

**ANALYSIS OF THE ROLE OF EAST AFRICAN COMMUNITY (EAC) IN
THE DEVELOPMENT OF CROSS-BORDER TRADE
A CASE OF UNITED REPUBLIC OF TANZANIA**

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THE DEVELOPMENT OF CROSS-BORDER TRADE
A CASE OF UNITED REPUBLIC OF TANZANIA**

By

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**A Dissertation Submitted in Partial/Fulfilment of the Requirements for Award
of the Degree of Master of Applied Economics and Business (MAEB) of
Mzumbe University**

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CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation titled “***Analysis of the Role of East African Community (EAC) in the Development of cross-border trade: A case of United Republic Of Tanzania***” in partial fulfilment of the requirements for the award of the degree of Masters of Science in Applied Economics & Business (MAEB) of Mzumbe University.

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I, **Iman Mbwambo**, declare that this dissertation is my original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

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DEDICATION

I would like to dedicate this research study to my entire family, who have been a source of inspiration and have shown me great support during the entire time while pursuing this study.

LIST OF ABBREVIATIONS

AEC	African Economic Community
AU	African Union
AMU	Arab Maghreb Union
ASEAN	Association of Southeast Asian Nations
COMESA	Common Market for Eastern and Southern Africa
CEN-SAD	The community of Sahel-Saharan States
CM	Common Market (CM)
EAC	East African Community
ECCAS	Economic Community of Central African States
ECOWAS	Economic Community of West African States
EU	European Union
FTA	Free Trade Area
GDP	Gross Domestic Product
IGAD	Intergovernmental Authority on Development
NBS	National Bureau of Statistics
NTB	Non-Tariff Barrier
NAFTA	North American Free Trade Agreement
OSBP	The One-Stop Border Post
RI	Regional Integration
SADC	Southern African Development Community
SCT	The Single Customs Territory
TEI	Theory of Economic Integration
TRA	Tanzania Revenue Authority

ABSTRACT

This study investigated the role that the EAC has played in the development of the cross-border trade; while focusing on the impact of capital inflows, intra-trade and the effect of inflation to export performance of Tanzania.

The study employed the Gravity Model theoretical framework which used the gravity equation to describe the size of joint trade flows between two countries. The data was analyzed using the estimation technique – Pooled Mean Group (PMG). The study used a panel of four countries with annual data for the period 2003-2018 using the PMG technique.

The outcomes of PMG revealed that FDI, GDP from the Partner States and inflation have all a positive statistically significant relationship with Tanzania exports, imports from the Partner States affects Tanzanian exports negatively except for population variable. The results of the PMG in the short-run have revealed that; changes in the rate of Rwanda's import has a positive and statistically significant impact to Tanzania exports; the economic growth of Uganda has had a negative statistical significant relationship with Tanzania's export performance. Otherwise, the positive change in the economic growth of Tanzania statistically increases the rate of export; and that, Burundi and Kenya have no short-run causality with the Tanzania export rate because all the variables are not statistically significant.

The discoveries of this study have significant policy inferences to the economy of Tanzania. The biggest constraint to the study was the fact that data were sourced from diverse sources, which are conflicting, thus requiring an in-depth analysis to be conducted first. Future research can expand the number of countries to include other regional integrations that Tanzania is associated with, such as the Southern Africa Development Community (SADC).

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Chapter one of this dissertation report consists of the background of the study, problem statement, the objectives of the study, research questions, significance of the study and the scope of the study.

1.2 Background Information

Globally a lot of economies are finding ways to improve foreign trade through trading blocs, integration and collaboration. The ambitions of the unified countries and cooperation will range from economic to the political issues and the environmental aspects. To promote trade and cooperation between the partner countries, several bordering countries have established Regional Economic Communities (RECs) that focus on social as well as economic aspects. The regional integrations are the context through which the regional economic communities member States or the nations conduct trade among themselves economic boosting aspects (Negasi, 2009).

Regional integration forms a pillar and crucial element for international trade and regarded as a general policy tool for enhancing territorial industrialization, improving intra trade, social welfare of the citizens and boosting the overall economic growth and development as a whole within the integrated territories. Such significance has led to speedy growth and progression of the number of regional integration also known as the regional trade agreements (WTO, 2013). According to WTO (2017), there were about 280 regional trade organizations fully operational worldwide in 2017.

In most of these regional trade agreements today, the negotiations broaden beyond tariffs to a multi-policy area, including under-border rules such as competition policy, public procurement regulations and intellectual property rights, impacting trade and investment in goods and services. Furthermore, these agreements can either be shallow agreements covering tariffs and other border measures or the profound agreements, which include regional trade agreements covering a wider range of policy areas at and behind the border.

Moreover, over the past two decades, the world has seen an increased interest in regional integration through an increase in the number of renewed regional trade agreements. At each specific stage, the choices facing countries is on whether or not to enter into various trade blocks as well as the level of integration they should choose (Pelipas, Tochitskaya, & Vinokurov, 2014). As of current, the development of world trade is very much dominated by regionalism, which tends to affect countries' economic and political relations especially on the removal of tariff and non-tariff barriers to facilitate the free flow of goods and services (ITC, 2017). Boosting the intraregional trade is not the only benefits to the member states; similar regional integration supports more employment-intensive activities and sharing the benefits of growth and greater prosperity for the member states.

In developing countries, regional economic integrations are the fundamental driving force towards poverty alleviation, social instability reduction and economic variance through trade, investment and regional cooperation programs (ITC, 2017). In the modern structure of international trade, the African continent still has not stopped the expansion of regional economic cooperation. The establishment of regional integrations and union communities in Africa was promoted primarily by the broader African Economic Community (AEC), which was formed by the 1991 Treaty of Abuja, to facilitate regional economic integration between member nations (Chiumya 2010).

The treaty highlighted the Regional integrations, partly as a solution for prevailing political uncertainty and economic weakness, are crucial for Africa's growth and

development. Therefore, for the case of Africa, the initiatives for regional integration are undertaken underneath the umbrella of the African Union (AU) programs towards transitioning to the African Economic Community (AEC). The AU has designed different regional economic communities as building blocks for achieving an AEC.

The process predicts a steady integration of African economies through a change process from establishing free trade areas, customs unions, common markets, monetary unions, culminating to one continental central bank and a single currency (IFC, 2009). Examples of the regional economic communities in Africa are Arab Maghreb Union (AMU), Community of Sahel-Saharan States (CEN-SAD), Common Market for Eastern and Southern Africa (COMESA), East African Community (EAC), Economic Community of Central African States (ECCAS), Economic Community of West African States (ECOWAS), Intergovernmental Authority on Development (IGAD) and Southern African Development Community (SADC).

Nevertheless, Negasi (2009) postulated that the regional integrations in the African countries especially in the sub-Saharan region dates back to the Pan Africanism era, especially during the colonial age. During the era, the majority of the regional integrations were based on the colonial states that were present by then. For instance the current origins of international collaboration in East African territory date back to 1926 when the respective colonial governments implemented the mutual economic integration. It later developed into a regional shared currency, the common currency by then the East African Shilling (EASh) that was used between all the territories and a common functioning customs administration.

The creation of the East African Corporation and the East African Currency (EASh), during colonial era later led to the creation of the East African currency board. However, the monetary entity was limited in duration until 1929 (Davis, 2008). The East African currency board was formulated to standardize and regulate the East African currency and other monetary operations. The idea was based on the overall

concept of regional integration between the territories of Tanganyika (the present-day Tanzania), Kenya and the Uganda provinces. This portrays that even at these early times of backward and unimaginative economy and peripheral situation the issue of integration could still be rectified. The concept of the East African Community (EAC) therefore pre-existed and was formed without the trapping of well-established frameworks and plans, by the three founding partner States.

However, the regional integration in the African continent has been staggering and not in an impressive order. Such that, despite a huge number of regional integrations being established in the continent with a rapid population growth of 16.3 per cent, evident is a little promotion of trade in the continent. UNCTAD (2019) points out that, the African continent accounts for only 2.6 per cent of the world trade. However, since the measure of obstacles to trade and economic growth in the region is a lower performance in trade and trade facilitation. A lot of African countries, rank low in e-commerce, linear shipping connectivity and market business indicators, which are comparatively due dependence on a few export sectors, which account for more than 80 per cent of the overall exportation of Africa over the years, together with small and fractured isolated markets (Hailu, 2014).

1.3 The Role of the East African Community (EAC) in the Growth of the Intra-Region Trade

The East Africa Community (EAC) was originally established in 1967 by only 3 member states that are United Republic of Tanzania (URT), Kenya and Uganda. The cooperation later collapsed in 1977. The collapse of the EAC was seen as a huge setback for the corporation between the African states. The main reasons being pinpointed as the failure to embrace the long-term gains from the EAC, actual or unfair allocation of earnings, dissimilar currency strife, institutional lack of infrastructure, and lack of constitutional homogeneity between the three nations, or lack of or little constitutional will. Essentially, the organization failed due to the intrinsic weakness of the EAC as an organization, and particularly to the hostility to

the EAC through the leadership of member states, for instance, the Idi Amin and Tanganyika tension (Adar, 2010).

However, the continued problems in the development field especially in East Africa, the desire to expand intraregional exchange within the East African region and maybe the commitment to stick to the Abuja Treaty from the members of the initial EAC founding member countries rapidly increased the need for the revival of the EAC. Therefore, Kenya's president Daniel Arap Moi, Uganda's president Yoheri Museveni and Tanzania are the late Benjamin Mkapa, presidents by the time signed the treaty to establish the EAC, at the leadership conference on November 30th 1999 at the end of almost three decades and after years of intensive negotiations and consensus-building. On 7th of July 2000, the Treaty came into force and was binding on three member nations, and EAC (EACII) was officially introduced on January 15th in 2001.

The EAC current member countries include the URT (Tanzania), Kenya, Uganda, Rwanda, Burundi and South Sudan. The EAC as the inter-governmental regional organization was developed with a vision for a stable, productive, safe and policy-oriented East Africa. Along with the mission of growing and deepening economic, political, social and cultural integration to raise competition, the added value of the production of goods, and improving trade and investment to improve the quality of life of citizens of East Africa (Bünder, 2018).

The EAC was established on the main focus of seven core areas that are political, cultural, security and defence, culture, legal as well as economic aspects. Research areas and technology are also crucial areas that are targeted by the EAC to be improved. The goals of the EAC regional integration were further well defined into the four elements, the common market, the customs union, monetary union and the political federation (Okello, 2002).

The Partner States of the Community have agreed in principle to establish closer economic links among themselves up to the establishment of the Political

Federation. The EAC has so far established a Free Trade Area in 2001, a Customs Union (2005), a Common Market (2010), and a Monetary Union (MU) that was planned to commence by 2012 (GTZ, 2010).

Since the Community came into force, the EAC Partner States have enjoyed a great deal of achievements, which are globally recognized making other countries, envy to join this regional block. Some of those achievements include the increase of intra-regional trade (Table 1.1) and increase in the Foreign Direct Investment (FDI) inflows both from the Partner States and outside the region (Shinyekwa, 2015). As of 2017, the total population of 168.2 million was noted in EAC with the collective GDP of USD 155.2 billion with an annual growth of 5.6 per cent (EAC, 2018).

Table 1.1: The Value of EAC Intra-Region Trade, 2013 -2018 USD Million

Item	2013	2014	2015	2016	2017	2018
Intra EAC Domestic Exports	419.5	601	304.7	300	430.5	465.8
Intra EAC Re-exports	698.5	178.5	32.7	38.32	34.03	56.3
Intra EAC Total Exports	1118	779.5	337.4	338.32	464.53	522.1
Percent Share of Intra-Re-exports	62.5	22.9	9.7	11.3	7.3	17.6

Source, TRA and NBS

Despite the achievements, a wide range of challenges remains which constrains the efforts to establish the political federation. Some of those challenges include: failure to implement the Common External Tariffs (CET), due to variation in customs valuation procedures across member states resulting in different computed values of taxation; phasing out tariffs within the region to implement a Free Trade Agreement; removing Non-Tariff Barriers (NTBs) takes longer thus affects the free flow of trade; together with agreeing on future terms for cooperation and external trade (GTZ, 2010).

The United Republic of Tanzania as one of the founding members of the EAC, together with Kenya and Uganda and as the host of the EAC Headquarters allocated in Arusha has the clear critical role to play in the Community. Nonetheless, many challenges still constrain the country from enjoying fully the fruits of regional

integration among them is the lack of awareness of Tanzanians to coherent the profits to be obtained from the integration process (Makame, 2012). Furthermore, Makame (2012) adds that most of the people, especially those within the private sector tend to rely on government as they are not very entrepreneurial; and the high cost of doing business because of the issues of red tape and corruption (Makame, 2012).

