Impact of economic partnership agreements: the case of EAC's manufactured imports from EU

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Abstract

This study uses a partial equilibrium model to analyse the impact of East African Community elimination of import duty on imports of manufactured products from the European Union on preferential basis under the proposed EAC-EU Economic Partnership Agreement. Results show possibility of a 9% increase of manufactured goods imports from EU into the EAC region. Imports from EU found to be likely to increase the most are those with higher tariffs of 25% or 10%. EAC tariff elimination is found to be likely to lead to lower prices for manufactured goods, leading to small consumption gains of about 0.03% of the region's GDP. We recommend that EAC countries take measures to improve the competiveness of their manufactured goods in order to compete with EU's manufactured products once the EAC-EU EPA comes into effect.

1.0 Introduction

Since 2002, the East African Community (EAC) partner states of Burundi, Kenya, Rwanda, Tanzania and Uganda have been negotiating an Economic Partnership Agreement (EPA) with the European Union (EU). Although the EAC-EU EPAs covers several cooperation areas of interest to the EAC and EU economies such as development issues, the main objective of cooperation in goods trade is the liberalization of trade between the two regions.

For long, trade between EAC partner states and EU member countries' was governed by the African Caribbean Pacific (ACP) group of countries and EU Agreement trading regime. The ACP-EU trading regime provided un-reciprocal market access to EU of products exported from the ACP countries, with exports from the former (including EAC partner states) entering the EU market on duty free basis, while exports from EU to EAC countries were subject to import duty.

Once negotiations are completed and the Agreement comes into force, the EAC- EU EPA will provide a reciprocal preferential trading arrangement between EAC partner states and the EU member countries. EAC's liberalization of EU imports is progressive; starting two years after the EAC- EU EPA comes into effect with import duty being targeted for elimination within a period of 17 years after the EAC- EU EPA comes into effect (EAC, 2008).

Manufacturing sector contributes about 10% of EAC partner states' GDP while the exports share of merchandise is slightly over 20% for Kenya, Tanzania and Uganda but less than 10% for Burundi and Rwanda. The main export destination markets for EAC's industrial goods include EAC itself, European Union (EU) and USA, with exports in these markets being under preferential trading arrangements.

Manufactures account for the largest share (60 %) of merchandise imports in the region. United Arab Emirates was the leading import source market in 2011 followed by China.

Together, EU member countries are also an important source market for EAC's manufactured goods imports and Kenya is among the largest import source markets of manufactured goods for other EAC partner states.

Tariffs applicable to EAC partner state imports of various manufactured products from third countries are in line with EAC's Common External Tariffs (CET). The CET is a three band tariff structure of 0%, 10% and 25% for raw materials, intermediate, and finished goods respectively. Products considered sensitive in the EAC region face applied tariffs which are higher than the general 25% applicable to finished goods. Import of Portland cement for example attracts a duty rate of 55%, while other products including matches, textile products (such as table, bed linen, toilet and kitchen linen, textile fibres), Manganese dioxide, Mercuric oxide, silver oxide, Lithium, primary cells and primary batteries attracts duty rates well over 25%.

A significant proportion of manufactured goods imported into the EAC region from various countries globally are not dutiable, with the largest proportion of dutiable imports to the region originating from Japan. Apart from imports from Kenya (which trades with other EAC partner states under EAC Customs Union trading regime), imports from other countries into EAC region face tariffs greater than 10%. The goal of EAC's regional industrial policy is to achieve structural transformation of the manufacturing sector through high value addition and product diversification based on comparative and competitive advantages of the region (EAC, 2012). Specific objectives of the policy include diversifying the manufacturing base and expanding trade in manufactured products and transforming micro, small and medium enterprises (MSMEs) into viable and sustainable business entities, among other objectives. Imports of manufactures account for about 65% of total EAC merchandise imports, accounting for over 21% of the region's GDP. Manufactured imports from EU account for about 22% of the total manufactured imports into the EAC region.

Currently EAC countries have duty free, quota free market access to EU market, while imports from EU to EAC are subject to import duty rates according to the EAC CET. EAC-EU trade liberalization under EPAs will offer no additional market access benefits to EAC partner states to EU market, but it will enhance market access for EU exports into the EAC region. In view of this, what is the likely impact of preferential trade liberalization under EPAs on EAC's imports of manufactured goods? And what is the likely impact of these imports on the welfare of EAC partner states? This study seeks to address itself to these questions.

