



## **Evaluating Trade and Revenue Effects of the EAC Customs Union in Kenya**

*Christopher H. Onyango*

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**THE KENYA INSTITUTE FOR PUBLIC POLICY  
RESEARCH AND ANALYSIS (KIPPRA)**

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Christopher H. Onyango

*Productive Sector Division*  
Kenya Institute for Public Policy  
Research and Analysis

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## **Abstract**

*This study examines the impact of the EAC customs union on trade, revenue and welfare on the Kenyan economy over the 5-year transitional period. Using a simple partial equilibrium method to measure static effects, the analysis suggests net benefits in trade creation, revenue generation and welfare gains for Kenya from the EAC trade regime. The simulation results also indicate that there have been net positive trade effects in Kenya under the EAC customs union regime. The largest trade impact occurred in the products designated under the EAC list of sensitive products. These include prepared foodstuffs (24.9% of total trade), textile and textile products (22.8%), paper products (20.3% of total trade) and vegetable products (17.2%). In addition, net welfare effects were positive, implying that producers and consumers in Kenya are better off under the customs union regime. The welfare gains can be attributed to realignment of prices and the reduction of domestic prices induced by Kenya's tariff reforms, which create opportunities for investments, reallocation of resources and efficiency gains. Besides, there are regional efforts towards trade facilitation and addressing non-tariff barriers, including improvement in customs administration, reduced police check-points, and improved clearances at the Port of Mombasa. Finally, fiscal disruptions have been minimal, largely attributed to improved trade and economic performance coupled with better customs administration. The study recommends the need for Kenya to expand its production and export base in order to take full advantage of the expanded regional market and to sustain fiscal reforms with a view to minimizing the impact of tariff revenue losses, among others.*

## **Abbreviations and Acronyms**

CBK	Central Bank of Kenya
CET	Common External Tariff
COMESA	Common Market for Eastern and Southern Africa
CU	Customs Union
EAC	East Africa Community
EPA	Economic Partnership Agreement
EU	European Union
FDI	Foreign Direct Investment
MFN	Most Favoured Nation
RTA	Regional Trade Agreement
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
US	United States
VAT	Value Added Tax
WTO	World Trade Organization

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## 1. Introduction

This study explores the impact of implementation of the East African Community (EAC) customs union in Kenya. Integration in the East African region was conceived in the 1940s when Kenya, Tanzania and Uganda formed the East African High Commission to advance political, social and economic interests. After initial failed attempts, the three countries eventually agreed and signed a new treaty establishing the East African Community (EAC) in November 1999. The Treaty envisaged four stages of integration starting with the establishment of a customs union, a common market, a monetary union and ultimately a political federation by 2015. However, despite the renewed efforts for deepening integration, fears that application of the provisions for the protocols on the establishment of the EAC customs union and the common market would lead to severe trade imbalances persisted. Thus, remedial measures to address such imbalances are articulated in Article 77 of the Treaty as well as the 1<sup>st</sup> and 2<sup>nd</sup> EAC Development Strategies (EAC Secretariat, 1996; 1999; 2000).

Implementation of the East African Customs Union<sup>1</sup> by the three partner states commenced on 1<sup>st</sup> January 2005, over a five year transitional period. Rwanda and Burundi joined the EAC in 2007. The EAC Customs Union intended to deepen the integration process by liberalizing and promoting intra-regional trade, promoting efficiency in production in response to extra-regional competition, and promoting cross-border and foreign direct investments. In addition, the partner states intended to reduce intra-regional trade barriers and adopted a common policy towards the rest of the world, that is by agreeing on a three-band Common External Tariff structure whereby raw materials and capital goods attracted zero duties, intermediate goods attracted 15 per cent duty, and consumer goods attracted 25 per cent duty.

The Treaty also embraces the principle of asymmetry with regard to elimination of internal tariffs, taking into account variations in the levels of development and the need to address imbalances that may arise due to elimination of intra-trade tariffs. Thus, for the first five years,

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<sup>1</sup> According to Article 75(1) of the EAC Treaty, the customs union entails: application of the principle of asymmetry, elimination of internal tariffs and other charges of equivalent effect, elimination of non-tariff barriers, establishment of a common external tariff, rules of origin, dumping, subsidies and countervailing duties, security and other restrictions to trade, duty drawback and remission of duties and taxes, customs cooperation, re-exportation of goods, and simplification and harmonization of trade documentation and procedures.



imports into Kenya from the other partner states attracted no duties. On the other hand, Uganda and Tanzania agreed to eliminate tariffs on all imports from Kenya, except for an agreed list of commodities; that is, 426 tariff lines for Uganda and 906 for Tanzania. The tariffs were to be reduced gradually to zero within a period of five years.

The EAC trade regime designated 55 goods as sensitive products and set *ad valorem* tariffs ranging from 35 per cent to 100 per cent, which is 35, 40, 45, 50, 55, 60, 75 and 100. The top rate of 100 per cent applies to most varieties of sugar, high rates also apply to rice (75%), wheat (60%), milk and various milk products (60%), and maize (50%). This measure was agreed upon to protect local production under an assumption that the region had adequate capacity to meet the demand for the selected commodities. Partner states are also granted special concessions on special grounds, including the need to enable infant industries attain meaningful levels of competitiveness, or for attainment of national policy objectives.

So far, no empirical studies have been done to analyse the impacts of implementation of the EAC Customs Union in Kenya over the 5-year transitional period. It is in this respect that this study intends to evaluate its trade, revenue and welfare impacts in Kenya. The purpose is to inform the national trade policy and improve the incentive structures for enhancing competitiveness in production and export, as envisioned in the Kenya Vision 2030.