1.4 Statement of the Problem

Regional integrations such as the EAC have proved to have huge relevance to the social welfare of the citizens, intra trade enhancement, enabling business competition and boosting the overall economy in the region. Since in most cases the regional integration provide room for free movement of people, goods, services, capital and for those that have progressed custom unions and the common market (Muthoga, 2013). However, despite a noticeable progression of the EAC to a common market protocol phase, to some circumstances there still slight challenges that limit the level of interaction in terms of social, political, cultural and most of all economic perspectives such as the barriers to the free movement factors and allocation of resources (Njuki, 2016; Tsikata and Melo, 2017).

Furthermore, according to the EAC facts and figures report (2016), in the year 2015, the total exports from the intra EAC trade amounted to USD 3,207.4 million while the total imports amounted to USD 1,533.1 million, thus giving an intra-trade surplus of USD1, 677.5 million. Tanzania was one of the countries that recorded overall intra trade surplus, alongside Kenya and Uganda. On the other hand, Tanzania also accounted for 37.3 per cent and 32.8 per cent on the intra EAC trade for the year 2017 and 2018 respectively.

Nonetheless, Makame (2012) pointed out several issues that up to this date still constrain Tanzanians from enjoying the fruits of the inter-trade growth between member countries, such as the continued food export ban which demoralize farmers and agriculturally based entrepreneurs who are forced to store theirs produces and

face losses where they have no appropriate storage facilities rather than exports. Additionally, such barriers encourage informal trade at the borders thus denying revenue to the Government.

According to Hailu (2014), despite the challenges that may occur, regional integration does impact highly the trade performance and the social welfares of the citizens and on the other hand, it does influence the flow of investment, technology and enhance economic growth. Alternatively, various scholars including Itungu (2015), Yayo and Asefa (2016), Zielinski (2017) and Admassu (2019) have highlighted on how regional integrations and regional trade agreements tend to influence the economy, especially through the intra territorial trade. However, identifying the roles played by the regional integrations in enhancing and development of cross border trade is still concealed and thus not clearly illustrated. Therefore, this study aims to pinpoint and evaluate the roles of regional integration, especially concerning the growth of cross-border trade, by examining the export performance in Tanzania.

1.5 The research Objectives

The study generally sought to assess the role that the EAC plays development of the cross-border trade for the URT. Specifically, the study is addressing the following objectives and the associated questions thereafter:

- i. To examine the impact of capital inflows from EAC member states to the export performance of Tanzania.
- ii. To investigate the impact of intra-trade between EAC member states on the export performance of Tanzania.
- iii. To analyze the effect of inflation in triggering the export performance of Tanzania,

1.6 The research Questions

- i. How does the capital inflow from the EAC member states impact Tanzania's export performance?
- ii. To what extent does the intra-trade between EAC member states impact Tanzania's export performance?
- iii. What role does inflation play in triggering the export performance of Tanzania?

1.7 The significance of the study

The study aimed to raise awareness of how regional integration has been an influential element in the growth and development of cross-border trade and in particular in the case of Tanzania through the EAC. The study also explains how such integration and trade agreements can affect the country's export performance individually.

To other researchers and academicians, the outcome of this analysis is a fundamental source of literature materials to future studies, in particular on the field of regional integration and the overall notion of international trade agreements. The findings of the research would however be useful in reforming and improving export outputs and cross-border trade policies for the EAC and the responsible ministries in particular.

In addition to the above, the study has a significant impact on a researcher to gain analytical skills and experience in research methodology for a fruitful achievement of a Master's degree and career development.

1.8 The scope of the dissertation

The primary aim of the dissertation was to examine the role of East African Community towards the development of cross-border trade for Tanzania, in

particular by monitoring the performance of trade exports in Tanzania. Therefore, the data used in this analysis were collected from the TRA and other stakeholders both domestic and foreign. Additionally, the study interviewed TRA's staffs and reviewed various documents concerning international trade that is found at TRA.

1.9 Organization of the study

There are six chapters for this research review. Chapter One presents the background, objectives, research questions that act up as the study hypotheses and significance of the report. The second chapter, titled The Literature Review, discusses various research, hypotheses and relevant variables about the microfinance contributions to women's entrepreneurial activities concerning the previous studies. This chapter also includes an analytical study of different empirical works of literature as well as the theoretical reviews. Finally, an evaluation of both concepts and evidence highlights the research gaps, which the thesis needed to tackle. Chapter Three is then described as the research methodology, this chapter reveals the work process and how the study was conducted. The research model, variables and how these variables were represented and calculated are also discussed in this chapter. Chapter Four that is also termed as Presentation findings, the chapter presents all the revealed findings that were found out during the data collection procedures and the analysis of the study. Chapter Five summarizes the introduction results by presenting these observations and in detail explaining the findings with their implications to the economy as a whole. Eventually, Chapter Six explains the research summary, conclusion, recommendations and policy implications together with the suggested studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Chapter two of this dissertation is based on a review of the theoretical and empirical studies; evidence regarding the role of Regional integration towards the development of trade. The chapter is organized into four sub-sections. Both theoretical and empirical studies are discussed in this chapter.

2.2 Definition of Key Terms

The definition of variables in this study was treated as the operational definitions of the study to guide the direction, and even the result of this study will be reached by referring to these key definitions.

Regional Integration (RI) entails practices of the neighbouring states agreeing to upgrade collaboration through common institutions and procedures (Lim, 2019). Furthermore according to Mattli, (1999) Regional integration is a mechanism in which neighbouring states sign an agreement to strengthen cooperation through shared structures and regulations. Whereas, Schmitter (1970) defines the term regional integration, as the multidimensional mechanism in which sovereign nation-states create a unified political and legal, economic as well as social governance structure. The goals of these agreements tend to vary from economic to political and environmental, even though it has typically taken the form of an attempt to accomplish wider social-political and security priorities identified by the national governments in a global economy. The coordination of regional integration highly depends on the combination of the multilateral administrative frameworks or intergovernmental decision-making (Lim, 2019).

The Free Trade Area (FTA) refers to a protocol where the member states of the RI decide to remove barriers of both tariffs and non-tariff on all trade conducted between themselves while maintaining tariffs on non-members (International Financial Cooperation [IFC], 2009). Yu (2020) defines free trade area as a situation where several countries have signed a free trade agreement, yet are subject to minimal or no trading restrictions in the form of tariffs or quotas. The international trade entails direct revenues as well as specialization and migrant labour to promote free trading zones. Whereas Ezeani (2018) described a free trade region is a community of countries with little to no trading restrictions within themselves in terms of tariffs and quotas.

The free trade areas tend to expand the foreign trade volume between the member states and allowing those nations to increase their specialization (comparative advantage). The participating countries need to create laws on how the existing free trade area works to establish a free trade zone. The laws may relate to tariff barriers if any, and resolution of disputes and the customs procedures to be followed by the member countries, goods' transportation for trade as well as intellectual rights security and maintenance. In a specific free trade agreement, how these issues are addressed tends to be based on policy influences and power relations between countries. This forms the magnitude and extent of the true nature of free trade. Since the purpose is to develop a trade policy that can be agreed by all countries in the free-trade region.

Customs Union is a protocol where the member states of RI decide to form a sole custom zone. This custom territory eliminates tariffs and other restricting trade protocols for all trade among themselves. Besides, in a customs union, there exists a common external towards the non-member's states (IFC, 2009).

Eralp (2018) generally explained the term Customs union as the stage of the economic integration that is to be characterized to consist of a free-trade region with a joint foreign tariff. Trade unions are established utilizing trade pacts, which define a similar foreign trade policy for the participating countries (in some situations

separate import quotas are used). This third level of economic integration is imposed to address and enhance an increase in economic productivity and closer political and cultural linkages between the member states.

The Common Market (CM) is a protocol where member states of the RI remove restrictions on the capital and labour movement to allow free movement of goods, services, and factors of productions (IFC, 2009). According to Lavenex (2019), common market is a collective arrangement, where a coalition of countries is established in which a similar external tariff is introduced by each member state. Within a common market, countries often allow free trade between the members of the community, free movement of labour and capital. This trade relationship aims to provide all the participants of the single economy with better mutual benefits. The concept of a common market is based on the incentives provided by a common international tariff.

When trade flows are growing and the imports of component inputs into developed economies continue to spread freely, supply chains start to form across intraregional national boundaries. This results in a growing burden on the countries involved in the integration process to reduce the costs of the export of finished and semi-finished goods. The solution is to harmonize the border processes, leading in their ultimate form, as internal barriers for commerce, to the virtual removal of national boundaries and the creation of a free-flowing zone hence a common market.

The Monetary Union is the protocol where member states decide to establish a unified monetary authority, which has a sole role of conducting monetary policy for the union eventually leading to the introduction of the single currency (IFC, 2009). On the other hand, Stockhammer (2016) illustrated the term monetary union as an international economic arrangement between two or more nations with the same monetary policies and currency. However, such states do not necessarily have further convergence (such as an economic and monetary union with a customs union and a common market, moreover). With the present global rise in the economy, the costs for businesses tend also ascent to the perpendicular concomitant increase of

intra-regional trade. Although borders remain available for free movement of goods and services, persistent financial and administrative costs for businesses working within the region remain incurred by the need to participate in foreign exchange operations to transfer payments as well as by the multiple relative costs induced by specific national economic policies.

Therefore such conflicts there lead to an improvement and development is a sort of monetary union by either setting the relative exchange rates as decided or introducing the single currency most widely discussed. Economic integration issues are also beginning to have a strong political flavour at this point. A good convergence in macroeconomic policy, which places external constraints on the domestic monetary and spending policies of a country, would be also required to ensure that all project members follow a shared currency or monetary policies and strategy. As a result, the political and economic lines are slowly blurring, dividing the states participating in the integration process.

Non-Tariff Barrier (NTB) is a way used to restrict trade by the use of the trade barriers in a form other than a tariff, such as quotas, embargoes, sanctions, and levies (Lim, 2019). However, according to Orifice (2017), Non-tariff barriers (NTB) are the forms of restrictions resulting from quotas, regulations or particular market requirements, which make it difficult or costly to import or export products.

The Non-tariff barriers may include discriminatory or insufficient enforcement of Non-Tariff Measures (NTMs), such as sanitary and phytosanitary and other known Technical Trade Barriers (TTB). The Non-tariff barriers emerge from several policy and authorities-led initiatives, laws, rules, mandates, bans, or special arrangements, and market activities in the private sector or prohibitions shielding domestic businesses from international competition.

The Single Customs Territory (SCT) is regarded as the point where member nations attain full Customs Union whereby duties and other restrictive regulations are eliminated as well as regulating and/ or minimizing the internal border customs

controls on goods moving between member countries (Tanzania Revenue Authority [TRA], 2019).

The One-Stop Border Post (OSBP) is the inter-country facility whose main role is combining two stops for country's borders controlling and handling into a single and consolidated border function in a shared space for exiting one member country and entering another (TRA, 2019). The amended Kyoto Convention under the World Trade Organisation (WTO) and the World Customs Organization treaties has established the One-Stop Border Post as a trade facilitation tool. This idea behind the development of the one-stop border post was to enhance border control performance by reducing freight checks, streamlining import, export and transit records (WCO, 2009).

This would shorten border clearance times, decrease freight costs and make the supply chain more stable. The one-stop border post paves its way since the early 1960s when there was a one stop-off and common control agreements in Western Europe. Their mutual boundaries were signed in Southern Cone countries' common market. The consensus was reached as part of this Agreement on 16 boundary points for the operation of Unified Controls (Marko, 2010).

Cross border trade can be informal or formal selling or buying goods and commodities across international land borders within a reach of duly defined area Hailemeskel, Mohammed, Negash, & Getu, 2016). According to Rippa (2019), the cross border trade involves trading among neighbouring countries by weak, small and unrecorded traders is informal. For instance, a seller in Tanzania selling to a buyer from Uganda or Kenya in Uganda is a simple clear example for cross-border trade in the purchasing and sale of goods and services among companies in neighbouring countries, with the seller being in one state and the buyer selling them in another. It's often an informal type of trade. In general, trade-in close proximity involves the movement of products between border markets. Informalities apply not generally to the exchange itself (caught or not in the official customs scheme) but to the trader's (unregistered) status.

2.3 General Overview about Regional Integration

Musila (2005) the last two decades has shown that RI has been growing intensively in both developed and developing countries. The European Union (EU) in 1999 instituted the monetary and economic union. On the other hand, the NAFTA was launched in 1993. Other RIs are the ASEAN launched in 1992. The Common Market of the South (MERCOSUR) established in 1991. And, in Africa, several regional initiatives such: SADC, COMESA, the ECCAS and the EAC.

According to Itungu (2015); Shinyekwa (2015); and Bündler, (2018) Regional Integration has been in existence for decades, however, there has not been a precise definition about it. Lim (2019) has explained in simple terms, about RI which is a dynamic process entailing the willingness of states to share their sovereignty to form a larger whole.

