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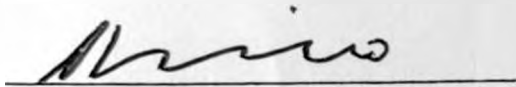
BY

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X50/70923/2007

Research Paper submitted in partial fulfillment for the requirement of the degree of Masters of Arts (Economics) of the University of Nairobi.
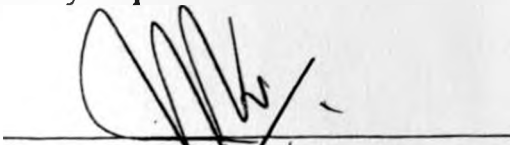
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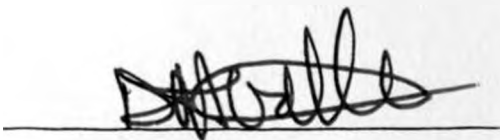
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DEDICATION

This work is dedicated to my family.

ACKNOWLEDGEMENTS

ABSTRACT

Export-led growth strategy has been a focus for Kenya since the early 1990's. Therefore the formation of the "new" EAC-RTA raises the question of whether this trade arrangement is of merit to Kenya. The study reviewed the effect of various RTA's on members countries and analysed Kenya's exports to Uganda and Tanzania since 1977, when the initial EAC disintegrated and the eventual revival of the East Africa Community. Using a simple regression model based on commodity exports, which are generally price focused and the EAC-RTA dummy variable, the study estimated the factors and the effect of the EAC-RTA on Kenya exports to the region.

The model estimation using annual data on export value from 1977 to 2008 showed that the existence of the EAC-RTA and tarmacked road network in Kenya had significant effect on exports. In addition the results indicated that when investment as a proportion of the GDP, taken as a proxy for supply side constraints reduces, there is an increase of export value. The study recommends that, to fully exploit the opportunities in the East African region, road infrastructure costs, investment constraints in Kenya be reduced and the new East Africa Community do not disintegrate.

ACRONYMS AND ABBREVIATIONS

ACP	Africa, Caribbean, and Pacific
ADB	African Development Bank
ASEAN	Association of South East Asian Nations
BCI	Business Climate Index
BOP	Balance of Payments
CET	Common External Tariff
CGE	Computable General Equilibrium
COMESA	Common Market for Eastern and Southern Africa
CU	Customs union
EAC	East African Community
EABC	East Africa Business Council
EPAs	Economic Partnership Agreements
ESA	Eastern and Southern Africa
EU	European Union
EC	European Commission
FDI	Foreign Direct Investment
FTA	Free Trade Agreement/Area
GATT	General Agreement on Tariffs and Trade
IMF	International Monetary Fund
Mercosur	The Common Market of the South America
MUB	Manufacture Under Bond
NTBs	Non-Technical Barriers
RoO	Rules of Origin
RTA	Regional Trade Arrangements
SADC	Southern African Development Community
WTO	World Trade Organization
OECD	Organization for Economic Co-operation and Development
RCA	Regional Comparative Advantage
UNCTAD	United Conference on Trade and development

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CHAPTER ONE

1.0   Introduction

Regional trade arrangements are an integral part of international trade, operating alongside the multilateral agreements under the World Trade Organization (WTO). The last decade has witnessed growth in the number of regional trade arrangements (RTAs)[1]. In the developing countries RTAs account for about 30–40 per cent of all trade agreements that are currently active (WTO, 2003). Africa is home to about 18 active RTAs with the revival of defunct and formation of new agreements occurring as part of deeper trade integration schemes. On average an African country belongs to 4 RTAs (World Bank 2004).

The growth of regional trading blocs has been a major development in international relations with virtually every country belonging to one or even multiple blocs (Schiff & Winters, 2003). Where Kenya, Uganda, Rwanda and Burundi belong to EAC and COMESA, Tanzania belongs to EAC and SADC. These regional groupings provide higher visibility to foreign investment and possible integration into the global economy, though primarily visualized on lowering trade barriers between members.

Regional Trade arrangements differ substantially in their treatment of issues such as, labour, land, capital mobility and investment. Nonetheless, it is possible to characterize the growth in regionalism in at least three broad separate, albeit related dimensions. Typically the agreements include those that are "deepening" existing RTAs, where RTAs that originally focused on "hard" trade restrictions like tariffs and quotas on manufactures and agriculture are extended to "soft" restrictions such as health and environmental standards, to other product areas like services and intellectual property, investment and capital mobility.

There is also, the "widening" of existing RTAs, as countries previously not members of any RTA seek to join one (or more) and the accession of some to the other RTAs. Further, other regions create new RTAs or relaunch ones that had effectively been dormant. In line with the trend of new regionalism, a tripartite summit held in October 2008, in Uganda resolved that three of the RTAs in Africa, namely; COMESA, SADC and EAC with a population of 600

million people and an average GDP per capita of U.S $ 1,184 should merge and form a single regional economic community. The feeling was captured by the former SADC chairman, who said that a single trading block that will span 26 countries is vital for the regions development. "We see regional integration as a central component for our development strategy in a globalized economy", he said (See East Africa Standard, Financial Journal, pg 7, November 11 2008).

The search for an explanation for the proliferation of RTAs begins with a number of positives. The intellectual case for free trade is as strong as it has always been, though dampened by the current global economic recession. Further, the ability to model the RTAs rigorously has added respectability to the traditional arguments linking trade liberalization and growth. All parties seem to agree that regionalism is a useful accompaniment to the global multilateral system, as exemplified by the push for a new EU-ACP EPAs.

The welfare and political outcomes of any RTA cannot be determined *a priori* (Kreinin and Plummer, 2002). Both therefore, will depend much on wide range of country circumstances and the domestic policy choices. Ideally, international trade should stimulate growth in a number of ways including production and demand linkages, economies of scale due to larger international markets, increased efficiency, competitiveness, adoption of superior technologies, and increased productivity through specialization and creation of employment (Basu *et al*, 2000, Santos-Pauline, 2000).

1.1   Regional Trade Arrangements

The most common forms of regional integration include Free Trade Areas (FTAs), Customs unions and Common Markets. The route adopted by most regional groupings, is to integrate by progressively liberalizing trade relations between members of the grouping. Integration therefore is a progressive process that goes through: a Preferential Trade Area (PTA); Free Trade Area (FTA), Customs union (CU), a Common Market and an Economic Union where there is a common currency and a unified monetary policy. Finally, a Political Union that represents the final stage of economic and political integration in which the legislative and judicial process of member states are either unified or federated under consensually agreed arrangements.

There is no easy conclusion on the contributions of trade arrangements to trade and economic development, it is necessary to investigate whether the formation of EAC-RTA has been trade enhancing. This study therefore focuses on the EAC-RTA that skipped the FTA stage and formed a customs union under the principle of asymmetry.

1.2   Previous East African economic cooperation

The history of cooperation between the East Africa countries goes back to the early 1920's on-account that the countries are neighbors, and their people engage in cross border trade. A common market between the three territories came into being in stages over a number of decades. The official formation of the East African Community was in 1967 which cemented regional co-operation. The aim of the agreement was to *"strengthen and regulate industrial, commercial and other relations to promote harmonious and balanced development of economic activities where the benefits whereof shall be equitably shared"* (Treaty for East African Co-operation, 1967). However, the life span of the EAC was short; it was dissolved in 1977, following ideological and economic differences. Kenya undertook a capitalist economic development strategy, while Tanzania followed a socialist approach. The industrial dominance by Kenya also increased the tension occasioning the community's eventual disintegration.

1.2.1 Current East African Community:

The EAC trade liberalization program has not followed the traditional sequence of economic integration from free trade area to customs union. The current cooperation commenced in 1993 with the signing of a *Declaration on Closer East African Cooperation*, a declaration of intent to cooperate in virtually all economic, social and political sectors. These efforts resulted in the formation of the "new" East African Community (EAC). EAC disposed of the intermediate step of first establishing a free trade area. Thus on 30th November 1999, the current East African Community (EAC) Treaty was signed by the EAC partner states of Kenya, Tanzania and Uganda and came into force on 7th July 2000 upon ratification by the three Partner States, the group was later expanded to include Rwanda and Burundi. The sequence of events towards full integration of East Africa, according to Article 5-2 of the Treaty, comprises the establishment of a customs union, followed by a common market, a monetary union and ultimately a Political Federation.   The Customs union became the entry point into the community and integration process. The envisaged benefits include; wider market for the

sectors, especially the manufacturing sector to facilitate FDI, improved access to raw materials for industrial development, increased trade among the partners and ground for sector competitiveness. Even though Rwanda and Burundi are members of the EAC, their late entry makes it difficult to get reliable data, hence this study did not include them due this limitation.

1.2.3 Common external tariff (CET)

The new EAC-Customs union established a Common External Tariff (CET) for the partner countries in accordance with the provisions of Article 75 of the Treaty. The protocol provides, three tariff bands on imports of goods originating outside East Africa, zero percent (covering principally capital goods), 10 percent (covering principally intermediate goods), and 25 percent (covering principally "sensitive sector" products and consumer goods to be protected from import competition). Therefore the new EAC trade regimes is characterized by tariff structure that imposes the lowest rates on raw materials and capital goods, moderate rates on intermediate goods and the highest rates on consumer goods (McIntyre, 2005). Additional changes under the Customs union include (Bagamuhunda, 2005);

(i) Common duty rates that will apply uniformly on all goods imported into the EAC.

(ii) Zero rates on most goods originating and traded within the EAC.

(iii) Reduction to zero rates on goods originating from Kenya and imported by Uganda and Tanzania. Under the CET, Uganda will eliminate 426 tariff lines and Tanzania 906 tariff lines to zero. The implementation will be in two phases; First, the adoption of the three-band structure, with Uganda and Tanzania maintaining tariffs on selected Kenyan imports and then removal of all internal tariffs by 2010 (McIntyre, 2004).

(iv) Classification of "sensitive items" that the EAC wants to protect from import competition, these items will attract rates of more than 25 percent

(v) Harmonised commodity descriptions and codes and harmonization of customs administration to eliminate delays and duplication

(vii) Tax incentives for exporters in the region where duties are waived including export processing zones, manufacturing under Bond, inward processing and duty drawback for manufactures for export

(viii) Computation of taxes based on a CIF value at the initial port of discharge (either at Mombasa or Dares Salaam)

(ix) COMESA and SADC preferential treatment will continue to apply on some products for a period of two years.