The overall objective of the study is to evaluate the effects of the EAC customs union trade regime on trade, revenue and welfare in Kenya. The specific objectives include:

- (i) Review trade, revenue and investment flows to Kenya under the EAC trade regime; and,
- (ii) Analyse the effects of the EAC Customs Union on trade, revenue and welfare on the Kenyan economy.

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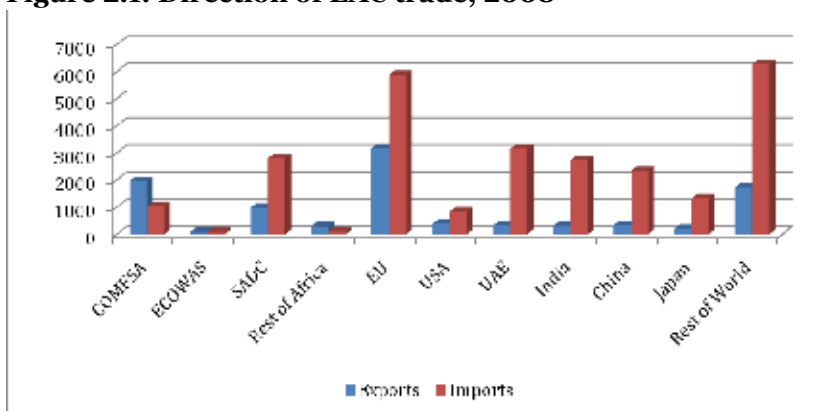
## 2. Trade, Revenue and Investment Flows in the EAC

### 2.1 Overview of Trade Flows

Like many other blocs in the developing world, the EAC has not been spared the harrowing effects of the prevailing unfavourable terms of trade. Apart from COMESA bloc and perhaps the rest of Africa, there are deficits in trade between the EAC and all other economic blocs (Figure 2.1). However, despite the deficit, EAC trade with the rest of the world has been increasing in the recent past. According to EAC Secretariat, total EAC trade increased by 23.7 per cent to US\$ 32,406 million in 2008 compared to an increase of 26.8 per cent in 2007. The increase partly reflects the rising commodity prices in international markets. On the other hand, total imports into EAC region also grew by 22.7 per cent from US\$ 18,403 million to US\$ 22,574 million during the same period, largely due to a high import bill for oil.

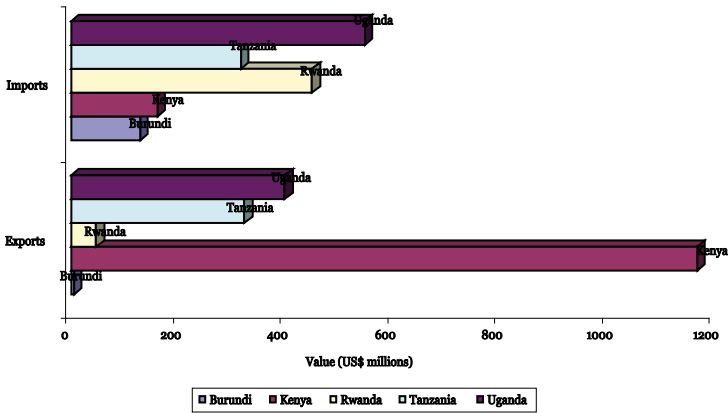
Besides, the share of total intra-EAC trade to total trade increased from 7.5 per cent to 8.4 per cent in 2008 (EAC Secretariat, 2010). Intra-EAC trade was mainly in agricultural commodities and manufactures. While the EU bloc took the largest share of EAC trade accounting for 18.4 per cent in 2008, it however was a decline compared with 21.9 per cent recorded in 2007. Trade with EU was mainly in agricultural commodities, minerals and capital goods.

**Figure 2.1: Direction of EAC trade, 2008**



Source: EAC Secretariat (2010)

**Figure 2.2: Total EAC trade during 2009**

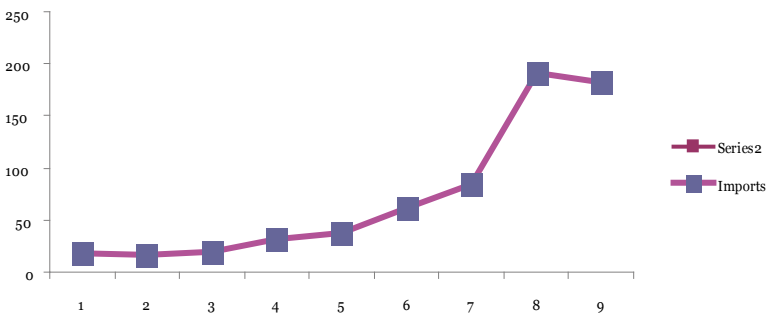


Source: EAC Secretariat (2011)

Kenya has a favourable trade balance within the EAC trading bloc, despite the poor prospects of global trade (Figures 2.2 and 2.3). Both exports and imports to and from the EAC region have been increasing over the recent past. For instance, total exports rose from about US\$ 650 million in 2002 to about US\$ 974 million in 2005, reaching US\$ 1,167 million in 2009 (EAC Secretariat, 2011). The rate of increase of exports was higher after 2005, following the launch of the Customs Union. Similarly, imports increased from US\$ 19 million to US\$ 162 million over the same period.

