is a theoretical basis for the argument that the level of economic performance influences the decision to adopt competition reforms, especially since competition policy objectives tend to clash with other objectives which an economy that is still developing might seek to prioritise. This would imply the existence of a causal relationship, with causality running from economic performance to competition reforms adoption. There is a limited theoretical basis for building a competition reform model that incorporates economic development as an explanatory variable. However, it is possible to build the model's theoretical basis based on the Granger causality rationale. Based on the original theoretical model by Granger (1969), one variable, say *x* can be said to be Granger causing another variable, say *y,* if past values of *x* are useful in the prediction of variable y. In other words, the possibility of predicting variable y is more likely if past values of variable x are included in the equation that describes the behaviour of y based on its previously observed values. While the original causality test by Granger (1969) was built on time series data, a number of researchers have modified it to apply to panel data as well (for example, Lopez and Weber, 2017; Dumitrescu and Hurlin, 2012; Hurlin and Venet, 2003). Since the main interest of this study was to assess whether GDP has a causal effect on competition reforms, the Granger causality rationale could be used to estimate the model. This study, therefore, adopted panel Granger causality tests as the basis to assess whether there was any causality between GDP and the competition reform variable CRI.

6.4.2 Variables, model specification and data sources

Based on the Granger causality assumptions, the model that describes the time series variables, Y_t and X_t can be described as:

$$y_t = \alpha + \sum_{k=1}^{K} \beta_k y_{t-k} + \Sigma_{k=1}^{K} \delta_k x_{t-k} + \varepsilon_t \text{---------- (12)}$$

Causality tests involve testing whether the coefficients of X_t, namely δ_1 to δ_k are significantly different from zero. As specified by Lopez and Weber (2017), this time series specification can be extended to panel data as:

$$y_{i,t} = \alpha_i + \sum_{k=1}^{K} \beta_{ik} y_{i,t-k} + \sum_{k=1}^{K} \delta_{ik} xi_{,t-k} + \varepsilon_{i,t} \text{---------- (13)}$$

In this case, y_{it} and x_{it} would be observations for stationary variables for individual (country in this case) i in period t. The coefficients for the two variables and their lags, βi and δi, therefore, only vary across individuals but are time invariant. This study employed this model to test for causality, with CRI being the dependent variable and the explanatory variables being its lags and lagged nominal GDP as follows:

$$CRI_{i,t} = \alpha_i + \sum_{k=1}^{K} \beta_{ik} CRI_{i,t-k} + \sum_{k=1}^{K} \delta_{ik} GDP_{i,t-k} + \varepsilon_{i,t} \text{ ---------- (14)}$$

Causality involved testing whether the GDP terms in equation (14) were significant in explaining the competition reform variable. This involved testing the hypothesis:

H_0: $\delta_{i1} = \delta_{i2} = \ldots = \delta_{ik} = 0$ ----------(15)

The model was therefore constructed using only two variables, the CRI and GDP. The data sources and the construction methods for the CRI variable were described in detail under section 5.2 while the GDP variable and its sources of data were discussed in section 5.3. However, since the data used to construct the CRI did not include competition law enforcement but only focused on the extent to which the quality of competition law is influenced by economic growth, the period of assessment ran from 1998 to 2018. This is because the data period was not affected by the primary data which had 2016 as its end date, and it could also run before the starting point of 2001 which was determined by Trade Map data. The year 1998 was used as a benchmark, as this was when enforcement of competition regimes in most of the countries was just beginning.

6.4.3 Estimation methods and model diagnostics

Equation (14) is estimated as a panel Vector Autoregressive (VAR) model or, if the variables are cointegrated, as a Vector Error Correction Model (VECM). According to Canova and Ciccarelli (2013) such a method is particularly suited to studying panel data over a number of countries for a number of reasons. First, the model is able to capture both the static and dynamic interdependencies across countries. Second, panel VAR models can easily incorporate variations over time in the coefficients as well as shock variances. Third, the models easily account for heterogeneities in the cross sectional dynamic. Two variables are classified as cointegrated if they are both non-stationary, having the same order of integration, while it is still possible to find a linear combination involving these variables that would be stationary (Jones and Nesmith, 2007). Thus, a cointegration test is preceded by tests for unit roots to ascertain if the order of integration for the two variables is the same. For the purpose of checking whether a VECM is necessary, unit root tests had to be conducted, even though the time period (T) is very small. The unit root tests are based on five different measures, namely, the Fisher Augmented Dickey-Fuller test; Im, Pesaran and Shin test; the PP test; Fisher Chi-Square test; and the Levin, Lin and Chu test. All five have to be satisfied for a variable to be considered stationary. The results confirmed that the two variables were not stationary in levels but stationary at first difference, hence, cointegration tests were conducted using the Johansen Fisher Panel Cointegration test. This was chosen in preference to the Pedroni (2004) and Kao (1999) tests for cointegration because it is system based, which provides an aggregation of all the p-values associated with the individual Johansen maximum likelihood cointegration test statistic (Kwenda, 2018), whereas the other two tests are one-way cointegration tests based on residual Engle Granger two-step tests (Kwenda, 2018). The Johansen Fisher Panel Cointegration test responds sensitively to lag selection, hence, the lag selection which minimises the Akaike Information Criterion of an unrestricted VAR model (lag 1) was chosen as the optimal model. Based on only one lag, the Johansen Fisher Panel Cointegration test confirmed that the two variables were cointegrated; hence, a VECM was estimated. The Breusch–Godfrey test (LM test)

for autocorrelation was used to check whether serial correlation did not exist in the estimated model at this selected lag.

Causality is assessed at two levels; short-run and long-run. The cointegrating equation coefficient in the VECM would reflect the existence of a long-run relationship for the variables if it is negative and also statistically significant. In other words, it is possible for the variables to have no short-run causality, but an observed long-run relationship can emerge. The short-run causality was estimated using a Wald test statistic to test the hypothesis of the GDP variables having a causal effect on the competition adoption variable. This involved testing whether the coefficients of the GDP variables were statistically significant in the CRI equation. The estimation was done using the Eview package, the choice of which was informed by the ease with which VAR methods can be run using the software.

A balanced panel was used to estimate causality of economic growth on the decision to adopt competition reforms. This ensured that the results were not affected by missing values. Some countries which did not have balanced panels, including Angola (which adopted a competition law in 2018, but the law could not be established), Eritrea (the World Bank data for GDP for Eritrea has missing values for a number of years) and Somalia (GDP data missing) were removed, resulting in panel data of 23 countries for the 21-year period, 1998 to 2018, and in 483 observations. This summarises the estimation process for the results which are presented in Chapter 7.

6.5 Ethical considerations

The study relied heavily on secondary data sources, which were only blended with primary data sources in regimes where such data does not exist. To a large extent, the primary data required were already designed to be in the public domain, although some countries had not released the data online. Thus, although primary data was employed, no confidential data is presented. However, the necessary procedures, including the assurance that all information would be subjected to the highest level of confidentiality were duly followed in seeking pertinent information to answer the research questions. In

particular, the competition authorities were informed that the information that they would provide would not be reported in any disaggregated manner, but only as part of an index and it would not be possible to ascertain how it was constituted. Thus, no ethical violations occurred in conducting this study.

6.6 Chapter summary

This chapter described the methods and estimation procedures employed in the study and the specific methods used to achieve its three main objectives. The first objective is to be achieved through a descriptive analysis based on univariate methods, especially by analysing the mean, standard deviation, maximum and minimum CRI scores. For this, the time period for assessment is from 1998 to 2018. The second objective is analysed using regression analysis, particularly random effects and GMM methods. The time frame for the data used is over the period 2001 to 2016. The third objective is assessed using VECM, where data is analysed over the period 1998 to 2018. There are always alternative methods that can be used to attain the same objectives. Justifications were thus provided for selecting the particular methods employed. The estimation procedures involved the use of regression models as well as univariate methods, with model selection being grounded in the study's theoretical foundations discussed in previous chapters. Justifications were also provided for the choice of estimation methods and procedures. The data used in the assessment models was also described. Although some primary data was employed, the study mainly relied on secondary data from reliable sources. This removed any potential bias that could result from primary data, which is affected by sampling, collection methods and other potential challenges.

The description of the study's methodology sets the stage for the estimation and presentation of results, as well as their implications in the following chapter.

CHAPTER 7: FINDINGS, ANALYSIS AND DISCUSSION

7.1 Introduction

With the methodology described, this chapter demonstrates how the study's objectives were achieved by showcasing how the findings provide answers to the key research questions. The chapter is organised in line with the six key research questions which formed the backbone of this study. Section 7.2 answers the first two research questions on whether existing evidence shows that there has been acceptance of the competition reform agenda in the TFTA, based on descriptive statistics analysis using graphs and illustrations. Given the size of this region, the study also assessed whether geographic or sub-regional differences would render some countries more likely to adopt competition reforms than others. The implication of variations or otherwise in the extent to which competition reforms have been adopted is also discussed in this section, especially with respect to whether the emerging patterns and trends imply that the patterns explored in subsequent sections can emerge.

Section 7.3 discusses whether the analysis of the emerging patterns and trends based on the adopted models demonstrates that economies that have adopted and tightened their competition regimes have been able to unlock international trade benefits compared to those that have not done so. In particular, the section discusses the magnitude of such benefits, and the implications in terms of the competition reforms agenda going forward. It also examines other factors which would help to explain the manner in which competition reform benefits, as reflected by international trade, can be enjoyed.

Section 7.4 discusses the results from the analysis of the role played by economic growth and development, as measured by GDP, in spurring economies to adopt competition reforms. It discusses the findings' implications for the competition reform agenda going forward, especially whether there is a need for proper targeting in terms of advocating for such reform. The findings and their implications are discussed with respect to existing theories and evidence in section 7.5, which prepares the ground for the concluding observations in the final chapter.

7.2 Acceptance of the competition reform agenda in Africa

As noted in Chapters 4 and 5, there are two dimensions to competition reforms in the countries forming the TFTA which would reflect whether the region has generally accepted such reform. The first is reflected in the increase in the number of countries with competition regimes, while the second is reflected in the quality of the competition reforms that has been embraced, with quality competition regimes generally reflecting faith in competition principles. This is the basis used to explain the results and their implications.

7.2.1 Country and overall regional assessment of competition reforms acceptance

The quantity dimension is based on the evolution of the number of TFTA countries with competition laws. Based on the number of TFTA countries with competition laws or policies or both, there was a gradual but apparent increase in competition reforms between 1998 and 2018 (Figure 9). Only 28% of the 25 TFTA countries under review had competition laws in 1998[52]. There was a noticeable increase between 2003 and 2009, such that by 2009, about 68% of the countries in the proposed region had embraced competition reforms. Although the increase was less pronounced between 2009 and 2018, at least 80% of the region has now embraced competition reforms. This would create an expectation of competitive outcomes in the TFTA market. Although the remaining five countries is a significant number, if the increasing number of competition laws and policies is matched by active enforcement, this would be very instrumental in enhancing competition outcomes in the region. Thus, in general, the number of countries in the TFTA with competition laws is large, which could be construed to imply that there is significant acceptance of competition reforms in the region. The expectation is that there is a noticeable need for a departure from oligopolistic and monopolistic markets towards those that promote fair competition outcomes

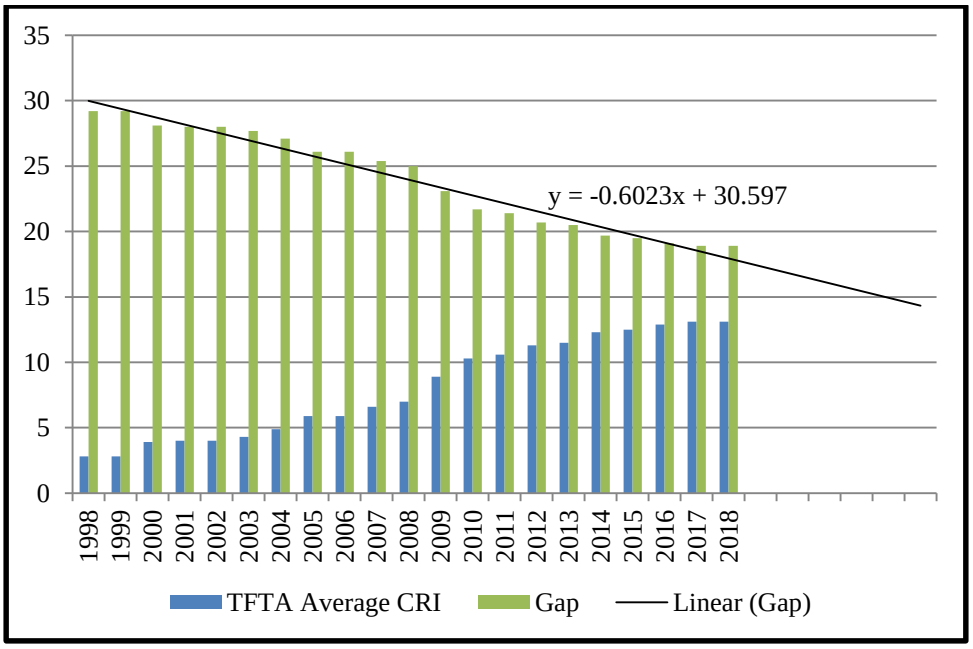
[52] The seven countries were the DRC, Kenya, Malawi, South Africa, Tanzania, Zambia and Zimbabwe.

Source: Author's construction

Figure 9: Evolution of countries with competition laws in the proposed TFTA (percentage)

However, while numbers are important, it is the quality of such reform that matters in influencing competition outcomes in the market. The quality of the competition regimes can be assessed based on improvement in the CRI in the TFTA over time. One way of reflecting this is to calculate the mean value for the CRI in all 25 countries each year from 1998 to 2018, and to trace how this mean value increased. Calculating the 'gap' as the difference between the mean score for the TFTA and 32 (the maximum possible score) and tracing the extent to which this gap has decreased since 1998 would also help to determine the length of time it might take for the average quality of competition regimes in the TFTA to reach the highest possible score in the future. This is illustrated in Figure 10. Firstly, while, as shown in Figure 9, the number of countries adopting competition reforms was static between 1998 and 2002, it is apparent that efforts were made during this period to improve the quality of the competition regimes, which is reflected in the slight increase in the CRI over the period (Figure 10). However, as the number of competition laws increased between 2003 and 2010, it is clear that the quality of the competition regimes improved, suggesting that countries were adopting improved versions of the competition regimes embraced by their predecessors. Although the

number of countries with competition reforms remained the same between 2012 and 2015 (Figure 9), there is a noticeable increase in their quality over the same period (Figure 10). This demonstrates that efforts were made to improve these regimes through amendments to address observed limitations.



Source: Author's construction

Figure 10: Annual trend of the average CRI for the countries in the TFTA and the gap, 1998-2018

Despite these improvements, Figure 10 shows that the quality of competition laws remains poor. Although about 56% of the countries in the region had adopted competition reforms by 2007, the mean CRI was only 6.6. By 2018, the mean average CRI had only increased to 13.1. This implies that the average quality of competition reforms in the TFTA was only about 41% by 2018. Although the five countries without competition reforms weigh down the average, the general implication is that countries in the region have included other considerations in their competition regimes to enhance welfare objectives, which, although noble, would be expected to restrict the development of fair competition in their economies. The gap analysis based on a linear trend assumption shown in Figure 10 reflects that, were the competition regimes to be fine-tuned over time at the same pace

of competition reforms observed since 1998, the regional mean CRI would be expected to reach 32 only in the year 2049. This underlines that, in general, TFTA countries have not fully accepted the need for strong competition regimes at the expense of other welfare objectives that might conflict with promoting competition.

A number of dynamics affect the regional mean performance, many of which are situated at individual country level. In particular, a country with a large mean CRI score would be expected to have adopted its competition reforms over an extended period of time, given that those countries which only recently introduced their competition regimes would have a low average, weighed down by the number of years without such regimes. Therefore, as the mean score rises, the chances of a discernible competition culture in the country would also be high, given the long period of adoption and, presumably, of enforcement. Thus, the mean scores of all the countries ranked in ascending order (Table 5) show that some countries took many years to adopt competition reforms. This list excludes five countries, namely, Eritrea, Lesotho, Libya, Somalia and Uganda that do not have competition regimes.