To expound on RI the authors have described it as a three-dimensional phenomenon comprising: firstly, *the geographic scope* that demonstrates the number of member countries comprised in the arrangement to form RI; secondly, the *substantive coverage*, the RI instating the sectorial or activity coverage. For example, they include exchange trade, the factors of production mobility, the macro-economic policies, sector policies, investment promotion, infrastructure, agriculture, food security, peace and security, social affairs, tourism, industry, among others. And third, the *depth of integration*, which is referred to the degree of sovereignty that a country is complete to surrender.

Similarly, Goertz and Powers (2011) describe the following characteristics as the most essential in any RI arrangements including:“(i) regional (the presence of contiguous States), (ii) having a set of legally binding treaties that constitute the institution, (iii) involving economic cooperation, and (iv) other multiple issues.” At this juncture, the characteristic of economic cooperation triggered this inquiry, which will be focusing on the analysis of IR in the Development of Trade in EAC.

2.4 The Insight of the East African Community

For this study, the author deliberated not to include the historical perspective of the EAC before its collapse in 1977, and therefore, the focus will be on the new EAC, which was revived and reformed in 1999. The new EAC Treaty, which was signed in 1999, was upgraded in 2007 and 2016 by an amendment to make the total number states to six including Burundi, Kenya, Rwanda, South Sudan, Tanzania and Uganda (Bünder 2018). Further, according to Itungu (2015); Shinyekwa (2015); and Bünder, (2018) the EAC focuses facilitating inter- and intra-regional trade while it perceived to extend RI by establishing a protocol that was implemented successively from on to another, starting with customs union (CU) which was concluded in 2010 and followed by the common market (CM) which is currently under implementation, and preparations for a monetary union (MU) and finally formulation of the EAC Federation which is a political goal of the partner states.

2.5 Empirical Literature Review

2.5.1 General Perspective on Trade Development in Regional Integration

Different researches have been undertaken by scholars around the world to identify the trade creation effects of regional integration. In this study trade creation and trade, diversion is synonyms to trade development, henceforward this study will use the term trade development to mean the same, or otherwise specified for specific reasons.

Yayo and Asefa (2016) have explicitly discovered in their study about SADC trade development and revealed that RI has trade creation and at the same time trade diversion effects on its members' states. In their study, they found that there has been a growing regional trade in minerals, fuels and heavy manufacturing sectors, conversely the regional has been experiencing diminishing trade in the agricultural and light manufacturing sectors. Therefore, they concluded that SADC has been doing better in creating trade with non-member states in the growing sectors.

Additionally, Urata & Okabe (2010) revealed that for a specific RTAs, the EU is found to have a trade creation effect in the trade of agricultural commodities, while the ASEAN Free Trade Area and the NAFTA have trade creation effects in all types of machinery trade. This made the formulation of machinery trade possible as production and its respective distribution networks in the region due to tariffs reduction through RTAs.

Not only trade creation impact, but other studies have also discovered robust evidence that African regional economic communities increase their members' exports and imports, albeit with varying degrees. This was evidenced by the study by Admassu (2019) who analyzed the impact of regional integration on trade for African countries and revealed that African trade blocs increase members' exports by up to 175 per cent and imports by as much as 200 per cent. Similarly, Simwaka (2011) estimated the trade potential expected from the Southern SADC Free Trade Area by analyzing what the SADC member states stand to gain by way of increases in intra-regional trade if all trade barriers are removed. The study findings revealed that the observed intra-regional trade is lower than its potential and suggests that there is trade potential in the sub-region.

2.6 Regional Integration and Trade Diversion

Other studies have revealed trade diversion on the effects of regional integration. Urata & Okabe (2010) examined the impacts of regional trade agreements on commodity trade of 67 countries for 20 commodities during 1980-2006 and discovered that the trade diversion is triggered by the remained tariffs on imports from non-member states. However, trade creation was caused by various factors besides the decrease in the tariff rates. Additionally, Urata & Okabe (2010) discovered that RTAs in developing countries tend to cause trade diversion. By considering tariff rates, the resulting outcome proposed that trade diversion could be attributed by tariffs remained on imports from the non-member states, whereas trade creation initiated by other factors apart from the reduction in the tariff rates.

The analysis on possibilities of trade creation between SADC countries by Cassim (2001) revealed that there are definite regions where potential trade is lower than actual trade, they include South Africa and Zimbabwean exports to the region. Whereby, South African's potential exports are significantly low. Hayakawa, Kimura, & Laksanapanyakul (2016) revealed that firms in Thailand have the great possibility to ban products import with low RTAs tariff rates or high most-favoured-nation tariff rates from non-members and make importation of such products from RTA member countries. There is also increasing evidence with an increase in tariffs on a product by 10 per cent leads to 12 per cent more if the same product is imported through informal means in the RTA (Bensassi & Jarreau, 2019).

2.7 Theoretical Literature Review

2.7.1 The Theory of Economic Integration

2.7.1.1 The Stages of Regional Integration

In an effort of understanding the impacts of integration to member states on trade and other economic activities, one theory has had the biggest of the contributions 'The Theory of Economic Integration (TEI).' The theory postulates that there are several forms of varying degrees, which the integration can take, place: FTA, a Customs Union, a CM or Single Market, as well as the Economic Union (EU) (Balassa, 1961; Grimwade, 2013).

According to the theory which describes that the FTA is reached when the member countries, maintaining an independent set of tariffs against the non-members, decided to abolish tariffs and other quantitative restrictions among themselves.

Each member states had the autonomy of deciding and maintaining its restrictions and tariff against countries which are not members of the IRAs pointed out by Balassa, (1961); Scollay (2001); and Grimwade, (2013) made a standard analysis on the FTAs, and suggested the small size of trade creation effects from effects in FTA leads to substantial risk on trade diversions. These authors concede that from several quantitative studies it has been confirmed that the small size of the trade creation

effects exist and also it showed the size of tariff losses, but were somewhat supportive on the issue of trade diversion. The authors further delineated that studies have also emphasized the significance of ongoing attention to the most-favoured-nation tariff reductions, equivalent to the development of the FTAs to ensure the positive welfare effects.

In understanding the RI concerning the Theory of Economic Integration, another stage of RI is the Customs Union, which is different from the FTA as it requires that all member states of the integration equalize the tariffs and other restrictions against the member states (Itungu, 2015).

The Custom Union further suppress the discrimination of commodity movements within the integration (Hailu, 2014; Balassa, 1961). Examples of the Customs Union are the Economic and Monetary Community of Central Africa (CEMAC), the COMESA, the SACU and EAC Customs Union. According to Zielinski (2017) described that the classical models of the effects of Customs Union concentrated on trade diversion, trade creation and the impact on welfare. The models were developed further to include a detailed analysis of the impact on tariffs, level of protectionism, and size of the country and the possible reaction of non-member states.

The theory further, expresses that (Balassa, 1961; Grimwade, 2013) the third stage of integration is the formation of the CM, which involves the removal of trade restrictions as well as restrictions on the movement of the factors of production such as labour and capital. Examples are the single market of the European Economic Community (EEC) and the Common Market of the EU, and East African Common Market among others.

Shenfield (1965), Karakaya & Cooke (2002), states that a common market enables efficiency among member states since the factors of production are resourcefully allocated, which results in strong economic growth. The market becomes more efficient while inefficient firms ultimately phase out because of severe competition.

Nonetheless, the transition to a CM comes with a few drawbacks. Such as companies that have previously been protected and subsidized by the government may struggle to remain afloat in a more competitive landscape, which might lead to unemployment.

The final stage is the EU (the Monetary Union in EAC) syndicates on the restriction dominance on the commodity. Factors include policies among the members with the main intention of removing discrimination that was caused by the policy disparities. The member countries within the EU adopt a common monetary system and policy. The final stage is the full economic integration that presumes the unification of monetary, fiscal, social and countercyclical policies. This stage further entails the setting of the universal authority whose resolutions are binding among the members (Balassa, 1961; Grimwade, 2013; Hailu, 2014; Itungu, 2015).

Figure 2.1: Five Stages of Regional Integration based on the TEI

	Regional economic integration			
	Free trade zone	Customs union	Single market	Economic union
Abolishing customs within the member-states of the zone	✓	✓	✓	✓
Common customs regime against the non-member states		✓	✓	✓
Free move of production factors within the member-states of the zone (labour, capital, etc.)			✓	✓
Common framework for economic policy				✓

Source: Balassa, 1961

2.7.1.2 Benefits of Regional Integration

The major advantages for being in regional integration, as postulated by the Theory of Economic Integration, are that regional economic integration eventually influences trade creation. As trade liberalization form a substantial economic progression in the region and to the rest of the world. It is stated within the theory that economic integration has an outcome of substituting cheaper imports from member countries the expensive domestic production (Hailu, 2014). The belief is that when the effect of trade creation of regional economic integration is predominantly dominating the trade diversion, it eventually will have diverse benefits such as the expansion of the markets, increased competition, creation of new trade opportunities, an increased flow of FDI in the region (Scollay, 2001, Hailu, 2014; Balassa, 1961).

Further, when economic integration member countries import more from lower-cost regional member countries then production improvement will occur as well as the fall of the less efficient domestic production. Additionally, improvement in consumption occurs when consumers in the member countries of the regional integration can buy cheaper imports as compared to the prices of domestic products (Zielinski, 2017; Hailu, 2014; Grimwade, 2013; Karakaya & Cooke, 2002). Another advantage of the economic integration is the improvement of the Terms of Trade especially when the integration is large enough in a world market to the point of affecting the prices of its imports and exports, or if the production costs increase when production expands.

2.7.1.3 Adverse Effect of Regional Integration

The theory of Economic Integration postulates that integration also has trade deviation effects apart from the trade creation effects. Trade will be diverted by the integration through the replacement of the initially cheaper imports from a non-member country with more expensive imports from a member country within the region. The trade deviation eventually leads to a lowering rate of completion and

increases prices to consumers. This finally led to the loss of welfare in an integrated member state (Hailu, 2014; Balassa, 1961; Grimwade, 2013).

2.8 Research Gap

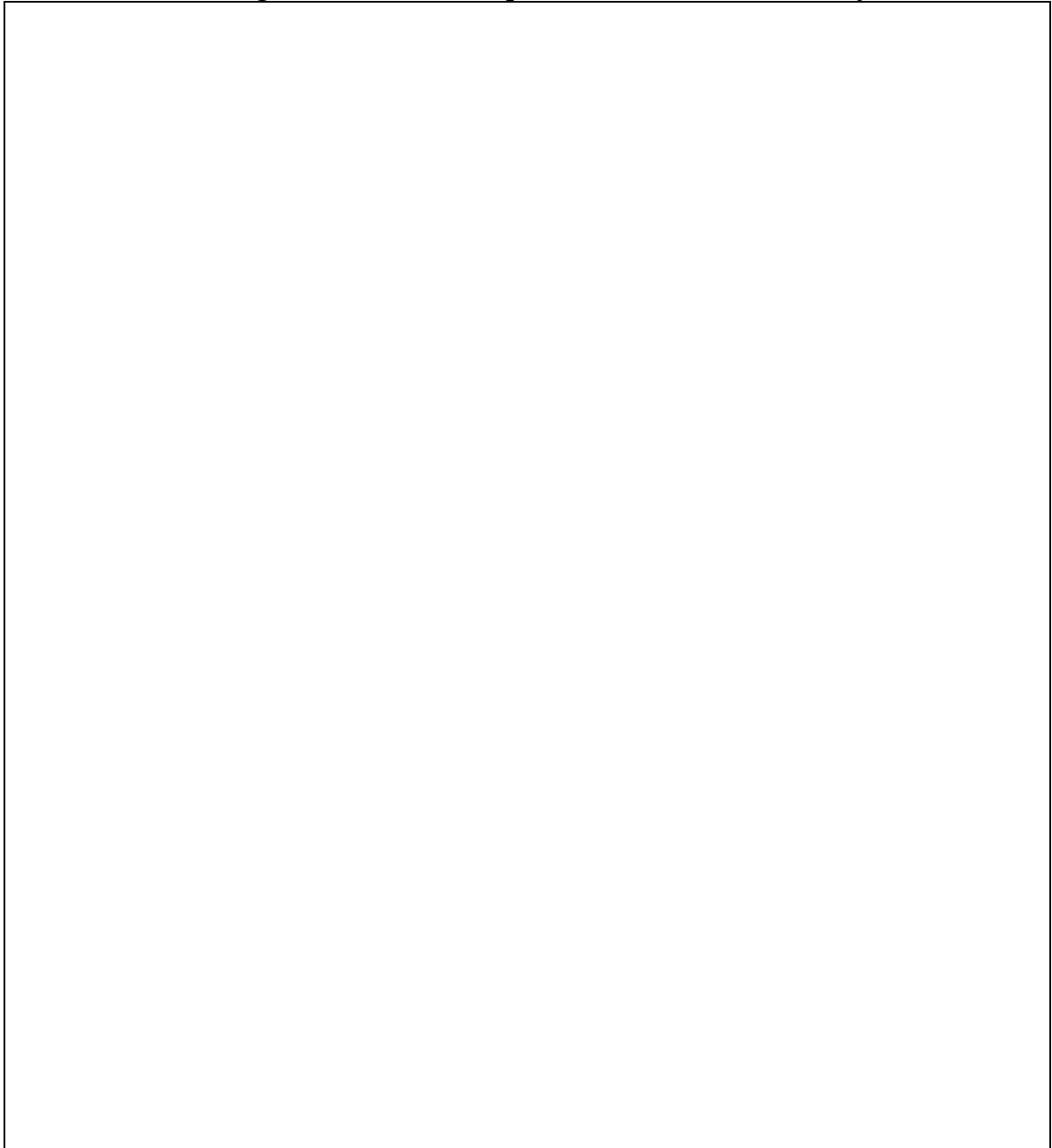
Both theoretical and empirical works of literature have revealed that regional integration can have a significant impact on the development of trade to a participating country. This can eventually be translated into economic performance. However, such theoretical and empirical assertion still needs to be attributed to the Tanzania trade development as an active participant of the EAC. It remains largely unexplored and need more studies to be conducted in this area. Thus, the study explored the subject matter with the following issues: to what extent does the EAC be an impetus to trade creation or trade diversion concerning Tanzania. In other words, does IR significantly influence the development of Trade in Tanzania concerning the rest of EAC? Therefore, this study aimed at analyzing this issue as to what role has the EAC played in the development of the cross-border trade (trade creation) for Tanzania. The study answered that gap in knowledge through the application of the Gravity Model, something that has never been attempted before in Tanzania.