Figure 2.4 shows that Uganda remained the largest destination of Kenyan products, accounting for 60 per cent total exports to the region, while Tanzania was the largest exporter to Kenya within

**Figure 2.3: Kenya’s trade with EAC partner states, 2000-2009**



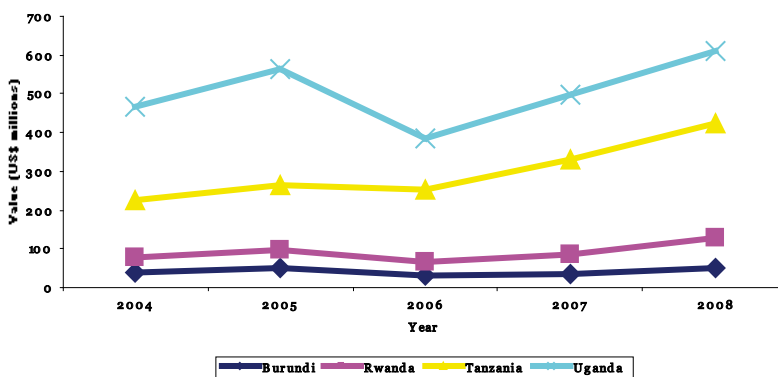
Source: EAC Secretariat (2011)

the EAC region with 65 per cent. Major exports to Uganda included mineral fuels, mineral oils and related products (salt, sulphur, earths and stone and plastering materials), paper and paperboard, plastics and articles thereof, iron and steel, beverages, spirits and vinegar, and pharmaceutical products. On the other hand, exports to Tanzania composed largely of wood and articles of wood, wood charcoal, paper and paperboard, articles of paper pulp, cotton, copper and articles thereof, textile articles, sets, worn clothing and worn textile articles, and rags, among others.

In Kenya, the leading export commodities in the recent past have been horticulture (20.6%), tea (17.03%), textiles and apparel products (5.89%), coffee (3.8%) and tobacco (3.11%). The main markets for horticulture and tea are the Netherlands and Pakistan respectively, while the US is a major export destination for textiles and apparel products. On the other hand, the main export destinations by country were Uganda (33.56%), United Kingdom (28.8%), Tanzania (22.3%), Netherlands (21.9%), US (19.2%), Pakistan (13.5%), Sudan (11.6%) and Egypt (9.1%).

While Uganda and Tanzania are among the leading export destinations for Kenyan exports, it is worth noting that a big percentage of the exports to the two countries constitute re-exports. For instance, Kenya's re-exports to Uganda reached about 60 per cent in 2003 prior to the customs union, but stabilized at about 10 per cent of total exports in recent years. The main re-export products have been petroleum products, chemicals, machinery, transport equipment and manufactured goods. On the other hand, re-exports to Tanzania accounted for about 45 per cent of total exports in 2003, and have since

**Figure 2.4: Kenya's exports to EAC countries 2004-2008**



Source: EAC Secretariat (2009)

been declining in the recent past, reaching 6 per cent in 2007. Major re-exports to Tanzania have been machinery and transport equipment, chemicals and manufactured goods.

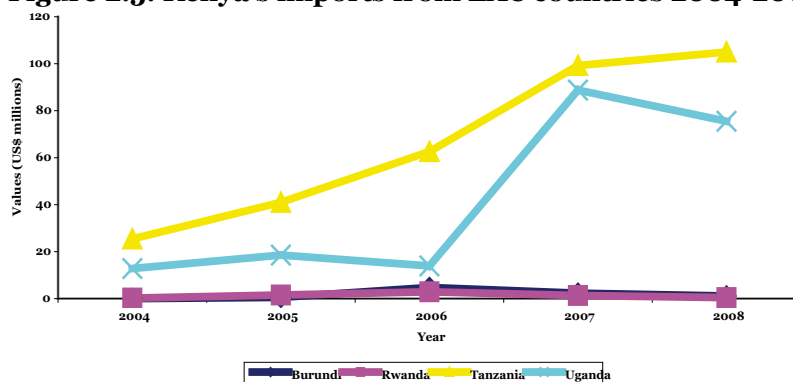
Likewise, imports into Kenya from the partner states have been increasing marginally over the recent years (Figure 2.5). Tanzania is the largest exporter to Kenya and has seen her import figures rising over the years. Kenya's imports from Tanzania in 2006 amounted to US\$ 62.7 million, compared with US\$ 41.0 million in 2005. Major imports from Tanzania include wood and articles of wood, paper and paper products, cotton, copper and articles thereof, and plastics and articles thereof.

On the other hand, imports from Uganda declined by 24.5 per cent in 2004, after a steep rise of 74.5 per cent in 2003. In 2006, Kenya imported goods worth US\$ 18.0 million from Uganda compared with US\$ 14.6 million in the previous year. However, imports from Uganda accounted for less than one per cent of total imports from 2003 to 2006. The major imports from Uganda included animal and vegetable fats, cereals, cotton, oil seeds and oleaginous fruits, furniture and wood and wood products.

## **2.2 Impact on Kenya's Revenue Performance**

Prior to the launching of the Customs Union, there were concerns that the application of the CU provisions would lead to huge revenue losses that would in turn severely affect the economic performances of the partner states. Studies done in recent years have established that these fears were largely unfounded. A study by the African Centre for Economic Growth (ACEG, 2003), for example, found that the potential revenue

**Figure 2.5: Kenya's imports from EAC countries 2004-2008**



*Source: EAC Secretariat (2008)*

losses arising from implementation of the zero rates of internal tariffs would be small. This is because partner states had already substantially reduced their tariff rates in the process of implementing the COMESA trade regime. Between 1999 and 2004, both Uganda and Tanzania had reduced their tariffs on their intra-EAC imports by 80 per cent, while Kenya had granted 90 per cent MFN tariff preference on imports from the two countries. While the potential losses arising from the CET are likely to be larger when the CET is low, the losses are also low. Minor adjustments in domestic revenue, tax structure and improvements in the efficiency of tax administration would be sufficient to absorb the revenue losses following the establishment of the Customs Union.

Total tax revenues have been increasing in Kenya despite the initial fears that implementation of the CET would affect government revenues. Available statistics indicate that although the contribution of import duties to total revenue has marginally declined, the value of import duties increased from US\$ 274 million in 2001/02 to US\$ 408.8 million in 2006/07.