(x) The WTO Customs Valuation Agreement that aims at a fair, neutral system for valuation of goods has been adopted. The agreement gives greater precision to the provisions of valuation in the original GATT (McIntyre, 2004).

The implementation of the CET has raised challenges in the past as noted by the Chairman of the EABC, "Uganda and Kenya are still maintaining this duty (on imported goods),but it was to only affect shopping bags and not all plastic packaging material," he said." The differences have made goods in the former countries uncompetitive and have resulted to loss of jobs and closer of industries". In addition the Uganda and Tanzania were granted a stay of the CET for the Commonwealth Heads of government meeting (in 2007) and the Dar es Salaam rapid port (Dart) project for imported buses. The countries were allowed to import buses without regard to existing local capacity." This not only goes against the policy of industrialization, but also negates the spirit of promoting local manufacturing", he added (see Sunday Nation, July 27th, 2008, EAC Business Fret over new rules breach).This kind of sentiments clearly points out the hurdles that the implementation of the CET must overcome to realize its main objectives.

1.2.4 Trade Liberalization episodes in Kenya

The link between trade liberalization and economic growth has been a source of both intellectual inquisitiveness and trade policy formulations (Edwards, 1998), where it is argued that rapid economic growth cannot be sustained without rapid trade liberalization. Kenya's liberalization episodes were characterized by both external positive shocks, the coffee price booms and negative shocks, the oil crises. The government's response to the negative shocks was to increase controls so as to stem the loss of foreign exchange reserves and its inflationary consequences. The response of the government to the positive shock was endogenous trade liberalization (Reinnika, 1996) that precipitated a balance of payments crisis.

Increased economic freedom in trade involves lower trade barriers, leading to lower costs and greater efficiency. Multilateral trade liberalization in the country started with conversion of quantitative restrictions to tariffs equivalent. There was phased tariff reduction such that by 1992 quantitative restrictions affected only 5% of imports compared with 12% in 1987 (Swamy, 1994). Over the 1987-1992 period, the number of tariff categories and maximum tariff rates were reduced from 25 to 11 and 170% to 70% respectively. Further, the number of tariff bands (including duty free was reduced from 15 in 1990/91 to 4 in 1997/98 and top regular tariff rates from 100% to 25% over the same period (Mwega, 2002). The most significant shift in trade policy occurred in 1993 with the abolition of trade licensing requirements and foreign exchange controls (Ndungu, 2000 and Were *et al*. 2001).

Over the 1993-95 periods, all current and capital account restrictions were lifted. The response on imports and exports were immense, with exports responding more due to the combined effect of devaluation of the Kenya shilling in 1993. In totality this raised the export earnings dramatically in the early 1990's from 13% of the GDP in 1992 to over 20% between 1993 and 1996 (Glenday and Ndii, 2000).

The regional trade integration measures under the East Africa Cooperation and the wider COMESA also accounted for the dominant share of increase in Kenya's exports. Recorded exports to COMESA increased from an average of 15% for the period 1990-1992 to 34% in 1996-98 (Glenday and Ndii, 2000).

The evidence in favour of export lead growth (ELG) and trade liberalization appears to have influenced the country to adopt export-lead growth strategy in the early 90's, to emphasize manufacturing for export markets through various schemes such as export compensation, manufacturing under bond (MUB) and export processing zones (EPZ). However, the impact of export incentive schemes especially MUB and EPZs designed to target dedicated export processing for outside markets has not been significant .The country has not been successful in gaining competitiveness in labour–intensive export processing (Glenday and Ndii,2000).

1.2.5 Kenya Trade direction

Kenya trades with both developed and developing countries, especially the Southern African developing countries because of the country's strategic position as a regional industrial hub with access to the sea. The geographical distribution of her trade since the onset of trade liberalization in the early 1990's, shows that the EU has been the dominant market for Kenyan exports followed closely by the EAC as shown in the table 1.1 below.

Table 1:1: Selected direction of Kenya's Exports and Origin of its Imports, 1992-2008

aphical and n	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
can																	
ts^a	44.0	39.1	34.8	33.7	35.3	34.3	31.7	31.3	29.8	27.1	27.1	28.5	26.4	24.0	26.1	26.4	25.9
ts^b	36.2	36.6	35.4	40.4	37.7	32.2	32.6	32.8	30.5	24.8	32.2	23.7	23.9	21.0	22.0	20.0	17.3
ca																	
ts	4.2	4.7	4.3	3.6	3.5	3.5	3.3	2.7	2.7	2.9	2.4	2.1	2.8	5.1	8.6	7.5	6.4
ts	10.9	7.8	8.0	6.9	7.4	9.5	13.0	9.7	6.0	15.7	7.4	6.4	6.7	11.7	6.2	9.2	5.7
rua																	
ts	4.2	7.0	10.2	11.8	12.0	12.2	12.0	11.2	8.2	9.2	8.4	4.0	8.3	7.7	7.3	8.1	8.5
ts	0.5	0.5	0.9	0.4	0.6	0.5	0.3	0.2	0.4	0.2	0.03	0.5	0.6	0.7	0.9	1.1	0.9
la																	
s	6.7	9.0	12.2	15.1	15.4	14.3	15.2	17.3	18.0	20.4	18.5	16.7	17.3	16.4	11.1	12.2	12.3
s	0.3	0.3	0.2	0.1	0.0	0.2	0.0	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.2	1.0	0.7
of .SA												3.5	3.4	3.5	3.4	3.0	3.1	3.2
s	10.9	14.0	16.6	13.9	12.5	13.3	14.2	15.3	15.9	16.8	0.4	0.4	0.4	0.3	0.3	0.5	0.4
s	2.1	1.6	1.5	0.7	0.7	2.9	0.9	1.4	1.5	3.5							
f Africa																	
s	4.0	4.1	4.5	6.1	5.4	4.3	3.9	2.9	3.9	2.8	15.4	14.7	15.0	15.3	18.1	18.5	18.2
s	0.3	0.1	11.2	7.5	8.3	11.6	7.5	9.0	7.1	7.0	3.7	4.1	4.0	3.5	4.6	4.0	3.5

Source: KNBS Economic Surveys

a – as a share of total exports
b – as a share of total imports

The share of Kenya's exports going to the EU over the period (1990-1999) declined by about 3.9% annually and has continued to decline since. While the share of exports to the rest of COMESA (excluding the EAC) has shown an increasing trend over time, with the share of exports to the rest of Africa being more or less constant. The share of exports to EAC (Tanzania and Uganda) has increased from 7.4% in 1990 to 28.5% in 1999, representing an impressive growth rate of 14.4% per annum. The significant increase in exports to the EAC began in 1993, the year when Kenya made significant liberalization of her trade regime under the structural adjustment programme and the signing of a Declaration on closer East Africa cooperation.

1.2.6 Structure and Composition of Exports

Like most Sub-Saharan Africa countries, Kenya's export structure is predominately composed of primary commodities-mainly, tea, coffee and horticulture. The share of manufactured exports has not only remained small but has been declining. The decline in Kenya's export

performance is mainly attributed to past policies that produced an anti-export bias (Wagacha, 2000). Consequently, export growth has been erratic, based on fluctuations in earnings from a few traditional primary exports and the tourism sector. This over reliance on primary commodities exposes the export sector to external shocks such as fluctuations of world market price and vagaries of weather. An export growth strategy that is based solely on the exploitation of agricultural resources is not good for long-term development due to limited scope for technological improvements and skill developments offered by such a strategy. Table 1.2 below shows various commodities, as a percentage of exports since the signing of the EAC Treaty in 1999.

Table 1:2: Principle commodities as a percentage of Exports, 1999-2008

ITEM	1999(%)	2000(%)	2001(%)	2002(%)	2003(%)	2004(%)	2005(%)	2006(%)	2007(%)	2008(%)
Tea	22.85	29.39	28.41	26.16	24.14	23.12	20.19	20.75	17.87	19.78
Horticulture	12.29	17.70	16.39	21.56	26.69	28.34	21.30	21.39	21.71	22.06
Petroleum Products	6.36	7.85	10.13	2.97	0.05	0.71	3.08	1.88	2.95	1.31
Coffee	8.34	9.77	6.18	4.98	4.6	4.45	4.32	4.00	3.98	3.14
Soda Ash	0.91	1.17	1.65	1.62	1.75	2.03	1.84	1.74	2.07	4.09
Cement	0.87	1.17	0.82	1.13	1.45	1.26	1.36	1.69	1.76	2.25
Pyrethrum Extract	0.46	0.58	0.82	0.61	0.59	0.60	0.53	0.48	0.06	0
Sisal	0.44	0.51	0.60	0.60	0.66	0.72	0.56	0.55	0.53	0.46
Fluorspar	0.36	0.54	0.54	0.56	0.49	0.57	0.58	0.50	0.37	0.67
Hides and Skins	0.22	0.41	0.52	0.34	0.40	0.61	0.41	0.27	0.05	0.01
All Other"	31.37	12.44	13.51	16.9	18.53	20.07	26.18	24.98	26.72	25.06
Total Exports	100	100	100	100	100	100	100	100	100	100

Source: Ministry of Trade, KEPLOTRADE sectoral background studies 2008.

The emerging pattern is one of a highly concentrated export structure; an export destination of a few traditional and dominant markets and an insignificant share of processed products in the export basket. This calls for increasing the product range, moving up the ladder in agro-

processing and expanding exports within regional markets and other destinations. A more diversified export structure reduces vulnerability to external shocks.

1.3   The Statement of the Problem

The East African Trade Arrangement was designed using the principle of asymmetry[2], hence retained tariffs on some products exported by Kenya into the member countries to protect their industries. This has resulted in conflicting interpretation and breach of the CET in the past, like levying exercise duty on plastics by some member countries. The government also acknowledges that weak negotiating capacity impedes the country's ability to negotiate for favorable trade agreements and therefore creates barriers against the country's exports (GoK, Vision 2030).

Due to a series of external shocks occasioned by the oil crises in 1973 and the 1980's resulting into balance of payments (BOP) problems and the collapse of the initial EAC in 1977, which impacted negatively on merchandise exports, the government shifted from import-substitution to export-promotion strategy by 1974.

Despite previous export growth strategies that were designed to promote manufacturing for exports, the contribution of the processed exports to the GDP has remained at about 9 per cent since the 1960's (Ministry of Industrialization, Strategic Plan 2008-2012).