2.9 Conceptual Framework

Kothari (2004) describes the conceptual context as the structure that presents the relationships in a given study between the main variables. A conceptual structure is an analytical method with different variations and meanings. It supports concept separation and the organization of ideas. Strong conceptual constructions capture and implement them in a fast way. It is further clarified that the researchers have a conceptual context explaining the relation between variables considered essential in a study (Creswell, 2009). The study, therefore, applied the Gravity model of trade to analyze the impact that regional integration on the Tanzanian economy. Precisely, the study used the EAC as the case study. Figure 2.3 defines both dependent and

independent variables through which both the objectives of the study will be answered.

Figure 2. 1: The Conceptual Framework of the Study



Source: Author's computation

Figure 2.3 illustrates that removal of on tariff barriers, coupled with the implementation of the single customs territory and one-stop border post, by the EAC member states has the power to influence the growth of cross border trade of the particular economy and among the regional block. Further, the figure identifies the independent variables that were assessed in the study, which are capital movement (FDI inflow) from the EAC member states, GDP of Tanzania and EAC member states, population variation across EAC member states, Intra-trade between EAC member states, and inflation rate. On the other hand, the specific dependent variable of interest is the export performance of Tanzania.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The research methodology chapter is designed to illustrate the study design of the research study. Other aspects in the chapter include the study hypotheses, the theoretical frameworks used, the model specifications, the choice of variables, techniques of estimations used, the types of data used, the discussion of the study results and the chapter conclusion.

3.2 Research Design

The research design was the casual design focusing on an analysis of a situation or a specific problem to explain the patterns of relationships between variables, also the study had a descriptive element which focused on the descriptive statistics of the variables of interest observed as prevailing trends. The study used historic data to determine impact capital inflows, intra-trade and inflation the in export performance in Tanzania.

3.3 The Population of the Study

The population of the study was members of EAC

3.4 Research Hypothesis

This study works on the following null hypotheses:

H₀₁: FDI has no influence on the development of the Tanzania exports;

H₀₂: EAC intra-trade has no influence on the development of the Tanzania exports;

H₀₃: EAC population has no influence on the development of the Tanzania exports.

3.5 Theoretical Framework

This study has employed the theoretical framework of the Gravity Model developed by Jan Tinbergen in 1962. The model defines the size of joint trade movements between two countries can be estimated with the law named gravity equation in analogy using the Newtonian theory of gravitation (Shinyekwa, 2015). Over the last half-century, the gravity model has become the workhorse of the applied international trade literature.

Theoretically, the gravity equation has the following multiplicative form:

$$X_{ij} = GS_i M_j \phi_j \quad (1)$$

where X_{ij} is the monetary value of exports from i to j , M_j denotes all importer-specific factors that make up the total importer's demand (such as the importing country's GDP) and S_i comprises exporter-specific factors (such as the exporter's GDP) that represent the total amount exporters are willing to supply. G is a variable that does not depend on i or j such as the level of world liberalization. Finally, ϕ_{ij} represents the ease of exporter i to access market j (that is, the inverse of bilateral trade costs).

3.6 Model Specification

From the Gravity Equation (1), the study developed the following equation:

$$\exp_{jt} = \alpha + \beta \exp_{it-1} + \gamma_1 \text{imp}_{it} + \gamma_2 \text{gdppartner}_{it} + \gamma_3 \text{gdptanzania}_t + \gamma_4 \text{pop}_{ij} + \gamma_5 \text{fdi}_{it} + \gamma_6 \text{infl}_{it} + \gamma_7 \text{dist}_i + \epsilon_{it} \quad (2)$$

Where $\exp$ stands for exports, imp stands for imports, gdppartner stands for the GDP of the EAC Partner States, gdptanzania stands for the GDP of Tanzania, pop stands for the population, infl stands for inflation, dist stands for the distance

between the capital cities of the Partner States, j stands for Tanzania, i stands for the Partner States, t represents time and ε is the stochastic error term.

For normalization purpose, the estimated equation (2) was logalized as follows:

$$\ln exp = \alpha + \beta \ln exp_{it-1} + \gamma_1 \ln imp_{it} + \gamma_2 \ln gdppartner_{it} + \gamma_3 \ln gdptanzania_t + \gamma_4 \ln Pop_{ij} + \gamma_5 fdi_{it} + \gamma_6 inf_{it} + \gamma_7 \ln dist_i + \varepsilon_{it}$$

(3)

While the corresponding error equation was given as follows;

$$\Delta \ln exp_{it} = \phi_0 + \phi_1 \Delta \ln imp_{it} + \phi_2 \Delta \ln gdppartner_{it} + \phi_3 \Delta \ln gdptanzania_t + \phi_4 \Delta \ln Pop_{ij} + \phi_5 \Delta fdi_{it} + \phi_6 \Delta inf_{it} + \phi_7 \Delta \ln dist_i + \varepsilon_{it}$$

(4)

Where: $\phi = -(1 - \beta)$ is the adjustment coefficient

Where $\ln exp$ stands for the natural logarithm of Tanzania exports to EAC member countries, $\ln imp$ is the natural logarithm of import of EAC member countries from Tanzania, $\ln gdp_partner$ is the economic growth rate of EAC member country, $\ln gdptanzania$ is Tanzania economic growth rate, Pop_{ij} is the population of member country given the population of Tanzania, $\ln dist$ is the natural logarithm of the distance between Dar es Salaam and capital city of EAC member countries, fdi is the foreign direct investment of EAC member country, inf is the inflation rate of EAC member country.

Additionally, the study employed two dummy variables which are *landlocked* which is the dummy variable for landlocked EAC countries and *national language* which is a dummy variable of Swahili speaking EAC countries as their national language.

3.7 Estimation Techniques

This study explores the factors affecting the intra-trade within the EAC in the long run for a panel of four countries (N=4) with annual data for the period 2003-2018 (T=16) using the Pooled Mean Group (PMG) technique. The PMG is one of the estimation technique that allows for a higher degree of heterogeneity of parameters in growth regressions than the other estimators described in equation (3) and (4) (Pesaran, Shin, and Smith, 1999). The PMG estimator considers a lower degree of heterogeneity since it imposes homogeneity in the long run coefficients while still allowing for heterogeneity in the short-run coefficients and the error variances.

The basic assumptions of the PMG estimator are: First, no serial correlation between error terms and are independently distributed among the regressors. The second assumption is the existence of cointegration between the dependent and explanatory variables and the third one is, the long-run parameters are the same across countries. Therefore, the study tested for both serial correlation and cointegration.

3.7.1 Why Choosing Pooled Mean Group (PMG) Estimation

According to Islam (1995), using cross-section data for a certain samples of countries with over a long period leads to biased estimates. This is because the

initial technological level is not observed due to omission of variable bias and hence, its effects are included in the error term. Thus, an ultimate independent variable is correlated with the error term.

Islam (1995) suggests using panel data and static fixed and random effect estimators as the solution to the problem. Static fixed effects estimation technique imposes homogeneity of all parameters assumption which allows the control of unobserved effects of a specific country. The weakness of static fixed effect estimation technique is, it does not allow homogeneity for intercepts of specific countries. However, the study uses fixed effect and random effect to estimate the model but with the use of Hausman test, the fixed effect seemed fits well our data.

But, since the static fixed effect allows heterogeneity only for intercepts, it is most likely for it to suffer from cross-sectional dependence problem. Thus, Pesaran, Shin, and Smith (1999) show that in a dynamic model with identical slope coefficients, Dynamic Pooled Estimators can produce unbiased and reliable estimated but if and only if there is no cross-sectional dependence problem. Presence of cross-sectional dependence in the model can cause serious biases, inconsistent and potentially misleading estimates.

3.8 Choice of Variables

The customs value of Tanzania exports to the EAC Partner States was used as a proxy for the export performance of Tanzania, whereas the custom value of imports

from the Partner States is used as the proxy for import performance. Similarly, custom values of exports and imports from each Partner States to/ from Tanzania were used as the proxy for exports/ import performance of Partner States. The nominal GDP at current prices was used as a proxy for GDP variable, whereas the estimated number of the annual increase in population for each Partner States was used as a proxy for population variable. Finally, the annual increase in inflation rate for each Partner States was used as a proxy for inflation.

3.9 Expected results

The study expected the results of the estimated equation to be as shown in Table 3.1:

Table 3. 1: The Expected Results of the Regression Model

Dependent Variable	Independent Variable	Expected Sign
Exports from Tanzania	FDI Inflow	+ve
	Imports from Partner States	-ve
	GDP from Partner States	+ve
	GDP of Tanzania	+ve
	Population of Partner States	+ve
	Inflation	-ve
	Distance	+ve

Source: Study Computation

3.10 Data

The study based on a wide range of panel data ranging from 2003 to 2018, collected from both international and local sources. The data for imports and exports were obtained from the TRA, whereas the FDI data inflows were collected from the UNCTAD Handbook of Statistics (various issues). The data on GDP, population and inflation were collected from the World Bank Statistics, whereas, the distance data were obtained from the official distance statistics provided by SUMATRA.

The full list of Panel Data used is given in Appendix I.

3.11 Conclusion

This chapter has presented the methodological aspects based on the theoretical framework and the model designed to support the study. Besides, the chapter discussed the methods of approximation that are engaged in this dissertation.

CHAPTER FOUR

PRESENTATION OF RESULTS

4.1 Introduction

This chapter presents the empirical findings of the model specified in the previous chapter. Section 4.2 presents Basic Descriptive Statistics, whereas, Section 4.3 presents the results of the Panel Unit Root Test. Section 4.4 presents the results of the Cointegration test. Section 4.5 presents the results of the Pooled Mean Group (PMG) whereas section 4.6 compares the results obtained in this study with those of the other studies. Finally, section 4.7 presents the conclusion of the chapter.

4.2 Descriptive Statistics

Before conducting further data analysis, it is crucial to understand the properties of each variable by generating descriptive statistics. This helps to understand how the variables behave. The result of these descriptive statistics has revealed that the mean value, standard deviation and kurtosis of the dependent variable are 25.06, 1.348, and 2.711 respectively implying that the dependent variable is normally distributed. The rate of import portrays a standard deviation of 3.05 while its Kurtosis is 1.969; this implied that a variable was normally distributed with the mean value of 22.968. However, the kurtosis of inflation rate was 5.07, indicating a variable was not distributed normally, this further suggests screening of a variable such as estimating in first difference (Table 4.1).