1.1 Objectives of the Study

The objectives of this study are to:

i. Analyse the impact of tariff elimination by EAC countries under EPAs on EU imports of Industrial goods into the EAC partner states
ii. Identify manufactured products in EAC which are likely to be affected by liberalization Under EPAs
iii. Analyse the welfare implications of EAC industrial goods liberalization under EPAs on EAC countries

2. Literature Review, results and discussion

2.1 Literature review

That free trade benefits all countries has been well documented starting with Smith (1776). Other authors including Gans et. al., (2011) and Krugman, Obstfeld and Melitz (2012), have also recently shown that reduction in tariffs or free trade leads to lower prices in the importing country thereby leading to an increase in consumer surplus and a decrease in

producer surplus. Studies by Bhagwati (1993); Bhagwati and Panagariya (1999); and Bhagwati (2008) have shown that regional trade agreements may lead to diversion of trade away from the most efficient global producers to regional partners, thereby leading to loss in welfare. According to Viner (1950), tariff reduction under preferential trading arrangement leads to ambiguous welfare effects, the net welfare effects being determined by the extent of both trade creation and trade diversion.

Recent studies on effects of regional trading arrangements (RTA) have shown mixed results with some RTAs experiencing trade diversion and others trade creation. Clausing (2001) analysed the effects of Canada- United States Free Trade Area (CUSFTA) and found that CUSFTA contributed to increased trade with trade increasing the most for goods which experienced the largest tariff reduction during the liberalization process. His results did not show evidence of trade diversion.

Khorana, Kimbugwe and Perdikis (2007) assessed trade creation and trade diversion in Uganda as a result of EAC Customs Union (CU) using a partial equilibrium model. They estimated trade, welfare and revenue effects under EAC-CU and analysed the impact of tariff reductions under the EAC-CU on different product groups for Uganda. Their findings did not show adverse trade impact of the EAC-CU on Ugandan products. Several studies also attempted to analyse the impact of EPAs on African countries. The studies such as those of the United Nations Economic Commission for Africa (UNECA, 2005); Busse et al. (2004); and Ndlela & Tekere (2003) found that EPAs were likely to lead to increased imports from the EU.

In the EAC region, Milner et al. (2005) analysed trade creation and diversion and welfare and revenue impacts of EPAs on three EAC partner states of Kenya, Tanzania and Uganda. The study used partial equilibrium models to identify sectors which were likely to be most affected by EPAs. They found that EPAs were likely to lead to loss in revenue and to increased welfare, albeit small, of the countries. Fontagné et al. (2008) analysed the impact of EU- ACP EPAs on various ACP groups negotiating EPAs with EU, using a partial equilibrium analysis model. Their study found that although there were revenue loses likely to be experienced by each ACP region negotiating an EPA; in general there would be minor trade diversion on ACP domestic production because EU products were not in direct competition with ACP production.

In a nutshell, it is evident that most of the impact studies on EPAs have been modelled on partial equilibrium and they show that EU is likely to gain more from EPAs than from the ACP countries' imports from EU. They also confirm that ACP countries' imports from EU are likely to increase significantly, while prices are likely to decrease and welfare to increase in EU. Studies also show that ACP countries are likely to lose revenue.

2.2 Estimation Method

This study uses a partial equilibrium model based on the System of Market **Analysis** and Restrictions of Trade (SMART) model, embedded in World Integrated Trade Solution (WITS) data retrieval system. The model allows estimation of the impact of tariff reductions on bilateral, preferential or multilateral levels on trade flows, tariff revenue, and welfare (Laird and Yeats, 1986). The SMART model has been used to analyse the impacts of MFN tariff cuts on trade values by Yeats (1994), Jachia and Teljeur (1999), IEA (2008), Karingi and Fekadu (2009), and Makochekanwa (2012). The two main advantages of the partial equilibrium models are the minimal data requirements and provision of analysis at a fairly disaggregated level.

In this study we estimate the EAC- EU EPA preferential impacts by assuming that both EAC and EU member countries eliminate their industrial goods tariffs on bilateral basis. Based on this we; estimate import flow impacts of EPAs; identify manufactured products most affected

and; determine the welfare effects of EAC countries eliminating tariffs under the proposed EAC-EU EPA.