Table 5: Descriptive statistics for the CRI across the TFTA countries (1998-2018)

Country	Mean score	Standard deviation of score	Minimum	Maximum
South Africa	22.64	4.23	10	24.5
Zambia	18.36	6.34	13	25.5
Malawi	16.12	4.36	3	17.5
Kenya	15.12	4.73	11.5	21
Tanzania	14.12	0.22	14	14.5
Zimbabwe	13.74	1.30	12.5	17.5
Namibia	11.43	7.41	0	16
Seychelles	10.83	11.77	0	25.75
Botswana	10.48	9.47	0	20
Ethiopia	10.19	7.10	0	18.5
Egypt	8.64	6.86	0	16.75
Eswatini	8	7.10	0	14
Madagascar	7.67	5.56	0	11.5
Mauritius	6.19	6.65	0	13
DRC	6	0	6	6
Rwanda	5.95	8.63	0	18
Burundi	5.57	6.59	0	13
Mozambique	5.12	7.46	0	18
Djibouti	3.14	3.07	0	6
Comoros	1.57	3.94	0	11

Source: Author's construction

Only three countries, namely, South Africa, Zambia and Malawi have mean scores which at least reaches the midpoint level, although Kenya is very close. This suggests that these three countries have enjoyed a quality competition regime over a longer period. The minimum score (corresponding to the value of the CRI for each country by 1998) confirms the general expectation that during the nascent years of competition reforms adoption when the competition doctrine was still new, countries had either very weak competition regimes or none at all. Countries that had adopted competition reforms by 1998 but did not consistently review them might have a low mean score even though they have a long history of competition reforms. Thus, although the mean score could be below the midpoint for some countries, the six with a history of competition reforms spanning more than two decades (South Africa, Zambia, Malawi, Kenya, Tanzania and Zimbabwe) would also be expected to have a competition culture.

The standard deviation of the CRI score is also critical. A high standard deviation shows a wide spread from the average score, and this would be expected for a country that has significantly improved its regime compared to its expected score. Thus, a country that has significantly improved its competition regime would have a high standard deviation, while those that have hardly improved theirs and hence have remained static will have a very low standard deviation. Since none of the countries started with a high-quality competition regime, a low standard deviation is considered to represent low quality of the regime as this would not have been improved upon significantly. The standard deviation level can thus also be used to reflect the extent to which competition reforms have been accepted in the region.

Only the DRC did not make any attempt to enhance its competition regime between 1998 and 2018[53]. Tanzania, Zimbabwe, Djibouti and Comoros also made few changes and the quality of their competition regimes was not expected to be significantly different from when they were introduced. However, the Seychelles, Botswana, Rwanda and Mozambique in that order lead in terms of efforts to improve the quality of their competition

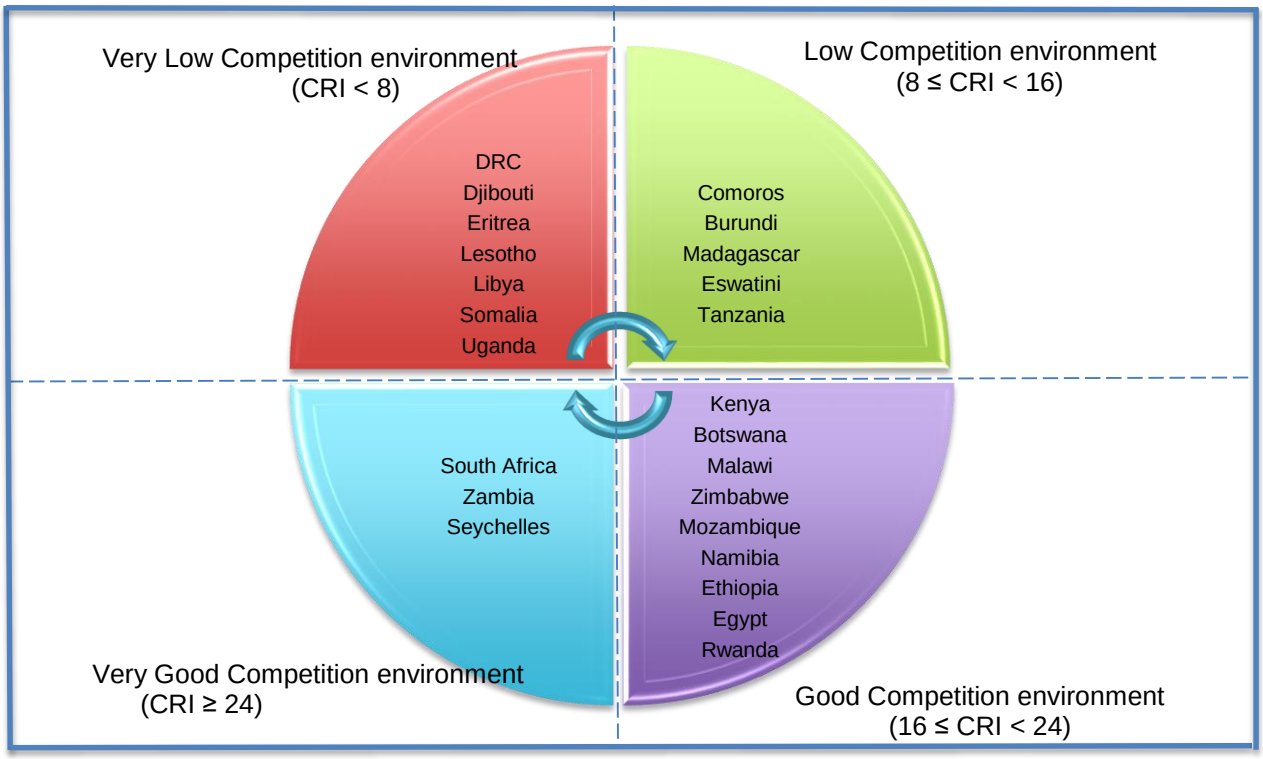
[53] The competition regime in the DRC was only improved in the second half of 2018.

regimes. The standard deviation also shows that the TFTA countries were generally embracing competition reforms, with only the depth of change differing. This pattern creates the expectation that the markets would have responded positively.

The strength of the competition regimes in 2018 gives a general idea of the expected current strength of such regimes in TFTA countries. While the mean score takes into account the entire period under focus, and hence would be a good reflection of the nature of competition in the markets, the maximum score, which corresponds to the year 2018, can be regarded as a summation of all the efforts to date to improve the competition regime. Theoretically, the country with the highest maximum score has the strongest competition regime. However, some of the strong competition regimes are relatively new, especially given that late adopters would have the advantage of learning from early adopters. Thus, only those economies with a high mean score, together with a high maximum score would be associated with a long period of high quality competition regime enforcement.

In order to reflect the current status of competition regimes, the maximum CRI score can be disaggregated into four quadrants to reflect the level of competition that would be expected to prevail in these economies (Figure 11). With this strict categorisation, only three countries, South Africa, Zambia and Seychelles, could be expected to have a very strong competition environment, based on the strength of their competition regimes as they existed on paper in 2018. However, nine other countries would also be expected to have good competition environments, as their competition regimes are fairly strong. Thus, at least 12 countries, which constitute about 44% of those under review, were expected to have markets that are characterised by competition. In addition, while the level of competition would be expected to be just below the average, five more countries' markets would be expected to be subjected to competition, as their score could be closer to 16. Thus, only in seven countries, constituting 28% of those under review, would competition be expected to be insignificant. This would also imply that the competition reform agenda in the TFTA has largely been accepted, although the level of acceptance differs. It assists in estimating whether the differences in competition reform adoption would be reflected

in differences in the benefits derived from international trade, which is influenced by the prevailing level of market competition.

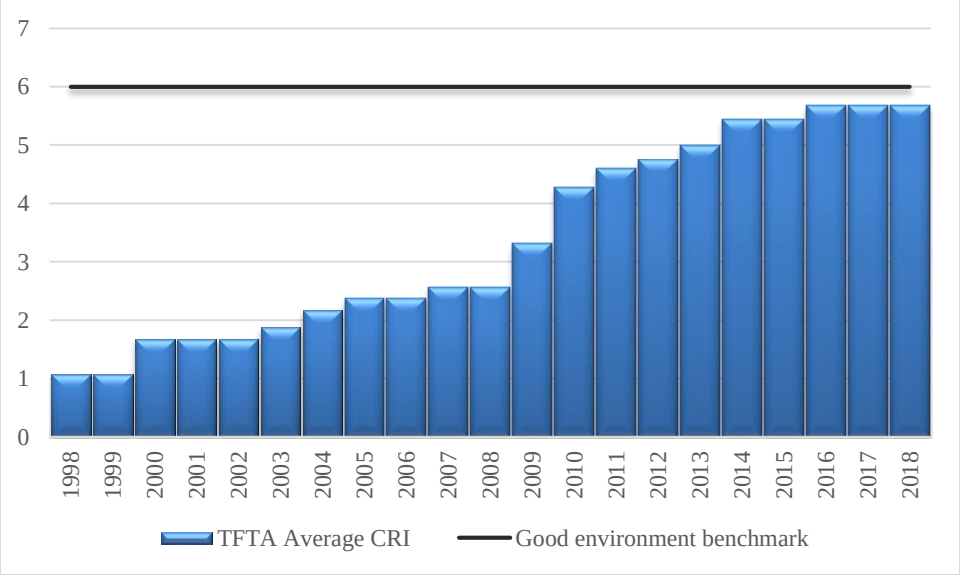


Source: Author's construction

Figure 11: Classification of TFTA countries based on quality of competition regimes

Since the CRI is mainly composed of the substance of the law as well as the strength of the institutions, the mean scores can be used to identify areas where the strength of the laws is deficient. This can be done by tracing the evolution of the mean scores disaggregated into the measures for authorities, as well as the substance. Strong enforcing institutions might compensate for the poor design of competition laws, as it is only through enforcement that weaknesses are identified and corrected. Thus, strong enforcement institutions can be regarded as the main determinant of the strength of the competition regime. A disaggregated mean score analysis was conducted for the region based on existing competition laws.

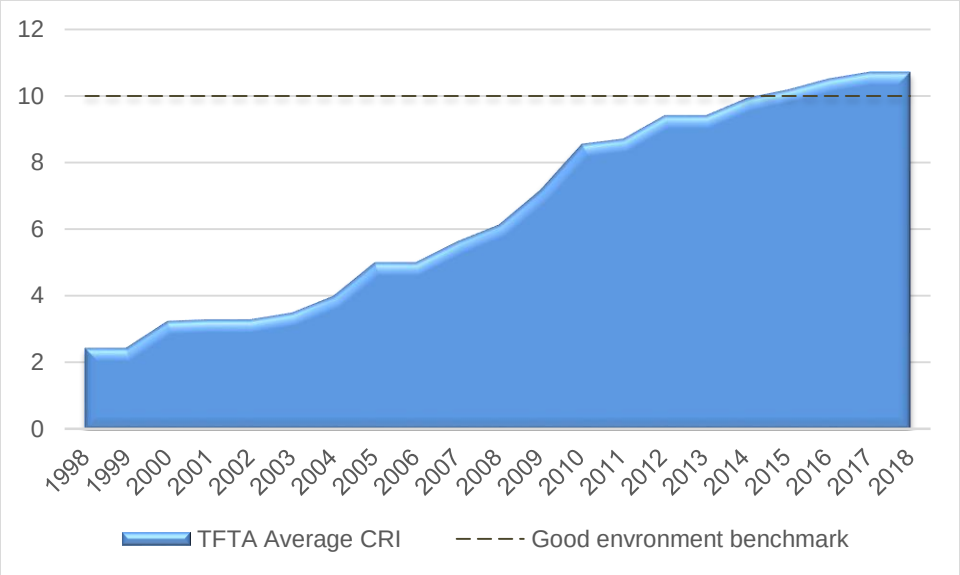
The CRI maximum score for strong institutions is 12, which means that deviation of the mean score from the midpoint value of 6 can be used as a proxy for strong competition authorities. The evolution of the CRI mean scores for the institutions established to enforce the competition regimes in all the countries in the TFTA with competition regimes (Figure 12) shows that although they increased over time, the average for the TFTA was still below the midpoint value of 6 by 2018. The implication is that on average, the institutions that have been established to enforce existing competition regimes in the TFTA are weak and would not be expected to enforce the competition laws to the level where full realisation of the expected benefits would be possible.



Source: Author's construction

Figure 12: Strength of enforcing competition institutions in the TFTA, 1998-2018

While the regional average is low in terms of institutions, there are some notable positives with respect to the substance of the law (Figure 13).



Source: Author's construction

Figure 13: Strength of the substance of the competition regimes in the TFTA, 1998-2018

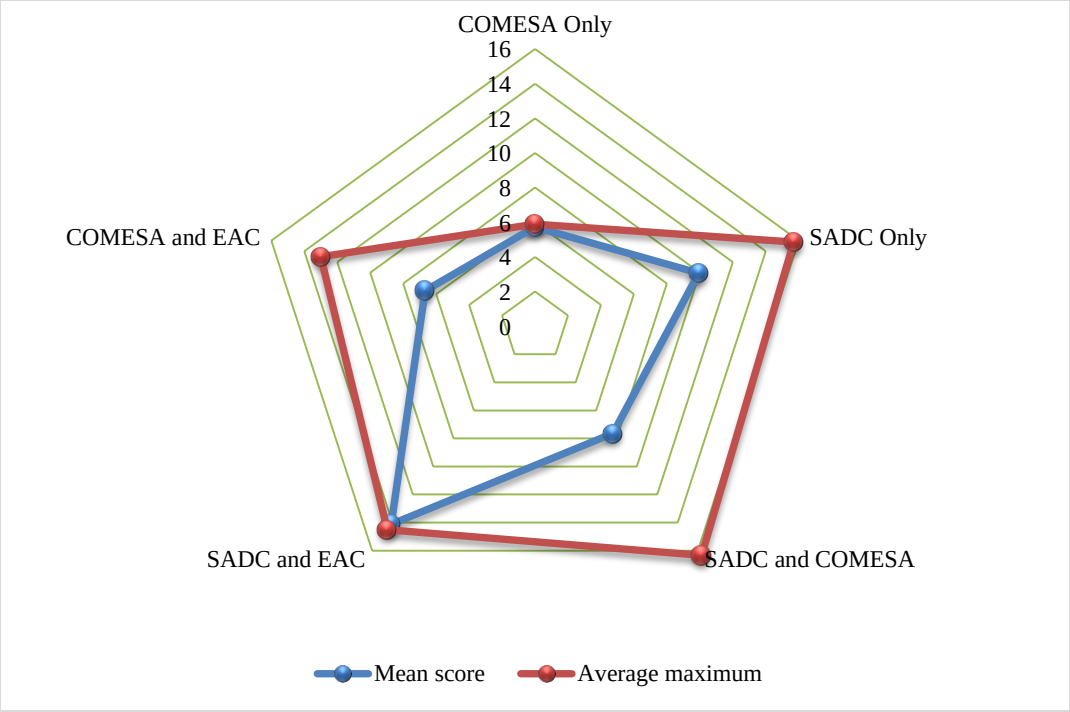
By 2014, the average quality of the competition regimes in the TFTA with respect to the substance of the law was strong enough to create a good competition environment, given that the mean CRI score was at least 10. This implies that the competition law regimes in the TFTA are generally stronger with respect to the substance, but enforcement can be weaker because the institutions put in place to enforce the laws are relatively weak. This could be an area that advocates for competition could focus on in their quest to ensure that a strong competition culture develops in the TFTA.

7.2.2 Impact of other geographic and regional dimensions in influencing acceptance

RECs' influence on the pace of the adoption of competition reforms could also explain the nature and pace of such reform across the countries. As noted in Chapter 1, the TFTA is composed of three regional integration bodies, COMESA, the EAC and SADC. Although COMESA's membership cuts across different geographical locations, generally SADC and the EAC are composed of southern and eastern African countries respectively. These regional bodies' influence on country decisions could thus be affected by geographical factors. However, there are many cross-memberships across the regional bodies. Five

countries (South Africa, Lesotho, Namibia, Botswana and Mozambique) belong to SADC only without cross membership, while seven (Comoros, Eritrea, Libya, Djibouti, Egypt, Ethiopia and Somalia) only belong to COMESA. All the EAC members also belong to either COMESA or SADC.

There are two main ways to assess acceptance of competition reforms within the REC context. First, the mean score would give an indication of the level of competition expected to prevail in the region, as it takes into account both the history of competition reform adoption as well as the current quality of the competition regimes. Second, the average maximum score would reflect the current average strength of competition regimes in the region, which would indicate the current level of competition reform acceptance. The mean and average maximum scores across the different categories are shown in Figure 14. The mean scores underline what has already been observed, that the existing state of competition in the markets is expected to be low, as the history of competition reform adoption is relatively new. The average maximum regional scores reinforce the fact that competition regimes are mostly new, as they demonstrate that the current status of competition regimes is stronger than what is implied by the average scores.