But according to the Kenya's Vision 2030 economic strategy, the government plans to increase the country's regional export share from 7 per cent to 15 per cent by 2012, through increased capacity utilization and elimination of impediments to Kenya's competitiveness in the region. However the East African market is currently dominated by imports from outside the region, while the overall business climate index declined in the year 2008 (EABC 2008).
This research paper sought to address the problem of how the EAC-RTA has affected Kenya's exports since 1977.

1.4   Objectives of the Study

The main objective was to analyse the effect of the East Africa Community trade arrangement on the country's exports and propose policies based on the findings.

The specific objectives included:

1) To analyse the effect of the EAC-RTA on Kenya's exports to the region from 1977 to 2008.

2) To identify and quantify the factors which determine Kenya's exports to the region.

3) To recommend policies that promote trade based on the study findings.

1.5   Significance of the Study

Through forming the EAC, the expectation is that the RTA should facilitate trade, labour and capital movements, reduce the cost of doing business, increase investment and thereby increase the aggregate economic activity of its members.

The EAC regional integration appears to be strong and moving towards deeper integration with the implementation of the customs union and a desire for political integration come 2010. However, the EAC-Customs union presents uncertain economic impacts on member countries. For instance, there have concerns by the trading partners of the adverse affects under the customs union on their industries by import competition from Kenya which is viewed to have a relatively advanced industrial sector.

There are also past incidences where different countries have interpreted the CET differently, like levying exercise duty on plastics and failure to reduce transportation costs may have resulted into a decline in the business climate index (BCI)[3] in the region (EABC 2008).The BCI is an initiative of the East Africa Business Council with the objective of giving a platform for the business community to provide necessary inputs leading to the elimination of Non Tariff Barriers (NTB's) and improvements of other business climate. The decline in BCI is significant as it indicates that there was a drop in the business climate. Therefore whereas intra-regional trade should be promoted, the tariff reduction alone under the customs union may not generate high interregional trade without elimination of the NTBs. Some studies show that the

implementation of the EAC-CU with maximum tariff of 25 per cent may cause trade diversion Lucio Castro, *et al.* (2005).

The total trade (exports and imports) is predicted to have marginal gains of about 2 and 3 per cent respectively Okelo (2006). These creates doubt about the merit of the new trade arrangement and its possible contribution the country's economic development

With the current EAC in its 9th year of operation, it is an opportune time to examine what effect, if any, it has brought about thus far. It is with this in mind that the study seeks to evaluate the contribution of the RTA on Kenya's exports, resulting from the expanded regional market. This was informed by the fact that export lead growth brings in technology transfer, and efficient allocation of resources imposed by international competition. The study is therefore significant as it will inform Kenya's trading policy within the East African region.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter attempted a review of the literature which have attempted to explain the formation of RTAs and their effect on member countries. According to various authors, economic groupings that represent varying degrees of integration tend to reduce the trade barriers between them resulting in easier flow of factors of production. The reasons advanced for these regional groupings include proximity of countries, economic size of the countries, per capita income and the international terms of trade among other factors. Although these are some of the reasons for regional groupings, within the East African region Kenya has been seen to have a competitive advantage, in part due to earlier industrial impetus and export growth strategies. The commodity composition of East African intraregional trade reveals that unlike trade with the rest of the world, manufactures play an important role. McIntyre (2005) indicates that for Kenya 11.5 percent and 43.4 percent of its imports from Uganda and Tanzania, respectively, are manufactures. For Uganda, 33.8 percent and 71.3 percent of its imports are manufactures from Kenya and Tanzania, and for Tanzania 56.8 percent and 16.6 percent of its imports are manufactures from Kenya and Uganda. In short, the expansion of intraregional trade has provided a market for Kenya's manufacturing sectors in the EAC member states, particularly Kenya.

2.2 Theoretical Literature

The assumption in trade theory, though not necessarily true is that a customs union, for example would be welfare improving since tariffs, which are in general welfare reducing would fall under such arrangement. However, in the static influencing concept of trade creation and trade diversion, Viner (1950) showed that a customs union effect on welfare is ambiguous. The basic Viner model was hinged primarily on international trade theory which assumed that, import-competing goods may be produced under increasing marginal cost conditions, while exportable goods are produced under constant cost conditions in each country.

Since Viner's seminal analysis, trade creation and diversion have been treated as synonymous with the impact of customs unions and other regional integration arrangements. If the effect of increased trade shifts production from low-cost producers outside the trading bloc to high-cost producers within the bloc, this would result into trade diversion. But if the increased regional trade leads to the shifting of production from less efficient, high-cost producers to more efficient, low-cost producers within the union, the agreement would be trade creating. Thus a trade union will be beneficial if on balance it is "trade creating" and harmful if it is "trade diverting". Dollar, (1992) noted that a well crafted trade bloc can increase competition in domestic industries and spur productive efficiency gains which improve the quality and quantity of inputs and goods available to the economy.

Bhagwati (1993) first questioned the validity of this assertion, pointing to an earlier important contribution by Lipsey (1957) that had spelt out the welfare improvement criteria in a specific model that differed from the ones defining the "natural trading partners." Subsequently, Bhagwati and Panagariya (1996) offered a systematic critique of the natural trading partners hypothesis. Regarding proximity as the basis of welfare-improving unions, they demonstrated that ceteris paribus, a union with a proximate partner could be more harmful than with a distant one. Regarding the volume-of-trade criterion, following Panagariya (1996), they pointed out that there was a presumption that the more a small country imported from its union partner, the more it would lose from liberalizing preferentially. As long as the country continued to import from the outside world, the price facing its consumers and producers would not change. Therefore, it would fail to reap any efficiency benefits that accrue via the decline in the internal price when liberalization is non-discriminatory. Instead, the country would lose tariff revenue on good imported from the partner country with the lost revenue transferred to the latter's exporters.

In assessing the effects of forming an effective RTA, the efficiency gains of economic integration depends on whether the products produced by members of the RTA are in direct competition with, or complementary to, each other. But to be competitive or have efficiency gains in an RTA, there must be a considerable overlap in the range of commodities that

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members of the RTA produce. In this case, complementarities' exists when members of RTAs produce commodities or products that do not compete much with the local production of other RTA members. Traditional integration theory contends that, in the case of complementary economies, economic integration will have the usual trade diversion and trade creation effects; the higher the barriers to trade with non-members, the higher the risk of trade diversion.

Khandelwal (2004) developed estimates of bilateral product complementary indices[4] in COMESA and SADC. The results indicate that, within COMESA, product complementarities between Kenya's exports and the imports of the other member countries average 38.6. For all other countries, except Egypt, average product complementarily for exports is far lower, EAC member Uganda, had an average of 19.8. The trading patterns of the EAC members however, indicate that trade linkages may be relatively weak hence there is no easy way to characterize these economies as either complementary or competitive.

The partial equilibrium nature of the Vinerian framework is not wholesome in explaining the impact of RTAs. In comparative advantage theory neighbouring countries are unlikely to be internationally competitive producers of the large number of products consumed by residents of most countries. This consideration would limit the number of cases in which regional integration arrangements among small countries to be trade creating owing to member countries' international competitiveness in various products. Also, the assumption of unlimited capability to produce exportables at constant unit costs is extreme and cannot hold under various production conditions.

Other studies have used gravity models to assess the impact of regional agreements on trade flows. Based on the law of gravity, the gravity model equations predict that the volume of trade between two economies should increase with their size (proxied by real GDP) and decrease in transaction costs (measured as bilateral distance). The standard gravity model predicts that the volume of trade between any two countries i and j, (i: exporting country j: importing country) is a function of the country's GDP (M_i, M_j), distance between i and j(D) and gravitational constant(G). Such that

$$F_{ij} = G \frac{M_i^\beta M_j^\alpha}{D^\delta_{ij}}$$

That is if $\beta, \alpha = 1$ and $\delta = 2$ to give the Newton's Law which the gravity model is anchored on. Appleyard and Files (2001) notes that the gravity model[5] provides a multivariate framework for assessing the impact of RTAs on the level in terms of volume rather than composition and what drives one country to export to another. The model predicts that a country's absolute trade potential depends on its total economic size as well as other factors such as land area, population, geographical distance, cultural similarities, policy and political ties (Kirkpatrick & Watanabe, 2005). These studies showed that the volume of trade is positively related to the national incomes of trading partners, and a decreasing function of the distance between them. The assumption being that, in the absence of a regional trade agreement, members' trade will be proportional to the gross domestic product (GDP) and the distance between them.

Kristjansdottir, (2005) indicates that GDP reflects the capacity to supply exporting goods and demand for exports by the importing country, which is assumed to increase as its GDP increases. Other studies show that gravity model works best for countries that are similar, like the East African region and have considerable intra-industry trade with one another (Helpman 1990). In Yarmrick and Gosh (2001), using gross domestic product and distance as the variables to capture the bilateral trade between two countries, the study concludes that RTAs are trade creating.

Even though the gravity model has gained wide application, a number of fundamental issues have been raised on its usage. The model appears to exist in a vacuum due to its lack of solid theoretical micro-economic underpinnings. The postulation that bilateral trade between countries is dependent of the size of their GDP and distance between them is not embedded on any theoretical literature of international trade. Equally, the model ignores the role of technology, factor endowments and demand functions or structural differences that are known to influence international trade. In addition some econometric issues still remain unresolved. The use of total trade (imports and exports) as dependent variable and the other standard variable with proxies to test the effects of membership of an RTA is in dispute. The use of total

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trade as dependent variable imposes equality of coefficients between exports and imports. It is suggested that these should be estimated separately.

Polak (1996) points out that using constant distance between trading partners is problematic, because the absolute distance of some countries from their trading partners is much lower than others. He gives the example of the EU (and their dependent on adjacent trading partners) as more favorably located in these terms in contrast to the South-East Asia countries (with higher dependence on the more distance European countries and other OECD markets), in addition the use of dummy variables to capture additional effects of an RTA may lead to incorrect inference, especially where there is multiplicity of membership to various trade arrangements.