2.2.1 Model Estimation

Estimation of trade creation, trade diversion and welfare effects is based on Laid and Yeats (1986). The import demand function for EAC partner states for a manufactured good can be expressed[1] as:

$$Mijk = f(Yj, Pij, Pik) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 1$$

The supply function of the exporting country can be expressed as:

$$Xijk = Pikj \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2$$

Combining (1) and (2) gives an expression for the partial equilibrium:

$$Mijk = Xikj \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3$$

Assuming a free trade situation, the domestic price of a manufactured good (*i*) in EAC importing country (*j*) is equal to the price in the exporting country (*k*) plus transport and insurance costs. The price in EAC partner state is therefore expected to rise by an amount equivalent to the tariff (ad valorem) applied to the good. Therefore:

$$Pijk = Pikj(1 + tijk) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 4$$

Trade Creation

The trade creation effect is defined as the increased demand for commodity (*i*) in EAC country (*j*) from any exporting country (*k*) as a result of price decrease associated with the assumed full transmission of price changes when tariffs are eliminated. Based on equations (1) to (5), the trade creation expression is derived. Starting with equation (4) the total differential of domestic price with respect to tariffs and foreign price is derived as shown in equation 5:

$$\partial Pijk = Pikj.\partial tijk + (1 + ijk).\partial Pikj \ldots\ldots\ldots\ldots\ldots\ldots 5$$

An expression for the elasticity of import demand with respect to the domestic price is obtained from rearranging equation 6 as follows;

$$\frac{\partial Mijk}{Mijk} = Em\left(\frac{\partial Pijk}{Pijk}\right) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 6$$

Substituting equation (4) and (5) into equation (6) we obtain:

$$\frac{\partial Mijk}{Mijk} = Em\left(\frac{\partial tijk}{(1+tijk)} + \frac{\partial Pijk}{Pijk}\right) \ldots\ldots\ldots\ldots\ldots\ldots\ldots 7$$

An expression for the elasticity of export supply with respect to the world price is expressed as:

$$\frac{\partial Pikj}{Pikj} = \left(\frac{\partial Xikj}{Xikj}\right)/Ex \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 8$$

From equation (3) it follows that the equilibrium in EAC market can be rewritten as:

$$\frac{\partial Mijk}{Mijk} = \frac{\partial Xikj}{Xikj} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 9$$

[1] Notations used in the explanation as follows:
M – imports; Mn - imports from non EPAs party countries; X – exports; V - output in EAC countries; P – price; W – welfare; t – EAC applied tariff rate; Y - national income; Em - elasticity of import demand with respect to domestic price; Ex - elasticity of export supply with respect to export price; Es - elasticity of substitution with respect to relative prices of the same product from different sources of supply; TC - trade creation; TD - trade diversion; i – manufactured product; j - importing (EAC) country; k exporting country; K- alternative exporting country; ∂ – change. Pijk - Price of commodity i in country j imported from country k (i.e. domestic price in the importing country); Pikj - Price of commodity i from imported from country k to country j (i.e. export/world price j); Mijk - Imports of manufactured product i by EAC country j from country k.

Substituting equation (9) into (8) and the result into (7) gives the expression for trade creation effect. From equation (3), trade creation is equivalent to the growth of exports of commodity (i) to country (j) in exporting country (k). The equation for trade creation is written as:

$$TCijk = \frac{Mijk \times Em \times dtijk}{[(1+tijk)\times(\frac{Em}{Ex})]} \quad \text{.....10}$$

Since in our model, the elasticity of export supply with respect to the world price is assumed to be infinite, the denominator on the right hand side of equation (10) is unity and is ignored.

Trade Diversion

Trade diversion in the model accounts for substitution of goods from one source (the rest of the World) to goods from EU in response to the change in the import price of supplies from EU but not from the rest of the world. Thus, if prices fall in EU there will be a tendency to purchase more goods from EU and less from other countries whose exports are unchanged in price. Trade diversion in our case occurs because of elimination of tariffs on imports from EU by EAC countries on preferential basis, while treatment of same imports from other source countries remain unchanged.