Source: Author's construction

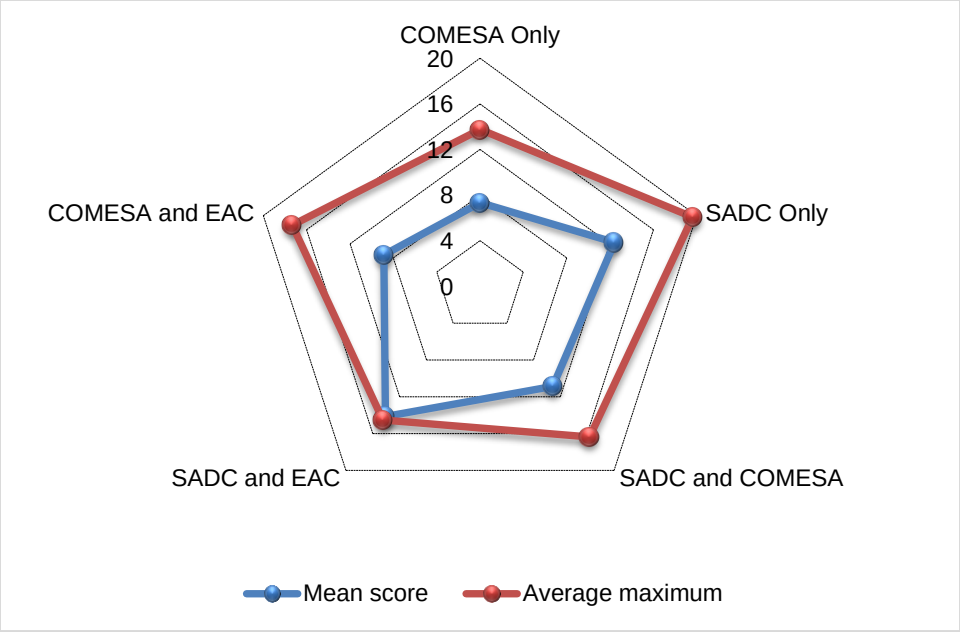
Figure 14: Comparison of the strength of competition regimes by REC

A number of implications arise from the situation described by Figure 14. First, both the mean score and the average maximum score suggest that events at the SADC level might have been responsible for influencing strong competition regimes. The maximum average score for countries that belong to SADC only, or to SADC and COMESA is generally very close to 16, which is the midpoint of the maximum possible score, and would fall within the 'good' competition environment. This means that belonging to SADC is generally associated with a higher competition reforms score. Thus, countries that belong to the SADC REC are likely to have stronger competition regimes than those that belong to the EAC and COMESA.

Belonging to COMESA is associated with both the lowest mean and the lowest average maximum score. This is also understandable as four of the five countries without competition regimes among the 25 countries reviewed belong to COMESA. The EAC's influence in enhancing the quality of competition regimes is reflected in the increase when COMESA and the EAC's scores are compared against a comparison of COMESA only

members. Thus, despite the fact that no country belongs exclusively to the EAC, EAC membership has a fairly strong effect on the quality of the regional scores. It can therefore be concluded that, in general, the competition reforms agenda has been embraced more in the southern and eastern parts of the continent than in other regions that are home to COMESA members.

However, given that the regional averages are significantly weighed down by economies without competition laws, the strength of existing competition regimes is best reflected by discarding countries with no competition laws. This would indicate the strength of the laws adopted. Significant changes are apparent when this is the case. The regional mean scores continue to reflect the expected low competition culture across all three RECS (Figure 15). However, there are significant improvements for COMESA, as countries without competition laws were weighing down the regional score. The maximum score shows that, although the COMESA region's regime is less strong that that of SADC, both regimes are fairly close to the 'good competition environment' category. The fact that countries belonging to both the EAC and COMESA fall into the good competition environment category attests to the EAC's influence. The SADC region is expected to be characterised by the strongest competition regimes, although strong competition regimes are also expected in the EAC region. This underlines that a fair number of countries with competition laws have tried to ensure that these laws would be able to create some level of competition culture if enforced.



Source: Author's construction

Figure 15: Strength of competition regimes based on countries with competition laws only

In summary, progress in competition reforms as reflected by the CRI shows that such reform has only been partly accepted in the TFTA. However, there are significant observed differences between countries, which could be expected to be reflected in the extent to which they derive associated benefits, including international trade. The current status with respect to competition reform adoption thus lays the groundwork to determine whether these differences would be reflected in the enjoyment of trade benefits.

7.3 Competition reforms' impact on international trade

As discussed earlier, the gravity international trade model is used to examine the manner in which competition reforms have affected international trade. To recap, equation (4) which is the linearized form of the model with the specified variables was given as:

$$lnX_{ijt} = \beta_0 + \beta_1 lnY_{it} + \beta_2 lnY_{jt} + \beta_3 lnDist_{ij} + \beta_4 lnComp\_exporter_{it} + \beta_5 lnComp\_importer_{it} + \beta_6 COMESA_{iit} + \beta_7 SADC_{ijt} + \beta_8 EAC_{ijt} + \beta_9 SACU_{ijt} + \beta_{10} Border_{ij} + \beta_{11} Lang_{ij} + \varepsilon_{it} \text{----------(4)}$$

This is the general gravity model which is estimated using static and dynamic models of panel data. However, it was necessary to conduct model diagnosis, including data cleaning and unit root tests to ensure that the data conformed to expectations in terms of the theoretical stipulation of the model, while ensuring that only stationary variables were used to avoid spurious regressions.

7.3.1 Static panel data model estimation for exports and results

The random effects model results with respect to exports are presented in Table 6. These are based on the estimated random effects model presented in equation (4), but allowing for the calculation of the variance-covariance estimates robust standard errors of the model parameters to control for heteroscedasticity[54] (Torres-Reyna, 2007). From the results, it is apparent that the Wald Chi-square test statistic is very significant, even at 1%; hence, the model is a good fit with the coefficients being significantly non-zero.

The regression results generally conform with the traditional gravity model stipulation that bilateral trade (exports) between any two countries is positively influenced by the size of the two economies, while being negatively related to their distance. These three variables are all significant with the coefficients also having the expected signs. In particular, the model predicts that if the GDP of the export destination increases by 1%, this will result in an average increase in exports of just over 1% holding other variables constant, which is a near one-to-one relationship. If the GDP of the exporting country increases by 1%, its export potential will increase by about 0.6%, holding other explanatory variables constant. This means that while other factors could be at play, expanding economies in the TFTA are bound to generate demand for trade among themselves.

The results also show that exports are very sensitive to distance, even if all the countries are actual or potential members of the same regional grouping. If distance increases by 1%, exports to a TFTA member would fall by about 3.8% on average, holding other variables constant. This means that countries would still find it more profitable to export

[54] That, is using the (VCE) robust option in Stata.

to neighbours than to those at a greater distance, even if such economies might not belong to the same REC. The results also show that the competition reform adopted by the exporting country positively influences bilateral exports. In particular, a 1% increase in a country's competition reforms variable will, on average, increase its export capacity by 0.1%, holding other influencing variables constant. However, the results show that the competition variable of the importing country does not significantly influence bilateral exports. In other words, the decision to export to an economy is not influenced by the status of its competition reforms, but by the state of such reform in the exporting economy. As expected, the results also show that a shared language and common border positively influence bilateral exports, while belonging to the SADC free trade area weakly influences exports, as this is only significant at 10% level. However, the results show that belonging to SACU does not positively influence export destinations; rather, countries in SACU export more to non-member states. This is reflected in a significant (at 5%) negative coefficient, which implies that belonging to SACU negatively affects the extent to which exports would flow into the region. The same is true with respect to the EAC, based on a negative but weakly significant (10%) coefficient. Thus EAC members' exports to non-members increase, while those to fellow member states relatively decline. Belonging to COMESA and the EAC apparently has no statistically significant impact on increasing bilateral exports within the TFTA.

Table 6: Random Effects Model Regression results for exports

Random Effects GLS regression results Based on: 5,464 observations and 436 panels		
R-squared: within = 0.0761 Between = 0.5698 Overall = 0.4574		
Wald Chi-squared (11) = 1040.47 Prob > Chi-square =0.0000		
Dependent Variable: logexports		
Variable	Coefficient	Standard Error
lgdp_exporter	0.598***	0.157
lgdp_importer	1.010***	0.134
ldistance	-3.827***	0.426
lcomp_exporter	0.095***	0.030
lcomp_importer	0.014	0.283
COMESA	-0.202	0.328
SADC	0.983*	0.364
SACU	-2.845**	1.436
EAC	-0.884*	0.338
Lang	2.584***	0.465
Border	3.228***	0.682
Constant	-7.782	4.815

Key: Significance level of 1% = ***; 5% = ** and 10% = *

Source: Author's compilation from estimation results

The model thus generally confirms theoretical expectations that adoption of competition reforms significantly influences international trade. However, as noted previously, a random effects model might not deal adequately with the serial correlation problem, as it might be difficult to ensure that all the individual effects variables not included in the model, that are assumed to be part of the disturbance term, have no correlation with one of the explanatory variables. This can be quickly confirmed by the Wooldridge Serial Correlation test (Table 7).

Table 7: Wooldridge Test for serial autocorrelation results

Ho: no first order autocorrelation
F(1, 374) = 14.589
Prob > F = 0.0002

Source: Author's compilation from test results

The results show that, generally, the null hypothesis of there being no serial correlation cannot be rejected. Thus, even though the results are consistent with the expectations of the gravity model, a dynamic panel data model is justifiable, as it addresses the problem of autocorrelation.

7.3.2 Dynamic panel data model estimation for exports and results

The System GMM model developed by Roodman in 2006 was employed and the model specification for the study was generally based on Roodman (2009) and Labra and Torrecillas (2018). There are two critical issues in relation to the estimation of GMM models. Firstly, there is a need to identify variables which are exogenous as well as those that are endogenous to use as instruments. It is known that the GDP variable is endogenous, given that there are a number of variables from economic growth models that have been found to significantly explain an economy's GDP. Thus GDP is generally endogenous. As discussed in the literature review, the nature of competition laws in developing countries is also influenced by a number of factors, which distinguish competition regimes in less developed economies from those of developed economies. Thus, the competition variables also have endogeneity properties, as the increase in both has to be dependent on some other underlying variables in an economy. Moreover, theoretically it is possible that GDP and competition enforcement can be dependent on each other, which also relates to the study's third objective. Given that bilateral trade is used in this model, such that exporting countries will also be importing countries at some time, there is no need to use both the importer and exporter's GDP as instruments, as they are similar. The same would be true with respect to the competition variable. Thus exports, the exporting country's GDP and its competition variable were used as the endogenous variables based on theoretical expectations. The distance between trading

partners was predetermined as was whether countries shared a border, and membership of the three RECs in the TFTA. In the model, these variables were treated as the exogenous variables. However, given that EAC and SACU members also belong to either COMESA or SADC, only membership of COMESA and SADC FTAs was considered for exogenous variables representing regional integration in the model[55]. Despite the large number of instruments adopted, the tally is lower than the number of groups; hence, the model is not subjected to instrument proliferation (Roodman, 2009b). To ensure that standard errors which are robust to heteroscedasticity as well as to the arbitrary patterns that could result from autocorrelation within individuals were obtained, the robust option was used. In addition, given that the time frame was relatively small at 16 time periods, the model also allowed for adjustments to capture small sample corrections to the covariance estimates.

The System GMM model results are shown in Table 8. The F-statistic of the model confirms that, jointly, the explanatory variables are significantly non-zero. Given that the model used a two-step robust estimation method, the Hansen statistic was used to indicate whether or not the model was over-identified due to the use of instruments when heteroscedasticity is present (Labra and Torrecillas, 2018). Using the Hansen test statistic, the null hypothesis that there is over-identification of restrictions is rejected, meaning that the instruments used are acceptable. Since the GMM model was selected to address possible autocorrelation in the random effects model, the Arellano and Bond test statistic (AR) was also given. This is used to detect whether autocorrelation still exists in the model. Stata reports both the first order (AR1) and second order (AR2) serial autocorrelation tests. For GMM models, AR (2) is considered more important as by design AR (1) is bound to report autocorrelation (Roodman, 2009). The AR (2) test statistic shows that the null hypothesis of no autocorrelation is accepted, confirming that the GMM

[55] The other dummy variable, language, could have been included among the exogenous variables. However, given that there are already a number of dummy variables, this could have resulted in endogeneity among the instruments. In addition, some countries changed their official language to embrace other languages, which makes the official language not strictly exogenous. Together with the need to manage the number of instruments for degrees of freedom, language was left out of the model.

methods of estimation were able to eliminate serial autocorrelation problems that were identified in the random effects model.

Table 8: Summary of the two-step system GMM estimation results for exports

Dependent Variable: Exports Based on: 4,666 observations		
No. of observations		4666
No. of instruments		351
No. of groups		377
AR(2) p-value		0.108
F-Statistic (p-value)		57.07 (0.000)
Hansen Statistic		0.162
Variable	**Coefficient**	**Standard error**
lag. lexports	0.216***	0.432
lgdp_exporter	0.993***	0.248
lgdp_importer	1.239***	0.382
ldistance	-2.583***	0.552
lcomp_exporter	0.164***	0.039
lcomp_importer	-0.461***	0.125
COMESA	0.227	0.551
SADC	1.646***	0.514
SACU	1.064	2.381
EAC	-4.099	3.040
Lang	4.015***	0.999
Border	2.644***	0.693
Constant	-32.927***	10.211

Key: Significance level of 1% = ***; 5% = ** and 10% = *

Source: Author's compilation from estimation results

Like the random effects model, the results confirm the general expectations from the gravity model. However, the coefficients are not the same. Bilateral exports are positively related to the trading partners' GDP, while being negatively related to their distance from each other. More specifically, a percentage increase in a country's GDP will boost its exports to a TFTA partner by 0.99% on average, with the effects of other variables held constant. However, if the TFTA importing partner's GDP increases by 1%, it will attract more exports, as bilateral exports to the country will rise by 1.2%, holding the other variables' effect constant. The effect of distance between trading partners is less pronounced under the GMM model than under the random effects model. A percentage point increase in the distance between a TFTA member and its TFTA trading partner will result in a 2.5% decrease in exports to that partner, holding other effects constant. The results also confirmed that a shared language and common border significantly and positively influence bilateral trade. Based on the interpretation of dummy variable coefficients on logged dependent variables by Wooldridge (2012), sharing a border has an incremental effect on exports of more than 260% in comparison to countries that do not share one, holding the effects of other variables constant. A common official language has an incremental effect on exports of about 400%, holding other factors constant.

The findings also show that the competition variable of both the exporting and importing country significantly influence exports, although that of the importing country would generally tend to reduce bilateral exports. Unlike the findings from the random effects model, the GMM model results show that the impact of competition reforms on bilateral exports in any country is more pronounced, as the reported coefficients are larger. More specifically, a 1% increase in the exporting country's competition reforms will be associated with a 0.16% increase in exports, on average, in the short run, holding other things constant. This finding confirms the theoretical expectations already discussed in this study. In particular, the findings are in line with the expectation in Porter's national competitive advantage theory that a country gains competitive advantage through, among other things, firm strategy, structure and rivalry, which are all influenced by competition reforms. They are also in line with Baumol's contestability theory, which holds that competition reforms eliminates strategic entry barriers and opens the economy to trade

(Baumol, 1982). Thus, there is evidence that countries in the TFTA that have undertaken competition reforms and have enforced competition laws, have been able to increase exports to the region at a higher rate than those that have lagged behind.

The results also show that if the competition variable in the importing country increases by 1%, this will lead to a 0.46% decrease in bilateral exports, on average, in the short run, holding other things constant. This implies that a country that has embraced competition reforms and hence has fair competition becomes competitive, which would see a decrease in exports to that country from traditional exporting countries. A country that does not adopt competition reforms, and whose markets are generally not subjected to intense competition, is generally less competitive and it is easier for products from economies that are more competitive (with such competitiveness also enhanced by competition reforms) to penetrate such economies. Competition reforms removes barriers, allowing more domestic firms to participate which becomes a basis to build competencies and capacity in the long run. Thus, embracing competition reforms enables an economy to grow through expanded exports rather than enhanced imports. This confirms Clarke and Evenett's (2003) finding that the vitamins cartel tended to export more to countries without competition laws.

The GMM method also enabled an assessment of the long-run impact of competition reforms on exports. The coefficients of the two competition variables in the model already discussed generally show the short-run or immediate (which can be within a year) response of exports to changes in competition reforms. However, there was need to assess the long-run picture, that is, the total adjustment of exports following a sustained competition regime. This was measured by the long-run coefficients of the model (Bruno et al, 2017). These coefficients were defined and estimated in Stata[56] and the results are shown in Table 9 together with the reproduced short-run coefficients already given in Table 8.

[56] Using the nlcom Stata command to define the relationship.

Table 9: Long-run and short-run coefficients for the estimated model

Dependent variable: Exports		
Variable	Coefficient in short run	Long-run coefficient
lcomp_exporter	0.164***	0.209
lcomp_importer	-0.461***	-0.587

Key: Significance level of 1% = ***; 5% = ** and 10% = *

Source: Author's compilation from estimation results

The results generally show that the impact of competition reforms becomes more pronounced in the long run compared to the short-run effects, with the long-run impact being sustained[57]. The average bilateral exports for the data used in the model were about USD 67.4 million, while the average competition reforms variable was about 8.3. In the short run, if a country improves its competition reforms variable by 1% from an average of 8.3 to about 9.1, the country would, on average, be able to increase its exports by an additional USD 11.1 million in the short run within a year. However, in the long run, if competition reforms increases by 1%, the impact on exports would increase to about USD 14.1 million per year. Similarly, an exporting country in the TFTA would lose about USD 31.1 million if its importing partner increased its competition reforms variable by 1% in the short run, which would eventually reduce exports by about USD 39.6 million per year in the long run. Therefore, countries that improve competition reforms are taking a positive step towards reduced import dependence for the products which other TFTA countries have generally exported to them.