Meade (1955) outlined the static theory of regional integration arrangements by abandoning the Vinerian assumption of constant costs of production in trading countries and recognized the necessity of ensuring equilibrium in international payments balances. Thus, he brought to the fore adjustment in both international and domestic relative prices to achieve general equilibrium under regional integration arrangements. The framework highlights the central role of prices and international terms of trade for achieving and maintaining equilibrium in international trade and payments under preferential trading arrangements. The analysis focused on the economic welfare of the world economy, not simply the countries forming a regional integration arrangement. In going beyond the "small country" perspective, Meade recognized the potential for significant secondary effects of regional integration arrangements on third-countries and the world economy at large owing to adjustment in world markets for traded and non-traded goods.

The use of CGE models has raised questions about the appropriate specification of behavioural and technical relationships and the choice of parameter values. Baldwin and Venables (1995) suggests that the uncertainties surrounding simulation results found by CGE models should be tested through sensitivity exercises designed to probe the implications of key assumed economic relationships, functional forms and parameter values.

Lipsey and Lancaster (1956/57) developed the theory of "second-best" which predicts that for distorted economic systems, the elimination of one set of distortions does not guarantee an improvement in overall economic welfare so long as other economic distortions remain unchanged. The theory of second best therefore implies that reducing tariffs on a discriminatory basis under a regional integration arrangement does not guarantee an improvement in welfare for individual countries.

2.3   Empirical Literature

The early empirical studies of different regional integration arrangements like EU, Nafta,Mercosur,Asean focused on explaining past trends in trade flows and related variables, such as prices and national income. By their nature empirical studies involve ex post analysis involving not only formally explaining past trends in trade flows and related variables, such as prices and national income, but also specifying what course trade and other variables would have taken had an extant regional integration arrangement not been established.

2.3.1 Studies on specific RTAs

The European Union being an early effort on integration has been the subject of many quantitative ex post analysis particularly its impact of trade in manufactures, after the Rome Treaty of 1957, using a variety of ex post approaches.

Studies by Truman (1969) and Prewo (1974) using trade share measures, Balassa (1967, 1975) using income elasticities of demand for imports and the assumption that higher (lower) income elasticity values imply trade creation (diversion), and Aitken (1973) using the gravity model method to explain bilateral trade flows between the trading partners, sought to estimate trade diversion as well as trade creation. Despite their different theoretical approaches, these studies concluded that, following creation of the European Community (EC), trade creation in manufactures significantly outweighed trade diversion in manufactures. They also found that formation of the European Community led to significant expansion of manufacturing exports to EC countries by non-member countries.

Balassa (1975) went beyond estimating the impacts of the European Community on trade, to examine the impact of the new regional integration arrangement on EC welfare. Using the

average EC tariff rate for manufactures and his own estimate of trade creation for 1970, he calculated that EC welfare was improved by about 0.15 percent of EC GDP per annum. Additionally, he considered the economic cost of trade diversion under the EU Common Agricultural Policy (CAP), which he calculated at $0.3-to-0.4 billion per annum. The analysis arrived at a net welfare gain for the EC customs union of $0.4 billion per annum, or less than one tenth of one percent of EC GDP per annum.

The studies by Gasiorek, Smith, and Venables (1992), and Haaland and Norman (1992) are both based on an analytical model of imperfect competition in the European Community developed by Smith and Venables (1988). These studies examined the implications of reducing intra-union trade costs for manufactures by 2.5 percent, in principle enabling EU firms producing differentiated products under imperfect competition to expand output and reduce costs along declining average cost schedules. Harrison, Rutherford, and Tarr (1994) employed a more extensive model that does not impose uniform pricing by firms across EU markets. The quantitative results indicated that deepening of economic integration in the European Union should be expected to achieve substantial economic gains, of about 1 percent of GDP per annum in several EU countries, owing predominantly to pro-competitive effects of product standardization. The results also suggested the occurrence of appreciable trade diversion under the CAP of 1992, possibly limiting gains in welfare in the European Union and contributing to losses in welfare in other parts of the world. The CGE simulation results indicated that rationalization of production occurred within the European Union, with large numbers of EU firms forced to shut down in the face of declining terms of trade and profit margins.

Studies by Brown, Deardorff, and Stern (1992) and Roland-Horst, Reinert, and Shiells (1992) on North Atlantic Free Trade area (NAFTA) which used CGE model incorporating imperfect competition and increasing returns to scale. The Brown, Deardorff, and Stern model assumed that firms set prices above average cost (though monopolistic profits are eventually bid away by entry of new firms), while the Roland-Horst, Reinert, and Shiells model assumed the firms set prices at average cost following the so-called contestable market theory (with no entry or exit by firms). The third study by Bachrach and Mizrahi (1992) involved a simple specified

model, that assumes perfect competition and constant returns to scale in production. All the three studies found out that NAFTA provides positive gains to member countries. However, the variation in simulated economic gains was wide, with the smallest gains found by the Bachrach and Mizrahi model (gains range from insignificant for Canada and the United States to 0.32 percent of GDP per annum for Mexico) and the largest gains found by the Roland-Horst, Reinert, and Shiells model (gains range from 2-to-3 percent of GDP per annum for the United States and Mexico, respectively, to 10.57 percent of GDP per annum for Canada).

Studies on Asean Free trade Area (FTA) by DeRosa (1995), and Lewis and Robinson (1996), found that AFTA is trade creating. The larger gains in trade and marginally larger gains in welfare obtained by DeRosa are attributed in part to the differences in base periods and simulation scenarios. Nonetheless, both studies conclude that Asean-FTA contributes comparatively little to higher economic welfare in Asean countries, except possibly the two highest-incomes and particularly open Asean countries, Malaysia and Singapore. This seems counterintuitive in light of the static economic theory which indicates that relatively open economies should be expected to experience limited if not negative gains from regional integration arrangements. However, as DeRosa (1995), explains, both Malaysia and Singapore benefit principally from the diversion of trade by other Asean countries. The two countries supply the largest proportion of the increased intraregional demand for manufactures previously supplied by advanced countries outside the region.

Yeats (1997) in an ex post study of the regional integration arrangement of Mecrosur-Argentina, Brazil, Paraguay and Uruguay, using CGE modelling, to investigate whether recent commodity patterns of exports by Mercosur countries to different destinations conform to the past revealed comparative advantage of Mercosur countries in natural resource-intensive and labor-intensive goods. He found that the fastest growing products in intra-Mercosur trade are capital-intensive goods in which Mercosur countries have not previously displayed strong export performance. Thus, the Yeats study suggests that the new patterns of trade are at odds with what their historical comparative advantage would predict is indicative of possible adverse effects of Mercosur on member countries.

Amjadi and Winters (1997) explored whether the regional integration arrangements offer member countries opportunities for enjoying economic gains from avoiding trade-costs with third countries. Specifically, they investigate whether transportation costs between Mercosur countries and the rest of the world (represented by the United States) are sufficiently high to afford significant gains to Mercosur countries from adopting preferential trade with one another. The study concluded that extra-regional transportation costs are appreciably higher than intra-regional transportation costs but that the margin between the two costs is not large enough *per se* to yield substantial gains with the introduction of trade preferences among Mercosur countries.

CGE models have become a widely used tool for evaluating the effects of trade policy reforms in both regional and multinational initiatives (U.S. International Trade Commission, 1992; Francois and Shiells, 1994; Martin and Winters, 1995). This is because regionalism currently involves not only "small" blocs of countries but also "large" blocs of countries that count for an appreciable share of world trade. While economic theory identifies how policy changes will affect economic variables, it does not define the size of the impact and in the case of RTA's leaves the effect ambiguous. The CGE models provide an empirical foundation for policy analysis that can quantify the magnitudes of the effects identified by theory and suggest the likely net effect, whether trade creating or trade diverting of an RTA. CGE models generally include sectoral structure, factor markets, macro data and any innovative features of the model, such as dynamic behavior and international labour, migration. The main advantage of CGE models is that it takes into account linkages between markets, both product and factor markets. The CGE framework accepts substitution of goods in demand and supply, simultaneous adjustment of interrelated markets for goods and factors of production in trading countries and is relevant in policy debates.

In contrast the Partial Equilibrium (PE) models focus on one sector at time without analysing the interactions between markets. The partial equilibrium analysis of regional integration arrangements appear incompatible with the modern neoclassical trade theory defined more by general equilibrium theory and an emphasis on inter-relationships among markets for goods and factors of production throughout an economy. But the main advantages of PE

models is that they are simple models, transparent (as rely on few key parameters) and more useful when the policy effects are small in nature.

2.3.2 Studies on the East African region

Lucio Castro, *et al* (2005) in their study on regional trade integration in East Africa: trade and revenue impacts of the planned east African community customs union, concluded that there will be modest increase in regional trade flows as a result of the CU implementation. In the first phase of CU implementation, there is almost no expansion of regional trade because of the temporary tariffs on selected imports from Kenya. If the CU was implemented without the temporary tariffs and a top rate of 20 percent, regional imports would increase by just less than 6 percent for Uganda, by about 2.4 percent for Tanzania, and about 1.4 percent for Kenya relative to the pre-CU situation. Almost all of this increase in regional trade would be trade diversion, which is more pervasive at the higher top tariff rate of 25 percent. He also noted that in all three countries, nontariff barriers such as discriminatory surcharges, standards, and import procedures hinder trade.

Okello (2006) in his study on the impact of East Africa Community customs union on Uganda economy: a computable general equilibrium (CGE) analysis. He used a single-country multi-sector CGE model to demonstrate the possible outcomes of East Africa customs union. The study found that the customs union reduction of tariff rates has only had a small effect on the macroeconomic variable in Uganda of less than 0.2 percent growth in real GDP, less than 0.2 of absorption, 2.1 percent of net income tax and 2 and 3 percent for exports and imports respectively. However, the removal of tariffs had mixed results on the industrial sector as some industries gained and while others lost.

McIntyre (2005) examined the impact of the EAC-CU on Kenya, noted that the trade linkages among the three EAC member states are not strong. However, the establishment of the EAC-Customs union and the introduction of the EAC- CET had potential positive benefits for the country. The results from the SMART trade simulation model[6] suggested that the EAC-CET, by lowering tariffs, has a positive impact on trade largely from trade creation. The lower tariffs result in lower import prices and increased flows of cheaper imports that improve consumer

welfare. However, the study warns that there are transitional costs that must be addressed to minimize economic dislocation, including revenue losses.