In this model, the value of elasticity of substitution is assumed to be 1.5, and is defined as a percentage change in relative shares associated with a 1% change in relative prices of the same product from alternative sources. This is expressed in equation 11:

$$Es = \frac{\partial\left(\frac{\Sigma Mijk}{\Sigma MijK}\right)}{\frac{\Sigma Mijk}{\Sigma MijK}} \Big/ \frac{\partial\left(\frac{Pijk}{PijK}\right)}{\left(\frac{Pijk}{PijK}\right)} \quad \text{.....11}$$

Based on this expression, the percentage change in the relative shares of the alternative suppliers in terms of the elasticity of substitution, the percentage change in relative prices and the original relative shares of imports from the alternative sources is presented. By extensive expansion, substitution and rearrangement, Equation 11, which shows the change in imports from one country (trade diversion (TD) gain or loss), as a result of the change in duty paid prices relative to the prices from EU sources resulting from EAC elimination of tariffs under the EPAs, is expressed as in equation 12.

$$TDik = \frac{Mijk}{\Sigma Mijk} \cdot \frac{\left(\Sigma Mijk.\Sigma MijKEs.\frac{\partial\left(\frac{Pijk}{PijK}\right)}{\left(\frac{Pijk}{PijK}\right)}\right)}{\Sigma Mijk+\Sigma MijK+\Sigma Mijk.Es.\frac{\partial\left(\frac{Pijk}{PijK}\right)}{\left(\frac{Pijk}{PijK}\right)}} \quad \text{.....12}$$

The relative price changes in the above equation are specified in terms of changes of the tariffs for the two foreign sources.

The Total Trade Effect

The total trade effect is obtained by summing up the trade creation and trade diversion effects.

The Price Effect

Since our assumption is that export supply elasticity is infinite, it follows that there is no price effect on exports.

The Welfare Effect

In this model, welfare effect arises from the benefits consumers in EAC partner states obtain from the lower domestic prices after elimination of tariffs under EPAs. For the pre-existing level of imports, import duty elimination to the consumer represents a transfer from the government

tariff revenue (import duty) and therefore no net gain to the country as a whole. For the increase in imports, there is a net welfare gain equal to the value of EAC countries' consumption (represented by the value of extra imports minus the cost of extra imports at supply price i.e. excluding tariffs). Net welfare gain is therefore estimated as the increase in import value times the average between the import duty before and after their elimination. The welfare is an increase in consumer surplus and is expressed as;

$$Wijk = 0.5(\partial t\, ijk . \partial Mijk) \quad \text{..... 13}$$

With: W denoting welfare, while ∂, *t, i, j, k* and M notations are as presented earlier.

2.2.2 Assumptions of the Model

Three main assumptions are made with respect to elasticities:

i. Export supply elasticities of EU are infinite. This is because EAC partner states are small economies by global economy standards. EAC is therefore assumed to be a price taker.
ii. Armington assumption on substitutability for export supply, which means that, exports of EU and other countries exporting to EAC partner states, although similar, are imperfect substitutes.
iii. Import substitution elasticity of 1.5, implying that similar products from different countries are imperfect substitutes.

2.2.3 Data Type and Sources

Data sets used in this study are obtained from UNCTAD's Trade Analysis and Information System (TRAINS). Data used is for the year 2011 or other available latest year. The data comprises of over 3836 manufactured products at Harmonised System (HS) code at 6- digit level of aggregation, imported into the EAC from various countries of the world. Other data include: exports (both total and those specific to EAC) of manufactured products from various countries exporting to EAC region including the EU; applied tariffs applicable to manufactured products imported from various countries to EAC partner states, and supply and demand elasticities as discussed above.

2.3 Results and discussion

4.1 Impact of EAC Countries Liberalizing to EU under EPAs

Table 1 reports the simulation results of partial equilibrium analyses of the effect of EAC countries eliminating tariffs for manufactured goods imported from the EU[2] under EPAs. If EAC eliminates the current applicable import duty for manufactured goods imported from the EU on preferential basis i.e. through the EPAs, manufactured imports from EU to the region are likely to increase by about 9% as is shown in Table 1.

Country	EU imports into EAC		Trade Total Effect	Trade Creation Effect ('US $ 000)	Trade Diversion Effect ('US $ 000)	Old duty rate (%)	Increase in imports from EU (%)
	Applied duty before	Applied duty after					
Burundi	94342.1	102841.7	8499.6	5745.9	2753.7	9.6	9
Kenya	2014582	2193955	179256.5	106162.2	73094.2	11.8	9
Rwanda	192538.1	213379.7	20841.6	13073.5	7768.1	9.8	11

[2] Refers to the 27 member countries of the EU (EU 27).