7.3.3 Imports model: Static panel data model estimation and results

Given that imports also matter for international trade, the random effects model was also estimated for imports and the results are presented in Table 10. Similar to the exports model, this model is estimated by allowing for the calculation of the variance-covariance

[57] They are sustained since the long-run coefficients are statistically significant.

estimates robust standard errors of the model's parameters so as to control for heteroscedasticity. The Wald Chi-square test statistic is very significant at 1%; hence, the model is also a good fit, as the coefficients are significantly different from zero.

The regression results also conform to the traditional expectations of the gravity model stipulation. The size of the trading economies positively influences bilateral imports while distance between the economies negatively influences bilateral imports. These three variables are also all significant with the coefficients also having the expected signs. The model predicts that if the GDP of the import source country (exporter) increases by 1%, this will result in an average 1.2% increase in bilateral imports, with other factors held constant. An 1% increase in the GDP of the importing country will result in an increase of around 1% in demand for imports from the TFTA, holding other explanatory variables constant. Like exports, imports are sensitive to distance, given that if the distance between bilateral trading partners increases by 1%, this will reduce imports from the TFTA by about 3.5% on average, with other variables held constant. The results also show that a common language and border significantly and positively influence bilateral imports. However, only belonging to the SADC free trade area is statistically significant in positively influencing imports. The model predicts that belonging to the EAC would reduce the chances of importing from each other, based on a negative coefficient that is statistically significant. The explanation is that the proportion of imports by EAC members from each other decreased in comparison with the proportion of imports from non-EAC members during the period under review.

Table 10: Random Effects Model Regression results for imports

Random Effects GLS Regression Results Based on: 5,114 observations and 397 panels		
R-squared: within = 0.1001 Between = 0.6212 Overall = 0.5200		
Wald Chi-squared (11) = 1131.47 Prob > Chi-square =0.0000		
Dependent Variable: limports		
Variable	Coefficient	Standard Error
lgdp_exporter	1.211***	0.128
lgdp_importer	0.995***	0.120
Ldistance	-3.492***	0.360
lcomp_exporter	0.065***	0.024
lcomp_importer	-0.002	0.021
COMESA	-0.336	0.260
SADC	0.447*	0.243
SACU	-1.212	0.905
EAC	-0.579**	0.294
Lang	2.744***	0.422
Border	3.052***	0.543
Constant	-23.02***	4.146

Key: Significance level of 1% = ***; 5% = ** and 10% = *

Source: Author's compilation from estimation results

However, in the context of this study, the relationship between imports and competition reforms is more important. The results show that only competition reforms by the import source markets matters and not such reform on the part of the country that seeks to import. More specifically, the results show that bilateral imports in the TFTA will increase by 0.07% if the source market (exporting country) improves its competition reforms by 1%, holding other influencing variables constant. The expected increase in imports is thus very low in response to competition reforms, even though very significant. However, while the results show a negative relationship between an increase in competition reforms and imports by the importing country (negative coefficient), this relationship is not statistically

significant. This also confirms the previous relationship established by the exports random effects model, where the competition variable of the importing country was not found to significantly influence bilateral exports.

As confirmed from the random effects model on exports, there is also a need to estimate the dynamic panel data model as the random effects imports model is likely to be affected by serial correlation problems arising from omission of other individual effects variables that are not adequately captured by the disturbance term. The Wooldridge serial autocorrelation test was also applied, and the results (Table 11) confirm that it is not possible to reject the null hypothesis that there is no serial correlation in the model.

Table 11: Wooldridge Test for serial autocorrelation in the panel data model used

H0: no first order autocorrelation
F(1, 374) = 13.604
Prob > F = 0.0003

Source: Author's compilation from test results

Even though the results are consistent with the expectations of the gravity model and confirm the exports model, a dynamic panel data model could improve the results.

7.3.4 Dynamic imports panel data model estimation and results

The system GMM model estimated for exports is also extended to imports, using the same rationale with respect to identification of expected exogenous and endogenous variables. The results from the estimation are shown in Table 12. A check on the model diagnosis reveals that the F-statistic and its associated p-value of the model confirm that, jointly, the explanatory variables are significantly non-zero. The Hansen statistic also shows that the instruments are generally acceptable. The AR (2) test statistic means that the null hypothesis of no autocorrelation is accepted, confirming that the serial autocorrelation problems embedded in the random effects model were eliminated by the use of GMM methods of estimation.

Table 12: Summary of the two-step system GMM estimation results for imports

Dependent Variable: Imports Based on: 4,594 observations		
No. of observations		4594
No. of instruments		368
F-Statistic (p-value)		44.46 (0.000)
No. of groups		377
Hansen Statistic		0.336
AR(2) p-value		0.107
Variable	**Coefficient**	**Standard Error**
lag. limports	-0.067**	0.035
lgdp_exporter	1.222***	0.241
lgdp_importer	1.823***	0.305
ldistance	-4.731***	0.600
lcomp_exporter	0.171***	0.057
lcomp_importer	-0.138	0.098
COMESA	-0.689	0.550
SADC	-0.539	0.563
SACU	0.902	3.068
EAC	-19.201***	5.857
Lang	3.619***	1.299
Border	4.545***	0.829
Constant	-32.53***	8.970

Key: Significance level of 1% = ***; 5% = ** and 10% = *

Source: Author's compilation from estimation results

The results show that bilateral imports among TFTA members can indeed be reflected by a gravity equation model. Like exports, bilateral imports are positively related to the trading partners' GDP while being negatively related to their distance. The estimated coefficients show that a 1% increase in a country's GDP will on average, boost its imports from a TFTA partner by 1.8%, holding constant the effects of the other variables. However, if the GDP of the source market partner in the TFTA were to increase by 1%, imports will rise by 1.2%, holding the effect of all the other variables constant. This implies that bilateral imports are more responsive to the manner in which a country's GDP is growing compared to the growing partners' economies. Bilateral imports are also very sensitive to distance between the trading partners; they fall by about 4.4% for every 1% increase in distance between an importing country and its source markets, holding other

effects constant. This means that regional integration arrangements are more likely to be enjoyed by economies that are close to each other than those that are far away. Sharing a border has an incremental effect on imports of more than 418% in comparison with countries that do not share a border, holding the effects of other variables constant. A common official language also has an incremental effect on imports of about 360% compared to those not sharing the same language, holding other factors constant.

The main interest in this study for this model is the relationship between competition reform adoption and imports. While the exports GMM results showed that competition reforms in both the exporting and importing country were important in reflecting bilateral exports, this is not the case with respect to imports. The results show that the competition variable of the exporting rather than the importing country will have a significant influence on bilateral imports. Although the negative effect of increasing competition reforms in the importing country is still apparent (negative coefficient), this is not statistically significant. The results show that if the competition variable in the exporting country were to increase by 1%, it will be associated with an average increase of 0.18% in bilateral imports in the short run, holding other things constant. This is in conformity with the theoretical expectations of competitive advantage, where competition reforms assists in penetrating export markets. However, the earlier finding from the exports model that adopting competition reforms by the importing country reduces trade is still observable, but not statistically significant.

Since only the competition reform variable of the exporting country matters in influencing bilateral imports, the long-run impact of competition reforms on imports can only be estimated with respect to one variable. The estimated results of the long-run effects are shown in Table 13.

Table 13: Long- and short-run coefficients for the estimated model

Dependent variable: Imports			
Variable	Coefficient in short run	Long-run coefficient	Significance level of long-run coefficient
lcomp_exporter	0.180	0.168	1%

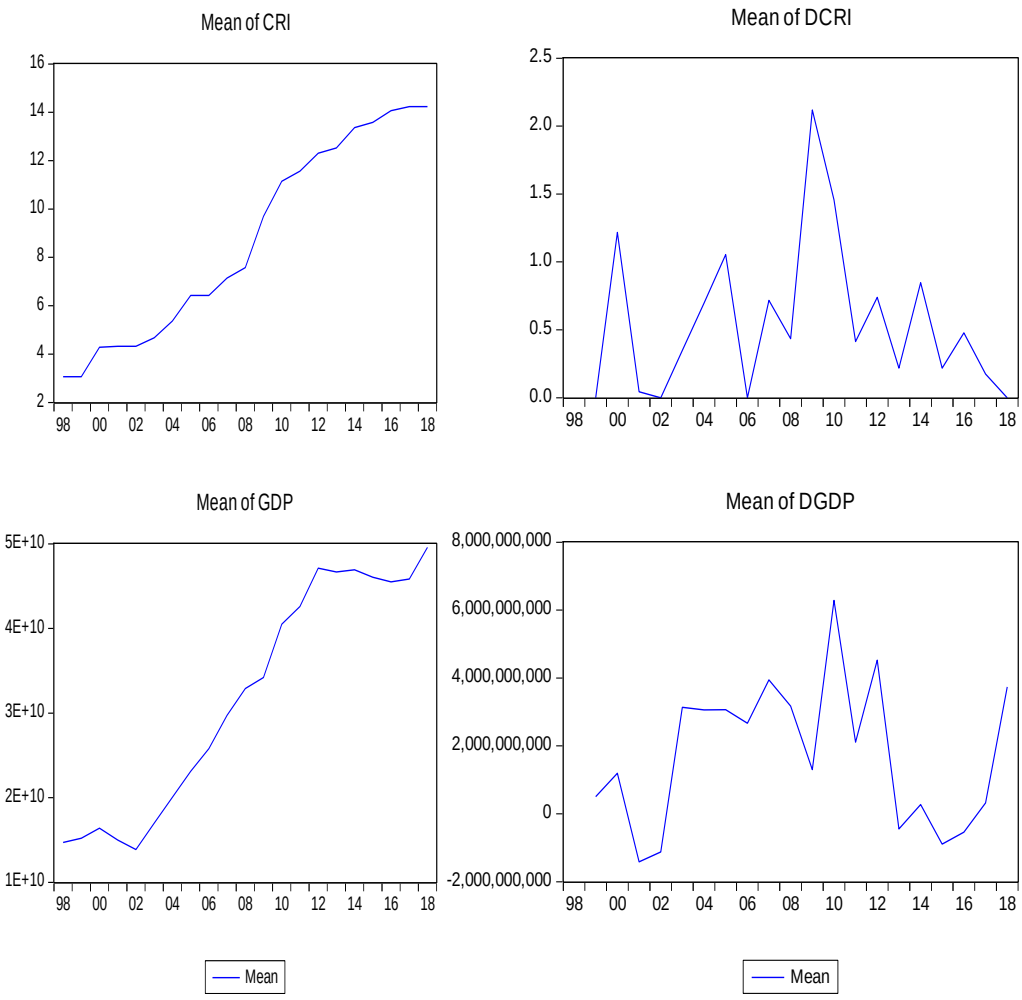
Source: Author's compilation from estimation results

The results generally show that the impact of competition reforms adopted in the exporting country is less pronounced in the long run than the short run, even though the impact of such reform would still be sustainable. In the long run, a 1% increase in the competition reforms variable in the exporting country would result in bilateral imports increasing by 0.17%, with other variables held constant. This implies that in the long run, the increase in imports due to competition reforms in the exporting country will be reduced by about 0.012 percentage points, as the effects of the shock following changes in market structures die down.

7.4 Influence of economic development on competition reforms adoption

The panel data for the 23 countries during the period 1998 to 2018 generally shows that the mean CRI and GDP were trending upwards (Figure 16), which could be seen as reflecting some relationship between the variables. However, since the two variables are generally non-stationary, the constant upward trend can largely be attributed to the linear trend as a result of time, as the differenced means[58] confirm that any relationship between the two variables is not very pronounced. Nonetheless, the differenced graphs also show that there are some periods when the movements appear to be related. This is confirmed by the correlation coefficient between GDP and CRI, which is about 0.38. It seems to indicate a weak but direct relationship between GDP and the CRI, although the direction of causality is not apparent.

[58] The differenced mean means the average of the variable after differencing it to correct for stationarity. The differenced GDP variable is shown as DGDP while that of the CRI is shown as DCRI



Source: Author's construction

Figure 16: Means for competition reforms and GDP across the TFTA countries

The weak but positive relationship called for a model to assess whether this relationship is indeed statistically significant.

7.4.1 Unit root and cointegration tests

As noted earlier, a panel VAR or panel VECM model test was used to determine whether the decision to adopt competition reforms could have been influenced by the existing level of economic development. This was given earlier in equation (14) as:

$$CRI_{i,t} = \alpha_i + \sum_{k=1}^{K} \beta_{ik} CRI_{i,t-k} + \sum_{k=1}^{K} \delta_{ik} GDP_{i,t-k} + \varepsilon_{i,t}$$ ---------(14)

The unit root tests results for the two variables[59] are shown in Table 14. The results are based on the assumption of an individual intercept with no time trend and automatic lag selection using the Schwartz Information Criterion. It is apparent that the null hypothesis of a unit root is accepted using three of the four unit root test statistics for the CRI variable (except for the PP Fisher Chi-square test). Since in this model a variable has to pass all four tests to be considered stationary, it is considered non-stationary in levels. The GDP variable is also non-stationary in levels based on all four tests. However, for both variables, the first differences are stationary; hence, the order of integration for the two variables is the same (I(1)). This implies that rather than differencing and estimating the VAR using stationary first differences, it might be possible to estimate a VECM if these two variables are cointegrated. It was, therefore, necessary to conduct panel cointegration tests.

Table 14: Panel unit root tests for the variables

	Levin, Lin & Chu t*		Im, Pesaran and Shin W-stat		ADF - Fisher Chi-square		PP - Fisher Chi-square	
	Statistic	P-value	Statistic	P-value	Statistic	P-value	Statistic	P-value
GDP	4.96	1.00	8.11	1.00	9.66	1.00	9.03	1.00
CRI	-0.71	0.240	1.64	0.950	20.14	0.950	52.49	0.013
D(GDP)	-11.71	0.00	-10.19	0.00	185.89	0.00	234.51	0.00
D(Comp)	-6.313	0.00	-5.201	0.00	27.68	0.00	31.13	0.00

Source: Author's compilation from test results

The results for the Johansen Fisher Panel Cointegration test are shown in Table 15. The Fisher test statistic for cointegration is reported in two parts; the trace test and the

[59] These are tests for the variables in levels and not logarithms which were conducted in the previous model.

maximum-eigenvalue test. In this study, the cointegration results needed to be confirmed by both tests to be considered valid. Both test results confirm that the null hypothesis that there is no cointegrating equation is rejected. However, the null hypothesis that there is at most one cointegrating equation cannot be rejected. This confirms that there is some evidence of the two variables being cointegrated; hence, the panel VECM was the appropriate model for the study.

Table 15: Johansen Fisher Panel Cointegration Test: CRI and GDP

No. of cointegrating equations	Fisher statistic (trace test)	P-value	Fisher statistic (max-eigen test)	P-value
None	69.38	0.0014	78.81	0.0001
At most 1	45.07	0.2001	45.07	0.2001

Source: Author's compilation from test results

The Akaike Information Criterion and the Schwartz Criterion for the VECM were minimised at the optimal lag length of 2. The Vector Error Correction Residual Serial Correlation LM test results (Table 16) confirm that at two lags, the model does not run into the problem of serial correlation.

Table 16: Residual Serial LM Correlation Tests for the VECM

Null Hypothesis: There is no serial correlation at lag order h		
Included observations: 414		
Lags (h)	LM-Stat	P-value
1	2.700950	0.6090
2	0.919755	0.9217
3	1.429072	0.8391
4	1.695033	0.7916
5	14.56373	0.0057
6	2.294151	0.6818
7	23.11518	0.0001
8	6.171126	0.1867
9	38.23193	0.0000
10	5.541497	0.2361
11	6.879565	0.1424
12	4.672403	0.3226

Source: Author's compilation from estimation results

The results show that it is only at five, seven and nine lags that the model is subjected to serial correlation challenges; hence, lag 2 was considered appropriate for the study.

7.4.2 Estimation of the Model and results

The estimation results of the VECM based on two lags are shown in Table 17. Causality can be examined at two levels; the short and the long run. The long-run relationship is confirmed by the cointegration equation coefficient, which confirms whether a long-run relationship could exist between the variables.

Table 17: Estimation results from the VECM for competition reforms and GDP

Variable	Coefficient	t-statistics	p-value
Cointegrating equation	-0.036	-2.608	0.0093
CRI lag 1	-0.122	-1.924	0.055
CRI lag 2	-0.028	-0.444	0.657
GDP lag 1	1.10×10^{12}	-0.166	0.8686
GDP lag 2	9.33×10^{12}	0.209	0.8349
C	0.674181	3.027	0.0026

Source: Author's compilation from estimation results

As shown in Table 17, the coefficient of the cointegrating equation is negative. In addition, the coefficient is statistically significant at the 1% level. This confirms a long-run relationship between GDP level and the decision to increase competition reforms. It suggests that when conditions are assessed over a long horizon, economies with higher levels of GDP would have higher CRI values. These results are in line with Waked's (2016) conclusion that, at a given point in time, economic development's effect on decisions to adopt competition reforms becomes apparent. However, the short-run dynamics are more critical, especially the extent to which an increase in GDP would rapidly create pressure to tighten competition reforms.