Import duties increased by 34 per cent between 2005/06 and 2006/07 (Central Bank of Kenya, 2011). This may be attributed to improved economic performance and reforms in revenue administration, including the introduction of electronic tax registers, as well as increased trading activities with the rest of the world following the tariff reductions initially averaging 35 per cent for Kenya. In addition, recent reforms have seen greater reliance by Kenya on income, VAT and excise duties for revenue generation as opposed to import duties. For instance, in August 2008, the composition of Government receipts was

**Table 2.1: Kenya's tax revenue performance (US\$ millions)**

Year	Import duty	Excise duty	Income tax	VAT	Total tax revenue	Total revenues
2001/02	274.1	407.4	709.5	646.1	2,037.3	2,511.9
2002/03	243.3	469.6	879.4	739.6	2,330.8	2,775.2
2003/04	281.9	506.1	977.4	779.4	2,544.7	3,216.9
2004/05	311.7	584.8	1,314.6	1,006.5	3,221.8	3,836.4
2005/06	284.5	697.8	1,510.4	1,085.5	3,550.3	4,354.9
2006/07	408.8	831.1	1,855.2	1,430.5	4,532.6	5,421.2
2007/08	499.5	938.7	2,378.0	1,697.3	5,513.6	6,538.3
2008/09	465.6	899.1	2,626.0	1,632.2	5,623.2	6,347.8
2009/10	545.7	984.5	2,858.9	1,936.1	6,325.1	7,880.5

Source: CBK Statistical Bulletin December 2011

**Table 2.2: Kenya's revenue performance (in %)**

	Before the Customs Union		After the Customs Union			
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Performance rates (Import duties)	-14.4	20.5	5.4	-12.8	34.1	19.8
Contribution of import duties to revenue	10.4	11.1	9.3	8.01	9.0	9.1

*Source: CBK Statistical Bulletin June 2008*

as follows: import duty (6.8%), excise duty (15.3%), income tax (32.5%) and VAT (29.7%).

### **2.3 Impact on Foreign Direct Investment Flows**

Foreign Direct Investment (FDI) continues to be one of the cornerstones of economic development in the EAC. Although FDI has flowed to the region over the years, it is only recently that the partner states have increased their focus on its growth. Investors are increasingly responding to the unfolding single market and investment area in an enthusiastic manner. Table 2.3 shows the flow of FDI into the region in 2002-2008.

As can be seen, within this period, inflows of FDI rose dramatically from US\$ 692 million in 2002 to US\$ 2.1 billion in 2007 before falling to US\$ 1.7 billion in 2008, resulting into an increase of FDI stock in the region to US\$ 13.2 billion (UNCTAD, 2009). Uganda and Tanzania were the leading recipients of FDI inflows, particularly through cross-border mergers and acquisitions. These were mainly in expansion projects relating to natural resource exploitation ventures that were ongoing, and mostly before the onset of the global financial and economic crisis. Kenya has been experiencing a dismal performance over the years despite being the strongest and most diversified economy in the region. For instance, FDI flows into Kenya were US\$ 51 million in 2006, compared to US\$ 597 million for Tanzania and US\$ 644 million for Uganda. However, in 2007, Kenya received significantly higher inflows (US\$ 728 million) due to mainly large privatization sales in the telecommunications sector and investment in the railways, but declined to a mere US\$ 96 million in 2008. Meanwhile, flows to both Tanzania and Uganda were on the increase. Flows to Rwanda and Burundi remain low.

**Table 2.3: FDI flows into the EAC, 2002-2009 (US\$ millions)**

Region/ Economy	2002	2003	2004	2005	2006	2007	2008
World	716,128	632,599	648,146	958,697	1,461,074	1,978,838	1,697,353
Developed economies	547,778	442,157	380,022	611,283	972,672	1,358,628	962,259
Developing economies	155,528	166,337	233,227	316,444	433,756	529,344	620,733
Africa	12,994	18,005	18,090	29,459	57,058	69,170	87,647
EAC	692	824	767	984	1,308	2,176	1,731
Burundi	-	-	3	1	-	1	1
Kenya	52	81	46	21	51	728	96
Tanzania	430	527	470	568	597	647	744
Uganda	203	211	237	380	644	733	787
Rwanda	7	5	11	14	16	67	103

Source: UNCTAD, *World Investment Reports 2005, 2008, and 2009*

At the same time, there are indications that cross-border investments are beginning to pick up and firms are now increasingly basing their business plans on the regional market, rather than the local national markets, in order to be able to enjoy economies of scale. Cross-border investments within the region are important for three reasons: (i) the transfer of skills and technology; (ii) the counteracting of regional trade imbalances; and (iii) the increasing of extra-regional export capacity. These factors are not unique to cross-border investments, but equally apply to other foreign capital flows.

In spite of these factors, the level of cross-border investment in the EAC is still low, standing at 5-10 per cent of total FDI (EAC, 2006). For instance, according to Uganda Bureau of Statistics (UBS, 2012), Kenya had projects estimated at US\$ 102 million in Uganda followed by Tanzania with six (6) projects worth US\$ 36.4 million during 2011. The distribution of investment flows shows a substantial spread among three main destination sectors, namely: manufacturing (40%-50%), services (30%-40%) and agriculture and natural resources (10%) (EAC, 2006). Uganda received the highest number of cross-border investments.