Tanzania	1470906	1597497	126640.8	65283.9	61356.9	12.1	9
Uganda	609722.6	666631.6	56909.0	32370.5	24629.3	11.4	9
EAC	4382091	4774306	392147.5	222636.0	169602.2	10.9	9

Table 1: Changes in EAC Imports of Manufactured Goods from the EU

Source: TRAINS Accessed through WITS (2012)

Simulation results show that if EAC countries eliminate tariffs applicable to manufactured goods imported from EU while tariffs applicable to imports from other countries remain, then imports from EU to EAC region are likely to increase by a value of about US$ 392 million or by about 9% of the current import values. This value accounts for about 0.4% of the region's GDP of about US$ 99.8 billion. The rise in imports from EU is due to increased consumption of EU imports as relative prices of goods imported from EU (relative to prices of similar goods imported from non EPA party countries) reduce due to elimination of import duty by EAC partner states. These results are in agreement with those of Busse et al. (2004) and Ndlela & Tekere (2003), who found that EU imports into various EAC countries are likely to increase on formation of EPAs. In absolute terms, the increase in imports of manufactured goods from EU is likely to be highest for Kenya (which accounts for over 50% of the import increase) than in other EAC countries. Tanzania, Uganda, Rwanda and Burundi then follow in that order.

The increase in imports is due to both trade creation and trade diversion, with most of the increase (about 57%) being a result of trade creation effect (Table 2). Trade creation occurs because consumption shifts from a high cost (less efficient) producer to a low cost (more efficient) producer. Assuming that EU is a more efficient producer of some manufactured goods compared to other exporters of such goods, then after the EAC-EU EPA comes into effect, EAC countries import manufactured goods from EU duty free, translating to lower prices and an efficiency gain to EAC consumers of manufactured goods.

Trade diversion occurs when consumption shifts from a lower cost (more efficient) third party producer in a trading arrangement to a higher cost (less efficient) one within the trading arrangement. With the EAC-EU EPA, elimination of tariffs by EAC countries makes the EU manufactures cheaper as the EAC CET remains for manufactures from third party countries. EAC countries switch consumption to EU manufactures, whose production (at least for some products) may be more costly than that of other EAC suppliers leading to a reduction in efficiency. Trade diversion is from both regional trading partner countries including those in COMESA and EAC and non- regional trading partner countries. For Burundi for example, regional countries that are likely to experience large trade diversions include Kenya, Uganda and Egypt. Manufactured exports from these countries face applied tariffs of zero as they are a part of the EAC Customs Union and COMESA FTA respectively. South Africa and China exports also lose out in the Burundi market.

In the Kenyan market, diversion is mainly from China, Japan, South Africa, Egypt and Tanzania exports. Egypt and Tanzania trade with Kenya under preferential COMESA and EAC Customs Union trading regimes, respectively. In Rwanda market, China, Tunisia, Japan, Kenya and Uganda exports experience the largest trade diversion. In Ugandan market India, China, South Africa, Kenya and Tanzanian exports experience the largest diversion while for China, India, Tanzania, Kenya and South Africa experience the largest trade diversion.

2.4 Results

2.4.1 Most Affected Products

Appendix A1 - A5 show the products likely to have the largest import increase into the EAC market. For all the EAC countries, these are products with higher tariffs of 25% or 10% in

line with EAC's Common External Tariff (CET). Among these products are iron, steel, vehicles and vehicle spare parts; generally products which can be classified as high technology products.

2.4.2 Welfare Implications of EAC Liberalizing to EU under EPAs

Because EAC countries experience both trade creation and diversion, the region will also experience both gains and loses in welfare. Overall, preferential liberalization of manufactured products by EAC partner states under EPAs is likely to make them better off on average as shown in Table 2. As a result of increased consumption and increased consumer surplus, the welfare of EAC partner states is likely to increase by about US$ 26 million (about 0.03% of EAC GDP). These findings are in agreement with Milner et al., (2005); and UNECA (2005). The welfare gain is as a result of a possible fall in price that is expected to accompany elimination of import duty on imports from the EU market.

EAC Partner State	Trade creation (US$' M)	Welfare (US$'M)	Old Weighted Average duty rate (%)
Burundi	5.7	0.6	9.2
Kenya	106.3	12.6	11.0
Rwanda	13.1	1.4	8.8
Tanzania	65.3	7.6	10.9
Uganda	32.4	3.8	9.9
EAC	222.7	26	9.9

Table 2: Welfare Effects of EAC Liberalizing under EPAs

Source: TRAINS (2012)

Of the five EAC countries, Kenya is likely to experience the largest gains in welfare followed by Tanzania, Uganda, Rwanda and Burundi, in that order. Although EAC is likely to experience welfare gains from liberalizing trade in manufactured goods under EPAs, the increased imports from EU may have a negative impact on the development and transformation of the much needed manufacturing sector in the region as it is likely to reduce producer surplus (manufacturers' gains). The manufacturing sector in EAC remains far less developed and less competitive as compared to the EU manufacturing.