The short-term causality was assessed through a Wald Test to test whether the lagged values of the GDP variable coefficients in the VECM model are jointly statistically significant. Two critical issues should be observed. As illustrated in Table 17 above, the GDP coefficients are not individually statistically significant in explaining the average CRI path across the 23 TFTA countries. In addition, the coefficients are so small that even if these lagged values were individually statistically significant, their influence would be very negligible. However, whether or not the two lagged variables are jointly statistically significant is reported by the Wald test results. The results from the Wald test for the two variables are shown in Table 18. They show that there is strong evidence for not rejecting

the null hypothesis that the coefficients are not jointly significantly different from zero. This implies that GDP growth has no short-run causal effect on competition reforms.

Table 18: Wald Test for GDP restrictions in the VECM model

Null Hypothesis : C(4)=C(5)=0	
Chi-square	0.481197
Df	2
P-value	0.7862

Source: Author's compilation from test results

The short-run causality can also be estimated by conducting a direct pairwise Granger Causality test. This would test whether a causal effect could be observed based on existing data that GDP Granger causes CRI growth. The results (Table 19) confirm that in levels or in differenced form, the null hypothesis of GDP not Granger causing CRI is accepted across all the four lags[60]. This confirms the findings from the Wald test that there is no short-run causality between GDP and the competition reforms variable.

Table 19: Pairwise Granger Causality Test results for GDP and CRI

Null Hypothesis	P-Values at lag:			
	1	2	3	4
GDP does not Granger cause CRI	0.4641	0.7729	0.9653	0.9894
D(GDP) does not Granger cause D(CRI)	0.7812	0.9676	0.9674	0.9863

Source: Author's compilation from estimation results

Taken together with the long-run relationship, this might seem contradictory. However, the short-run results underline that on average, the manner in which competition reforms was undertaken in the TFTA on an annual basis was inspired by considerations other than movement in economic performance. However, the long-run relationship confirms that while economic performance was not the main influence, the emerging picture in the

[60] The p-values are all greater than 0.05

long run is that economies that perform better would be more likely to have stronger competition regimes than those that perform poorly. Thus, while strong economies are associated with stronger competition policy regimes over the long run, improvement in economic performance on an annual basis per se does not trigger the revision of competition reforms. This also fits with the public interest and capture theories, where only after an economy has developed does competition reforms become necessary, as it might be in conflict with other objectives pursued by government. Thus, competition reforms stand a better chance of being tightened in economies that have already reached a certain level of development, compared to the stage when the economy is still developing. However, this trend is not observable in the short run, mainly because annual changes in GDP levels will not correspond to annual changes in competition reforms.

7.5 Findings' implications for existing theories and evidence

The study's findings have a number of implications for existing evidence and theories and this is true with regard to all its major objectives.

7.5.1 Acceptance of competition reforms in the TFTA

The findings reveal noticeable acceptance of competition reforms as by 2018, about 80% of the countries in the TFTA had enacted competition laws. Given that adoption of such laws is a lengthy process, this suggests belief in their benefits. However, the results show that the quality of the competition laws adopted is below average, with the average quality of competition reforms in the TFTA only reaching 41% by 2018. Nonetheless, efforts were made to gradually improve the quality of competition regimes across the region, which means that with time, these regimes will be strengthened. The findings also imply that a number of countries in the TFTA can be expected to have strong competition environments, as they have not only embraced reform, but have consistently updated the quality of their competition regimes to ensure that they become more effective.

Previous research mainly focused on the number of countries with competition laws and concluded that, based on the increasing number of African countries with such laws, there is high acceptance of competition reforms on the continent. This study has shown that

mere adoption of a competition regime is not sufficient; the quality of the regime also influences the extent to which a country is able to reap the benefits of competition reforms. Thus, further research should go beyond adoption of competition laws to assess the extent to which they can be successfully implemented to achieve the benefits of a strong competition regime.

The study's findings also have a number of implications with respect to the theoretical discourse. First, they confirm that, while some competition laws were adopted in the TFTA, they were designed to ensure that other interests are not necessarily compromised. This is based on low scores for some countries on provisions of competition laws. The finding are in line with the need to accommodate other objectives in competition enforcement as explained by Gal (2004), Gal and Fox (2015) and Fox (2016). While some markets in the TFTA countries are expected to gradually shift towards more market oriented operations based on their strong competition regimes, there is also an expectation that some markets in the countries that score poorly will still exhibit oligopolistic and monopolistic characteristics. These are the economies where competition enforcement is still weak, causing market distortions, especially if these are viewed as necessary in the public interest. Market structure theories, as explained by Viljoen (1998) and Semmler (1982), hold that markets that exhibit perfect competition characteristics are more likely to enhance consumer welfare in terms of pricing compared to those that are monopolistic. It is thus expected that, overall, market conditions in the TFTA might not be ideal to ensure that consumers are not paying higher prices due to anticompetitive practices. The outlook remains bleak for consumers in economies that have yet to embrace competition reforms. Furthermore, economies whose competition regimes have remained only moderately strong over a long period of time without improving might also not have been able to unlock the benefits of competition enforcement, even though other considerations which were prioritised ahead of tightening competition reforms, are noble.

Second, the gradual approach adopted by the TFTA countries, which is reflected in noticeable differences in the quality of competition reforms over time, demonstrates that

African governments opted for tailor made competition regimes, which do not result in drastic transformation of market structures. This is also in line with the literature that notes the need to accommodate other objectives. However, the implication of this study's findings is that even if other government priorities are necessary, their inclusion in competition laws would restrict international trade in the long run. Thus, unless other benefits that arise from a weak competition regime outweigh the costs in terms of lost trade benefits, the regimes might need to be tightened.

Third, despite a long period of lobbying and the extension of competition law and policy discussions across many countries in the region, some countries have yet to adopt competition reforms, while the quality of others' competition regimes has remained low for a long period of time. The literature points to ideological differences even among those that are sympathetic to the competition reforms ideology (Evenett, 2015). The differences across countries, reflected in the fact that some have no competition regime or low quality ones, while others have fairly strong regimes, confirm that there are ideological differences that will be expected to be reflected in attitudes when the competition protocols under the TFTA and the AfCFTA are negotiated.

7.5.2 Impact of competition reforms on international trade

The review of previous studies that tested the relationship between competition reforms and international trade suggested that a positive relationship could be expected. This study has generally confirmed that a country that tightens its competition reforms will be able to increase its bilateral exports within the TFTA. This finding confirms the earlier findings by Hollis (2003), Zhao and Zou (2002), Clougherty and Zhang (2008) and Opoku, Yan and Hyness (2020). However, the study also found that exports will mainly increase to economies that have not tightened their competition reforms. Exports will tend to decrease as traditionally importing countries tighten their competition regimes, which is in line with the earlier findings from Clarke and Evenett (2003). This relationship was also confirmed from the imports perspective; they tend to increase only as countries that are exporting tighten their competition regimes. The implication is that trade benefits from competition reforms are more pronounced where there are differences in the degree of

reform across the trading partners. Thus, while the current study's findings fit well with those of the literature, they reveal that the increase in exports arising from competition reforms is largely conditional.

This suggests that within the regional integration context, there is a limit to the extent to which competition reforms should be promoted as a way of increasing intra-regional exports. It should be clear that this increase will largely be at the expense of other member states that are lagging behind in competition reforms. This would mean that if all the countries in the TFTA were to tighten their competition reforms, this added advantage would be neutralised. This finding reinforces the need for competition reforms to be high on the agenda of both the AfCFTA and TFTA, with the ultimate objective of improving regional competitiveness in the world market. If all member states could enjoy a competitive advantage, it would be easier to penetrate global export markets. Thus, the study's results imply that competition reforms is an important strategy in promoting regional and continental competitiveness, and the AfCFTA should thus prioritise such reform in order to increase Africa's share of world trade.

The findings also reveal whether the founding and modern trade theories are applicable to TFTA countries' markets. For example, they confirm that mercantilism, as originally developed by Mun (1664) is generally not applicable to the TFTA context. The theory suggests that some markets should have low levels of competition so as to support the emergence of big firms through state intervention as the basis for increased international trade. The same is true of the infant industry protection theory, which suggests that countries that restrict competition in some market segments in order to promote the emergence of local industry, tend to benefit from increased exports. The implication of the current study's findings is that countries in the TFTA should not be encouraged to adopt policies and programmes that restrict competition in the market, as this would generally constrain rather than promote exports.

However, the study's findings support a number of the founding trade theories which resonate with the manner in which markets in the TFTA function. For example, in line with

the absolute and comparative advantage theories, this study's results suggest that a productivity-driven increase in exports as a result of competition in producing specialised products can be the basis for export promotion. The findings also resonate well with Cournot's model (Cournot, 1838) that posits that differences in competition conditions in any two countries are the main determinants of equilibrium price differentials, which influence the direction of trade flow patterns.

The current study's findings also support a number of modern trade theories. In line with the country similarity theory by Linder (1961) and economies of scale-based theories (Krugman, 1979), it was concluded that firms in domestic markets characterised by intense competition are likely to be more competitive in the international market. In addition, tighter competition reforms promoting exports is in line with the National Competition Advantage theory of Porter (1990), where rivalry in the domestic market is a source of competitive advantage in the export market. Thus, protecting firms or giving them advantages through state intervention might not necessarily work in their favour when they seek to penetrate the export market. Tightened competition reforms is a crucial strategy to penetrate export markets as it creates competition in the domestic market that is similar to what local firms will encounter in the international market.

7.5.3 Influence of economic development on adoption of competition reforms

The main expectation from the theoretical framework and the literature review was that there is a level of development below which regulation in the TFTA would succumb to the dictates of the market through capture. This expectation would arise from the private interest regulation theories, attributed to Stigler (1971). At this level of development, economies would be more preoccupied with pursuing other interests which are contrary to the principles of fair competition. Some powerful groups would be in control and oppose competition reforms, as this would dilute their power and hold on the market. Only when this level of development is exceeded, will countries be able to shake off the influence of vested interests and pursue public interests. However, the study's findings suggest that the decision to tighten competition policies was generally not in response to economic

growth, as reflected by GDP. This means that other forces and motivations drove the competition reform agenda.

However, the results also revealed that, from a long-term perspective, economies with higher levels of GDP tend to be associated with tighter competition reforms. This confirms the findings of earlier studies. Nonetheless, since regulation theories are also expected to explain competition regulation, the lack of a direct causal relationship between GDP and competition reforms reflects that, in general, economies in the TFTA have progressed past the levels of vulnerability explained by the capture theories. The period covered by this study was thus one where regulatory capture and vested interests no longer played a critical role in dictating regulatory paths in the TFTA. This is encouraging from a policy perspective, as it is possible for efforts at regional level to be continued across all countries with little fear that the process in some countries could be affected by their vulnerability to capture.

7.6 Chapter summary

This chapter presented the estimation results that were used to achieve the study's three main objectives. First, it assessed the extent to which the competition reform agenda has been accepted in the TFTA. Second, it established how the adoption and implementation of competition regimes have influenced intra-TFTA trade patterns. Third, the chapter assessed whether the adoption of competition reforms was influenced by changes in the level of economic development in the region.

The findings show that only about 20% of the countries in the TFTA have not yet embraced competition reforms; it has thus generally been accepted. However, the mean score of the CRI over the period 1998 to 2018 shows that three countries, Zambia, South Africa, and Malawi have markets that have been subjected to high quality competition regimes over a longer time period, although Kenya is fairly close to these three. While the quality of their competition regimes might be slightly lower, Tanzania and Zimbabwe also have a long history of competition reforms, spread over two decades. The mean score reflects that many challenges remain in establishing a strong competition regime in the

TFTA. The standard deviation of the CRI shows that only five countries (the DRC, Tanzania, Zimbabwe, Djibouti and Comoros) have not consistently improved their competition reforms over time. The findings suggest that acceptance of competition reforms is gradual, such that with time, revision and the introduction of new competition regimes would yield higher quality regimes. As at 2018, 44% of the countries in the TFTA had high quality competition regimes, with the competition regimes of 28% of the countries being classified as poor. The fact that there is gradual acceptance of competition reforms in the region, with noticeable differences across countries, provided a basis to estimate how these differences would be reflected in associated trade benefits. The study established that most of the strong competition regimes are in the SADC region, with COMESA associated with a low average regional score. This demonstrates that there are regional dimensions to acceptance of competition, with acceptance more pronounced in southern and eastern Africa.

The impact of competition reforms on international trade was estimated using the gravity model. Both the exports and imports gravity models confirmed that adopting competition reforms helps to increase exports. More specifically, it was found that a country that tightens its competition regime, either by legislative amendments or increased enforcement, will enjoy increased exports within the TFTA. However, exports to countries that also tighten their competition regimes fall, which shows that adopting a competition regime enhances a country's competitiveness. The imports model also showed that countries that tighten their competition regimes tend to benefit more from increased exports than those that have not improved their competition regimes. Thus, the assessment confirmed that adopting competition reforms enhances competitiveness, which is a critical element in unlocking an economy's export potential.

This chapter also established that the decision to tighten a competition regime is not primarily influenced by changes in economic performance. This was confirmed by the lack of short-run causality running from GDP to the CRI. However, over the long run, it remains true that economies with higher GDP in the TFTA tend to be associated with tighter competition regimes. In other words, economic performance's influence on the

decision to adopt competition reforms is not direct, but indirect through other critical considerations. Stakeholders that advocate for competition reforms in the TFTA thus stand a better chance of success in economies with relatively higher levels of economic development.

Having discussed the study's findings and their implications, the final chapter presents a summary, overall conclusions and recommendations.

CHAPTER 8: CONCLUSIONS, SUMMARY AND RECOMMENDATIONS

8.1 Introduction

This chapter concludes the study by summarising its main findings and their policy implications within the international trade context as well as within the competition policy reform discourse, and offering recommendations based on the findings.

Section 8.2 summarises the study's main findings. It recaps its main objectives and describes how these were achieved based on the findings. The findings are also discussed in relation to the study's theoretical framework and the literature review. Section 8.3 sets out the main implications of the findings, showcasing how the research questions were answered. The study's contribution to the existing body of knowledge is discussed in section 8.4. Finally, section 8.5 presents policy recommendations emanating from the study's findings and section 8.6 offers suggestions for further research.

All the study's key objectives were achieved and the research questions were answered. It is hoped that its findings will inform debate and discussion on international trade, especially within the context of regional and continental integration. The findings are also expected to stimulate interest in further research on the issue of competition reform adoption as well as international trade within the context of the AfCFTA.

8.2 Summary

This study focused on the TFTA and examined a number of issues relating to competition reforms and trade, which fit within the current discourse around the continental free trade area. Based on the study's key objectives, this section summarises its main findings.

8.2.1 Acceptance of the competition reforms agenda in Africa

The findings show that only about 20% of the countries in the TFTA have not yet embraced competition reforms. This points to general acceptance of competition reforms across the region. However, the mean CRI shows that only South Africa, Zambia, Malawi

and possibly Kenya's markets have been subjected to high quality competition regimes over a longer time period. The standard deviation of the CRI shows that countries have consistently improved their competition reforms over time, which also points to a gradual increase in acceptance. However, the maximum scores show that only 44% of the TFTA countries have high quality competition regimes, which could indicate low acceptance of competition reforms. It was also noted that regional factors might influence acceptance, as strong competition regimes are mainly found in the SADC region, while COMESA is associated with a low regional average score. Thus eastern and southern Africa generally have a higher level of acceptance of competition reforms than the rest of the continent. General, the level of acceptance of competition reforms is less satisfactory at the regional level, while at country level there are mixed results.

8.2.2 Competition reform's impact on international trade

The study used a gravity equation model to estimate the relationship between competition reforms and international trade. The model was estimated for both exports and imports using static (random effects) and dynamic (GMM) panel data estimation methods. The findings from the static panel data exports model reflect that if the competition reforms variable were to increase by 1%, a country would, on average, increase its export capacity by 0.1%, holding other influencing variables constant. This relationship is also confirmed by the dynamic exports model, which shows that if the exporting country were to increase competition reforms by 1%, it will be associated with an average 0.16% increase in exports in the short run, holding other things constant. The results of the dynamic exports model show that if the competition variable in the importing country increases by 1%, it will be associated with an average 0.46% decrease in bilateral exports in the short run, holding other things constant. The static panel data imports model reveals that bilateral imports in the TFTA will increase by 0.07% if the exporting country increases its competition reforms by 1%, holding other influencing variables constant. The dynamic imports model confirms the findings; if the exporting country were to increase its competition reforms by 1%, this would be associated with an average 0.18% increase in bilateral imports in the short run, holding other things constant.

Based on these results, it is concluded that the adoption of competition reforms is crucial in influencing both bilateral exports and imports; hence, competition reforms should be a critical issue for discussion within the context of regional and continental integration.