On the other hand, there has been relatively limited movement of investments to Kenya, with investors from the other partner states finding it hard to penetrate the market. This is mainly attributed to high production costs occasioned by poor infrastructure, high energy costs, relatively high corporate tax regime, administrative and regulatory red-tapes and high levels of insecurity. The number of projects into Kenya grew from 3 in 2004 to 5 in 2005, although their value declined from



US\$ 5 million to US\$ 2 million. Tanzania has also been slow in investing in the other partner states. Again, Kenya has taken the lead in investing in Tanzania. It is only second to the UK in trade with, and investment into Tanzania. About 270 Kenyan companies operate in the country, providing more than 100,000 jobs. Only 3 Tanzanian companies have invested in Kenya.

Cross-border investments have suffered mainly due to set-backs relating to poor infrastructure and the high cost of doing business, insecurity and low investor confidence, among others. The challenge therefore is to address this unhealthy situation and the emerging imbalances. A number of initiatives have been undertaken to create an environment that is conducive for cross-border investments to take place. They included: (a) consensus and confidence-building measures, such as tripartite meetings on various issues; (b) signing of MOU on defence cooperation as a step to guaranteeing peace, which is necessary for trade and investment to grow; (c) constituting sectoral coordination committees; (d) harmonization and rationalization of legal and judicial frameworks; and, (e) development of regional physical infrastructure, among others.

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### 3. Methodology

#### 3.1 Overview of Regional Integration and its Effects on Trade

Regional Trade Agreements (RTAs) have become an integral part of the international trading system, and their formation has continued unabated since the early 1990s. Whether they support or detract from the WTO's multilateral trading system, they provide an opportunity for groups of countries to negotiate rules and commitments, strengthen their integration and go beyond what is multilaterally possible. Participation in RTAs is driven by political and economic considerations. For instance, regional integration efforts in Europe and East Asia after the World War II were desirably political in nature. Their integration has since been largely driven by governments and policies through creation of powerful regional institutions, which have in their own right further deepened integration (Sakakibara and Yamakawa, 2004). Further, the prospects of economies of scale and potential for more efficient use of resources have attracted the adoption of RTAs on a global scale. In this case, firms seek to make more efficient use of inputs into their production processes, taking advantage of complementarities that exist among partner states.

Theoretical work suggests that regional agreements may be beneficial or harmful depending on the particular countries involved and the extent of trade creation and diversion. The seminal work by Viner (1950) pioneered the modern analytical framework for trading blocs, and describes how welfare effects of a regional trade agreement depended on trade creation and trade diversion. Johnson (1960) developed a partial equilibrium diagram that explains the economic effect of 'trade diversion' and 'trade creation' impact of an RTA and summed up several effects in markets where trade is diverted. Likewise, the gravity models (Tinbergen, 1962) have also become useful tools for establishing determinants of trade flows and making predictions. Overall, the estimation of welfare effects and changing trade patterns is done through two broad and distinct methods, that is *ex-post* or *ex-ante* methodologies. *Ex-post* studies examine trade flows after the RTA

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<sup>2</sup> So far, about 462 RTAs have been notified to the GATT/WTO up to February 2010, while 271 agreements were in force. Of these, 345 RTAs were notified under Article XXIV of the GATT 1947 or GATT 1994; 31 under the Enabling Clause; and 86 under Article V of the GATS. Further, Free Trade Agreements (FTAs) and partial scope agreements account for 90%, while customs unions account for 10%.

has been implemented and compare the actual levels of trade with a prediction of trade in the absence of the RTA, while *ex-ante* studies use trade patterns and estimated elasticities prior to the agreement to calculate the predicted effect of eliminating trade barriers.

So far, the methodological approaches have been subject to criticism. For instance, Wonnacott and Lutz (1989) and Krugman (1991) have proposed a natural trading partner hypothesis that countries tend to form regional agreements if they already have significant bilateral trade. Magee (2003) uses simultaneous equations model to demonstrate empirically that higher mutual trade flows do boost the probability that countries will form free trade agreements. Further, the coefficients of the dummy variables incorporate the possibility that high levels of intra-bloc trade may be attributed to historical or political relationships between bloc members. Haveman and Hummels (1998) show that the sample of countries included in gravity models are sensitive to RTA effects, and thus vary in their conclusions. The alternative approach has been the estimation of computable general models of trade. However, the net result of empirical work has so far failed to reach firm conclusions as to whether trade creation outweighs trade diversion (Clausing, 2001).

### **3.2 Context and Modelling Framework**

The EAC Customs Union set up common external tariffs for imports from third parties and also required partner states to eliminate all internal tariffs within a 5-year transitional period ending 2009. The impact of the CET and of eliminating internal tariffs on imports from EAC partner states primarily depends on how important the EAC region is as a destination of exports, in general, and for particular products, and the extent to which these compete with domestic producers. The realization of net welfare gains is associated with products where there are few or no competing domestic producers, while consumption gains arise from increased cheaper imports and potential welfare gains from sourcing imports from more efficient non-EAC producers.

### 3.3 Empirical Estimation Methods and Data

The partial equilibrium analytical framework which encompasses trade, revenue and welfare impacts is used in this study. As used by Milner *et al.* (2009), McKay *et al.* (2005) and Morissey and Zgovu (2009), it extends an established theoretical framework for analyzing the economic (welfare) effect of regional integration (Laird and Yeats, 1986).

In this model, simulations on effects of tariff changes are computed based on three key variables:-

1. The current level of trade (the current trade deficit) is likely to influence all the simulations in the same direction.
2. Size of tariff reductions.
3. Import demand elasticity of substitution. We use a default of elasticity of -1.5 (a recent study for South Africa estimated an elasticity of -0.85 and used both (-1.5 and -.85) to come up with a range of estimates.