3.0 Conclusion and Recommendations

Several conclusions can be drawn from the findings of this study: First, if EAC countries eliminate tariffs on imports from EU under EPAs, imports of manufactured goods from EU are likely to increase by about 9%, replacing exports from other EAC partner states among other country imports including those from China. Second, imports of manufactured products likely to increase the most are those with higher import duty rates. Third, regional partners most affected by increased imports from EU to the EAC market are Kenya, Tanzania, Egypt and South Africa. Lastly, elimination of tariffs by EAC partner states on manufactured products from EU is likely to lead to welfare gain albeit small, due to a likely increased consumption as a result of reduction in prices caused by tariff elimination.

It is recommended that EAC countries need to take measures to increase competitiveness of their manufactured products to compete better with EU in their domestic market when the EPAs eventually come into effect. Notably, the EAC partner states need to step up measures to improve quality and standards of manufactured products for better competitiveness, especially for products where EU imports to the region are likely to increase the most. They should also encourage research, development and innovation as well as industry-research institutions linkages. Addressing domestic factors that present binding constraints to the manufacturing

sector such as transport, energy and telecommunications infrastructure challenges; insecurity and macroeconomic challenges including ensuring access to affordable investment and trade finance for manufacturing sector entrepreneurs is necessary. Finally there is need to intensify value addition of the current manufactured products to ensure export of high technology products to EAC market and beyond.

4. Research limitations and direction for further research

4.1 Research limitations

The economic Partnership Agreement between EAC Partner States and the EU covers all the economic sectors. This study covered only the manufacturing sector, thus providing crucial information to policy makers. Because of limitations of time and data, the study could not be extended to cover other sectors under EPA negotiations, specifically agricultural and services' sector.

4.2 Direction for further research

It is recommended that in the future the research could be extended to cover the agricultural and services sector, thus providing the effect of EPAs on the whole economies of the EAC.

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6.0 Appendices

Appendix A: Products whose imports from EU are likely to increase most

A1: In Burundi

Product Code	Product Name	Trade Total Effect (US$' 000)	Trade Creation Effect (US$' 000)	Trade Diversion Effect (US$' 000)	Average Duty Rate Before (%)
630491	Knitted or Crocheted, Other Furnishing Articles	782.9	605.5	177.4	12.5
391723	Tubes, Pipes, Hoses of Polymers of Vinyl Chloride	376.4	316.9	59.4	25
730799	Iron or Steel, Other Tube or Pipe Fittings	322.9	287.9	35.1	25
870899	Vehicles accessories and other parts	312.34	186.4	125.8	10
870332	Compression-ignition Engine (diesel) of a cylinder capacity exceeding 1,500 cc but not exceeding 2,500 cc, other vehicles	274.5	243.9	30. 5	12.5
850720	Lead-acid Accumulators, Other	216.4	175.7	40.7	25
730719	Cast Iron, Other Tube or Pipe Fittings	196.9	162.0	34.8	25
620322	Cotton Men's or Boys' Ensembles	172.7	171..8	0.95	25
681091	Prefabricated structural components for building or civil engineering	151.3	128.6	22.8	25
482110	Printed labels of paper or paperboard	139.6	133.9	5.7	17.5
391729	Tubes, Pipes, Hoses of Polymers Plastics (Rigid), other	136.3	58.4	77.9	25
870899	Parts & access for motor vehicles (head 8701-8705), other	134.7	79.5	55.2	10
491110	Trade advertising material, commercial catalogs	110.7	53.8	56.8	25

Source: TRAINS (2012)

