

**The impact of tariff reductions under the East African Community
Customs Union: Intra-trade effects on Uganda***

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Abstract

Regional trade arrangements have become a popular vehicle for the promotion of trade and growth. This is particularly so in Africa where a number of overlapping arrangements have come into existence. In East Africa the previously defunct East Africa Customs Union has been resurrected to improve trade between Kenya, Tanzania and Uganda. To facilitate the development of the East African Community, transitional arrangements have been put in place to liberalise inter and intra-regional trade. Using a partial equilibrium model, this paper examines the implications of the transitional measures for products sensitive from the Ugandan perspective. The simulation results question the underlying rationale for these arrangements. It discusses whether they confer any real benefits on the stakeholders and suggests alternative approaches that may increase the benefits for Uganda from trade liberalisation within the customs union.

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1. Introduction

Regional integration arrangements (RIAs) constitute an increasingly significant feature of the world trade system. Africa and East Africa in particular is not an exception to this phenomenon. Estimates show that more than half of total world trade occurs through regional trade blocs/agreements and that world trade under RIAs grew from 43 % to 60 % between 2001 and 2005 (OECD, 2005). By December 2006, in total 211 RIAs had been notified to the WTO, of which 14 were in Africa. Among the African RIAs eight are regional economic communities (RECs). These are the Arab Maghreb Union (UMA), Community of Sahel-Saharan States (CEN-SAD), Common Market for Eastern and Southern Africa (COMESA), East African Community (EAC), Economic Community of West African States (ECOWAS), Economic Community of Central African States (ECCAS), Inter-Governmental Authority on Development (IGAD), and Southern African Development Community (SADC). In addition, there are six inter-governmental organisations; these are Central African Monetary and Economic Community (CEMAC), the Economic Community of the Great Lakes States (CEPGL), Indian Ocean Commission (IOC), Mano River Union (MRU), Southern African Customs Union (SACU), and West African Economic and Monetary Union (UEMOA). A key distinguishing feature of most African RIAs is overlapping membership with potentially conflicting goals (UNECA, 2004).

The resurrected East African Community (EAC) is among the most recent RIA notified to the World Trade Organization (WTO). Although a previous unsuccessful EAC was established in 1919, it ceased to function in the 1970s (UNECA, 2006). The treaty establishing the current EAC was signed on 30 November 1999 and came into force on 7 July 2001 upon its ratification by the Republics of Kenya, Uganda and Tanzania.¹ The main objective of the current EAC is to promote cooperation in “political, economic and social fields” by encouraging economic development (including trade liberalisation, monetary and financial integration, the free movement of persons, capital, goods and services); science and technology (including infrastructure, health and education); as well as political and legal matters. It envisages deepening regional integration by establishing a customs union (CU), common market, a monetary union and, ultimately a political federation among the partner countries (Article 5.2: EAC Treaty, 2001).

The EAC customs union protocol aims to liberalise inter and intra regional trade. Products originating in third countries, that cover approximately 99 % of all tariff lines, will be subject to a common external tariff (CET). This will be implemented in

¹ Rwanda and Burundi are the new member states that joined the EAC Treaty on 1 July 2007.

two phases. The first phase groups all products into three bands, each having its own tariff rate. There is a zero rate for raw materials, a 10 % rate for intermediate products and a 25 % rate for finished goods (EAC, 2005). The second phase of CET implementation comes in 2010 when the 25 % rate is reduced to 20 % subject to consultation amongst and approval by the member states (EAC, 2005).

For intra-EAC trade, the protocol splits traded products into category A and B goods. Tariffs were completely eliminated on category A goods when the customs union agreement came into force in January 2005. Category B goods are though subject to a transition period of five years from 2005 and the agreement allows for an annual reduction of 2 % per annum so that the 10 % tariff is eliminated in 2010. The products that appear on category B list are agricultural products, building materials, plastics, wood, paper, textiles, iron and steel and other manufactures. These products are from Uganda's view the most sensitive in terms of not being able to withstand immediate competitive pressure from Kenyan producers. The inclusion of category B good in the agreement not only recognises differences in competitiveness between the countries but also the damage that could be done to the integration process in the longer term if these are not acknowledged explicitly. In short, it is perceived that without accepting some flexibility, the EAC could fail again as in the past. Whether this policy is appropriate to achieve the objective of regional integration is open to question.