**Trade creation:** This refers to increased trade and efficiency in economic integration arising from formation of a customs union amongst trading partners brought forth by declining prices of goods and greater revenues. Less efficient producers are replaced by more efficient producers from the trading bloc. In this model, trade creation depends on current level of imports, the import demand elasticity and the relative tariff change. The model can be expressed as:

$$TC = 0.5 \left[ \frac{t}{1+t} \right] n_m^d M^{EAC} AV^{EAC} \quad [1]$$

where  $M$  is the current quantity of imports from the EAC,  $n_m^d$  is the import demand elasticity,  $AV$  is the current average unit value of imports from the EAC, and  $t$  is the current tariff against imports from outside the EAC.

**Trade diversion:** Trade diversion occurs when trade is diverted from more efficient suppliers from outside the trading bloc to less efficient suppliers from the bloc as a result of tariff elimination in the customs union, and formation of a common external tariff with the rest of the world. In this case, inefficient suppliers in the EAC region would be favoured against more efficient suppliers from the ROW. The magnitude of trade diversion depends on three factors: the current level of imports from EAC and ROW, the magnitude of tariff reduction, and

the elasticity of substitution between imports from the EAC and ROW.

$$TD = 0.5 \left[ \frac{t}{1+t} \right] \eta_m^d M^{ROW} AV^{EAC} \quad [2]$$

$t$  represents EAC common external tariff, and  $\sigma_m^d$  is the elasticity of substitution between EAC imports and imports from the rest of the world.

**Total trade effects (TE)** is the summation of the total trade creation and trade diversion and is represented as:

$$RI = -t.AV^{EAC}M^{EAC} \quad [3]$$

**Revenue impacts:** The change in revenue depends on the change in Ad Valorem tariff rate which can be computed as:

$$TE = TC + TD \quad [4]$$

**Welfare effects:** The welfare effect is the summation of consumers and producers' surplus. It is estimated based on consumer gains from lower prices of imported goods, which they substitute to assuming the elasticity of supply as infinite. The welfare equation in the WITS/SAMRT model is expressed as:

$$WE = 0.5t.\Delta TC + (AV^{EAC}M^{EAC})t \quad [5]$$

This study simulates the impacts of the EAC Customs Union as well as the EPAs, taking into account Kenya's trade during the year 2009. The study uses Customs data on volume of imports/exports and applied duties.

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## 4. Results

### 4.1 Trade Effects

The aggregate trade effects are presented in Table 4.1. Overall, the customs union has a net positive trade effect on the Kenyan economy. From the results, net total trade effect was worth Ksh 9.5 billion worth of imports, of which trade creation amounted to Ksh 12.7 billion, while trade diversion was worth Ksh 3.3 billion.

**Table 4.1: Estimated trade effects, 2009**

HS	Product category	Trade diversion	Trade creation	Total trade effect
Ch. 01-05	Live animals, animal products	(146,574,568.21)	565,917,629.10	419,343,060.89
Ch. 06-14	Vegetable products	(561,550,890.43)	2,751,307,400.36	2,189,756,509.93
Ch.15	Animal or vegetable fats and oils and their cleavage products	(71,029,687.99)	195,368,764.37	124,339,076.38
Ch. 16-24	Prepared foodstuffs, beverages, spirits and vinegar, tobacco	(815,180,364.87)	2,492,293,648.02	1,677,113,283.15
Ch. 25-27	Mineral products	(771,201.91)	645,055,220.84	644,284,018.93
Ch. 28-38	Products of chemical or allied industries	(71,288,873.73)	249,544,087.52	178,255,213.79
Ch. 39-40	Plastics and articles thereof, rubber and articles thereof	(13,792,758.33)	59,381,860.91	45,589,102.58
Ch. 41-43	Raw hides and skins, leather, fur skins and articles thereof	(1,607,766.98)	246,487,311.50	244,879,544.52
Ch. 44-46	Wood and articles of wood, wood charcoal, cork and articles of cork	(102,581,354.26)	273,550,278.03	170,968,923.77
Ch. 47-49	Pulp of wood or other fibrous cellulosic material, paper or paperboard	(663,581,528.62)	1,774,332,192.37	1,110,750,663.76
Ch. 50-63	Textiles and textile articles	(746,488,800.88)	2,650,362,666.30	1,903,873,865.42
Ch.64-67	Footwear, headgear, umbrellas, walking sticks	(108,003.67)	296,674.94	188,671.28

Ch. 68-70	Articles of stone, plaster, cement, asbestos, mica or similar materials	(7,669,889.95)	20,453,039.86	12,783,149.91
Ch. 71	Natural or cultured pearls, precious or semi-precious stones	-	-	-
Ch. 72-83	Base metals and articles of base metal	(41,180,870.08)	272,162,200.35	230,981,330.27
Ch. 84-85	Machinery and mechanical appliances, electrical equipment	(16,445,853.50)	435,089,759.85	418,643,906.35
Ch.86-89	Vehicles, aircraft, vessels and associated transport equipment	(1,648,463.86)	31,339,451.56	29,690,987.71
Ch. 90-92	Optical, photographic, cinematographic, measuring, checking, precision	-	68,234,336.41	68,234,336.41
Ch. 93	Arms and ammunition, parts and accessories	0	0	-
Ch. 94-96	Miscellaneous manufactured articles	(4,765,747.77)	12,708,660.73	7,942,912.95
Ch. 97	Works of art, collectors' pieces and antiques	0	0	-
	Total	(3,266,266,625.03)	12,743,885,183.02	9,477,618,557.99

*Source: Own simulations*

Table 4.2 expresses the percentage change in imports relative to the imports of the relevant product categories. The largest trade impact occurred in the products within the EAC list of sensitive products. These include milk, rice and wheat within chapters 6-14 (21.6%), sugar under chapters 16-24 (19.6%), paper products chapter 47-49 (13.9%), and textile and textile products chapters 50-63 (20.8%). On the other hand, the largest trade diversion effects occurred under chapters 16-24, that is prepared food stuffs (-6.40%) and chapter 50-63 or textiles and textile articles (-5.86%) during the year.