Ng'ang'a (2005) examined the effect on trade, welfare and productive activities in East Africa due to the new EAC. She found that the formation of the new EAC has not led to a large increase in trade volumes among the EAC countries. There was no sudden break in the overall trend, confirming that the EAC RTA has not had a major impact on the exports in the region. The study also concluded that the pattern of trade in the EAC is being driven by the process of development, rather than by trade pressures. Productive activities in the region show more of a change following the formation of the EAC. The level of intra-industry trade was also observed to increase by almost 175 per cent in the years following regional integration. Estimates from the gravity model revealed that trade linkages between the EAC members are quite dense.

Ngeno *et al.* (1999) in the study titled "Regional integration in East Africa, the case for Kenya", noted that East Africa countries join one regional group or another with the desire to address common problems in a collective and coordinated manner the objective is for enhanced growth and development through joint efforts. This is consistent with the overall objective of the customs union as a means of promoting increased intra-regional trade and economies of scale through pooling of fragmented and small markets to support industrialization. The latest EAC development strategy highlights this goal, even if actualization of the strategic objectives may be wanting.

Maria Nassali (2005) indicated in her study titled "The East Africa community and the struggle for constitutionalism; challenges and prospects" that countries of the East Africa have enjoyed close historical, commercial, and cultural parameters overtime. They share similarities in educational background and common law jurisdiction. Therefore out of commonness in these areas it is viable to collaborate than act individually for economic development achieve the aspirations of their citizens. But political differences between member countries can impede the successful implementation of an RTA.

Elbadawi and Mwega (1997) in their paper titled "Regional integration, trade, FDI in Sub-Saharan Africa", indicates that the geographical coverage of the regional integration schemes was of great importance to the EAC countries industrialization. As such these schemes should be made of large number of countries to allow development of sufficiently large internal markets to support their industrialization. This line of thought may have informed the inclusion of Rwanda and Burundi into the EAC even though they were not members at the time the EAC treaty was ratified.

Ademole Oyejide (1997) titled "Regional Integration and trade liberalization in sub-Saharan Africa" shows that these regional integration efforts have generally achieved little success. However, little achievement could be attributed to failure to reduce trade barriers due to inconsistent regional agreements with national aspirations and policies, such as loss of tariff revenues and land resources.

2.4   Literature Overview

The reviewed literature on various regional integration arrangements concludes in general that regional trading arrangements are trade-creating and welfare-improving for member countries and trading blocs as a whole. These studies incorporated the use of both general equilibrium and partial equilibrium methods, the results are near universal that regional trade arrangements are beneficial to member countries.

Studies such as Aitken (1973) using the gravity model showed that the formation of the EU was trade creating for the manufacturing sector in member countries, while studies by Reinert, and Shiells (1992) using a CGE model concluded that NAFTA had positive gains to member countries. Yeats (1997) in his study of Mercosur using CGE modelling, to investigate whether recent commodity patterns of exports by Mercosur countries to different destinations conform to the past revealed comparative advantage, found that the fastest growing products in intra-Mercosur trade are capital-intensive goods, where the countries did not have previous comparative advantage. Okello (2006) using the CGE to examine the impact of the EAC-CU concluded that the EAC-CU will have a small impact on macro-economic variables, with less

that 3 per cent growth in imports and exports, while Lucio Castro, *et al* (2005) found that the increased regional trade within the EAC would actually be trade diversion. The evidence from these studies suggests that the static gains of regional integration arrangements especially for developing countries RTAs are modest at best (less that 0.3 percent of GDP per annum).

The literature reviewed revealed many factors that influence the effect of RTAs on the member countries, some of the identified factors include, income of RTA member countries as measured by their GDP, membership to particular RTAs, applied tariff rates within the RTA, transport costs measured through distance, income elasticity of demand, revealed comparative advantage and closer ties (boundary, culture, history etc) among the trading countries.

However, from these literature there is no uniform approach on the methodology. The researchers have employed different methods depending on the study objectives and resource requirements. The study by Ng'ang'a (2005) for example, employed the gravity model, which makes it possible to challenge the outcome given the inherent weakness of the gravity model, while McIntyre (2005) used the SMART model which is static in nature hence does no take into account the dynamism of international trade, the model also employs borrowed elasticities, which heavily influences the final results. These two studies employed different methods, to arrive at divergent results on trade linkages within the EAC member countries, Ngang'a (2005) using trade intensity index finds that there are strong linkages within the member states, while McIntyre (2005) applying the complementarity index concludes that the linkages are weak.

This study contributes to existing literature by using a partial equilibrium approach, applying the conventional export model that incorporates the dynamic effect of real exchange rate as a proxy for relative prices and income per capita of the trading partners, (Ogun 1998, Klaassen 1999, Alemayehu 1999), tarmacked road network, investment as a proportion of the GDP and the existence of the EAC-RTA as explanatory variables to estimate Kenya's exports to the region from 1977 to 2008. It is expected that the results from the study will add to the empirical literature on RTAs, specifically on the East African region, after the formation of the "new" EAC.

CHAPTER THREE

3.0   METHODOLOGY

3.1 Theoretical Framework

The theory of international trade that as developed from the seminal writings of Heckscher and Ohlin is fundamentally based on the twin observations that countries differ from each other in the composition of their factor endowments and that productive activities are distinguished by the different relative intensities of factors required. The Heckscher–Ohlin Theorem states that countries export those commodities which require, for their production, relatively intensive use of those productive factors found locally in relative abundance. The twin concepts of relative factor intensity and relative factor abundance are most easily defined in the small dimensional context in which the basic theory is usually developed. Two countries engaged in free trade with each producing the same pair of commodities in a purely competitive setting, supported by constant returns to scale technology that is shared by both countries.

Following the partial equilibrium model outlined in Goldstein and Kahn (1985) and discussed further in Edwards and Wilcox (2003)[8] the specification of the export model differs between studies, particularly with respect to the variables included. But the core of the underlying (long-run) framework is usually a system of equations for export supply (X^s) and export demand (X^d), for country's exports in a given commodity or commodities, which simultaneously determine the export price and the export quantity.

The export demand is positively affected by foreign income (Y^*) and the price of competing foreign goods (P^*), but is negatively affected by the foreign price of domestic exports ($Px^*=Px/e$). The quantity of exports supplied is specified as a positive function of its own price and a negative function of the domestic price index and variable costs. As export sales become profitably relative to domestic sales (Px/P rises) firms shift production towards the export market. Other supply side variables include tariff rates, infrastructure costs and capacity

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utilization. It is assumed that in a small country case like member countries of the East African region, the supply of exports from one country to the other does not influence the prices.

3.2 Analytical Framework

Although literature on commodity export starts from structural equations, which accommodate a number of factors, the estimated reduced form equations are generally price-focused; they include either current or lagged (relative) prices. Therefore conventional commodity export models usually incorporates the real foreign income of trading partners and real exchange rate as a proxy for relative prices as explanatory variables in estimation of export functions in general (Ogun 1998, Klaassen 2004, Ndung'u and Ngugi 1999).The general reduced form of export equation is ;

$$\ln(X_{ij}^t) = b_0 + b_1 \left(\frac{P_i^x}{P_i^c}\right) + b_2 \ln GDP_i \dots \dots \dots (1)$$

Where:

X_{ij}^t is the export supply value from country i to j;

P_i^x is the export price in domestic currency of country i;

P_i^c means the consumer price index in country i;

GDP_i represents GDP of country i;

This study adopted a similar approach, but introduced investment as portion of the GDP to take into account capital formation, as a proxy for structural supply issues that may affect the supply of exports (Gotur, 1985; IMF, 1984) and the GDP per capita of the destination countries (Uganda and Tanzania) to capture the purchasing ability of the residents, while tarmacked roads surface in kilometers as a measure of infrastructure conditions. Further, to examine the effect of the EAC-RTA the study introduced the RTA proxy where a dummy value of (1) represents existence of the East African Community and (0) when EAC was not in existence (i.e. 1978-1993).

The study assumed;

   i.   Small country case: Where the new international trade is not big enough to influence international prices.

   ii.   Perfect competition: Domestic prices automatically move to converge to international prices.

3.3 Model specification

An empirical model along the standard export trade model is thus specified as;

$$X_{ij}^{s} = f\left(RER_{i}^{\beta 1} \cdot GDP_{cap}^{\beta 2} \cdot GDP_{inv}^{\beta 3} \cdot RTA_{ij}^{\beta 4} \cdot Trdnet_{i}^{\beta 5} \right) \dots\dots\dots\dots (2)$$

Where:

X_{ij}	=	the export supply value from country i to j
RER_{i}	=	real exchange rate of exporting country i
GDP_{capj}	=	income per capita of the importing country j
GDP_{invi}	=	Investments as a proportion of the GDP of exporting country i
$Trdnet_{i}$	=	Tarmacked road network of exporting country i
RTA_{ij}	=	the proxy for membership of i and j to the EAC-RTA
i	=	is the exporting country (Kenya)
j	=	export destination country (Uganda and Tanzania)

The above equation (2) will be transformed into a logarithmic form for estimation purposes;

$$\ln X_{ij} = \beta_0 + \beta_1 \ln RER_i + \beta_2 \ln GDP_{cap} + \beta_3 \ln GDP_{invi} + \beta_4 RTA_{ij} + \beta_5 \ln Trdnet + \varepsilon_{ij} \dots\dots\dots\dots (3)$$

3.4 HYPOTHESIS OF THE SUDY

The study hypothesized that;

   i.   There is a positive relationship between the real exchange rate and the value of exports.

   ii.   There is a negative relationship between income per capita and the value of exports.

   iii.   There is a negative relationship between tarmacked road network and value of exports.

CHAPTER FOUR

4.0 Data, Sources and Types

For estimation purpose, the study used annual secondary data covering the period from 1977-2008. The year 1977 was chosen to captures the period when the original EAC collapsed until the formation of the new EAC and the Kenya embarked on phased rationalization of the tariff bands due to external shocks, trade liberalization induced by the structural Adjustment Programmes (SAP) and an outward oriented growth strategy. The main sources of data on Real Exchange Rate, GDP, investment and the export values were the economic surveys by the Kenya National Bureau of Statistics, Kenya Revenue Authority, data from the East Africa Community secretariat, available in the official website and other relevant sources such as the World Bank, COMESA, UNCTAD and WTO. The selection of the countries (Uganda and Tanzania) was due to the fact that they are the main export destination of Kenya's export products within the EAC. Due to data considerations and the late entry of Rwanda and Burundi into the regional trade arrangement this study did not include them.