This paper aims to quantify and evaluate the perceived benefits to Uganda from the transitional arrangements that have been implemented for category B products and listed as sensitive from the Ugandan perspective. The structure of the paper is as follows: section 2 provides background information on the EAC member economies, comments on trade patterns and flows, in particular Uganda and Kenya. Section 3 provides an overview on the growth of African regionalism and concentrates on the development of the EAC and its intra regional trade policy. Section 4 discusses the partial equilibrium WITS-SMART model, estimates trade, welfare and revenue effects under the CU and analyses the impact of tariff reductions on different product groups. Section 5 concludes and suggests the way forward for Ugandan policy makers.

2. Overview of the EAC economies GDP, trade structure and pattern

The EAC brings together Kenya, Tanzania and Uganda to form a regional bloc of approximately 99.4 million people. The individual states are not that far apart in terms of population - Kenya has a population of 33.5 million, Uganda 27.8 million, and Tanzania 38.1 million people. According to the World Bank the combined GDP of the EAC is approximately US \$ 38.8 billion (Kenya US\$ 18 billion, Tanzania US\$ 12.1

billion; and Uganda US\$ 8.7 billion) (World Bank, 2006a, b, c). Table 1 provides a summary of the main economic indicators for the EAC member countries.

Table 1: EAC Main Economic Indicators (2005)

	GDP	Trade surplus/deficit	GDP per-capita	Growth rate	Imports as % of GDP	Exports as % of GDP
	(In billion US\$)		(In US\$)		(In %)	
Kenya	18	- 6.2	530	5.1	30.9	24.7
Uganda	8.7	- 1.24	340	6.9	26.3	17.1
Tanzania	12.1	- 9.2	280	5.6	27.7	14.6

Source: Compiled from World Bank country reports, 2006a, b, c

From this data, we can see that Kenya is the largest economy, in terms of GDP, among the EAC member countries. It also has the highest GDP per capita at US\$ 530 in 2005. Uganda and Tanzania have lower figures with GDP per capita of US\$ 340 and US\$ 280, respectively. Some convergence in the economic indicators between richer Kenya and poorer Uganda and Tanzania has taken place recently which is due to higher growth rates experienced in both Uganda (6.9 %) and Tanzania (5.6 %) compared to Kenya (5.1 %). The higher growth rates may in turn be the result of economic reforms in Uganda and Tanzania while lower growth in Kenya is attributed to economic mismanagement and corruption (World Bank, 2006a).

Regional trade among the EAC member countries has shown a steady increase. One can class the EAC economies as fairly open given their high import and export GDP ratios. Their overall trade imbalances can be accounted for by higher import ratios relative to their export ratios. At present, Kenya is the largest regional exporter of intermediate and finished goods to, both, Uganda and Tanzania. However, trade between Uganda and Tanzania is relatively small. The analysis of trade data in 2005 shows that Kenya accounted for 25.4 % of Uganda's total imports while Tanzania accounted for only 1.4 %; the remaining 74.7 % came from the rest of the world, mainly the EU (Ugandan Bureau of Statistics, 2006).

Overall Uganda's trade registered an increase between 2000 and 2005. Total imports were US\$ 958 million in 2000, which grew to US\$ 2.05 billion by 2005. Similarly, exports nearly doubled from US\$ 401 million in 2000 to US\$ 812 million in 2005. As a result of an imbalance in import and export growth, Uganda's trade deficit with Kenya and the rest of the world (RoW) nearly doubled, from US\$ 556 million in 2000 to US\$ 1241 million in 2005. The composition of trade flows show that total exports by Uganda were US\$ 0.81 billion in 2005; the main products were coffee and tea (US

\$ 224 million), fish products (US \$ 140 million), gold (US\$ 73 million) and cotton (US \$ 39.2 million). Total imports were US\$ 2.05 billion and consisted mainly of petroleum products, road vehicles, cereals, as well as iron and steel products. Imports of finished goods, however, registered the largest increase at 55.7 % followed by intermediate products.

Trade statistics (Table 2) show that after the EAC customs union came into force in 2005, Uganda's imports of category B products increased reflecting the overall economic growth in Uganda over the period. Imports of category B products increased from Kenya by 56.6 % while CET imports from the RoW grew by only 9.2% during 2005. This suggests that some trade creation and diversion took place consequent to changes in tariffs after the implementation of the EAC CU protocol.