Table 4. 1: Descriptive Statistics of the Variables used

Variable	Variable Name	N	Mean	Std. Dev.	Skewness	Kurtosis
Exports from Tanzania	lnexp	64	25.06	1.348	0.026	2.711
Imports into Tanzania	lnimp	64	22.968	3.05	-0.159	1.969
GDP of Partner States	lngdp partner	64	22.925	1.269	-0.055	1.924
GDP of Tanzania	lngdptanzania	64	24.185	0.443	-0.295	1.662
Population	lnpopij	64	0.386	0.547	0.307	2.061
Distance between Capital Cities	ln-dist	64	7.374	0.357	-0.777	1.942
FDI inflows from Partner States	fdi	64	451.375	487.002	0.807	2.381
Inflation	inf	64	8.413	5.178	0.952	5.027
Landlocked	landlocked	64	0.75	0.436	-1.155	2.333
National Language	nationallanguage	64	0.5	0.504	0	1

Source: TRA, NBS, World Bank Statistics and UNCTAD Statistics

The results of the correlation test indicate that value of export is positively related with the value of import, the economic growth rate of both Tanzania and the Partner States and dummy variable of if Swahili is the national language of partner countries. Other control variables such as population, distance, FDI, inflation and dummy variable of landlocked countries are negatively correlated with the value of export (Table 4.2). However, the correlation matrix describes the causation of the variables, but only showed if the variables of interests had a sign of multicollinearity problem.

Table 4. 2: The Correlation Test

Variables	lnexp	lnimp	lngdp_partner	Lngdp tanzania	lnpopij	lnDIST	fdi	inf	landlocked	nationallanguage
Exports from Tanzania	1.00									
Imports into Tanzania	0.72	1.00								
GDP of Partner States	0.73	0.86	1.00							
GDP of Tanzania	0.43	0.21	0.38	1.00						
Population	-0.55	-0.68	-0.88	-0.08	1.00					
Distance between Capital Cities	-0.71	-0.87	-0.83	-0.02	0.78	1.00				
FDI inflows from Partner States	0.56	0.71	0.82	0.39	-0.66	-0.64	1.00			
Inflation	-0.02	0.00	-0.09	-0.32	0.00	-0.12	-0.13	1.00		
landlocked	-0.66	-0.73	-0.68	0.00	0.72	0.93	-0.47	-0.16	1.00	
National language	0.60	0.86	0.84	0.00	-0.68	-0.82	0.72	0.04	-0.58	1.00

Source: TRA, NBS, World Bank Statistics and UNCTAD Statistics (2020)

4.3 The Results of the Panel Unit Root Test

In this section, the stationarity properties of the variables are examined. Literature shows that there are two types of Panel Unit Root Test assumptions. One is some pioneers assume cross-sectional independence (Maddala and Wu, 1999; Choi, 2001). The second was the tests that allowed several forms of cross-sectional dependence (Pesaran, 2007).

The results of the Panel Unit Roots provide a diverse indication based on all variable integration. The test results from Im, Pesaran and Shin test strongly fail to reject the null hypothesis of stationarity at level excluding for *lngdptanzania* and *fdi* from which the first variance was integrated through order one. Alike outcomes were found when Fisher-type test Augmented Dickey Fuller (ADF) test with an exception of *lnexp*, *lngdptanzania* and *fdi*, which are stationary at the first difference (Table 4.3). In general, there is the presence of some non-stationarity demanding appropriate treatment.

Table 4. 3: Results of the Panel Unit Root test

Variable	Im, Pesaran and Shin		Fisher-type (ADF)	
	Level	First difference	Level	First difference
Exports from Tanzania	-4.3923***		-0.5445	-6.7598***
Imports into Tanzania	-3.2140***		-3.9957***	
GDP of Partner States	-3.3404***		-4.3505***	
GDP of Tanzania	-1.1995	-3.1922***	0.9009	-4.0894***
FDI Inflows from Partner States	-1.8273	-4.8220***	-0.6778	-7.6358***
Inflation	-3.1471***		-3.9606***	
Population	-2.3242**		-1.9324**	

Source: TRA, NBS, World Bank Statistics and UNCTAD (2020)

4.4 Cointegration

Even though several data were non-stationary, there was a chance to mark a legal implication when there exists a significant long-run affiliation among the chosen variables. Table 4.4 provide co-integration tests results. Both, the Pedroni and Kao tests used the Bayesian information criterion and automatically selected an appropriate lag length (maximum set to 3). The estimations based on residuals of long-run static regression.

The results of the test for long-run relation between our variables of interest (*exports from Tanzania, Imports into Tanzania, GDP of Partner States, GDP of Tanzania, Inflation, Population and FDI inflows from the Partner States*) were tested to establish their long-run relationship. Table 4.4 shows that, except for Pedroni's Panel-v statistic, panel-rho statistic, Panel-ADF statistic and group-ADF statistic, all tests reject the null hypothesis of no cointegration among the variables at 5 per cent significance level. This suggests the existence of a long-run relationship between variables of interest.

Table 4. 4: Results of the Cointegration test

Test		Statistics
Pedroni test	<i>Panel-v</i>	-1.007
	<i>Panel-rho</i>	0.915
	<i>Panel-t</i>	-2.32***
	<i>Panel-adj</i>	0.09
	<i>Group-rho</i>	1.856**
	<i>Group-t</i>	-2.808***
	<i>Group-adj</i>	-0.495
Kao Test	<i>t-test</i>	3.2830***

Source: TRA, NBS, World Bank Statistics and UNCTAD(2020)

4.5 Results of the Pooled Mean Group (PMG)

4.5.1 Results of the Long-Run Relationship

Table 4. 5: Results of the Fixed Effect and Random Effect

Dependent Variable lnexp	(1)	(2)
	Fixed Effect	Random Effect
Log of Import from Partner States	0.1222	0.0278
	(0.0739)	(0.0808)
Log of GDP of Partner State	11.8525	-10.3776**
	(6.0157)	(3.3397)
Log of GDP of Tanzania	-8.8416	13.1374***
	(6.0239)	(3.4791)
Log of Population	10.4402	-9.3319*
	(5.6697)	(3.6684)
FDI Inflows from Partner States	-0.0008*	-0.0007
	(0.0003)	(0.0004)
Inflation	-0.0167	0.0016
	(0.0170)	(0.0189)
Log of Distance between Partner State	4.3082	0.5962
	(2.2872)	(2.4236)
Landlocked	-	4.9066
		(3.3104)
Dependent Variable lnexp	(1)	(2)
National language	-	17.6229***
		(4.6121)
Constant	-42.4091*	-49.2285*
	(17.6018)	(20.7814)
<i>N</i>	64	64
<i>Hausman Test (P-Value)</i>	0.0002***	0.05
<i>Pesaran CD test (P-value)</i>	0.000***	

Standard errors in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Source: TRA, NBS, World Bank Statistics and UNCTAD (2020)

The study first estimated the fixed and random effect of Tanzania's export and other variables that affects the intra-trade between Tanzania and other EAC countries

(Table 4.5). Based on Hausman test, fixed results estimates seemed to fit well with the data used by the study. However, the study cannot depend on these results since they suffer from cross-sectional dependence problem as the p-value of the Pesaran CD test suggests. Studies that rely on static panel estimates such as fixed and random effects in intra-trade countries such as EAC countries might have underestimated the effects of export on import, FDI, inflation, population, GDP, and distance.

As explained in the previous chapter, one of the methods of dealing with cross-sectional dependence problem is to opt for dynamic models such as the PMG from which the number of observations is small than a time period ($T > N$) which prevents the rise of asymptotic imprecision and biases. The PMG generally can account for endogeneity, cross-country endogeneity and cross-sectional dependence. These arise due to non-observed common factors which are normally on macroeconomic figures. The results of the PMG are illustrated in Table 4.6.

The results of the PMG reveal the existence of the long-run relationship between the dependant variable and explanatory variables since the error term has expected negative sign and statistically significant at the 10 per cent level. Further, in the long-run relationship, all variables are significant with an exception of population variable. The variable of import from the Partner States has a negative and significant impact on the export performance of Tanzania. This means that a unit increase in imports from the Partner States will reduce the exportation of Tanzania by 0.039 per cent. The variable of GDP from the Partner States has a statistically significant relationship with the export performance of Tanzania, meaning that a unit

increase in GDP from Partner State will lead to a 1.68 per cent increase in Tanzania's export. Similarly, FDI inflow from the Partner States was found to have a statistically positive relationship with the export performance of Tanzania, whereby, a unit increase in FDI inflow will cause a 0.04 percent increase in Tanzania exports. Nevertheless, Inflation of partner EAC countries affects Tanzania export rate by 0.01 percent as it increases by one percent.

Table 4. 6: Results of the Pool Mean Group Long-run Estimates

Exports from Tanzania	Coefficient	Std. Error	Z	P-value	[95% Conf. Interval]	
Imports into Tanzania	-0.039*	0.022	-1.830	0.067	-0.082	0.003
GDP of Partner States	1.688**	0.124	13.580	0.000	1.445	1.932
Population	-0.238	0.425	-0.560	0.576	-1.071	0.595
FDI inflows from Partner States	0.040**	0.016	2.550	0.011	0.009	0.071
Inflation	0.012**	0.005	2.510	0.012	0.003	0.021

Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: TRA, NBS, World Bank Statistics and UNCTAD(2020)

4.5.2 Results of the Short-Run Relationship

In order to see the short-run impact, the study estimated the PMG full model which shows the short-run estimates of each partner country. Table 4.7 shows the short-run relationship results of Burundi, whereas, Table 4.8 shows results for Kenya, Table 4.9 shows results for Rwanda and 4.10 shows results for Uganda.

The results of the PMG full model indicate that, Burundi has no short-run causality with the Tanzania export rate because all the variables are not significant. But, the error correction term suggests the joint causality of the variables since it is significant and has high speed of adjustment of over 212 percent per year (Table 4.7).

Table 4. 7: Burundi Short-Run Results

	Coefficient	Std. Error	Z	P-value	[95%Conf. Interval]	
ECT	-2.128***	0.122	-17.420	0.000	-2.367	-1.888
D1.Log Import from Partner State	0.010	0.039	0.250	0.801	-0.067	0.087
D1.Log GDP from Partner States	-149.886	95.312	-1.570	0.116	-336.695	36.923
D1.Log of GDP from Tanzania	151.175	95.958	1.580	0.115	-36.900	339.249
D1.Log of Population	-145.948	95.784	-1.520	0.128	-333.682	41.786
D1.Log of FDI	0.025	0.019	1.310	0.190	-0.013	0.064
D1.Inflation	0.003	0.006	0.530	0.594	-0.009	0.015
D1.Log of Distance between Capital cities	Omitted					
Constant	-22.346	6.832	-3.270	0.001	-35.737	-8.956

Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: TRA, NBS, World Bank Statistics and UNCTAD Statistics (2020)

From Table 4.8, Table 4.9 and Table 4.10 show the coefficients on Error Correction term are negatively insignificant evincing the fact that the disequilibrium between short run values and long run values in lagged periods is neither corrected nor extended each period showing that there are no disturbances present. Additionally, Table 4.8 shows that none of the variables has an impact on Tanzania export rate in the short-run.

Table 4. 8: Kenya Short-run results

Variable	Coef.	Std. Error	z	P-value	[95% Conf. Interval]	
ECT	-0.385	0.253	-1.520	0.128	-0.880	0.110
D1.Log Import from Partner State	-0.022	0.122	-0.180	0.855	-0.261	0.217
D1.Log GDP from Partner States	61.757	45.133	1.370	0.171	-26.702	150.216
D1.Log of GDP from Tanzania	-61.802	45.906	-1.350	0.178	-151.776	28.173
D1.Log of Population	62.007	45.446	1.360	0.172	-27.066	151.079
D1.Log of FDI	-0.117	0.121	-0.970	0.333	-0.355	0.120
D1.Inflation	-0.003	0.014	-0.210	0.835	-0.031	0.025
D1.Log of Distance between capital cities	Omitted					
Constant	-5.103	3.669	-1.390	0.164	-12.295	2.088

Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: TRA, NBS, World Bank Statistics and UNCTAD(2020)

Further, the results of the PMG full model indicate that for the short-run intra trade causality between Tanzania and Rwanda, only changes in rate of Rwanda's import has a positive and statistically significant impact to Tanzania exports. That is, a percentage change in rate of Rwanda's import leads into 0.294 percent change in Tanzania's export. Other variables are not statistically significant (**Table 4.9**).

Table 4. 9: Rwanda Short-run Results

Variable	Coefficient	Std. Error	z	P-value	[95% Conf. Interval]	
ECT	-0.016	0.212	-0.080	0.940	-0.431	0.399
D1.Log Import from Partner State	0.294***	0.108	2.730	0.006	0.083	0.505
D1.Log GDP from Partner States	-29.450	59.805	-0.490	0.622	-146.667	87.766
D1.Log of GDP from Tanzania	38.049	60.107	0.630	0.527	-79.759	155.857
D1.Log of Population	-36.869	59.308	-0.620	0.534	-153.109	79.372
D1.Log of FDI	-0.338	0.396	-0.850	0.394	-1.115	0.439
D1.Inflation	-0.050	0.035	-1.430	0.152	-0.118	0.018
D1.Log of Distance between capital cities	Omitted					
Constant	-1.270	2.870	-0.440	0.658	-6.895	4.354

Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: TRA, NBS, World Bank Statistics and UNCTAD (2020)

The results of the PMG full model indicates that, the intra trade between Tanzania and Uganda is being affected by the economic growth of both countries and the population since these variables are statistically significant at 5 percent. The economic growth of Uganda affects the rate of export in Tanzania negatively, that is a positive change in the economic growth of Uganda, decrease the rate of export of Tanzania by 212.2 percent. While a positive change in economic growth of Tanzania increases rate of export by 210.8 percent (Table 4.10).