The macro-economic variables are non-stationary overtime, failure to distinguish between stationarity and non-stationary may lead to spurious regression problem. The study applied the Ordinary Least Squares (OLS) when estimating the log-linear model specification referred in 3.2. Augmented Dickey-Fuller (ADF) tests was used to test for stationary of the data. The model was estimated in natural logarithms to make it less sensitive to extreme observations when applying OLS estimation and estimated parameters interpreted as elasticises. The RTA dummy variable was not transformed into a logarithmic form, but to show its effect on exports a graphical trend analysis was performed showing the years when the RTA was in existence and when the EAC was not in existence.

It has been acknowledged that the application of simple OLS using time series data may produce spurious, even biased regression results (Cheremza and Deadman, 1992 and Alemayehu, 1999). Modern time series modelling techniques provide better ways of addressing these concerns. In order to avoid spurious regression, stationarity and cointergartion analysis of the series is conducted, this validates the usual test statistics (t- and

F-statistics, and R^2). In this study stationarity was achieved by appropriate differencing using Augmented Dickey Fuller (ADF) (Dickey and Fuller 1979).

Assume the equation;

$$y = \beta_1 + \beta_2 + \alpha_i \sum_{i=1}^{m} y + \varepsilon$$

where y = is the variable of interest = $\{RER_i, GDP_{capj}, GDP_{invi}, RTA_{ij}, Trdnet_i,\}$ and ε is the white noise residual of zero mean and constant variance

$\{\beta_1, \beta_2, \alpha_1 \ldots \alpha_m\}$ is a set of parameters to be estimated.

Both of the null and alternative hypotheses in unit root tests are:

H0: $\delta = 0$ (y is non-stationary/a unit root process)

H1: $\delta \neq 0$ (y is stationary)

The unit root hypothesis of the Dickey-Fuller can be rejected if the t-test statistic from these tests is negatively less than the critical value tabulated. In other words, by the Augmented Dickey Fuller (ADF) test, a unit root exists in the series y (implies nonstationary) if the null hypothesis of δ equals zero is not rejected (Gujarati 1995).

CHAPTER FIVE

5.0   Data Analysis and Results

5.1   Descriptive Statistics

This chapter presents the descriptive and empirical analysis of variables estimated in the model. The descriptive statistics gives the mean, the standard deviations and graphical analysis of the observed variables while the empirical analysis gives the regression results of the estimated model.

5.1.1 Standard Deviations and Means

In this section a summary of the main variables that have been used in estimation of the model are shown in the table 5.1 below.

Table 5:1: Descriptive Statistics

Var	Obsv	Uganda			Tanzania			Kenya		
		Median	Mean	Std deviation	Median	Mean	Std deviation	Median	Mean	Std deviation
Log Exports	32	4.5	15.33	1.40	3.3	14.3	2.17			
Log GDP-per capita	32	281	5.62	.392	300	5.66	.31			
Log Real exchange Rate$K	32							61	4.10	.19
Log Investme nt to gdp Kenya	32							19	2.0	.13
Log tarmacke d road-network in Kenya	32							4.0	8.23	.16

Source: Authors computation

From the descriptive statistics all the variables have all the observations indicating that there no missing observations in the primary variables. The mean and median of exports to Uganda is 15.33 and 4.5 respectively with a standard deviation of 1.40 while the exports to Tanzania had a mean of 14.3 and median of 3.3 with standard deviation of 2.17 over the years. This indicates that Kenya exports a near equal share to the regional countries with Uganda slightly a head of Tanzania as an export destination of Kenyan goods, the low standard deviation of in

both cases shows the robustness of the data and points to low fluctuation of Kenya's exports to the countries.

The GDP per capita of the two countries Uganda and Tanzania have a mean of 5.66 and median 281 for Uganda and 300 for Tanzania with low standard deviation of 0.39. When the GDP per capita is taken as a reflection of the level of development it shows that there is little variation between the two economies though Tanzania is slightly ahead. It can be concluded that there is potential for expanding exports by Kenya into either Uganda or Tanzania due to near similar levels of demand based on income per capita.

The tarmacked roads in kilometers which is a proxy for the infrastructure in Kenya's has the highest mean of 8.23 and a standard deviation of 0.15. The study attempted to use tarmacked road per capita, however this resulted into extreme low figures as the population growth rate was consistently much higher than the rate of tarmacked road surface. The high mean shows that infrastructure costs are generally high for exporters in Kenya with the low standard deviation indicating that infrastructure costs has remained constantly high over the years.

5.2 Stationarity analysis

Recent studies have drawn attention to the fact that most time series data might be non-stationary which is likely to result in 'spurious regressions' and the concomitant incorrect statistical inferences. Though first differencing can be used to overcome this problem, potentially useful information about long-run equilibrium relationships between economic variables might be lost. The level information may be of significance particularly when a group of variables are cointegrated. The Augmented Dickey Fuller (ADF) test was utilized to test for the presence of unit roots. The test was performed in levels and in first difference including both a constant and a deterministic trend. The results are given in table 5.2.

Table 5:2: Unit root tests

Variable	Level	First difference	I(d)
Log Exports to Uganda	-1.44	-5.38	I(2)
Log gdp par capita-Uganda	-2.07	-3.69	I(1)
Log exports to Tanzania	-0.82	-4.53	I(2)
Log gdp per capita - Tanzania	-0.66	-2.98	I(1)
Log real exchange Rate SK	-2.46	-3.70	I(1)
Log investment to GDP-Kenya	-2.46	-3.25	I(1)
Log tarmacked road network-Kenya	-4.32	-2.80	I(1)
Critical Values at 5% 1%	-2.96 -3.66	-2.97 -3.67	

Source: Authors computation

Critical Values for the test are -3.66,-2.96 at 1% and 5 % respectively. I(d) refer to the order of integration. From the results the variables are non-stationary in the first difference except for exports to Tanzania and Uganda that were integrated of order two.

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Table 5.3 Stationary Test for residual

ADF Test Statistic	-4.288299	1% Critical Value*	-3.6959
		5% Critical Value	-2.9750
		10% Critical Value	-2.6265

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(RESID1)
Method: Least Squares
Sample(adjusted): 1982 2008
Included observations: 27 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID1(-1)	-1.105346	0.257759	-4.288299	0.0003
D(RESID1(-1))	0.026371	0.180054	0.146459	0.8848
C	-11.02458	16.00673	-0.688747	0.4976

R-squared	0.595781	Mean dependent var		-5.314684
Adjusted R-squared	0.562096	S.D. dependent var		125.3201
S.E. of regression	82.92967	Akaike info criterion		11.77830
Sum squared resid	165055.9	Schwarz criterion		11.92228
Log likelihood	-156.0071	F-statistic		17.68689
Durbin-Watson stat	1.462894	Prob(F-statistic)		0.000019

Source: Authors computation

From the results the ADF statistic is less than the critical values at 1%, 5% and 10% level of significant. The residuals are therefore stationary at 1%, 5% and 10%. If the residuals are non-stationary they cannot become the Error Correction Term (ECT) and consequently an error correction model is not adopted. The residuals were found to be stationary at 1%, 5% and 10% levels of significance by the ADF test. The Durbin Watson statistic of 1.4 shows that there is no serious serial correlation between the dependent variable and the residual of the estimated equations. Therefore the residual becomes the Error Correction Term (ECT). The residuals is therefore taken to be independent and identically distributed as N (0, δ).

5.2.1 Correlation of variables

Modelling using variables in the first difference to achieve stationary leads to loss of long-run information. The concept of correlation implies that if there is long-rung relationship between two or more non- stationary variables, deviation from this long run-path are stationary.

Under specific assumptions as to the properties of the random error term ε, the OLS estimator has some useful properties. Specifically, the OLS is consistent and unbiased as an estimator of β if the following conditions hold: None of the dependent variables are perfectly correlated (multicollinearity); ε is an independently distributed normal error with mean zero and with constant variance. ε is uncorrelated with any of the independent variables. The underlying model relating the dependent and independent variables is linear. If these conditions hold, the estimates are reliable and that hypothesis tests are informative.

Pearson correlation multivariate procedure was used to establish whether the variables are correlated in the long-run. According Gujarati (2004), multicolineality becomes a serious problem if the pairwise or zero-order correlation coefficient between two regressors is in excess of 0.8. The results given below in tables 5.4 and table 5.5 were run to test both the existence of correlation between the variables at 5% level of significance for the exports to Uganda and Tanzania respectively. The results showed that most of the variables are not correlated, except tarmacked road network in kilometers in Kenya and exports to Uganda. However, the correlation is not strong to result into serious endogenity problem and unbiased estimates, hence no need to perform a two stage least square, which may not produce any better results than a simple OLS.

Table 5:4: Correlation of variables of exports to Uganda

	Variable	Log exports to Uganda	Log GDP per capita -Uganda	Log real exchange Rate$K	Log investment to GDP in Kenya	Log tarmcked road Kenya
Pearson Correlati on	Log exports to Uganda	1.000	-.123	.499	-.374	-.875
	Log GDP per capita-Uganda	-.123	1.000	-.424	.440	.153
	Log Real exchange Rate$K	.499	-.424	1.000	-.645	-.319
	Log investment to GDP in Kenya	-.374	.440	-.645	1.000	.258
	Log tarmacked road network -Kenya	-.875	.153	-.319	.258	1.000

Source: Authors computation

Table 5:5: Correlation of variables of exports to Tanzania

	Variable	Log of exports to Tanzania	Log Real Exchange rate$K	Log Investment to GDP in Kenya	Log tarmacked road in Km in Kenya	Log of GDP percapita in Tanzania
Pearson Correlation	Log of value of exports to Tanzania	1.000	.720	-.598	-.720	.029
	Log real exchange rate$K	.720	1.000	-.645	-.319	-.070
	Log Investment to GDP in Kenya	-.598	-.645	1.000	.258	-.039
	Log tarmacked road Kenya	-.720	-.319	.258	1.000	-.187
	Log of GDP percapita in Tanzania	.029	-.070	-.039	-.187	1.000

Source: Authors computation

5.3 Empirical results

The empirical results from equations developed in section three are presented here. The study used three different models to establish the relationships between the variables in a general model that combined both export values and used the country as a variable to asses whether country of export destinations was significant. The second set of models used individual country (Uganda and Tanzania) to run the regressions. The Ordinary Least Squares (OLS) was used in the regressions, with 32 observations representing export values since 1977 to 2008. The estimation results are shown in tables 5.6, 5.7 and 5.8, and figures 5.1, 5.2 at the end of the discussion. The broad conclusion from the models is that the existence of the regional trade arrangement and tarmacked road network in Kenya are significant determinants of export values.