A2: In Kenya

Product Code	Product Name	Trade Total Effect (US$' 000)	Trade Creation Effect (US$' 000)	Trade Diversion Effect (US$' 000)	Duty Rate Before (US$' 000)
852352	Smart cards	5899.4	5406.0	493.4	10
870323	Spark-ignition Engine Of a cylinder capacity exceeding 1,500 cc but not exceeding 3,000 cc, Other Vehicles	4019.3	1685.8	2333.5	12.5
870323	Spark-ignition engine Of a cylinder capacity exceeding 1,500 cc but not exceeding 3,000 cc, Other Vehicles	3341.8	1398.0	1943.8	12.5
870332	Compression-ignition Engine (diesel) of a cylinder capacity exceeding 1,500 cc but not exceeding 2,500 cc, Other Vehicles	3058.9	2375.4	683.5	12.5
481092	Multi-ply	2992.9	2477.3	515.7	25
480257	Weighing 40 g/m² or more, Other	2868.4	1783.0	1085.4	25
853710	Bases for Electric Control or the Distribution, Not Exceeding 1,000v	2412.8	1751.3	661.5	10
480421	Unbleached kraft paper & paperboard, uncoat nesoi, rolls etc	2274.0	1688.0	586.0	25
480411	Unbleached kraft paper & paperboard, uncoat nesoi, rolls etc	2108.9	1163.4	945.5	25
381121	Additives for Lubricating Oils (Containing Petroleum Oils or Bituminous Oils)	2074.5	1575.1	499.4	10

Source: TRAINS (2012)

A3: In Rwanda

Product Code	Product Name	Trade Total Effect ('US$ 000)	Trade Creation Effect in (US$ '000)	Trade Diversion Effect (US$ '000)	Old simple average duty rate (%)
854420	Co-axial Cable and Other Co-axial Conductors	1514.4	578.0	936.4	25
761490	Aluminium Stranded Wire, Cables, Plaited Bands and the Like, Other	1341.9	1339.0	2.9	10
852352	Smart cards	695.03	602.4	92.6	10
870332	Compression-ignition Engine (diesel) Of a cylinder capacity exceeding 1,500 cc but not exceeding 2,500 cc, Other Vehicles	686.5	587.7	98.8	12.5
870323	Spark-ignition Engine Of a cylinder capacity exceeding 1,500 cc but not exceeding 3,000 cc, Other Vehicles	494.3	228.4	265.9	12.5
854420	Co-axial Cable and Other Co-axial Conductors	442.4	160.8	281.6	25
721491	Rectangular (other than square) cros	439.4	437. 7	1.9	10
870332	Compression-ignition Engine (diesel) Of a cylinder capacity exceeding 1,500 cc but not exceeding 2,500 cc, Other Vehicles	404.0	345.5	58.6	12.5
851770	Elec apparatus for line telephony, telephone sets, Parts	398.78	163.0	235.8	10

731300	Iron or steel twisted hoop or single flat wire, barbed or not, and loosely twisted double wire, Barbed wire of fencing, iron or steel	335.6	329.8	5.9	25

Source: TRAINS (2012)

A4: In Tanzania

Product Code	Product Name	Trade Total Effect (US$' 000)	Trade Creation Effect (US$' 000)	Trade Diversion Effect (US$' 000)	Duty Rate before (%)
300490	Minced: Surim, Alaska pollock (Theragra chalcogramma), Other	7838.5	3582.5	4255.9	10
481910	Cartons, boxes and cases, of corrugated paper or paperboard:	4028.6	3127.4	901.2	25
870323	Spark-ignition Engine Of a cylinder capacity exceeding 1,500 cc but not exceeding 3,000 cc, Other Vehicles	2545.8	1054.0	1491.8	12.5
843149	Parts of Derricks, Cranes, Graders, Levellers, Scrapers or Pile-drivers	2542.8	1205.6	1337.1	10
401120	New Pneumatic Tyres of Rubber, of a Kind Used On Buses or Lorries	2306.8	906.7	1400.1	17.5
870333	Compression-ignition Engine (diesel) Of a cylinder capacity exceeding 2,500 cc, Other Vehicles	2221.6	946.1	1275.6	12.5
330210	Mixtures of Odoriferous Substances for Food or Drink Industries	1754.9	804.3	950.7	10
870421	Motor vehicles for the transport of goods GVW not exceeding 5 metric tons	1581.9	645.4	936.5	12.5
350691	Adhesives Based On Rubber or Plastics (Including Pratificial Resins)	1436.3	1411.8	24.6	25
851770	Elec apparatus for line telephony, telephone sets, Parts	1302.8	639.9	662.8	10

Source: TRAINS (2012)

A5: In Uganda

Product Code	Product Name	Trade Total effect (US$' 000)	Trade Creation effect (US$' 000)	Trade diversion effect (US$' 000)	Duty rate before (%)
730890	Iron or steel structures and parts, there off	2756.5	1274.3	1482.2	25
480411	Unbleached kraft paper & paperboard, uncoat nesoi, rolls etc	2079.1	1503.7	575.3	25
852352	Smart cards	1962.8	1647.5	315.4	10
870323	Spark-ignition Engine Of a cylinder capacity exceeding 1,500 cc but not exceeding 3,000 cc, Other Vehicles	1511.2	576. 6	934.6	12.5
730890	Iron or Steel Structures and Parts, Other	1407.0	638.0	768.9	25
721420	Concrete reinforcing bars and rods, Hot-rolled, Hot-drawn, Hot-extruded	1393.8	1032.9	360.9	10