**Table 4.2: Trade impacts (% product trade)**

HS	Product category	Trade creation	Trade diversion
Ch. 01-05	Live animals, animal products	4.44	-1.15
Ch. 06-14	Vegetable products	21.59	-4.41
Ch.15	Animal or vegetable fats and oils and their cleavage products	1.53	-0.56
Ch. 16-24	Prepared foodstuffs, beverages, spirits and vinegar, tobacco	19.56	-6.40
Ch. 25-27	Mineral products	5.06	-0.01
Ch. 28-38	Products of chemical or allied industries	1.96	-0.56
Ch. 39-40	Plastics and articles thereof, rubber and articles thereof	0.47	-0.11
Ch. 41-43	Raw hides and skins, leather, fur skins and articles thereof	1.93	-0.01
Ch. 44-46	Wood and articles of wood, wood charcoal, cork and articles of cork	2.15	-0.80
Ch. 47-49	Pulp of wood or other fibrous cellulosic material, paper or paperboard	13.92	-5.21
Ch. 50-63	Textiles and textile articles	20.80	-5.86
Ch.64-67	Footwear, headgear, umbrellas, walking sticks	0.00	0.00
Ch. 68-70	Articles of stone, plaster, cement, asbestos, mica or similar materials	0.16	-0.06
Ch. 71	Natural or cultured pearls, precious or semi-precious stones	0.00	0.00
Ch. 72-83	Base metals and articles of base metal	2.14	-0.32
Ch. 84-85	Machinery and mechanical appliances, electrical equipment	3.41	-0.13
Ch.86-89	Vehicles, aircraft, vessels and associated transport equipment	0.25	-0.01
Ch. 90-92	Optical, photographic, cinematographic, measuring, checking, precision	0.54	0.00
Ch. 93	Arms and ammunition, parts and accessories	0.00	0.00
Ch. 94-96	Miscellaneous manufactured articles	0.10	-0.04
Ch. 97	Works of art, collectors' pieces and antiques	0.00	0.00

*Source: Own simulations*



## 4.2 Revenue Effects

The elimination of tariffs on imported products from the EAC partner states implied foregoing import duty revenues. During 2009, import

**Table 4.3: Revenue effects (Ksh millions)**

<b>HS</b>	<b>Product category</b>	<b>Revenue effects</b>
Ch. 01-05	Live animals, animal products	910.19
Ch. 06-14	Vegetable products	4,184.38
Ch.15	Animal or vegetable fats and oils and their cleavage products	28.09
Ch. 16-24	Prepared foodstuffs, beverages, spirits and vinegar, tobacco	248.60
Ch. 25-27	Mineral products	43.30
Ch. 28-38	Products of chemical or allied industries	2,155.29
Ch. 39-40	Plastics and articles thereof, rubber and articles thereof	628.59
Ch. 41-43	Raw hides and skins, leather, fur skins and articles thereof	307.82
Ch. 44-46	Wood and articles of wood, wood charcoal, cork and articles of cork	1,838.00
Ch. 47-49	Pulp of wood or other fibrous cellulosic material, paper or paperboard	60.07
Ch. 50-63	Textiles and textile articles	294.18
Ch.64-67	Footwear, headgear, umbrellas, walking sticks	0.04
Ch. 68-70	Articles of stone, plaster, cement, asbestos, mica or similar materials	1.66
Ch. 71	Natural or cultured pearls, precious or semi-precious stones	0.04
Ch. 72-83	Base metals and articles of base metal	244.26
Ch. 84-85	Machinery and mechanical appliances, electrical equipment	240.13
Ch.86-89	Vehicles, aircraft, vessels and associated transport equipment	-
Ch. 90-92	Optical, photographic, cinematographic, measuring, checking, precision	-
Ch. 93	Arms and ammunition, parts and accessories	0
Ch. 94-96	Miscellaneous manufactured articles	-
Ch. 97	Works of art, collectors' pieces and antiques	0
	<b>Total</b>	<b>(3,187.32)</b>

*Source: Own simulations*

revenue forgone as a result of this was worth Ksh 3 billion. This is a relatively modest amount attributed mainly to increased trade and generation of more revenues from domestic taxes, improved tax administration and better economic performances in all the EAC partner states. In terms of product categories, the biggest losses were in chapters 6-14 (21.6%), chapters 16-24 (19.5%), chapters 47-49 (13.9%), and chapters 50-63 (20.7%) (Table 4.3).

### **4.3 Welfare Effects**

The welfare effects of the EAC Customs Union are presented in Table 4.3. Overall, the results indicate that EAC integration has a positive welfare effect on the Kenyan economy. The welfare benefits are in the form of reduced prices due to elimination of import duties on imported commodities, the availability of more product varieties in markets, better quality products, and employment generation due to increased productions to meet the wider market. During 2009, welfare benefits in total were worth Ksh 2.6 billion of total imports. The largest welfare gains were realized from products in the following categories: vegetable products (21.6%), textiles and articles of textiles (20.8), prepared food stuffs (19.6%), and wood and paper products (13.9%). Apparently, the welfare gains are concentrated on only a few sectors. Besides, it is notable that Kenya does not have a competitive advantage in production of these products compared to the other EAC trading partners.