In the general model I, the country of destination was found to be significant and negatively related to exports, the results indicated that as exports value increase for Uganda there is a marginal drop in exports to Tanzania. This result is consistent with the observed trend where Uganda is the leading export destination of goods from Kenya within the EAC. This can be attributed to historical factors that followed the collapse of the then EAC in 1977, Tanzania closed its border with Kenya resulting into lag in exports to the country.

Analysis concerning the impact of infrastructure on economic expansion tends to investigate the linkages between infrastructure and economic growth as framed by the theoretical underpinnings of growth theory (Straub 2007). The empirical analysis usually establishes a positive and significant relationship between infrastructure and output growth or productivity (Straub 2008). The channel from infrastructure to growth involves the productivity enhancing effects of improvements in infrastructure through expansion of the capacity in a specific factor of production. Further, increasing infrastructure stock indirectly raises the productivity of other factors of production. Therefore improved infrastructure has the potential to reduce the costs of doing business and encourage investment in productive assets (Manuel 2006). The results of this study showed that a 1% increase in the tarmacked road surface leads to a 4.3% increase in exports confirming previous observations. Noting that tarmacked road network was used as a proxy for infrastructure conditions, it can be concluded that an improvement of

infrastructure in Kenya is desirable for increased exports. However, Kenya's export growth is being constrained mainly by inadequate transport infrastructure. This has resulted in considerable wear and tear, unnecessary road checks, delays in port clearing, high accident rates and inflated cost of transportation.

Kenya has been losing its competitiveness in attracting investment and retaining the stock of investment over the last decade. According to Kenya's Vision 2030, Kenya's performance in attracting FDI has been marginally better at nearly US$6 per US$1,000 of GDP (US $82 million in total) since 2003. This is partly explained by factors such as negative perception by investors about corruption, inadequate infrastructure, political instability, among other reasons. The net stock of foreign direct investment was 15% during the first half of the 1990s decade but plunged to less than 6% compared with Uganda's meteoric rise from 8% to 50% (Mullei 2003). This translates to an annual average of US$ 59 million in FDI or 25.7% of what was received by Uganda or 18.7% of the FDI that went to Tanzania between 1997 and 2002. The results showed that investment as a proportion of the GDP, a proxy for export supply constraints in Kenya is negatively related to exports in both regressions; the study found that a 1% decrease in investment as proportion of the GDP results into 0.15% increase in exports value. This confirms that a decrease in the supply constraints would result into an increase in exports value, implying therefore that Kenya should improve its image to attract more investments by reducing the current investment constraints like high power costs, licensing procedures, corruption, political stability among other investment issues in order to increase its export share in the EAC regional markets.

The exchange rate is an instrument used to explain the international competitiveness of the country exports. This variable is negatively related to export growth. An appreciation of the exchange rate helps promote price stability but reduces the country's international competiveness and vice versa (Ndung'u and Ngugi 1999). A depreciated real exchange rate reduces relative prices of domestic goods and services enhancing production of tradable goods and discouraging the production of non-tradable goods. On the other hand an appreciated exchange rate increases the relative prices of domestic goods and discourages the production

of the tradable goods, while encouraging production of non-tradable goods. In economic theory the depreciation a country's exchange rate leads to an increase in the exports. This study showed that a 1% depreciation in real exchange rate in Kenya results into 0.95% increase in exports, though not a significant determinant of exports from Kenya into the trading partners. This is consistence with past Kenya's policy choices where real exchange rate has been used to promote price stability and not as an instrument to promote Kenya's trade competitiveness.

Past studies have tried to investigate trade openness and its effect on the per-capita income levels of a country. By examining per capita income on total trade, the studies embody an underlying assumption that exports and imports contribute equally to income growth. Imports, however affect growth negatively, such that increasing the import trade share by 1 percentage point is associated with a reduction of the per capita GDP by approximately 0.1 percent (Zhang *et al* 2003). The combined general model I of this study showed that a 1% increase in GDP per capita results into 0.049% increase into exports. While the empirical results on individual country models for both Uganda and Tanzania showed that income per capita of the trading partners is negatively related to exports from Kenya, where a 1% decrease in GDP per capita of the trading partners resulted into a 0.05% increase in exports, confirming the linkage between imports and income per capita.

The explanation to this negative relationship is that countries which import primarily consumption goods grow slower than countries with a large proportion of their imports composed of intermediate goods. The general argument is that importing from established foreign firms may discourage the development of domestic infant industries, leading to less technological improvement (Keller 2000). Therefore, reducing the imports of infant industry products may encourage the internalization of costs and help increase the factor productivity, hence countries' overall per capita income level.

Economic arrangements that represent varying degrees of integration tend to reduce the trade barriers between them resulting in easy flow of factors of production. The reasons advanced for the regional trade arrangements include proximity of countries, economic size of the

countries, per capita income and the international terms of trade among other factors. The main objective for formation of East Africa Community was to develop policies and programmes aimed at widening and deepening co-operation among partner states in political, economic, social and cultural fields, research and technology, defense, security and legal and judicial affairs for their mutual benefit (Treaty for the Establishment of the East African Community 1999).The empirical results reinforced this objective by finding that RTA as a dummy for the existence of the EAC was significant in determining Kenya's export to the region. To analyse the effect of the RTA dummy, the study conducted a trend analysis,which showed that Kenya's exports to the trading partners decreased following the years after the disintegration of the initial EAC in 1977.

Therefore does the study track the effect of the EAC-RTA on Kenya's export performance? This is the question that the study was set to answer. Figure 5.1and 5.2 shows how Kenya's exports performance during the periods when the EAC was in existence and when the initial EAC disintegrated. The graphical analysis shows the difference in the two periods following the disintegration and revival of the EAC-RTA and its effect on Kenya's export trends.

The export trends for both Uganda and Tanzania showed that between the periods of 1977 to 1992, when there was no EAC-RTA there was near stagnant growth in the exports value. But following the revival of the current EAC and signing of a declaration on the need to corporate in all areas by the three countries (Kenya Uganda and Tanzania) in 1993, export trade improved as shown by the increasing trend in export values. The designing of the EAC treaty customs union protocol using the Principle of Asymmetry may explain the slacked export growth between 1994 and 2005. The customs union was the entry point into the Regional Integration Arrangement (RTA).The gradual elimination of the various tariff lines that were initially maintained by both Uganda and Tanzania on goods originating from Kenya to protect their domestic industries under the Principle of asymmetry, resulted in the increase in the value of Kenya's exports after 2006.

Generally, the high adjusted R^2 of 0.89 and F-statistic for the goodness of fit of 93.87 in the general model, with the specific country model having 0.89 as the adjusted R^2 and F-statistics of 57.51. This shows that the independent variables in the model can jointly explain Kenya's export performance for the period of 1977-2008, indicating that other factors outside the model explain about 20% of Kenya's exports to the trading partners. The negative intercept of -17.1, both in the general and specific country models shows that all other variables being constant, Kenya will have a high negative trade balance with Uganda and Tanzania, with Kenya importing more from these countries than it exports.

All the significant variables are similar in the three models, expect income per capita of the trading partners being positively related with exports from Kenya in the general model. Subsequently, the general model I was picked as the best model in this study given the high values of the adjusted R and F-statistic.

5.3.1 General Model I.

logEXP = logGDPCAP + logRER$K + logINVGDP + logTRNKM + RTA1 + country1

The Regression results are shown in table 5.5 below.

Table 5:6: General model I regression results

```
Coefficients:
             Estimate Std. Error t value Pr(>|t|)
(Intercept) -17.10085    7.23388  -2.364   0.0215 *
Log gdpcap    0.04911    0.23313   0.211   0.8339
Log ReR$K    -0.85943    0.70322  -1.222   0.2267
Log InvgdpK  -0.19204    0.76758  -0.250   0.8033
Log Trnkm     4.24759    0.92955   4.569 2.67e-05 ***
RTA11         2.56209    0.20466  12.519  < 2e-16 ***
country1,2   -1.03357    0.15060  -6.863 5.38e-09 ***
```

Significant codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.6012 on 57 degrees of freedom
Multiple R-squared: 0.9081,   Adjusted R-squared: 0.8984
F-statistic: 93.87 on 6 and 57 DF, p-value: < 2.2e-16

Source: Authors computation

Model I

$EXPS_{ij}$=-17.1+0.049$GDPCAP_j$-0.86RER$K-0.19 $INVGDP_i$+4.24$TRNKM_i$+2.56RTA_{ij} -1.033 country+ε

t-value   (-2.364) (0.211)   (-1.222) (-0.250)   (4.569)   (12.519)   (-6.863)
Adjusted R^2: 0.8984

5.3.2 UGANDA

logEXPUg = logGDPCAPUg + logRER$K + logINVGDP + logTRNKM + RTA2+ε

Table 5:7: Model II regression results

```
Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept) -17.62368    9.69084  -1.819 0.074138
Log gdpcapUg -0.05228    0.31170  -0.168 0.867377
Log ReR$K    -0.94750    0.94197  -1.006 0.318654
Log Invgdpk  -0.15234    1.02831  -0.148 0.882742
Log Trnkm     4.34789    1.24519   3.492 0.000925 ***
RTA21         2.55529    0.27418   9.320 3.95e-13 ***
```

Significant codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.8054 on 58 degrees of freedom
Multiple R-squared: 0.8322,   Adjusted R-squared: 0.8177
F-statistic: 57.51 on 5 and 58 DF, p-value: < 2.2e-16

Model II

EXPUg = -17.6-0.05 GDPCAPUg-0.9 RER$K-0.2 INVGDP + 4.3 TRNKM +2.6RTA2

Running best fit Model resulted into
Coefficients:
(Intercept)   log tarmacked in KM   log Regional Trade Arrangement
 -15.305   3.501   2.588

EXPUg=-15.3+3.5TRNKM + 2.6 RTA+ε

t-value   (-1.810) (3.492) (9.320) (0.8054)

Adjusted R²=81

Source: Authors computation

5.3.3 TANZANIA

Log EXPTZ = log GDPCAPTz + logRER\$K + logINVGDP + logTRNKM + RTA3

Table 5:8: Model III regression results

```
Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept) -17.62368    9.69084  -1.819 0.074138
Log gdpTz    -0.05228    0.31170  -0.168 0.867377
Log ReR$K    -0.94750    0.94197  -1.006 0.318654
Log Invgdp   -0.15234    1.02831  -0.148 0.882742
Log Trnkm     4.34789    1.24519   3.492 0.000925 ***
RTA31         2.55529    0.27418   9.320 3.95e-13 ***
```

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.8054 on 58 degrees of freedom
Multiple R-squared: 0.8322,   Adjusted R-squared: 0.8177
F-statistic: 57.51 on 5 and 58 DF, p-value: < 2.2e-16

Model III

EXPTZ = -17.63-0.05GDPCAPTz -0.95RER\$K-0.15INVGDP + 4.35TRNCAPK + 2.55RTA3

Running the best fit model resulted into;
Coefficients:

(Intercept)	log tarmacked Road in KM	log Regional Trade Arrangement
-15.305 3.501		2.588

EXPTz= -15.301+3.50TRNM + 2.59 RTA+ε

Se   (9.69084) (3.492) (9.320)   (0.8054)

Adjusted R²=81

Source: Authors computation.