330210	Mixtures of Odoriferous Substances for Food or Drink Industries	1263.4	624.6	638.7	10
350691	Adhesives Based On Rubber or Plastics (Including Pratificial Resins)	920.6	903.2	17.4	25
690890	Glazed Ceramic Flags	835.1	425.8	409.2	25
490700	Unused postage, revenue or similar stamps of current or new issue in the country to which they are destined; stamp-impressed paper; banknotes; check	824.3	804.2	20.1	5

Source: TRAINS (2012)

Appendix B: Countries Likely to Face Largest Trade Diversion

B1: In Burundi Market

Partner Name	TradeTotal Effect (US$' 000)	Trade Diversion Effect (US$' 000)	Average Applied Duty Rate (%)
China	-539.4	-539.3	16.1
Japan	-436.2	-436.2	9.6
United Arab Emirates	-421.6	-421.6	15.6
Kenya	-320.4	-320.4	0
Uganda	-143.4	-143.4	0
Egypt, Arab Rep.	-64.1	-64.2	0
South Africa	-62.3	-62.3	13.1
Switzerland	-59.7	-59.7	16.7

Source: TRAINS (2012)

B2: In Kenya Market

Partner Name	Trade Total Effect (US$, 000)	Trade Diversion Effect (US$, 000)	Average Applied Duty Rate (%)
China	-18380.4	-18380.4	12.4
Japan	-11158.6	-11158.6	11.9
India	-8450.6	-8450.6	11.1
South Africa	-8101.3	-8101.3	12.1
United States	-4598	-4598	12.4
United Arab Emirates	-2961	-2961	13.4
Egypt, Arab Rep.	-2909.5	-2909.5	0
Thailand	-1651.2	-1651.2	15.4
Tanzania	-1638	-1638	0
Japan	-1445.1	-1445.1	12.5
Korea, Rep.	-1184.1	-1184.1	11.9

Source: TRAINS (2012)

B3: In Rwanda Market

Partner Name	Trade Total Effect (US$, 000)	Trade Diversion Effect (US$, 000)	Average Applied Duty Rate (%)
China	-1728.8	-1728.8	14.3
Tunisia	-842.2	-842.2	10.2

Japan	-829.4	-829.4	11.6
Kenya	-760.1	-760.1	0.0
United Arab Emirates	-751.8	-751.8	15.2
India	-382.1	-382.1	11.3
Uganda	-356.9	-356.9	0.0
Hong Kong, China	-311.9	-311.9	13.7
Japan	-301.0	-301.0	12.5

Source: TRAINS (2012)

B4: In Uganda Market

Partner Name	**TradeTotal Effect (US$, 000)**	**Trade Diversion Effect (US$, 000)**	**Average Applied Duty Rate (%)**
India	-4957.2	-4957.6	10.5
China	-3890.1	-3890.1	13.5
South Africa	-2853.1	-2853.1	12.7
Japan	-2462.9	-2462.9	12.4
United Arab Emirates	-2391.7	-2391.9	14.1
Kenya	-2121.7	-2121.7	0.0
United States	-938.5	-938.5	13.1
Swaziland	-474.3	-474.3	16.1
Singapore	-469.9	-469.9	14.1
Turkey	-431.3	-431.3	15.7
Tanzania	-430.5	-430.5	0.0

Source: TRAINS (2012)

B5: In Tanzania Market

Partner Name	**Trade Total Effect (US$, 000)**	**Trade Diversion Effect (US$, 000)**	**Average Applied Duty Rate (%)**
China	-13896	-13896	12.7
South Africa	-10855	-10855	12.4
India	-6480	-6480	11.91
United Arab Emirates	-5961.1	-5961.1	12.9
Japan	-5148.2	-5148.2	12.8
Kenya	-3938.7	-3938.7	0
United States	-3096.1	-3096.1	12.9
Singapore	-1525.2	-1525.2	12.3
Australia	-1272.7	-1272.7	12.5
Swaziland	-1024.2	-1024.2	14.5

Source: TRAINS (2012)