Table 2: Uganda's Category B imports from Kenya and the Rest of the World (2004-2005)

(In thousand US\$)

Product groups	Imports ²				% change in imports from	
	2004		2005		imports from	
	Kenya	RoW	Kenya	RoW	Kenya	RoW
Agricultural products	6,538	97,591	9,954	112,607	52.2	15.4
Processed food products	1,213	2,923	1,911	2,579	57.5	-11.8
Tobacco products	926	2,208	819	3,210	-11.7	45.4
Building materials	14,747	204	29,828	291	102.3	42.7
Detergent and its products	4,263	3,085	6,448	3,121	51.2	1.2
Plastic products	3,026	4,544	2,775	2,787	-8.3	-38.7
Wood products	780	2,139	699	2,134	-10.4	-0.2
Paper products	1,414	1,299	2,354	335	66.5	-74.2
Textile products	783	12,849	363	9,318	-53.7	-27.5
Textile-manufactured products	410	3,594	469	3,996	14.3	11.2
Iron and steel products	2,742	12,027	3,258	14,843	18.8	23.4
Other manufactured products	1,372	4,230	957	4,940	-30.2	16.8
Total (All product groups)	38,214	146,692	59,833	160,160	56.6	9.2

(Base year: 2004)

Source: Compiled from the UBOS database, 2004 and 2005.

Most individual product groups also showed an overall increase, exceptions were plastics, wood and textile products that registered a decline. Product groups in which

² Import data for 2004 and 2005 have been used given that figures for 2004 and 2005 represent pre- and post EAC CU.

imports from Kenya registered an increase larger than that from the RoW (with 2004 as the base year) were building materials particularly cement (102.3 %) followed by paper (66.5 %), processed food products like flour (57.5 %), agricultural products like rice and sugar (52.2 %), detergent and its products (51.2%) and textile manufactured products (14.3 %). Given Uganda's reliance on imports, an increasing trade in building materials, agricultural products and iron and steel products suggests that Uganda's economy is growing.

3. Regional integration in East Africa and implications for the EAC member countries

Regional integration initiatives in Africa date back to the establishment of the South African Customs Union (SACU) in 1910. In East Africa, regional integration initiatives were launched in 1919 with the formation of the EAC customs union between Uganda, Kenya and Tanzania. This cooperation, however, lasted only until 1977. The main factors that contributed to the collapse and ultimate failure of the EAC were both, political and economic. The literature indicates that centralisation of the administrative facilities in Kenya and the growing animosity between the member countries were important political factors that led to the disintegration of the RIA (McKay et al., 1998). The dismal economic performance of the then EAC led to trade diversion under the RIA, which with lack of compensatory arrangements for Tanzania and Uganda contributed to the failure of integration efforts in the region (Hazelwood, 1975; UNECA, 2004). Given that coordination mechanisms envisaged in the then treaty failed to achieve regional balance between the member countries, the treaty on the one hand led to high inflation and massive trade deficits in Tanzania and Uganda while on the other, Kenya gained industrial dominance (Newlyn, 1971; Nixon, 1973; Robson, 1998; Maasdrop, 1999; Venebles, 1999; Mair, 2000; Schiff, 2000; Shams, 2003). The contradictory economic systems in each country further added momentum to the disintegration of the EAC (McKay et al., 1998). When the new treaty was drafted in 1999, the economic factors that led to the break-up of the EAC in 1977 were specifically addressed so that trade liberalisation under the revamped EAC would not again lead to current account deficits for Uganda and Tanzania with Kenya and endanger the stability of the EAC CU.

Studies show that the African countries have been pursuing regional integration to overcome the fundamental development constraints that are characteristic of African economies, i.e., small economic size; lack of structural complementarities as manifested in the narrow set of similar low-value primary export products and basic minerals produced; and, dependence on imports of intermediate and final goods (ADB, 2000). In addition, Kwaku (1995) suggests that the main driver for increasing

number of RIAs on the African sub-continent is the need to increase regional cooperation by creating a unified economic bloc. The African countries also envisage that RIAs will be the building blocks for stronger integration between countries that will lead to the eventual creation of an African Economic Community (WTO, 2005; UNECA, 2004). Some are of the view that regional integration will increase intra-regional trade, which will in turn spur economic growth and development through economies of scale (Kasekende & Ng'eno, 2000; Mistry 2000). A study by the World Bank (2004) suggests that regionalism in Africa will pool the under-utilised resources and fragmented African markets, promote industrialisation and act as a useful alternative to unilateral trade liberalisation. All these objectives provide the main motivation behind the establishment of the new EAC.