Table 4.10 Uganda Short-run Results

Variable	Coefficient	Std. Error	Z	P-value	[95% Conf. Interval]	
ECT	-0.407	0.338	-1.200	0.229	-1.070	0.256
D1.Log Import from Partner State	-0.007	0.152	-0.040	0.965	-0.304	0.291
D1.Log GDP from Partner States	-212.174**	91.054	-2.330	0.020	-390.635	-33.712
D1.Log of GDP from Tanzania	210.796**	89.823	2.350	0.019	34.747	386.846
D1.Log of Population	-210.478**	90.179	-2.330	0.020	-387.225	-33.731
D1.Log of FDI	-0.384	0.516	-0.740	0.457	-1.395	0.628
D1.Inflation	0.022	0.030	0.720	0.474	-0.038	0.082
D1.Log of Distance between capital cities	-3.343	2.836	-1.180	0.238	-8.902	2.215
Constant	-4.790	4.922	-0.970	0.330	-14.437	4.857

Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: TRA, NBS, World Bank Statistics and UNCTAD (2020)

In general, for the results of the PMG full model in the short-run, it is only FDI of Partner States of EAC countries has a significant impact on the Tanzania's rate of export. The immediate impact is negative suggesting that, in the short run changes in FDI by one unit, it will reduce Tanzania exports by 0.1923 percent.

Table 4. 11: Pool Mean Group Results

	(1)
	PMG
Long-run	
Log of Import from Partner States	-0.0376*
	(0.0215)
Log of GDP from Partner States	1.7034***
	(0.1243)
Log of Population	-0.2444
	(0.4246)
Log of FDI from Partner States	0.0401**
	(0.0156)
Inflation	0.0115**
	(0.0047)
Error Correction Term	-0.6747*
	(0.4912)
Short-run	
D.Log of Import from Partner States	0.0982
	(0.0716)
D.Log of GDP from Partner States	-80.0942
	(61.0132)
D.Log of GDP of Tanzania	82.2519
	(60.3398)
D.Log of Population	-80.5719
	(60.0182)
D.Log of FDI from Partner States	-0.1923**
	(0.0889)
D.Log of Inflation	-0.0075
	(0.0149)
Constant	-7.7918
	(5.2065)
N	59
Pesaran CD Test	1.000

Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: TRA, NBS, World Bank Statistics and UNCTAD (2020)

The overall results of the Pooled Mean Group (PMG) are given in **Appendix II**.

4.6 Comparison with Other Studies

The study found out that in the long run, Tanzania's exports are positively influenced by the Partner States GDP, the inflow of FDI from the Partner States as well as the level of inflation from the Partner States. Nonetheless, the study found out that the level of imports from the EAC Partner States affects negatively the performance of the export of Tanzania.

These results are similar to the findings obtained by Rahman (2009) who found out that Australia's bilateral trade is affected positively by economic size, GDP per capita, openness and common language. Similarly, Nguyen (2010) used gravity model to analyze exporting activities of Vietnam with the dependent variable being the exporting value from Vietnam to other countries during the 20 years up to 2006 and found out that the value of export from Vietnam to another country increases alongside the raises of GDP.

4.7 Conclusion

This chapter has discussed the empirical findings. The correlation matrix indicated that value of export is positively related with the value of import, the economic growth rate of both Tanzania and the Partner States and dummy variable of if Swahili is the national language of partner countries. The co-integration test suggests the existence of a long-run relationship between variables of interest. The results of the Pooled Mean Group (PMG) estimation has revealed that in the long-run, Tanzania's exports are positively influenced by the Partner States GDP, the inflow of FDI from the Partner States as well as the level of inflation from the Partner States. Nonetheless, the study found out that the level of imports from the EAC Partner States affects negatively the performance of the export of Tanzania. The next chapter provides an in-depth discussion of the empirical findings.

CHAPTER FIVE

DISCUSSIONS OF THE RESULTS

5.1 Introduction

This chapter discusses the results of the Pooled Mean Group (PMG) estimation obtained in Chapter Four. The chapter is divided into three sections. Section 5.1 discusses the results of the long-run relationships whereas section 5.2 discusses the results of the short-run relationship: Finally, section 5.3 concludes the chapter.

5.2 Discussion of the Long-Run Relationship Findings

5.2.1 Relationship between Imports and Exports

In the long-run, it was revealed that the imports from the Partners States affect the export performance of Tanzania negatively. This is in accordance with the Gravity model theory which depicts that the negative relationship between imports and exports depicting a trade creation effect, thus the results have indicated that indeed the EAC has led to trade creation for Tanzanian exports. This is because the EAC Partner States are situated in one Geographical location and are always competing for the control of the market within the Community. In general, most of the imports from the Partner States originates from Kenya, with the average share of 88.1 per cent for the period under investigation followed by Uganda with a share of 11.3 per cent (Table 5.1). The commodities that constituted a significant share for increased the value of imports from the EAC Partner States include pharmaceuticals, soaps, iron and steel, plastic and articles thereof and vehicles other than the railway.

Table 5.1: Imports from the EAC Partner States, 2003 -2019 Shs Billion

Year	Burundi	Kenya	Rwanda	Uganda	Total
2003	0.34	111.93	0.83	7.70	120.79
2004	6.07	880.19	3.31	169.01	1,058.57
2005	0.34	194.84	0.03	7.25	202.47
2006	0.03	219.66	0.13	6.78	226.60
2007	0.04	409.20	0.06	24.10	433.40
2008	0.51	510.48	0.06	20.53	531.58
2009	0.41	411.64	0.02	17.41	429.49
2010	0.87	388.78	1.96	25.12	416.74
2011	1.20	522.39	2.44	56.07	582.10
2012	6.07	880.19	3.31	169.01	1,058.57
2013	2.68	533.30	2.72	92.22	630.92
2014	0.50	687.26	0.90	36.92	725.57
2015	2.12	428.90	2.09	43.86	476.97
2016	1.69	574.82	2.44	66.90	645.84
2017	0.52	448.02	2.91	76.22	527.67
2018	2.34	549.80	3.22	118.98	674.34
2019	0.83	613.66	3.48	138.36	756.33

Source: TRA

Despite the fact that Kenya is the major exporter of Tanzania imports within the region, the study revealed also that Kenya is also the biggest importer of Tanzania exports within the region, with an average share of 71.4 per cent for the period under investigation (Table 5.2). The commodities that are mostly exported to the EAC Partner States include cattle: pure-bred breeding animals, ornamental fish: other, other frozen fillets of other fish, fish heads, tails and paws, fertilized eggs for incubation, tomatoes, fresh or chilled, beans, onions, pigeon peas and sweet potatoes. This simply proves the results obtained that there is a trade creation effect established by the EAC since Tanzania exports most of the commodities which are not largely produced by other Partner States and it imports those commodities that it produces the least.

Table 5. 2: Exports to the EAC Partner States, 2003 -2019 Shs Billion

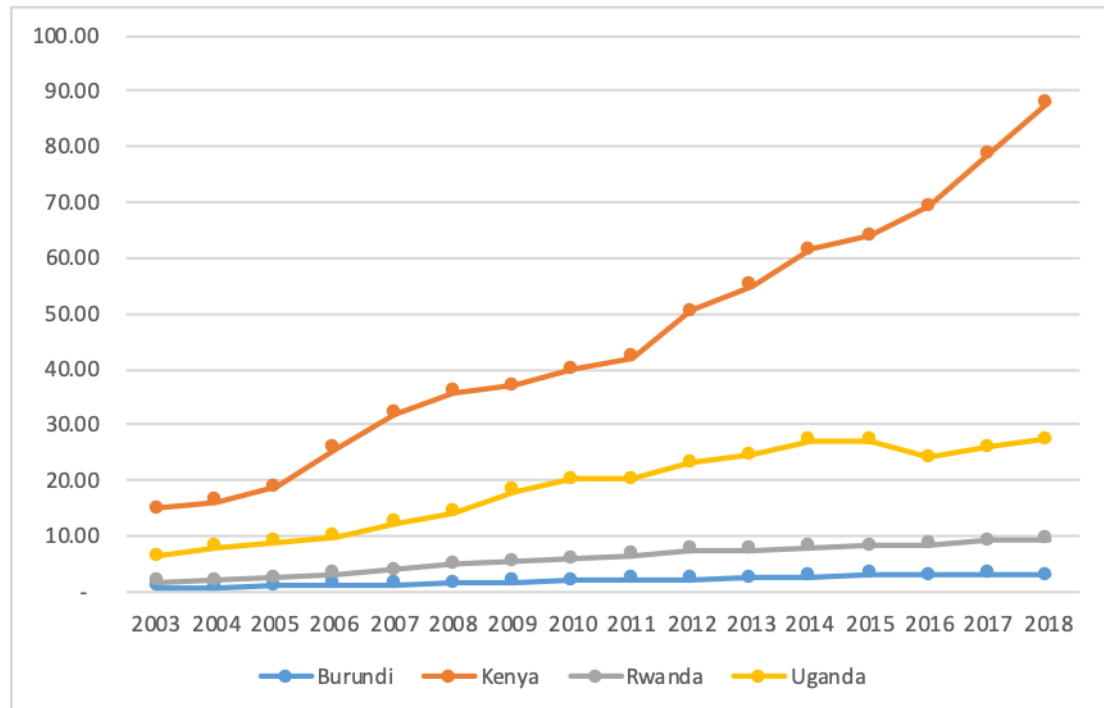
Year	Burundi	Kenya	Rwanda	Uganda	Total
2003	8.72	88.21	5.68	50.09	152.69
2004	14.44	98.77	8.34	60.07	181.62
2005	14.29	106.47	7.77	54.73	183.26
2006	11.43	133.61	7.01	54.74	206.79
2007	89.38	189.12	23.75	61.18	363.42
2008	24.41	298.83	26.58	76.11	425.92
2009	32.43	249.48	21.21	115.21	418.33
2010	51.29	291.24	119.53	83.55	545.61
2011	61.34	341.56	155.49	83.30	641.69
2012	85.19	545.50	165.11	160.93	956.72
2013	104.46	1,372.08	178.21	125.27	1,780.02
2014	68.03	841.92	48.68	132.72	1,091.35
2015	72.61	1,347.95	77.29	94.51	1,592.36
2016	112.83	1,176.21	13.13	335.21	1,637.39
2017	110.26	631.22	16.36	62.45	820.29
2018	80.84	521.84	5.18	20.64	628.51
2019	56.03	583.52	51.55	29.50	720.61

Source: TRA

5.2.2 Relationship between GDP from the Partner States and Exports

The value of GDP from the Partner States was revealed to have a statistically positive long-run relationship with the export performance of Tanzania. This can be attributed by the fact that the increase in GDP of Partner States is always attributed by an expansion of the market for Tanzania products. According to the IMF and World Bank economic outlooks, the GDP of EAC Partner States are one among those who grew faster over the last decade. It can be revealed that exports of Tanzania to other Partner States have increased tremendously over the years as the result of the presence of markets for Tanzanian products in those countries. As it can be revealed from Figure 5.1, the GDP of Kenya has grown rapidly from USD 14.90 billion in 2003 to USD 87.91 billion in 2018, signifying a huge market-potential for Tanzania exports. The GDP of Burundi and Rwanda grew the least and that is why their share to total Tanzania exports is very minimal.

Figure 5. 1: GDP Growth from the Partner States, 2003 -2018 USD Billion



Source: World Bank Statistics

5.2.3 Relationship between FDI Inflows and Exports

Similarly, FDI inflow from the Partner States was found to have a statistically positive relationship with the export performance of Tanzania. This means that investors from the Partner States see Tanzania as a stable and reliable investment destination, something that is down to good policy that was implemented by the Tanzanian Government to attract foreign investors. One of those policies is on the establishment of the Tanzania Investment Centre that aimed at facilitating investors coming to invest in the country. According to various reports on FDI inflows published by NBS and BoT, Kenya on average rank in the top three of countries with most investments in Tanzania. Kenyan firms have operations in Tanzania such as Kenya Airways, Kenya Commercial Bank (KCB), Equity Bank and many others.

5.2.4 Relationship between Inflation Rate and Exports

The findings of the long-run relations indicate that inflation from partner EAC countries affects Tanzania export positively. This is following economic theories which strongly postulates that an increase in inflation in one country will lead to its product becoming expensive to foreign customers, whereas imports from other countries will become cheaper once sold in the country. Whereas the headline annual inflation rate has been declining steadily in Tanzania over the years, those of the EAC Partner States have been fluctuating with Burundi recording the highest average rate of 7.8 per cent followed by Kenya with the average of 9.8 per cent over the period under review. The country is still maintaining the objective of attaining the country's medium-term inflation target of 5.0 per cent and convergence criteria for EAC is 8.0 per cent, which is set as maximum.