8.2.3 Influence of economic development on competition reform adoption

The study assessed whether the current competition reform process in the TFTA has been influenced by the growth trajectories in the economies over the years. The theoretical framework for this discussion was situated within general regulation theories, especially with regard to why the level of economic development at a given time would be expected to influence the nature of the regulation adopted. The relationship was estimated in line with the Granger causality rationale. Panel Granger causality tests were used to assess whether there was any causality between GDP and the decision to adopt competition reforms in the TFTA. The results showed no evidence of short-run causality running from GDP to CRI. This suggests that the movements noted in the CRI over the years in the TFTA were not a reaction to movements in the TFTA economies' GDP. However, the variables' long-run relationship is statistically significant. This means that while the increase in the CRI over the years was not in response to increasing GDP, the long-run emerging pattern is such that TFTA economies with higher GDP tend to be associated with tighter competition regimes. This is more likely than not a reflection of reverse causality.

8.3 Conclusion

The study examined the relationship between the adoption of competition reforms by countries in the TFTA, their trade patterns and economic growth. This section provides an overall conclusion

Evidence of acceptance of the competition reform agenda

While many countries in the TFTA have high quality competition regimes, much remains to be done before they can be regarded as optimal. If the current trajectory is maintained, only in 2049 can all these countries be expected to have adopted and revised their laws to become totally effective. However, given that other objectives need to be met alongside

competition policy objectives, it is not likely that all the countries will feel the need for optimal competition regimes. Furthermore, some countries in the TFTA have not yet adopted competition reforms; thus, the reform agenda has not been fully embraced. The region has also made more strides in enhancing the substance of the laws than the institutions established to enforce them. Weak enforcing institutions or a lack of such bodies undermines the achievement of a competitive environment in the region. However, the competition laws that have been adopted are fairly strong in terms of substance. Thus, more effort should be made to put strong institutions in place to enforce the laws.

Geographic factors' influence on the adoption of competition reforms

The evolution and trends of the CRI show that the overall TFTA trend is weighed down by COMESA while being influenced upwards by SADC and the EAC. This suggests that competition regimes tend to be stronger in eastern and southern Africa and calls for initiatives to enhance competition reforms within COMESA regional cooperation frameworks. However, while the impact of tariff reductions within free trade agreements is expected to have been captured by the FTA dummies, agreements at REC level to enhance competition and strengthen institutions also promote competition in the market.

Impact of competition reforms in the individual TFTA countries on bilateral trade

Although the adoption of the competition reform agenda has not been satisfactory, there is evidence that countries that have adopted such reform have benefitted from increased exports. Thus, if participation in regional integration within the TFTA is intended to expand export markets, countries should ensure that they complement support for regional integration with enhanced competition reforms. The study also established that economies that have improved their competition reforms have benefitted from increased exports. This implies that a country that lags behind in competition reforms under the TFTA or the AfCFTA could be at a disadvantage as countries with stronger competition regimes would tend to become more competitive and exploit export opportunities. Countries that wish to avoid becoming net importers within the context of the TFTA stand a better chance of achieving this if they tighten their competition regimes.

Additional factors which play a role in competition reform and international trade

The results show that, although competition reforms positively influences exports, the status of competition in the importing country also matters. Exports will decrease if the importing country increases its level of competition reforms. Thus, increased exports as a result of enhanced competition reform is conditional on the status of competition reforms in the rest of the TFTA countries. If all the economies in the region were to tighten their competition regimes, the observed positive effect of competition reforms in increasing exports to the region would not hold. The study thus established that the relationship between exports and competition reforms is not unconditional; exports will increase if traditional trading partners are slower in adoption competition reforms. This suggests that, over a longer horizon, adoption of competition reforms in the TFTA should be promoted within the context of increased production and competitiveness of the region rather than enhancing intra-TFTA exports, as that advantage will cease when all members have adopted competition reform.

Impact of economic growth on adoption of competition reforms

The study found no evidence that African countries' decision to adopt competition reforms was mainly in response to increased economic development as reflected by changes in GDP. Thus, the decision to adopt competition reforms does not occur naturally as the economy grows. Advocates for competition reforms should therefore encourage all countries in the TFTA to embrace competition regimes rather than only targeting those with high levels of GDP. However, economies with high levels of economic development tend to be associated with tighter competition reforms in the long run. This could be a reflection of reverse causality, where the adoption of competition reforms unlocks growth opportunities which help spur their economies.

8.4 Contribution to the existing body of knowledge

The study adds to the existing body of knowledge in four respects. Firstly, it is the first to develop time series data for the strength of competition reforms, as most previous studies considered the static position rather than tracing how such quality evolved over the years. A static position imposes limitations in estimating panel data given the short time frame.

By producing this dataset, the study opens avenues for possible estimation of the relationship between competition reforms in Africa and many other desirable outcomes using panel data methods. This dataset was not available in the existing literature.

Second, the study demonstrated that competition reforms yields benefits if both the strength of the competition regime on paper as well as enforcement realities are taken into consideration. Such an estimation had not been previously undertaken. The researcher designed a variable that reflects the state of competition prevailing in the countries rather than using proxies, which might not necessarily provide an accurate picture. Such measures were not previously available; hence, this study will make it easy for other scholars to estimate the impact of competition regimes on different aspects. The study provided a measure of the strength of competition regimes for a larger number of African countries, which will promote discussion and debate on issues to do with competition policy and enforcement. Although the benefits of competition policy have been widely discussed in the literature, previous studies did not differentiate the strength of competition regimes based on whether a country has a competition policy in addition to competition law. Thus, some studies that used various proxies for competition regimes failed to find evidence of the anticipated benefits of competition, mainly due to the failure to differentiate countries based on the presence and absence of these critical attributes. The innovative approach adopted in this study enabled it to demonstrate that real benefits accrue from competition reforms if both the design and enforcement attributes are factored into the analysis.

Third, there is a paucity of empirical research on the relevance of competition reforms within the TFTA and the AfCFTA discourse. This study fills this gap by not only serving as an input but also setting the context for further studies to build on it in demonstrating the impact of competition reforms on various other factors relevant to continental and regional integration programmes. If not properly assessed, differences in competition reforms might result in overstatement or understatement of the benefits of regional integration. This study thus laid a foundation to empirically evaluate the implications of such differences for other benefits of regional integration.

Fourth, while many studies have estimated whether economic growth is influenced by the decision to adopt competition reforms, few empirical studies have focused on reverse causality. To the best of the researcher's knowledge, this study is the first to estimate this relationship, particularly within the African context. The study also justifies the need for continued efforts by various development partners and civil society organisations that have advocated for the adoption of competition reforms over the years, as the study showed that such reform is not the natural outcome of economic development. It provides evidence that without the necessary lobbying, competition reforms will not take place within the short run.

8.5 Recommendations

Three policy implications flow from the study's findings, which give rise to the following recommendations:

(i) Countries should enhance competition reforms in order to maximise the benefits of regional integration within the TFTA. There are two ways to achieve this. First, there is a need to ensure that competition laws and institutions are stronger by constantly updating competition regimes in line with new developments in the market. The current institutional framework to enforce competition is weak, which negatively impacts these institutions' ability to enforce the law. Second, countries that have adopted competition laws should enforce them vigorously. Development partners should therefore continue to include the competition reform agenda in their advocacy, as this contributes to unlocking the associated benefits.

(ii) The study confirmed that the decision taken at the 1996 WTO Ministerial Conference in Singapore to include trade and competition in trade negotiations was justified. The strong opposition expressed by developing countries was thus misplaced, as the slow pace of competition reform limited their competitiveness and they continued to be 'dumping grounds' for more competitive regions with stronger competition environments. It is critical that TFTA members take cognizance of the need for the region to enhance competition reforms so as to benefit more from world trade and not remain net importers.

(iii) Discussions to establish the TFTA are slowly being overtaken by strides towards the AfCFTA. It is, therefore, important that African countries appreciate that the extent to which the AfCFTA will unlock trade benefits will also depend on the state of their competition reforms. Generally, countries would want to be net exporters in order to realise full trade benefits. However, those that have not yet embraced competition reforms will be at a disadvantage in terms of competitiveness and are hence likely to be net importers. Discussions within the AfCFTA should therefore include competition reforms to ensure that members compete on a level playing field. The protocol on competition policy should thus be prioritised.

8.6 Suggestions for further research

Three important issues in relation to competition reforms were not extensively covered in this study. First, although the study did not establish that economic growth has a causal effect on competition reforms, a significant long-run effect was observed. This could be an issue of reverse causality. The extent to which competition reform processes in the TFTA have been able to create a basis for economic growth, which could also be a channel through which such reform enhances trade, could be the subject of further research.

Second, the study established that costs arise when other objectives, which could be in the public interest, are accommodated in competition laws, as reflected by lost export opportunities. However, export promotion is not the only role of government; it also has the duty to safeguard other interests. Thus, there is a need to assess whether the benefits of pursuing public interest objectives through the enforcement of competition regimes might not outweigh the costs of lost export promotion. This issue was beyond the scope of this study and could be the subject of future research.

Third, the study gave some justifications in the development of the competition enforcement variable, which is referred to as COMP in this study. This was obtained by adding the CRI and the cases completed per worker in each year. However, the justification of the resultant variable has some theoretical limitations. There is still room

for further explorations on how best a variable capturing the law on paper and enforcement realities can be constructed.

References

Abrego, L., Amado, M.A., Gursoy, T., Nicholls, G.P., and Perez-Saiz, H. (2019). The African Continental Free Trade Agreement: Welfare Gain Estimates from a General Equilibrium Model. IMF Working Paper WP/19/124. Washington DC: International Monetary Fund.

Acharya, S. (2004). Economic Development, Deregulation and Employment Conditions: The Indian Experience*. Policy and Society*, 23(2), 78-100.

African Law Business (2018). *Special Report on Investment in Africa 2018, Sudan Chapter*. Available at: https://www.africanlawbusiness.com/specialreport/sudan (Accessed 07 November 2018).

African Union (2018). Agreement Establishing the African Continental Free Trade Area. Kigali: Africa Union.

Aghion, P., Bechtold, S., Cassar, and L., Herz, H. (2018). The Causal Effects of Competition on Innovation: Experimental Evidence. *The Journal of Law, Economics, and Organization*, 34(2), 162-194.

Albagoury, S., and Anber, M. (2018). COMESA-EAC-SADC Tripartite Free Trade Area: Challenges and Prospects. MPRA Paper No. 92621. Munich: Munich Personal RePEc Archive.

Alesina, A., Arnaud, D., William, E., Sergio, K., and Romain, W. (2003). Fractionalization. *Journal of Economic Growth*, 8(2), 155-194.

Althubaiti, A. (2016). Information bias in health research: definition, pitfalls, and adjustment methods. *Journal of Multidisciplinary Healthcare*, 9, 211-217.

Arellano, M., and O. Bover (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics,* 68(1), 29-51.

Arellano, M., and S. Bond (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies,* 58(2), 277-297.

Arezki, R., Ait Ali Slimane, M., Barone, A., Decker, K., Detter, D., Fan, R. Y., Nguyen, H., Miralles, M. G., and Senbet, L. (2020). *Reaching New Heights: Promoting Fair Competition in the Middle East and North Africa: Middle East and North Africa Economic Update.* Washington, DC: World Bank.

Aydin, U., and T. Büthe (2016). Competition Law and Policy in Developing Countries: Explaining Variations in Outcomes; Exploring Possibilities and Limits. *Law and Contemporary Problems Journal*, 79(4), 1-36.

Babool, M. A. I., Reed, M., Mikic, M., and S. Saghaian (2007). The Impact of Competition Policy on Production and Export Competitiveness: A Perspective from Agri-food Processing. *Southern Agricultural Economics Association Annual Meeting in Mobile*, Alabama, February 4-7.

Babuşçu S., Hazar, A., Solakoglu M. N, and Tunc, C (2019). Sector-Level Competition and Export: Evidence from Exporter Dynamics Database. *Journal of International Commerce, Economics and Policy*, 10(3), 1-18.

Backus, M. (2019). *Why is Productivity Correlated with Competition?* NBER Working Paper No. 25748. Cambridge: National Bureau of Economic Research.

Bain, J. S (1956). *Barriers to New Competition: Their Character and Consequences in Manufacturing Industries.* Harvard University Series on Competition in American Industry Series, Volume 3. Cambridge: Harvard University Press, MA.

Baltagi, B. H (2013). *Econometric analysis of panel data.* 5th Edition. West Sussex: John Wiley and Sons Ltd.

Baumol, W. J. (1982). Contestable markets: an uprising in the theory of industry structure. *American Economic Review,* 72(1), 1-15.

Bergstrand, J. H. (1989). The generalized gravity equation, monopolistic competition and the factor-proportions theory in international trade. *The Review of Economics and Statistics,* 71(1), 143-53.

Blundell, R., and Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115-143.

Bourlès, R., Cette, G., Lopez, J., Mairesse, J., and G. Nicoletti (2013). Do product market regulations in upstream sectors curb productivity growth? Panel data evidence for OECD countries. *Review of Economics and Statistics*, 95(5), 1750-1768.

Bradford, A., and Chilton, A. S. (2018). Competition Law around the World from 1889 to 2010: The Competition Law Index. *Journal of Competition Law and Economics*, 14(3), 393-432.

Bruno, G. S. F., Choudhry, M. T., Marelli, E., and M. Signorelli (2017). The Short- and Long-Run Impacts of Financial Crises on Youth Unemployment in OECD Countries**.** *Applied Economics*, 49(34), 3372-3394.

Buccirossi, P., Lorenzo, C., Tomaso, D., Giancarlo, S., and V. Cristiana (2013). Competition policy and productivity growth: An empirical assessment. *Review of Economics and Statistics*, 95, 1324-1336.

Burke, M., Paremoer, T., Vilakazi, T., and T. Zengeni (2017). *Cross-cutting Competition Issues in Regional Industrial Development*. CCRED Working Paper 20/2017. Johannesburg: CCRED.

Canova, F., and Ciccarelli, M. (2013). *Panel Vector Autoregressive Models: A Survey*. European Central Bank Working Paper Series No. 1507. Frankfurt: European Central Bank.

Carrigan, C., and C. Coglianese (2015). George J. Stigler, The Theory of Economic Regulation. In M. Lodge, E. C. Page, and S. J. Balla (eds), *The Oxford Handbook of Classics in Public Policy and Administration.* Oxford: Oxford University Press

Chakravarty, V. (2019). Resale Price Maintenance: What Future, What Past? *RAIS Conference Proceedings, April 3-4, 2019* (pp. 361-368). Usak: Research Association for Interdisciplinary Studies.

Chamberlin, E., H. (1949). *The Theory of Monopolistic Competition: A Re-orientation of the Theory of Value*. 6th Edition. London: Oxford University Press.

Chaney, T. (2008). Distorted gravity: the intensive and extensive margins of international trade. *American Economic Review,* 98(4), 1707-21.

Choi, I. (2001). Unit root tests for panel data. *Journal of International Money and Finance,* 20(2), 249-272.

Clarke, G.R.G. (2011). Competition Policy and Innovation in Developing Countries: Empirical Evidence. *International Journal of Economics and Finance*, 3(3), 38-49.

Clarke, J. and S. Evenett, (2003), The deterrent effect of national anti-cartel laws: Evidence from the international vitamins cartel. *The Antitrust Bulletin*, 48(3), 689-726.

Clougherty, J. A., and Zang, A. (2008). *Domestic rivalry and export performance: theory and evidence from international airline markets*. Wissenschaftszentrum Berlin

Discussion Paper SP II 2008-12. Berlin: Wissenschaftszentrum Berlin für Sozialforschung gGmbH.

COMESA (2020). 'More Countries Ratify Tripartite Free Trade Area Agreement'. COMESA Newsletter, Lusaka.

COMESA, EAC and SADC (2015). *Agreement Establishing a Tripartite Free Trade Area Among the Common Market for Eastern and Southern Africa, the East African Community and the Southern African Development Community*. COMESA, EAC and SADC.

Competition and Consumer Protection Commission and CUTS (2012). *Why should Zambian consumers be interested in competition policy and law?* Lusaka: CCPC and CUTS International.

Competition and Fair Trading Commission (2013). *2012 / 2013 Annual Report*. Lilongwe: Competition and Fair Trading Commission.

Cook, P. (2001). *Competition and its regulation: Key Issues*. Centre on Regulation and Competition Working Paper Series No. 2. Manchester: Centre on Regulation and Competition.

Correa, J. A., and C. Ornaghi (2014). Competition and innovation: Evidence from US patent and productivity data. *The Journal of Industrial Economics,* 62(2), 258-285.

Cournot, A. (1838). *Researches into the mathematical principles of the theory of wealth*. London: Macmillan and Company.

CUTS (2001). *Competition Policy and Law Made Easy*. Monographs on Investment and Competition Policy #8. Jaipur: CUTS Centre for International Trade, Economics and Environment.

CUTS (2003). *Pulling up our socks: A Study of Competition Regimes of Seven Developing Countries of Africa and Asia under the 7-Up Project*. Jaipur: CUTS Centre for Competition, Investment and Economic Regulation.