**Table 4.4: Welfare effects of the EAC Customs Union (Ksh millions)**

HS	Product category	Welfare effects - EAC
Ch. 01-05	Live animals, animal products	114.9 (4.4)
Ch. 06-14	Vegetable products	558.86 (21.6)
Ch.15	Animal or vegetable fats and oils and their cleavage products	39.68 ( 1.5)
Ch. 16-24	Prepared foodstuffs, beverages, spirits and vinegar, tobacco	506.25 ( 19.6)
Ch. 25-27	Mineral products	131.03 ( 5.1)
Ch. 28-38	Products of chemical or allied industries	50.69 ( 1.9)
Ch. 39-40	Plastics and articles thereof, rubber and articles thereof	12.06 (0.5)
Ch. 41-43	Raw hides and skins, leather, furskins and articles thereof	50.07 (1.9)
Ch. 44-46	Wood and articles of wood, wood charcoal, cork and articles of cork	55.56 ( 2.2)
Ch. 47-49	Pulp of wood or other fibrous cellulosic material, paper or paperboard	360.41 (13.9)
Ch. 50-63	Textiles and textile articles	538.35 (20.8)
Ch.64-67	Footwear, headgear, umbrellas, walking sticks	0.06 (0.0)
Ch. 68-70	Articles of stone, plaster, cement, asbestos, mica or similar materials	4.15 (0.2)
Ch. 71	Natural or cultured pearls, precious or semi-precious stones	1.09 (0.0)
Ch. 72-83	Base metals and articles of base metal	55.28 ( 2.1)
Ch. 84-85	Machinery and mechanical appliances, electrical equipment	88.38 (3.4)
Ch.86-89	Vehicles, aircraft, vessels and associated transport equipment	6.37 (0.3)
Ch. 90-92	Optical, photographic, cinematographic, measuring, checking, precision	13.86 (0.5)
Ch. 93	Arms and ammunition, parts and accessories	0 (0)
Ch. 94-96	Miscellaneous manufactured articles	2.58 ( 0.1)
Ch. 97	Works of art, collectors' pieces and antiques	0 (0)
	<b>Total</b>	<b>2,589.70</b>

Source: Own simulations

Percentage shares in parenthesis

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## **5. Conclusion and Policy Implications**

### **5.1 Conclusion**

In this study, we examined the impact of the EAC Customs Union on Kenya. The direct effects arise from the requirement to eliminate tariffs on all imports from all trading partners and the adoption of a common external tariff against imports from third parties. There are static and dynamic effects from this but, overall, consumers gain from cheaper imports; the government loses tariff revenue and producers face increased competition. Our analysis suggests that there are significant impacts of full reciprocity on imports in Kenya under the EAC Customs Union regime. As a result, both trade and production have expanded during the implementation of the EAC Customs Union protocol. Besides, imports have become relatively cheaper, thereby enhancing production and welfare of the consumers.

The results further indicate a net positive revenue impact of the customs union on Kenya, despite the loss of tariff revenues which dispels the initial fears about fiscal costs. The minimal disruption in fiscal revenue is mainly attributed to the existence of the exclusion list, where tariff revenues continue to be collected and the need to safeguard agriculture and industry. Besides, tariffs continue to be collected from imports from other trading partners other than the EAC. Improvements in the tax administration, broadening of the tax base and good economic performance have ensured minimal disruption of revenue collection.

In addition, the EAC induced liberalization increases welfare in Kenya. The simulation results indicate that the net welfare effects of the CET have been positive, implying producers and consumers in Kenya are better off under the customs union regime. The welfare gains can be attributed to realignment of prices and the reduction of domestic prices induced by Kenya's tariff reforms, which create opportunities for investments, reallocation of resources and efficiency gains. Besides, the positive welfare effect can be attributed to trade creation within the EAC region as partner states increase production and sale of manufactured products as opposed to primary products. In addition, the regional efforts towards trade facilitation and addressing non-tariff barriers, including improvements in customs administration, reduced police check-points, and improved clearances at the Port of Mombasa.

## **5.2 Policy Recommendations**

### *Product and export diversification*

The simulation results indicate that 3 product categories, that is Chapters 16 -24, 47-49 and 50-63 account for about 70 per cent of total trade effects, an indication of low level of diversification. Therefore, there is need to identify sector-specific constraints affecting production and investments, with a view to expanding the country's production and export bases.

### *Fiscal adjustments*

Although the revenue losses are modest, it would be necessary to enhance revenue generation from non-tariff sources to support the devolved system of government adopted in Kenya. In addition, it is necessary to sustain on-going fiscal reforms with respect to taxation from non-trade tax sources in order to replace tariff revenue losses associated with the EAC common external tariff, particularly with regard to zero-rated products.

### *Trade facilitation*

It will be necessary to support actual and potential exporters to stimulate development of export products and enhance knowledge about export market opportunities and requirements in order to reap benefits of re-allocating resources away from import-competing sectors towards new or emerging sectors.

### *Skills development and productivity enhancement*

As import-substitution activities contract and export activities expand, it will be necessary to support skills development and improve firm organization and management structures through elaborate macroeconomic policies and infrastructure as envisioned in the Vision 2030 blueprint. In other words, the structural reform measures should focus beyond the adjustment implications of the customs union, but the global economy.

### *Awareness creation about opportunities and implications of EAC integration process*

The information gap between policy makers, on the one hand, and implementers, private sector players and other stakeholders hinder the full exploitation of existing trade and investment opportunities created by the EAC Customs Union. There is need to enhance sensitization

amongst all stakeholders about the imminent adjustment implications of deepening integration in the EAC and the policy measures being pursued to ensure maximum benefits are reaped and challenges addressed in the best possible manners.

### **5.3 Areas for Further Research**

A further study encompassing the implementation of the Economic Partnership Agreement (EPA) with the European Union is necessary in this context. There are potential adjustment costs arising. A significant reduction of tariffs on imports from the EU is provided for under the EPAs. Thus, there is a possible shift by consumer preferences towards the relatively cheaper EU imports, which would in turn reduce production of industrial and consumer goods and lead to loss of jobs and incomes in the affected sectors.

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