It can be seen from Table 5.3 that all of the EAC Partner States have been fighting to reduce the rate of inflation in their countries, to the point of inflation rates reaching negative rates for Burundi and Rwanda in 2018. This indicates a challenge on Tanzanian exports in the long-run as its exports will be less valued in the Partner States than those found within those countries. This is because imports are major drivers of the increase in inflation rates among the Partner States, of whom the majority are import-dependant countries. Therefore, even though inflation rates prove to have a positive statistically significant relationship with Tanzania exports in the long-run, this relationship needs to be looked at very carefully as the annual headline inflation rates of the Partner States keeps on decreasing from one year to another.

Table 5. 3: Annual Inflation Rate for EAC Partner States, 2003 -2018

Year	Burundi	Kenya	Rwanda	Uganda
2003	10.6	9.8	7.4	8.7
2004	8.2	11.6	12.3	3.7
2005	13.3	10.3	9.0	8.4
2006	2.7	14.5	8.9	7.3
2007	8.4	9.8	9.1	6.1
2008	24.4	26.2	15.4	12.1
2009	10.6	9.2	12.9	13.0
2010	6.5	4.0	-0.3	4.0
2011	9.6	14.0	3.1	15.1
2012	18.2	9.4	10.3	12.7
2013	7.9	5.7	5.9	4.9
2014	4.4	6.9	2.3	3.1
2015	5.5	6.6	2.5	5.4
2016	5.6	6.3	7.2	5.4
2017	16.1	8.0	8.3	5.6
2018	-2.8	4.7	-0.3	2.6

Source: World Bank Statistics

5.3 Discussion of the Short-Run Relationship Findings:

The findings of the PMG full model indicate, in the short-run, that there exists a positive short-run intra trade causality between Tanzania and Rwanda, whereby, changes in the rate of Rwanda's import has a positive and statistically significant impact to Tanzania exports. These findings can be explained by the fact that Rwanda is the landlocked country (see Appendix III) and depend on Tanzania for most of the agriculture products. In the short-run, most of the commodities that Rwanda imports are food-related and Tanzania is one of their major suppliers.

Further, the results of the PMG full model indicate that the intra trade between Tanzania and Uganda is being affected by the economic growth of both countries and the population. This also can be explained by the fact that growth in GDP and population of the Partner States leads to the expansion of the market for Tanzania

products. Majority of the products that Tanzania exports to Uganda are agricultural products.

5.4 Conclusion

This chapter discussed the meaning of the empirical results found in Chapter Four. Generally, the presence of EAC has led to trade creation for Tanzania which is mostly associated with by the fact that these countries are situated in one Geographical area. The next chapter provides the concluding remarks.

CHAPTER SIX

CONCLUSIONS AND POLICY IMPLICATIONS

6.1 Introduction

This part encompasses three sub-sections. Section one is the summary and conclusions of the study. Sub-section two present policy implications. And sub-section three are dissertation limitations and the suggested areas for further studies.

6.2 Summary and conclusions

The study investigated the role that the EAC has played in the development of the cross-border trade for the URT. This study employed the theoretical framework of the Gravity Model, developed by Jan Tinbergen in 1962 which describes the extent of two-sided trade movements among two countries can be estimated employing a law called the gravity equation through analogy in the Newtonian theory of gravitation.

This study explored the factors affecting the intra-trade within the EAC in the long run for a panel of four countries (N=4) with annual data for the period 2003-2018 (T=16) using the Pooled Mean Group (PMG) technique. The correlation test indicates that value of export is positively related with the value of import, the economic growth rate of both Tanzania and the Partner States and dummy variable of if Swahili is the national language of partner countries. The results of the cointegration suggest the existence of a long-run relationship between variables of interest.

The results of the Pooled Mean Group (PMG) has revealed that all variables have a statistically significant relationship with export performance of Tanzania except for only the population variable. Whereas FDI, GDP from the Partner States and

inflation have all a positive statistically significant relationship with Tanzania exports, imports from the Partner States affects Tanzanian exports negatively.

The results of the Pooled Mean Group in the short-run have revealed that for Rwanda, only changes in the rate of Rwanda's import has a positive and statistically significant impact to Tanzania exports; for Uganda shows that economic growth of Uganda has a statistically significant negative relationship with the export performance of Tanzania, whereas, the positive change in the economic growth of Tanzania statistically increases the rate of export, and Burundi and Kenya have no short-run causality with the Tanzania export rate because all the variables are not significant.

6.3 Policy Implications

The findings of this study have important policy implications for the economy in Tanzania. FDI inflows from the Partner States was found to have a statistically significant relationship with the level of exports of Tanzania. This means that the favourable investment climate that the Government has created has bared fruits of expanding the production of exported commodities to the other Partner States. It is also evidenced by the fact that Kenya ranks in the top five of countries with most FDI inflows to Tanzania. Since Tanzania has achieved the middle-income status in 2020, it is crucial now for the Government to design and implement policies that will not only attract FDI into the country but also ensure the sustainability of those FDI inflows over a long period. This is the reason as to why the Fifth Phased Government decided to create a special Ministry responsible only for Investment and place it under the Prime Minister's Office for effective implementation. The Government has also maintained peace and stability among the Tanzanian citizens (both nationals and foreigners) something that tends to attract FDI inflows for a long period.

It also emerged that the increase in the GDP of the Partner States affects the exports of Tanzania positively. This means that, as integration keeps on getting strengthened so it is for the economies of the Partner States, something that can only increase the market for Tanzanian products and thus more foreign earnings. Both EAC Partner States are striving to improve their countries economic conditions, therefore have invested heavily in improving their GDP position. This will only be advantageous to Tanzania exports as it simply means more exports.

Unsurprisingly, imports from partner states had an adverse correlation with the export performance of Tanzania. This raises an alert to the Government to make sure that they implement better industrial policies that will lead to increase both the quality and quantity of our exports so that they can compete with those of other Partner States such as Kenya. One cautionary note is that the study revealed that Tanzania imports most manufactured products, whereas, it export mostly traditional products. The Government needs to ensure that it places policies that will lead to the industrialization of the country since in the long run this type of trade will not be beneficial to the country. Exportation of the traditional product will not attract enough foreign currencies like those of manufactured products tend to do. This is why the Fifth Phased Government, under the leadership of his Excellency John Pombe Magufuli has been loudly advocating for Tanzania to establish more industries to improve both domestic production of goods and strengthening its export position.

Finally, the positive relationship between the level of inflation of other Partner States and Tanzania exports simply means that the Government should continue to monitor the country's levels of inflation as it gives us an advantage over other Partner States. This also needs to be looked at with cautionary eyes since most of the EAC Partner States have also been striving to reduce their annual headline inflation rates also, meaning that in the future, Tanzania exports might not be able to enjoy this advantage anymore.

6.4 The limitations of the study and recommended areas for further study

This study investigated the role that the EAC has played in the development of the cross-border trade in the URT. The study explored the factors affecting the intra-trade within the EAC in the long run. A panel of four countries with annual data for the period 2003-2018 using the Pooled Mean Group (PMG) technique. The major limitation that the study encountered was the fact that there are various sources of the same type of data. Sometimes it happens that those sources differ in the same type of data that they have, something that required more analytical work to be conducted first to be able to decide which data source should be selected by the study.

The future research can expand the number of countries by including other regional integrations that Tanzania is associated with such as the Southern Africa Development Community (SADC). Additional, future studies can also expand the period before 2003 for better test results.

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APPENDIX I

PANEL DATA USED IN THE STUDY

Reporter	Partner	Year	FDI	Export to EAC	Import from EAC	Inflation	Pop_partner	Pop_Tanzania	GDP_Partner	GDP Tanzania	Distance
Tanzania	Burundi	2003	-	8,722,310,470	335,168,134	10.6	6,909,154	36,337,782	784,654,423.6	15,224,257,698.5	2,125.25
Tanzania	Burundi	2004	0.0	14,439,953,702	6,066,364,920	8.2	7,131,693	37,379,767	915,257,323.4	16,675,948,414.8	2,125.25
Tanzania	Burundi	2005	0.6	14,290,864,879	341,977,031	13.3	7,364,862	38,450,320	1,117,113,045.7	18,399,046,025.3	2,125.25
Tanzania	Burundi	2006	0.0	11,430,061,701	34,386,984	2.7	7,607,849	39,548,663	1,273,375,020.3	18,649,590,248.3	2,125.25
Tanzania	Burundi	2007	0.5	89,383,876,179	37,237,337	8.4	7,862,214	40,681,414	1,356,199,364.9	21,843,529,024.9	2,125.25
Tanzania	Burundi	2008	3.8	24,411,149,966	508,554,228	24.4	8,126,102	41,853,944	1,611,835,901.9	27,941,177,434.5	2,125.25
Tanzania	Burundi	2009	0.3	32,434,088,788	413,930,173	10.6	8,397,668	43,073,834	1,781,455,092.1	29,081,425,282.3	2,125.25
Tanzania	Burundi	2010	0.8	51,289,147,985	873,121,050	6.5	8,675,602	44,346,525	2,032,135,246.5	32,014,249,841.4	2,125.25
Tanzania	Burundi	2011	3.4	61,342,681,390	1,195,955,947	9.6	8,958,406	45,673,338	2,235,820,867.8	34,657,139,495.4	2,125.25
Tanzania	Burundi	2012	0.6	85,186,906,035	6,066,364,920	18.2	9,245,988	47,052,481	2,333,308,099.5	39,650,530,214.3	2,125.25
Tanzania	Burundi	2013	7.4	104,455,498,752	2,684,545,528	7.9	9,540,289	48,482,266	2,451,625,332.7	45,680,532,613.8	2,125.25
Tanzania	Burundi	2014	47.1	68,030,678,179	504,177,032	4.4	9,844,297	49,959,822	2,705,783,272.1	49,964,788,814.1	2,125.25
Tanzania	Burundi	2015	7.4	72,607,324,176	2,124,053,445	5.5	10,160,030	51,482,633	3,104,394,858.1	47,378,599,025.3	2,125.25
Tanzania	Burundi	2016	0.1	112,829,236,828	1,685,935,765	5.6	10,487,998	53,050,790	2,959,640,987.3	49,774,021,003.1	2,125.25
Tanzania	Burundi	2017	0.3	110,261,422,883	521,262,874	16.1	10,827,024	54,663,906	3,172,292,379.4	53,320,625,958.6	2,125.25
Tanzania	Burundi	2018	1.0	80,843,394,397	2,342,525,397	-2.8	11,175,378	56,318,348	3,036,931,818.2	58,001,200,572.4	2,125.25

Reporter	Partner	Year	FDI	Export to EAC	Import from EAC	Inflation	Pop_partner	Pop_Tanzania	GDP_Partner	GDP Tanzania	Distance
Tanzania	Kenya	2003	81.7	88,206,615,190	111,930,470,927	9.8	34,678,779	36,337,782	14,904,517,649.8	15,224,257,698.5	899.13
Tanzania	Kenya	2004	46.1	98,772,598,557	880,188,646,555	11.6	35,635,271	37,379,767	16,095,337,093.8	16,675,948,414.8	899.13
Tanzania	Kenya	2005	21.2	106,467,109,865	194,843,890,877	10.3	36,624,895	38,450,320	18,737,897,744.8	18,399,046,025.3	899.13
Tanzania	Kenya	2006	50.7	133,613,314,144	219,662,628,642	14.5	37,649,033	39,548,663	25,825,524,820.8	18,649,590,248.3	899.13
Tanzania	Kenya	2007	1,107.5	189,116,793,540	409,202,645,403	9.8	38,705,932	40,681,414	31,958,195,182.2	21,843,529,024.9	899.13
Tanzania	Kenya	2008	488.0	298,826,753,774	510,478,766,409	26.2	39,791,981	41,853,944	35,895,153,327.8	27,941,177,434.5	899.13
Tanzania	Kenya	2009	1,491.3	249,479,629,569	411,636,001,758	9.2	40,901,792	43,073,834	37,021,512,048.8	29,081,425,282.3	899.13
Tanzania	Kenya	2010	1,197.6	291,238,249,218	388,779,867,271	4.0	42,030,676	44,346,525	40,000,088,346.8	32,014,249,841.4	899.13
Tanzania	Kenya	2011	1,450.5	341,556,498,672	522,389,588,290	14.0	43,178,257	45,673,338	41,953,433,591.4	34,657,139,495.4	899.13
Tanzania	Kenya	2012	1,380.2	545,498,768,758	880,188,646,555	9.4	44,343,410	47,052,481	50,412,754,861.0	39,650,530,214.3	899.13
Tanzania	Kenya	2013	1,118.8	1,372,077,297,912	533,302,535,716	5.7	45,519,889	48,482,266	55,096,728,047.9	45,680,532,613.8	899.13
Tanzania	Kenya	2014	820.9	841,924,634,082	687,259,727,678	6.9	46,699,981	49,959,822	61,448,046,801.6	49,964,788,814.1	899.13
Tanzania	Kenya	2015	619.7	1,347,953,677,055	428,896,604,752	6.6	47,878,336	51,482,633	64,007,750,178.5	47,378,599,025.3	899.13
Tanzania	Kenya	2016	681.	1,176,213,171,791	574,820,337,93	6.3	49,051,686	53,050,790	69,188,755,511.1	49,774,021,003.1	899.13