CUTS (2006). *Fairplay Please: Advocacy and Capacity Building on Competition policy and law in Asia: The 7Up2 project*. Jaipur: CUTS International.

CUTS (2007). *From the Bottom Up: Capacity Building on Competition Policy in Select Countries of Eastern and Southern Africa: 7Up3 project*. Jaipur: CUTS Centre for Competition, Investment and Economic Regulation

CUTS (2010). *A Time for Action: Analysis of Competition Law Regimes of Select West African Countries - Volume I: The Gambia, Ghana & Nigeria*. Jaipur: CUTS Centre for Competition, Investment and Economic Regulation.

CUTS (2015). *Framework for Competition Reforms: A Practitioners' Guidebook*. Jaipur: CUTS International.

Dalkir, S (2009). A Quantitative Evaluation of Effectiveness and Efficacy of Competition Policies Across Countries. In Evenett, S. J., and Mehta, P (eds), *Politics triumphs economics? Political economy and the implementation of competition law and economic regulation in developing countries.* Jaipur: Academic Foundation.

Datta-Chaudhuri, M. (1990). Market Failure and Government Failure. *The Journal of Economic Perspectives*, 4(3), 25-39.

de Benedictis, L., and D. Taglioni (2011). The Gravity Model in International Trade. In L. De Benedictis, L. Salvatici (Eds), *The Trade Impact of European Union Preferential Policies: An Analysis Through Gravity Models*. Heidelberg: Springer.

Deardorff, A. V. (2017). Comparative advantage in digital Trade. In Evenett, S.J.(ed.), *Cloth for Wine? The Relevance of Ricardo's Comparative advantage in the 21st Century*. London: CEPR Press.

den Hertog, J. (2010). *Review of Economic Theories of Regulation*. Tjalling C. Koopmans Research Institute Discussion Paper Series Nr: 10-18. Utrecht: Utrecht University.

Dieleman, J. L., and T. Templin (2014). Random-Effects, Fixed-Effects and the within-between Specification for Clustered Data in Observational Health Studies: A Simulation Study. *PLoS ONE* 9(10), 1-16.

Dimand, R.W. (1998). Rae and international trade. In Hamouda, O.F., Lee, O.C., and Mair, D.(eds), *The Economics of John Rae.* London and New York: Routledge.

DLA Piper (2020). *Global enforcement priorities in vertical agreements.* London: DLA Piper.

Dosi, G., Pereira, M.C., Roventini, A., and Virgillito, M. E. (2017). *Causes and Consequences of Hysteresis: Aggregate Demand, Productivity and Employment*. Innovation-Fuelled, Sustainable, Inclusive Growth Working Paper 03/2017.

Drukker, D. M (2003). Testing for serial correlation in linear panel-data models. *The Stata Journal*, 3(2), 168-177.

Dumitrescu, E., and C. Hurlin (2012). Testing for Granger non-causality in heterogeneous panels. *Economic Modelling*, 29(4), 1450-1460.

Economic and Social Commission for Western Asia (2015). *Competition and Regulation in the Arab Region*. Economic Governance Series E/ESCWA/EDID/2015/5. Beirut: United Nations.

ECOWAS (2007). *ECOWAS Regional Competition Policy Framework*. Abuja: Economic Community of West African States.

El Fadl, B. A., and M. Hashish (2009). Antitrust review in Egypt. In S. Cabrera, K. Jörgens, and Á. González (eds), *Antitrust 2009 Year in Review*. Chicago: American Bar Association.

Evenett S. J. (2015). Competition law and the economic characteristics of developing countries. In G. Michal, B. Mor, D. Josef, E. Fox and D. Gerber (eds.), *Economic characteristics of developing jurisdictions: Their implications for competition law.* Cheltenham and Northampton: MA, Edward Elgar.

Evenett, S. J. (2002). How much have merger review laws reduced cross border mergers and acquisitions? In W. K. Rowley (ed.), *International merger control: Prescriptions for convergence*. London: International Bar Association.

Ezrachi, A. (2016). *Sponge*. Centre for Competition Law and Policy Working Paper CCLP (L) 42. Oxford: University of Oxford.

Fisher, R. A. (1932). *Statistical Methods for Research Workers.* 4th Edition. Edinburgh: Oliver and Boyd.

Fox, E. M., and Trebilcock, M. J. (2012). *The Design of Competition Law Institutions and the Global Convergence of Process Norms: The GAL Competition Project*. Law and Economics Research Paper Series, Working Paper No. 12-20. New York: New York University.

Fox, E.M. (2016). Competition Policy: The Comparative Advantage of Developing Countries. *Law and Contemporary Problems*, 79(69), 69-84.

Friesenbichler, K. S. (2014). *EU Accession, Domestic Market Competition and Total Factor Productivity. Firm Level Evidence*. WIFO Working Papers, No. 492. Vienna: Austrian Institute of Economic Research.

Gabrielsen, T. S., Johansen, B. O., and Lømo, T. L. (2018). Resale price maintenance in two-sided markets. *Journal of Industrial Economics, 66*(3), 570-609.

Gal, M. (2004). The Ecology of Antitrust: Preconditions for Competition Law Enforcement in Developing Countries. In *Competition, Competitiveness and Development: Lessons from Developing Countries*, ed. UNCTAD. New York: United Nations.

Gal, M. S., and E. M. Fox (2015). Drafting Competition Law for Developing Jurisdictions: Learning from Experience. In E. M. Fox, M. Bakhoum, D.J. Gerber, and M. S. Gal (eds), *Economic Characteristics of Developing Jurisdictions: Their Implications for Competition Law*. Cheltenham, UK – Northampton, MA: Edward Elgar.

Gani, W. (2012). Tunisian competition law: An experience of twenty years. *Concurrences* 2(2012), 196-199.

Gavrilov, D. (2020). Positivism - From Weaknesses to New Openings. *Sociologie,* XVI(1), 151-166.

Giesselmann, M., and A. Schmidt-Catran (2018). 'Interactions in Fixed Effects Regression Models'. Discussion Paper No. 1748. Berlin: Deutsches Institut für Wirtschaftsforschung.

Gouri, G. (2020). Convergence of competition policy, competition law and public interest in India. *Russian Journal of Economics*, 6, 277–293

Government of Botswana (2005). National Competition Policy for Botswana. Gaborone: Government Printing and Publishing Services

Government of Malawi (1997). Competition Policy of Malawi. Lilongwe, Ministry of Commerce and Industry.

Government of Rwanda (2010). Rwanda Trade Policy. Kigali: Ministry of Trade and Industry.

Granger, C. W. (1969). Investigating causal relations by econometric models and cross-spectral methods. *Econometrica,* 37(3):424-438.

Haberler, G. (1936). *The theory of international trade.* London: William Hodge.

Hammed, W.B. (2006). *Adaptation of Tunisian competition law within the Euro-Mediterranean Free Trade Area*. Master's thesis. University of Lund.

Hattori, M. (1975). *Formation and Fundamental Theories of Market Structure Analysis*. Faculty Working Papers. Illinois: University of Illinois.

Hazel, D., R. (2015). Competition in Context: The Limitations of Using Competition Law as a Vehicle for Social Policy in the Developing World. *Houston Journal of International Law*, 37(2), 275-350.

Head, K., and T. Mayer (2014). Gravity Equations: Workhorse, Toolkit, and Cookbook. In G, Gopinath, E. Helpman and K. Rogoff (eds), *Handbook of International Economics*. North Holland: Elsevier.

Helpman, E., Melitz, M., and Y. Rubinstein (2008). Estimating trade flows: Trading partners and trading volumes. *Quarterly Journal of Economics*, 123(2), 441-487.

Hollis, A (2003). Industrial Concentration, Output, and Trade: An Empirical Exploration. *Review of Industrial Organization* 22(2), 103-19.

Hurlin, C., and B. Venet (2003). *Granger causality tests in a panel data models with fixed Coefficients*. Mimeograph. Paris: Universitie Paris I.

Hylton, K., and F. Deng (2007). Antitrust around the world: An empirical analysis of the scope of competition laws and their effects. *Antitrust Law Journal* ,74(2), 271-341.

IMF (2019). *Regional Economic Outlook: Sub-Saharan Africa - Navigating Uncertainty.* Washington DC: International Monetary Fund.

Jenny, F. (2016). The Institutional Design of Competition Authorities. In Jenny, F., and Katsoulacos, Y. (eds.), *Competition Law Enforcement in BRICS and in Developing Countries*. Springer International: AG Switzerland.

Joekes, S., and Evans, P. (2008). *Competition and Development: The Power of Competition Markets.* Ottawa: International Development Research Centre.

Jones, B.E., and T.D. Nesmith (2007). 'Linear Cointegration of Nonlinear Time Series with an Application to Interest Rate Dynamics', Federal Reserve Board Finance and Economics Discussion Series No. 03. Washington DC: Federal Reserve Board.

Kao, C. (1999). Spurious Regression and Residual-Based Tests for Cointegration in Panel Data. *Journal of Econometrics,* 90,1-44.

Karamuriro, H. T., and W. N. Karakuza (2015). Determinants of Uganda's Export Performance: A Gravity Model Analysis. *International Journal of Business and Economics Research,* 4(2), 45-54.

Karanja-Ng'ang'a, J. (2017). EAC Competition Law. In E. Ugirashebuja, J. Ruhangisa, T. Ottervanger, and A. Cuyvers (Eds.), *East African Community Law: Institutional, Substantive and Comparative EU Aspects*. Leiden; Boston: Brill.

Kareem, F. O., Martinez-Zarzoso, I., and Bernhard, B. (2016). *Fitting the gravity model when zero trade flows are frequent: A comparison of estimation techniques using Africa's trade data*. GlobalFood Discussion Papers, No. 77. Göttingen: GlobalFood.

Kazmerzak, K., and Sandrock, R. M. (2020). *Vertical Agreements in USA.* London: Law Business Research.

Kee, H. L., and B. Hoekman (2003). *Imports, Entry, and Competition Law as Market Disciplines*. World Bank Policy Research Working Paper 3031. Washington DC: World Bank Development Research Group.

Khemani, R. S. (2007). *Competition Policy and Promotion of Investment, Economic Growth and Poverty Alleviation in Least Developed Countries.* Washington DC: The International Bank for Reconstruction and Development /The World Bank.

Kigwiru, V. K. (2020). The Cooperation on Competition Policy under the African Continental Free Trade Area. *Manchester Journal of International Economic Law*, 17(1), 98-121.

Koop, C., and Lodge, M. (2015). What is regulation? An interdisciplinary concept analysis. *Regulation and Governance*, 11(1), 95-108.

Kothari, C. R. (2004). *Research Methodology: Methods and Techniques.* Revised 2nd Edition. New Delhi: New Age International (P) Ltd.

Kovacic, W. E. and Hyman, D. A. (2012). *Competition Agency Design: What's on the Menu?* GW Law Faculty Publications and Other Works No. 628. Washington DC: George Washington University.

Krakowski, M. (2005). *Competition Policy Works: The Effect of Competition Policy on the Intensity of Competition: An International Cross-Country Comparison*. HWWA Discussion Paper 332. Hamburg: Hamburgisches Welt-Wirtschafts-Archiv.

Krugman, P. (1980). Scale economies, product differentiation and the pattern of trade. *American Economic Review* 70(5), 950-59.

Krugman, P., R. (1979). Increasing Returns, Monopolistic Competition, and International Trade. *Journal of International Economics*, 9, 469-479.

Kwenda, F (2018). A Panel VECM Analysis of Competition, Access to Finance and Economic Growth in BRICS. *ACTA Universitatis Danubius* 14(1), 138-153.

Labra, R., and C. Torrecillas (2018). Estimating dynamic Panel data: A practical approach to perform long panels. *Revista Colombiana de Estadística*, 41(1), 31-52.

Lam, T. (2015). A Review of Modern International Trade Theories. *American Journal of Economics, Finance and Management***,** 1(6), 604-614.

Lancaster, K. (1980). Intra-industry trade under perfect monopolistic competition. *Journal of International Economics,* 10(2), 151-172.

Leamer, E. E. (1995). *The Heckscher-Ohlin Model in Theory and Practice*. Princeton Studies in International Finance, No. 77. New Jersey: Princeton University.

Levinsohn, J. (1994). *Competition Policy and International Trade*. Institute of Public Policy Studies Working Papers in International Economics. Michigan: University of Michigan.

Lim, K., Trefler, D., and Yu, M. (2018). *Trade and Innovation: The Role of Scale and Competition Effects*. Princeton University online paper. Available at https://ies.princeton.edu/wp-content/uploads/2018/06/LTY_061118.pdf (Accessed 26 June, 2020).

Lin, P., and Fung, C. (2008). *Anti-competitive Behaviours and Competition Policy.* Wanchai: Curriculum Development Institute-Education Bureau.

Linder, S.B. (1961). *An essay on trade and transformation*. Uppsala: Almqvist and Wiksells.

Linders, G. M., and H.L.F., de Groot (2006). *Estimation of the gravity equation in the presence of zero flows*. Tinbergen Institute Discussion Paper TI 2006-072/3. Amsterdam: Tinbergen Institute Amsterdam

Lipimile, G. (2018). 'Competition Law for the Tripartite Free Trade Area and the Africa Continental Free Trade Area'. *Fourteenth Meeting of the Tripartite Committee of Senior Officials and Fifteenth Meeting of the Tripartite Trade Negotiation Forum*, Cape Town, 14-16 June.

Lopez, L. and S. Weber (2017). *Testing for Granger causality in panel data*. IRENE Working paper 17-03. Neuchatel: Institute of Economic Research, University of Neuchatel.

Luniku, R. (2014). *The Effects of Competition Policy Changes on International Trade and Export Flows: Canada Case Estimates*. Wayne State University Dissertations Paper 901. Michigan: Wayne State University.

Maddala, G. S., and S. Wu (1999). A comparative study of unit root tests with panel data and a new simple test. *Oxford Bulletin of Economics and Statistics*, 61(S1), 631-652.

Mahmood, S. A., and Ait Ali Slimane, M. (2018). *Privilege-Resistant Policies in the Middle East and North Africa: Measurement and Operational Implications*. Washington DC: World Bank.

Makochekanwa, A. (2014). Welfare Implications of COMESA-EAC-SADC Tripartite Free Trade Area. *African Development Review,* 26(1),186-202.

Marshall, A. (1930). *The pure theory of foreign trade.* Replica version. London: Lund Humphries.

Mason, E. (1939). Price and Production Policies of Large-Scale Enterprise. *American Economic Review*, 29(1), 61-74.

Mayer, T., and S. Zignago (2011). *Notes on CEPII's distances measures: The GeoDist Database*. CEPII Working Paper 2011-25. Paris: CEPII.

McNulty, P. J. (1967). A Note on the History of Perfect Competition. *Journal of Political Economy*, 75(4), 395-399.

Mehrad, A., and Zangeneh, M. (2019). Comparison between Qualitative and Quantitative Research Approaches: Social Sciences. *International Journal For Research In Educational Studies, 5*(7), 1-7.

Mehta, P. S. (ed.) (2006). *Competition Regimes in the World - A Civil Society Report*. Jaipur: CUTS International.

Mehta, P. S and S. Chakravarthy (2011). *Dimensions of Competition Policy and Law in Emerging Economies*. CUTS Discussion Paper. Jaipur: CUTS CCIER.

Mill, J., S. (1844). *Essays on Some Unsettled Questions of Political Economy*. 2nd Edition. Kitchener: Batoche Books.

Miroudot, S. (2017). Examining trade in services through Ricardo's lens. In Evenett, S.J.(eds), *Cloth for Wine? The Relevance of Ricardo's Comparative advantage in the 21st Century*. London: CEPR Press.

Miroudot, S., E. Pinali and N. Sauter (2007). *The Impact of Pro-Competitive Reforms on Trade in Developing Countries*. OECD Trade Policy Papers, No. 54. Paris: OECD.

Moen, Ø., Tvedten, T., and Wold, A. (2018). Exploring the relationship between competition and innovation in Norwegian SMEs. *Cogent Business and Management*, 5(1), 1-15.

Mokoena, N. (2012). The Evolution of Competition policy and Law in South Africa. In P.S. Mehta (ed.), *Evolution of Competition Laws and their Enforcement: A Political Economy Perspective*. London: Routledge.

Mold, A., and R. Mukwaya (2016). Modelling the economic impact of the tripartite free trade area: Its implications for the economic geography of Southern, Eastern and Northern Africa. *Journal of African Trade* 3(1-2), 57-84.

Motta, M. (2003). *Competition Policy: Theory and Practice*. Cambridge: Cambridge University Press.

Mudida, R. Ndiritu, N. S., and T. W. Ross (2015). Kenya's New Competition Policy Regime. *World Competition*, 38(3), 437-462.

Mun, T. (1664). *England's Treasure by Foreign Trade or the Balance of our Foreign Trade is the Rule of our Treasure*. London: John Mun.

Murphy, E. (2013). *The evolution of trade theory: An exercise in the construction of surrogate or substitute worlds?* PhD Thesis. SOAS, University of London.