5.3.4 Export trends

Graphical analysis was used to show the effect of the existence or non-existence of the RTA have on Kenya's exports in absolute values, to Uganda and Tanzania in the periods under study between 1977 to 1992 when the EAC was not existing, and 1993 to 2008 when the EAC was revived.
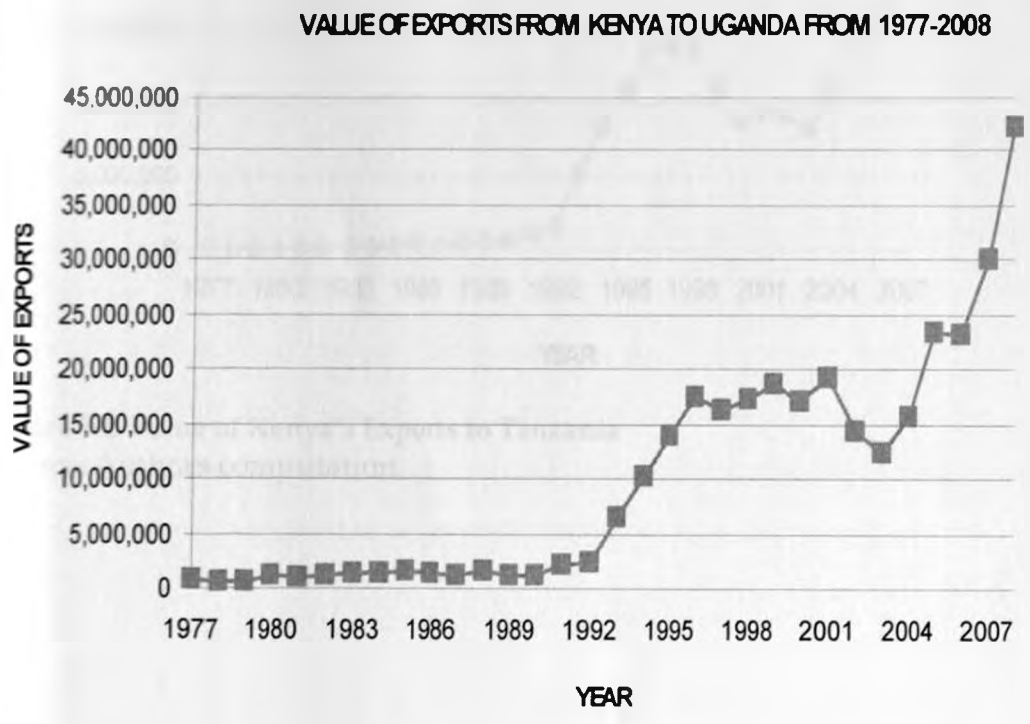
VALUE OF EXPORTS FROM KENYA TO UGANDA FROM 1977-2008

Figure 5:1: Value of Kenya's exports to Uganda
Source: Authors computation.

Figure 5:2: Value of Kenya's Exports to Tanzania
Source: Authors computation.

CHAPTER SIX

6.0 Summary, Conclusion and Policy implications

6.1 Summary

Recent academic literature has contributed immensely to the debate on the importance of RTAs and their contribution to regional trade. This study has explored a broad range of theories and empirical literature on RTAs. These theories focused on the relationship between a country's membership to an RTA and a set of economic variables. The theoretical development of RTAs has evolved from the classical to the neo-classical trade theories and provided a foundation for empirical analysis of the EAC-RTA.

On empirical grounds, a large literature supports the view that there exist a functional relationship between RTAs and expansion of trade. The extensive theoretical and empirical literature discussed showed that modeling and estimating exports largely depend on the objective of the study. The observation drawn from the studies reviewed was that the price effect variables are included in explaining a country's exports in many of such kind of studies and Kenya was found not to be an exception.

The objective of the study was to investigate the effect of the EAC-RTA and the factors that determine Kenya's exports to Uganda and Tanzania. It conducted an analysis of the various factors which helped in identifying the following variables as having possible influence on the country's exports to the regional trading partners'; GDP per capita of trading partners, investment as a proportion of the GDP in Kenya as a proxy for supply constraints, Real Exchange Rate of Kenya shilling and the US dollar, tarmacked road network in Kenya, and the existence of the EAC-RTA to reflect the regional trade arrangement following the collapse of the initial EAC in 1977.

6.2 Conclusion

The results indicated that the variables included in the equation had the expected signs. The study concluded that integration in East African region and tarmacked road network as a proxy for infrastructure are significant determiners of Kenya's exports to Uganda and Tanzania.

From both models, the study infers that real exchange rate is not a significant factor in explaining exports though negatively related to exports. In this paper inconsistency was noted in the general model I where GDP per capita had a positive sign but turned negative on individual country models. Investment as proportion of the GDP used as proxy for supply constraints, had a negative coefficient, hence the study concluded that reducing supply constraints would result into increased exports, though not a significant determinant of trade between the trading partners. However, it is important to keep in mind that investments in the country as proportion of the GDP have been declining overtime. It is also crucial to note that even though Kenya exports to the two countries have increased, it has also expanded to other countries in the wider COMESA region.

Over the years investors in Kenya have complained of the high costs in conducting business in the country. The results vindicate this position as tarmacked road network as a proxy for infrastructure conditions, was found to be positively significant in explaining exports. Therefore the study concluded that by improving the infrastructure in the country exports trade can be increased.

With increasing levels of multilateral trade liberalization, export-led growth strategy is inevitable. Even though Kenya has reduced its dependence on traditional major export destinations by pursuing a regional approach in her trade policy. The empirical estimations of this study concluded that there exists a relationship between the East Africa Community and the performance of exports. The positive coefficient of the RTA dummy shows the importance of regional trade arrangements in enhancing Kenya's export growth strategy. That notwithstanding, the share of commodity exports to the region is still relatively low, therefore the country stands to gain by pursuing export opportunities into the regional markets through

promotion of valued added merchandise in line with the aspirations of the economic blueprint, Vision 2030.

6.3 Policy Implications

A key question for Kenyan policy makers is 'why has substantive trade policy reform in Kenya produced to date a limited response in terms of the growth and diversification of exports? The study identified the existence of the RTA as a significant determinant in explaining export values from Kenya into the trading partners underscoring the importance of Regional Trade Arrangements in trade policy orientation. Specifically, there is need for careful consideration for the development of an external trade policy focused on regional trade facilitation and trade expansion.

The trend analysis showed that Kenya benefits when the EAC was in existence due to increased exports. In order to consolidate the gains there is need to conclude the formation of a common market and provide political goodwill to prevent a second disintegration of the new EAC. A common market is preferable as it will allow in addition to goods and services free movement of factors of production like capital, labour, and entrepreneurship. Kenya should therefore undertake domestic policy reforms to accommodate common market issues like land ownership, citizenship and the use of identity cards as a traveling document.

To enhance trade facilitation, efficiency in Mombassa port and border controls should be increased while the EAC partner states develop a common infrastructure development policy to reduce the infrastructure costs. Currently, the EAC is in the process of developing an EAC Transport strategy and Road Sector development programme to identify regional strategic priorities and transport sector development. In addition EAC partner states in collaboration with the business associations need to establish one stop investment authority to market the EAC region as single investment destination to increase the share of both domestic and Foreign Direct Investment (FDI) in the partner states. This will help offset the negative perception of the region as being unstable and provide a more secure and predictable investment climate in the East Africa region.

1. RTAs is a process where two or more countries in a particular region/area voluntarily join together to pursue common objectives for the mutual benefit of members mainly economic in nature but with inherent social and political implications.

2. Principle of Asymmetry integration is where some member countries are allowed to retain tariffs than the agreed CET on other members; within the EAC this is to temporarily protect producers in Tanzania and Uganda from the increased competition from some Kenyan products.

3. BCI is calculated on a scale of 0-100 where 0 represents poor condition and 100 excellent condition, through a sample survey of 240 business leaders, Uganda (25%), Kenya (21%), Tanzania (20%), Rwanda (18%) and Burundi (15%), 140 truck drivers, and 187 clearing and forwarding agents. on a set of 13 predetermined business factors are considered.

4. Complementary Index is a measure of similarities between the export basket of one country and the import basket of another country. The value of the complementarity index can range from 0, which represents no complementarity between the exports and imports of two countries, to 100, which implies a perfect match. The higher the index between two countries, the greater the product complementarity.

5. The gravity model has a long history in the social sciences. It has been used to explain social flows, primarily migration, in terms of the "gravitational forces of human interaction." Its name is derived from its similarity to Newtonian law of gravitation in that large economic entity such as countries or cities are said to exert pulling power on people or their products.

6. SMART is a static partial equilibrium model operable under strict *ceteris paribus* conditions. It provides a snapshot of the projected impact of tariff reductions while disregarding any adjustment process accompanying this change. Thus, the dynamics that affect the change are not explicitly modeled, nor can complex variations in the setup be considered.

7. Trade intensity indices provide additional insights into the nature and importance of secular changes in bilateral trade flows. These indices can highlight the relative importance of (seemingly minor) changes in trade between countries that have relatively small global trade shares.

8. The model is an imperfect substitute model where imperfect substitutability between domestic and export products enables domestic and export prices to differ from one another (Goldstein and Kahn, 1985).

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