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Reporter	Partner	Year	FDI	Export to EAC	Import from EAC	Inflation	Pop_partner	Pop_Tanzania	GDP_Partner	GDP Tanzania	Distance
Tanzania	Kenya	2017	1,27 5.4	631,223,024,116	448,022,173,083	8.0	50,221,473	54,663,906	78,757,391,333.0	53,320,625,958.6	899.13
Tanzania	Kenya	2018	1,62 5.9	521,836,717,603	549,802,198,247	4.7	51,393,010	56,318,348	87,908,262,519.9	58,001,200,572.4	899.13
Tanzania	Rwanda	2003	4.7	5,677,884,274	833,075,393	7.4	8,557,161	36,337,782	1,846,198,770.6	15,224,257,698.5	2,130.28
Tanzania	Rwanda	2004	7.7	8,344,775,889	3,305,749,958	12.3	8,680,524	37,379,767	2,088,961,968.9	16,675,948,414.8	2,130.28
Tanzania	Rwanda	2005	8.0	7,772,795,061	32,721,432	9.0	8,840,215	38,450,320	2,581,313,485.7	18,399,046,025.3	2,130.28
Tanzania	Rwanda	2006	30.6	7,011,895,725	131,131,880	8.9	9,043,337	39,548,663	3,194,248,865.8	18,649,590,248.3	2,130.28
Tanzania	Rwanda	2007	82.3	23,746,948,709	64,763,402	9.1	9,273,757	40,681,414	3,875,655,218.4	21,843,529,024.9	2,130.28
Tanzania	Rwanda	2008	102. 3	26,576,634,064	59,421,569	15.4	9,524,534	41,853,944	4,924,731,465.9	27,941,177,434.5	2,130.28
Tanzania	Rwanda	2009	118. 7	21,206,337,663	24,971,086	12.9	9,782,770	43,073,834	5,450,464,409.1	29,081,425,282.3	2,130.28
Tanzania	Rwanda	2010	250. 5	119,533,719,925	1,962,077,333	-0.3	10,039,338	44,346,525	5,849,863,212.5	32,014,249,841.4	2,130.28
Tanzania	Rwanda	2011	119. 1	155,487,324,694	2,436,570,658	3.1	10,293,331	45,673,338	6,646,901,208.0	34,657,139,495.4	2,130.28
Tanzania	Rwanda	2012	255. 0	165,107,979,849	3,305,749,958	10.3	10,549,678	47,052,481	7,428,848,122.0	39,650,530,214.3	2,130.28
Tanzania	Rwanda	2013	257. 6	178,212,567,670	2,720,325,246	5.9	10,811,543	48,482,266	7,621,924,854.2	45,680,532,613.8	2,130.28
Tanzania	Rwanda	2014	458. 9	48,675,438,108	895,253,518	2.3	11,083,635	49,959,822	8,016,593,394.2	49,964,788,814.1	2,130.28
Tanzania	Rwanda	2015	379.	77,293,428,815	2,090,005,190	2.5	11,369,071	51,482,633	8,277,614,580.6	47,378,599,025.3	2,130.28

			8								
Reporter	Partner	Year	FDI	Export to EAC	Import from EAC	Inflation	Pop_partner	Pop_Tanzania	GDP_Partner	GDP Tanzania	Distance
Tanzania	Rwanda	2016	342.3	13,133,980,512	2,437,693,521	7.2	11,668,818	53,050,790	8,475,622,319.0	49,774,021,003.1	2,130.28
Tanzania	Rwanda	2017	356.4	16,360,552,943	2,905,405,763	8.3	11,980,937	54,663,906	9,140,429,057.9	53,320,625,958.6	2,130.28
Tanzania	Rwanda	2018	398.5	5,180,411,871	3,219,597,309	-0.3	12,301,939	56,318,348	9,508,715,596.4	58,001,200,572.4	2,130.28
Tanzania	Uganda	2003	202.2	50,085,084,303	7,695,420,674	8.7	25,980,552	36,337,782	6,336,696,289.0	15,224,257,698.5	2,130.28
Tanzania	Uganda	2004	295.4	60,065,903,204	169,013,639,122	3.7	26,821,297	37,379,767	7,940,362,799.2	16,675,948,414.8	1,552.85
Tanzania	Uganda	2005	379.8	54,727,120,359	7,252,100,685	8.4	27,684,585	38,450,320	9,013,834,373.4	18,399,046,025.3	1,552.85
Tanzania	Uganda	2006	644.3	54,738,108,179	6,776,113,453	7.3	28,571,475	39,548,663	9,942,597,780.0	18,649,590,248.3	1,552.85
Tanzania	Uganda	2007	792.3	61,175,818,049	24,099,604,778	6.1	29,486,338	40,681,414	12,292,813,603.2	21,843,529,024.9	1,552.85
Tanzania	Uganda	2008	728.9	76,109,987,754	20,534,988,681	12.1	30,431,736	41,853,944	14,239,026,629.6	27,941,177,434.5	1,552.85
Tanzania	Uganda	2009	841.6	115,209,573,595	17,411,672,061	13.0	31,411,096	43,073,834	18,168,902,153.9	29,081,425,282.3	1,552.85
Tanzania	Uganda	2010	543.9	83,552,303,541	25,121,803,795	4.0	32,428,167	44,346,525	20,186,496,527.1	32,014,249,841.4	1,552.85
Tanzania	Uganda	2011	894.3	83,299,234,341	56,074,140,689	15.1	33,476,919	45,673,338	20,176,025,256.9	34,657,139,495.4	1,552.85
Tanzania	Uganda	2012	1,205.4	160,925,329,277	169,013,639,122	12.7	34,559,168	47,052,481	23,114,293,416.4	39,650,530,214.3	1,552.85

Reporter	Partner	Year	FDI	Export to EAC	Import from EAC	Inflation	Pop_partner	Pop_Tanzania	GDP_Partner	GDP Tanzania	Distance
Tanzania	Uganda	2013	1,096.0	125,269,666,496	92,217,167,149	4.9	35,695,246	48,482,266	24,599,550,623.7	45,680,532,613.8	1,552.85
Tanzania	Uganda	2014	1,058.6	132,717,968,825	36,915,356,704	3.1	36,912,148	49,959,822	27,291,879,819.4	49,964,788,814.1	1,552.85
Tanzania	Uganda	2015	737.7	94,510,215,580	43,861,525,859	5.4	38,225,453	51,482,633	27,102,650,386.6	47,378,599,025.3	1,552.85
Tanzania	Uganda	2016	625.7	335,212,945,671	66,900,542,177	5.4	39,647,506	53,050,790	24,133,664,284.5	49,774,021,003.1	1,552.85
Tanzania	Uganda	2017	802.6	62,447,955,779	76,220,904,870	5.6	41,162,465	54,663,906	25,995,031,850.2	53,320,625,958.6	1,552.85
Tanzania	Uganda	2018	1,337.1	20,644,710,316	118,979,213,066	2.6	42,723,139	56,318,348	27,461,440,192.4	58,001,200,572.4	1,552.85

Source: TRA, NBS, World Bank Statistics and UNCTAD (2020)

APPENDIX II

RESULTS OF THE POOLED MEAN GROUP (PMG)

Iteration 0: log likelihood = -33.755099 (not concave)						
Iteration 1: log likelihood = -26.933354 (not concave)						
Iteration 2: log likelihood = -22.442268 (not concave)						
Iteration 3: log likelihood = -16.863018						
Iteration 4: log likelihood = -15.099282						
Iteration 5: log likelihood = -14.99455						
Iteration 6: log likelihood = -14.99408				Number of obs = 59		
Iteration 7: log likelihood = -14.99408				Number of groups = 4		
Pooled Mean Group Regression				Obs per group: min = 14		
(Estimate results saved as PMG)				avg = 14.8		
Panel Variable (i): partner				max = 15		
Time Variable (t): year				Log Likelihood = -14.99408		
D.Log of export to Partner States	Coef.	Std.Err.	z	P-value	[95%Conf. Interval]	
Long-Run						
Log of Import from Partner States	-0.039	0.022	-1.830	0.067	-0.082	0.003
Log of GDP of Partner States	1.688	0.124	13.580	0.000	1.445	1.932
Log of Population	-0.238	0.425	-0.560	0.576	-1.071	0.595
Log of FDI	0.040	0.016	2.550	0.011	0.009	0.071
Inflation	0.012	0.005	2.510	0.012	0.003	0.021
Short-run Results per Country						
Burundi	Coef.	Std.Err.	z	P-value	[95%Conf. Interval]	
ECT	-2.128	0.122	-17.420	0.000	-2.367	-1.888
D1.Log Import from Partner State	0.010	0.039	0.250	0.801	-0.067	0.087
D1.Log GDP from Partner States	-149.886	95.312	-1.570	0.116	-336.695	36.923
D1.Log of GDP from Tanzania	151.175	95.958	1.580	0.115	-36.900	339.249
D1.Log of Population	-145.948	95.784	-1.520	0.128	-333.682	41.786
D1.Log of FDI	0.025	0.019	1.310	0.190	-0.013	0.064
D1.Inflation	0.003	0.006	0.530	0.594	-0.009	0.015
D1.Log of Distance between apital cities	Ommitted					
Constant	-22.346	6.832	-3.270	0.001	-35.737	-8.956

Kenya	Coefficient	Std.Err.	z	P-value	[95%Conf. Interval]	
ECT	-0.385	0.253	-1.520	0.128	-0.880	0.110
D1.Log of Import from Partner States	-0.022	0.122	-0.180	0.855	-0.261	0.217
D1.Log of GDP from Partner States	61.757	45.133	1.370	0.171	-26.702	150.216
D1.Log GDP of Tanzania	-61.802	45.906	-1.350	0.178	-151.776	28.173
D1.Log of Population	62.007	45.446	1.360	0.172	-27.066	151.079
D1.Log of FDI	-0.117	0.121	-0.970	0.333	-0.355	0.120
D1.Inflation	-0.003	0.014	-0.210	0.835	-0.031	0.025
D1.Log of Distance between capital cities	Ommitted					
Constant	-5.103	3.669	-1.390	0.164	-12.295	2.088
Rwanda	Coefficient	Std.Err.	z	P-value	[95%Conf. Interval]	
ECT	-0.016	0.212	-0.080	0.940	-0.431	0.399
D1.Log of Imports from Partner States	0.294	0.108	2.730	0.006	0.083	0.505
D1.Log of GDP from Partner States	-29.450	59.805	-0.490	0.622	-146.667	87.766
D1.Log of GDP of Tanzania	38.049	60.107	0.630	0.527	-79.759	155.857
D1.Log of Population	-36.869	59.308	-0.620	0.534	-153.109	79.372
D1.Log of FDI Inflows from Partner States	-0.338	0.396	-0.850	0.394	-1.115	0.439
D1.Inflation	-0.050	0.035	-1.430	0.152	-0.118	0.018
D1.Log of Distance between Capital Cities	Ommitted					
Constant	-1.270	2.870	-0.440	0.658	-6.895	4.354
Uganda	Coefficient	Std. Error	z	P-value	[95%Conf. Interval]	
ECT	-0.407	0.338	-1.200	0.229	-1.070	0.256
D1.Log of Import from Partner States	-0.007	0.152	-0.040	0.965	-0.304	0.291
D1.Log of GDP of Partner States	-212.174	91.054	-2.330	0.020	-390.635	-33.712
D1.Log of GDP of Tanzania	210.796	89.823	2.350	0.019	34.747	386.846
D1.Log of Population	-210.478	90.179	-2.330	0.020	-387.225	-33.731
D1.Log of FDI Inflows from Partner States	-0.384	0.516	-0.740	0.457	-1.395	0.628
D1.Inflation	0.022	0.030	0.720	0.474	-0.038	0.082
D1.Log of Distance between Major Cities	-3.343	2.836	-1.180	0.238	-8.902	2.215
Constant	-4.790	4.922	-0.970	0.330	-14.437	4.857

Source: *Author's computation*

APPENDIX III

THE MAP OF EAST AFRICAN COMMUNITY PARTNER STATES



Source: EAC Website