Muzata, T., Roberts, S., and Vilakazi, T. (2017). Penalties and settlements for South African cartels: An economic review. In Klaaren, J., Roberts, S., and Valodia, I. (eds), *Competition law and economic regulation: Addressing market power in Southern Africa*. Johannesburg: Wits University Press.

Ng'ona, S. (2015). *The Impact of the Competition Reforms on Business in Zambia: An Evaluation of the Zambian Business Licensing and Regulatory Reform Programme*. Lusaka: CUTS International Lusaka.

Nicholson, M. W. (2004). *Quantifying Antitrust Regimes*. Federal Trade Commission Working Paper No. 267. Washington DC: Federal Trade Commission.

Nicholson, M. W. (2008). An Antitrust Law Index for Empirical Analysis of International Competition Policy. *Journal of Competition Law and Economics* 1(21), 1-21.

Obradović, M., Lončar, D., Stojanović, F., and Milošević, S. (2019). Public Interest Consideration in Competition Policy*. Ekonomika preduzeca*, 67(1-2), 167-179.

OECD (2005). *The Benefits of Liberalising Product Markets and Reducing Barriers to International Trade and Investment in the OECD*. OECD Economics Department Working Papers, Number 463. Paris: OECD.

OECD (2012). *Policy Framework for Investment User's Toolkit- Chapter 4. Competition Policy*. Paris: Investment Division of the OECD Directorate for Financial and Enterprise Affairs.

OECD (2014). International Co-operation in Competition Law Enforcement. Meeting of the OECD Council at Ministerial Level, Paris, 6-7 May 2014.

OECD (2015). *Does Competition Kill or Create Jobs? Contribution from Swaziland*. Paper submitted by Swaziland under Session I of the Global Forum on Competition held on 29-30 October 2015. Paris: OCED.

OECD (2016). *Independence of Competition Authorities - From Designs to Practices: Contribution from Egypt*. Global Forum on Competition Report, DAF/COMP/GF/WD (2016) 60. Paris: OECD.

OECD (2018). *Challenges and Co-Ordination of Leniency Programmes - Background Note by the Secretariat*. OECD Report number DAF/COMP/WP3(2018)1. Paris: OECD.

OECD (2019). *Vertical Mergers in the Technology, Media and Telecom Sector.* Paris: Organisation for Economic Co-operation and Development.

Ohlin, B (1933). *Interregional and International Trade.* Cambridge, MA: Harvard University Press.

Opoku, E. E. O., Yan, I. K., and Hynes, K. (2020). Reaching Up and Reaching Out: The Impact of Competition on Firms' Productivity and Export Decisions. *Pacific Economic Review*, 25(1), 69-101.

Pal, R (2017). *Issues and Concepts of Economics*. New Delhi: Adhyayan Publishers.

Pedroni, P (2004). Panel Cointegration; Asymptotic and Finite Sample Properties of Pooled Time Series Tests, with an Application to the PPP Hypothesis. *Econometric Theory*, 20(3), 597-625.

Pekarskiene, I., Bruneckiene, J., Daugeliene, R., and Peleckiene, L. (2018). The impact of competition policy on the national economy of a country with a developing culture of competition. *Engineering Economics*, 29,72-83.

Pereira, M. M., and P. Saraiva (2018). Mozambique: Overview. In Global Competition Review (ed.), *The European, Middle Eastern and African Antitrust Review 2018: A Global Competition Review Special Report*. London: Global Competition Review.

Peters, D. (2006). *The Interaction of Competition Policy and International Trade in New Zealand*. Faculty of Law, Victoria University of Wellington. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1865567 (Accessed 29 August, 2017).

Phan, T. (2016). The Legality of Extraterritorial Application of Competition Law and the Need to Adopt a Unified Approach. *Louisiana Law Review,* 77(2), 425-477.

Porter, M. E. (1990). The Competitive Advantage of Nations. *Harvard Business Review*, 68(2), 73–93.

Posner, R. A. (1974). *Theories of Economic Regulation*. NBER Working Paper Series No. 41. New York: National Bureau of Economic Research.

Preston, J. (2005). Implementing Competition Policy in Developing Countries: The Role of Donors. *International Conference on 'Reforming the Business Environment – From Assessing Problems to Measuring Results'.* Cairo: 29 November - 1 December 2005.

Ryan, G. (2018). Introduction to positivism, interpretivism and critical theory. *Nurse Researcher, 25*(4), 41-49.

Reinert, E., S. (2004). *How Rich nations got Rich: Essays in the History of Economic Policy*. Centre for Development and the Environment Working Paper No. 2004/01. Oslo: University of Oslo.

Ricardo, D. (1817). On the principles of political economy and taxation. 3rd Edition. Kitchener: Batoche Books.

Ringo, F. S. (2012). Why Do Countries Adopt Competition Laws? The Tanzania Case. In P.S. Mehta (ed.), *Evolution of Competition Laws and their Enforcement: A Political Economy Perspective.* London: Routledge.

Roberts, S., Vilakazi T., and Simbanegavi, W. (2017). Competition, regional integration and inclusive growth in Africa: A research agenda. In Klaaren, J., Roberts, S., and Valodia, I. (eds), *Competition law and economic regulation: Addressing market power in Southern Africa*. Johannesburg: Wits University Press.

Roodman, D. (2009). How to do xtabond2: An introduction to difference and system GMM in Stata. *The Stata Journal*, 9(1), 86-136.

Roodman, D. (2009b). A Note on the Theme of Too Many Instruments. *Oxford Bulletin of Economics and Statistics*, 71(1), 135-158.

Rosenburg, S., and O'Halloran, P. (2014). Firm Behavior in Oligopolistic Markets: Evidence from A Business Simulation Game. *Journal of Business Case Studies*, 10(3), 239-254.

Scholvin, S. (2018). Developmental Regionalism and Regional Value Chains: Pitfalls to South Africa's Vision for the Tripartite Free Trade Area. *Africa Spectrum*, 53(3), 115-129.

Schumacher, R. (2012). Adam Smith's theory of absolute advantage and the use of doxography in the history of economics. *Erasmus Journal for Philosophy and Economics,* 5(2), 54-80.

Schwartz, M., and Vincent, D. (2008). Quantity Forcing and Exclusion: Bundled Discounts and Nonlinear Pricing. In A. B. Association, *Issues In Competition Law and Policy* (pp. 939-976). Chicago: ABA Book Publishing.

Semmler, W. (1982). Theories of Competition and Monopoly. *Capital and Class,* 18, 91-116.

Shahriar, S., Qian, L., Kea, S., and Abdullahi, N. M. (2019). The Gravity Model of Trade: A Theoretical Perspective. *Review of Innovation and Competitiveness, 5*(1), 21-42.

Shafaeddin, M. (2000). *What did Frederick List actually say? Some Clarifications on the Infant Industry Argument*. UNCTAD Discussion Paper No. 149. Geneva: UNCTAD.

Simpson, B., P. (2010). Two Theories of Monopoly and Competition: Implications and Applications. *The Journal of Applied Business and Economics, 7*(4), 139-151.

Smith, A. (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations*. An Electronic Classics Series Publication. J. Manis (2005) (ed). Pennsylvania: The Pennsylvania State University.

Smith, P., and Swan, A. (2014). Public Interest Factors in African Competition Policy. *The African and Middle Eastern Antitrust Review*, 1(1), 1-6.

Sorinas, S., Meijer, J., Montembault, B., and O. Binyingo (2018). The Democratic Republic of Congo's New Pricing Freedom and Competition Act. Herbert Smith Freehills Legal Briefings.

Stankov, P. (2010). *Deregulation, Economic Growth and Growth Acceleration*. Center for Economic Research and Graduate Education Working Paper Series 424. Prague: CERGE-EI.

Stigler, G. J. (1957). Perfect Competition, Historically Contemplated. *Journal of Political Economy*, 65(1), 1-17.

Stiglitz, J. A. (1989). Markets, Market Failures, and Development. *Perspectives on Economic Development,* 79(2), 197-203.

Tinbergen, J. (1962). *Shaping the World Economy: Suggestions for an International Economic Policy*. New York: Twentieth Century Fund.

Tomohiko, I., Atsushi, K., and Tsutomu, M. (2008). *Do Competitive Markets Stimulate Innovation? An Empirical Analysis Based on Japanese Manufacturing Industry Data*. RIETI Discussion Paper Series 08E012. Tokyo: The Research Institute of Economy, Trade and Industry.

Torres-Reyna, O. (2007). *Panel Data Analysis: Fixed and Random Effects using Stata (v. 4.2)*. Princeton: Princeton University.

Tralac (2018). SADC-EAC-COMESA Tripartite Free Trade Area Legal Texts and Policy Documents: Launch of the Tripartite FTA. Western Cape: Tralac Newsletter.

Tralac (2020). Towards the African Continental Free Trade Area: AfCFTA Ratification Barometer. Western Cape: Trade Law Centre.

UNCTAD (2008). *The effects of anti-competitive business practices on developing countries and their development prospects*. UNCTAD Report number UNCTAD/DITC/CLP/2008/2. Geneva: UNCTAD.

UNCTAD (2010). *The role of competition policy in promoting economic development: The appropriate design and effectiveness of competition law and policy*. UNCTAD Report number TD/RBP/CONF.7/3. Geneva: UNCTAD.

UNCTAD (2011). *The importance of coherence between competition policies and government policies.* Geneva: United Nations Conference on Trade and Development.

UNCTAD (2012). *Voluntary Peer Review of Competition Law and Policy: Zimbabwe Overview*. UNCTAD Report No. UNCTAD/DITC/CLP/2012/1. Geneva: UNCTAD.

UNCTAD (2014). *Voluntary Peer Review of Competition Law and Policy: Namibia Overview*. UNCTAD Report No. TD/B/C.I/CLP/33. Geneva: UNCTAD.

UNCTAD (2014b). *Voluntary Peer Review of Competition Law and Policy: Seychelles*. UNCTAD Report No. UNCTAD/DITC/CLP/2014/2. Geneva: UNCTAD.

UNCTAD (2015). *Ways and means to strengthen competition law enforcement and advocacy*. UNCTAD Report Number TD/RBP/CONF.8/5. Geneva: UNCTAD.

UNCTAD (2015b). *Investment policy review: The Sudan*. UNCTAD Report Number UNCTAD/DIAE/PCB/2014/5. Geneva: United Nations.

UNCTAD (2016). *Competition Guidelines: Leniency Programmes*. UNCTAD Report Number UNCTAD/DITC/CLP/2016/3. Geneva: UNCTAD.

UNCTAD (2017). *Model Law on Competition (2017) –Revised chapter II*. UNCTAD Report number TD/B/C.I/CLP/L.8. Geneva: UNCTAD.

UNCTAD (2018). *A Review of Competition Policy in Ethiopia*. UNCTAD Report No. UNCTAD/DITC/CLP/2017/3. Geneva: UNCTAD.

UNCTAD (2018b). *Voluntary peer review on competition law and policy: Botswana - Overview*. UNCTAD Report No. TD/B/C.I/CLP/51. Geneva: UNCTAD.

UNCTAD (2019*). Model Law on Competition (2019), Revised Chapter IX*. UNCTAD Report Number TD/B/C.I/CLP/L.11. Geneva: UNCTAD.

Vagliasindi, M. (2001). *Competition Across Transition Economies: An Enterprise-Level Analysis of the Main Policy and Structural Determinants*. EBRD Working Paper No. 68. London: European Bank for Reconstruction and Development.

Vernon, R. (966). International Investment and International Trade in the Product Cycle. *Quarterly Journal of Economics*, 80, 190-207.

Vijayamohanan, P. N (2016). 'Panel Data Analysis with Stata Part 1: Fixed Effects and Random Effects Models'. MPRA Paper No. 76869. Munich: MPRA.

Viljoen, R.P. (1998). *Microeconomics*. Pretoria: Unisa Press.

Waked, D. I. (2016). Adoption of Antitrust Laws in Developing Countries: Reasons and Challenges. *Journal of Law, Economics and Policy,* 12(2), 193-229.

Walters, L., Bohlmann H.R., and M. W. Clance (2016). *The Impact of the COMESA-EAC-SADC Tripartite Free Trade Agreement on the South African Economy*. ERSA Working Paper 635. Cape Town: Economic Research Southern Africa.

Wang, X., and R. P. Badman. (2016). A Multifaceted Panel Data Gravity Model Analysis of Peru's Foreign Trade. *Turkish Economic Review*, 3(4), 562-577.

Wolszczak-Derlacz, J (2014). The Impact of Domestic and Foreign Competition on Sectoral Growth: A Cross-Country Analysis. *Bulletin of Economic Research*, 66(S1), S110-S131.

Wooldridge, J. M (2002). *Econometric Analysis of Cross Section and Panel Data*. Cambridge: MIT Press.

Wooldridge, J.M. (2012). *Introductory Econometrics: A Modern Approach*. 5th Edition. Mason: South-Western.

World Bank (1994). *Structural Adjustment in Africa: Reforms, results and the road ahead*. Oxford: Oxford University Press.

World Bank (2015). *Madagascar Systematic Country Diagnostic*. World Bank Report No. 99197. Washington DC: World Bank Group.

World Bank (2016). *Breaking Down Barriers: Unlocking Africa's Potential through Vigorous Competition Policy*. Washington, DC: World Bank Group.

World Bank and OECD (1999). *A framework for the Design and Implementation of Competition Law and Policy*. Paris: The World Bank and OECD.

World Economic Forum (2019). *Competition Policy in a Globalized, Digitalized Economy.* Geneva: World Economic Forum.

WTO (2016). *Trade Policy Review: Democratic Republic of the Congo*. WTO No. WT/TPR/S/339. Geneva: World Trade Organisation.

WTO and UNCTAD (2012). *A Practical Guide to Trade Policy Analysis*. Geneva: WTO and UNCTAD.

Youssef, J., and Zaki. C. (2019). *Between Stabilization and Allocation in the MENA Region: Are Competition Laws Helping?* ERF Working Papers 1319. Giza: Economic Research Forum.

Zhao, H., and Zou, S. (2002). The impact of industry concentration and firm location on export propensity and intensity: An empirical analysis of Chinese manufacturing firms. *Journal of International Marketing*, 10(1), 52-71.

Appendix 1: Competition Authority Questionnaire

The Chief Executive Officer
Address of competition Authority

06 June 2018

Dear Sir/Madam

Greetings from the University of KwaZulu-Natal!

This letter serves to inform you that Cornelius Dube (student number 21607613) is currently pursuing his PhD studies at the University. His thesis is entitled *"Do competition regimes matter in international trade? A case study of Africa's Tripartite Free Trade Area".*

The study is aimed at establishing the impact that the adoption of competition policy reforms has had on international trade in the TFTA. This would contribute to the competition policy discourse within the region, especially as an input in the current debate about whether or not competition reforms should be a priority for Africa under regional integration initiatives.

One innovative measure to arise from the study is a competition policy index focusing on Africa which can be used by competition practitioners around the world in studying the impact of competition reforms in the region. As part of the inputs to the construction of this variable, your cooperation is required in availing the number of competition cases you have handled since the South African Competition Commission started effective operations in **----** until **2016**. Please note that no specific details are required but just the annual totals for each category. The information will only be used to construct the variable and will only be published as an index which aggregates all the categories together. In addition, this information will be treated with the highest level of confidence.

Please find attached a Table which you can just quickly fill in for your convenience.

I trust that you will find this information in order.

Yours faithfully

Professor Mabutho Sibanda (PhD, MSc, PGDip (Higher Ed), BCom (Hons), Adv Dip (Banking))
Dean & HoS – Accounting, Economics & Finance

Number of cases handled by the competition authority, 1999-2016

Year	No of Merger cases completed	No of abuse of dominance cases completed	No of cartel cases (horizontal agreements) completed	No of vertical agreements	Number of employees (including support staff)
1998					
1999					
2000					
2001					
2002					
2003					
2004					
2005					
2006					
2007					
2008					
2009					
2010					
2011					
2012					
2013					
2014					
2015					
2016					

Appendix II: Ethical clearance

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

7 December 2020

Mr Cornelius Dube (216076123)
School Of Acc Economics&Fin
Westville

Dear Mr Cornelius Dube,

Protocol reference number: 00001587
Project title: Do competition regimes matter in international trade? A case study of the Tripartite Free Trade Area

Exemption from Ethics Review

In response to your application received on 22 July 2019, your school has indicated that the protocol has been granted **EXEMPTION FROM ETHICS REVIEW.**

Any alteration/s to the exempted research protocol, e.g., Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through an amendment/modification prior to its implementation. The original exemption number must be cited.

For any changes that could result in potential risk, an ethics application including the proposed amendments must be submitted to the relevant UKZN Research Ethics Committee. The original exemption number must be cited.

In case you have further queries, please quote the above reference number.

PLEASE NOTE:
Research data should be securely stored in the discipline/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours sincerely,

[redacted] December 2020

Prof Josue Mbonigaba
Academic Leader Research
School Of Acc Economics&Fin

Appendix III: Turnitin Report Summary Page