Overlapping membership of more than one regional agreement characterises the present RIAs in East Africa. Table 3 presents an overview on all the existing regional trade agreements in East Africa. Both, Kenya and Uganda are members of the EAC, COMESA, IGAD and the African Union (AU) but they have opted to remain out of the SADC. Similarly, Tanzania is a member of the EAC, AU and the SADC³ though not that of the IGAD. In addition to the preferential regional access, all the three EAC members enjoy preferential access to the EU and the U.S. markets under the Cotonou Agreement⁴ and the African Growth and Opportunity Act⁵ (AGOA), respectively.

Table 3: Multiplicity of RTA membership by countries in East Africa

Regional Initiatives	Membership		
	Kenya	Uganda	Tanzania
AU	✓	✓	✓
COMESA	✓	✓	✗
SADC	✗	✗	✓
EAC	✓	✓	✓
IGAD	✓	✓	✗

Source: Own compilation

Evidence shows that the proliferation and multiplicity of memberships in the RIAs, particularly in East Africa, has enhanced the complexity of regional trade arrangements that present member countries with the challenge of trade effects from multiple memberships. For instance, tariffs notified under the COMESA differ and are

³ It withdrew its membership from the COMESA in favour of the southern African RTA, SADC.

⁴ The Cotonou Agreement allows non-reciprocal preferential tariffs on agricultural products to 77 African, Caribbean and Pacific countries. This was concluded for a twenty-year period from March 2000 to February 2020. It entered into force in April 2003 by replacing the Lomé Agreement. Available at: http://europa.eu.int/comm/development/body/cotonou/agreement/agr10_en.htm

⁵ The AGOA is a market initiative of the U.S. that allows duty-free treatment on 94 % of the total tariff lines under the GSP programme to LDCs in the sub-Saharan Africa until September 2015.

often lower than those notified under the EAC, which allows importers the possibility of benefiting by importing under the COMESA rates rather than the EAC. As a result, multiplicity of overlapping memberships has the potential to influence the distribution of gains from regional agreements that raises concerns about losses to tax revenues and trade. Yet there are some advantages of multiple memberships; studies suggest that these enhance market access for the investors and producers to the partner countries' markets. For instance, investors in Kenya and Uganda have access to the COMESA market (385 million consumers); similarly, Tanzanian investors have access to an additional 215 million consumers in the SADC markets (UNECA, 2004).

More generally, in the African context the feasibility of multiple memberships is also debated. Studies suggest that "it is difficult to envisage how SADC and COMESA, given their convergence to both sectoral cooperation and trade integration, can live and prosper with overlapping membership of the southern African states" (Lyakurwa et al., 1997). Others show that RIAs may lead to duplication of efforts to harmonise tariffs between the member countries (Aryeetey & Oduro, 1996). Yet others suggest that "African governments have fallen into the fallacy of 'transposition' by assuming that the experience of regional integration among industrialised countries could be replicated in the less developed countries instead of concentrating on single memberships" (Goldstein & Quenan, 2002).

There is evidence to suggest that regional imbalance in particular with regard to industrialisation contributed to collapse of the EAC in 1977 (Newlyn, 1971; Nixon, 1973; Maasdrop, 1999; Mair, 2000; Shams, 2003). The 1999 Tripartite Commission, formed to discuss the establishment of a new EAC, clearly noted the fear that trade liberalisation would lead to more efficient Kenyan manufacturers displacing domestic producers in Tanzania and Uganda. In an effort to address this issue, the three countries sought to establish a mechanism that would afford some temporary protection to infant industries in the less developed partner countries against the more developed Kenyan industries. Even though it was recognised that the customs union would generate major benefits by bringing about greater competition among domestic firms, it was acknowledged that in the short run firms that stood to gain most were those that were already competitive (EAC, 2000). It was with this consideration in mind that the principle of asymmetry⁶ was adopted in the phasing out of internal tariffs by providing firms located in Uganda and Tanzania with an adjustment period of five years. This form of protection, it was believed, would give those Tanzanian and Ugandan firms lagging behind an opportunity to adjust their cost base and eventually compete with their Kenyan rivals.

⁶ This addresses variances in the implementation of measures in an economic integration process for purposes of achieving the common objective of regional integration and growth in the member states.

There has been a recent revival of support for this type of “infant industry” protection (Shafeaddin, 2000). The “Zedillo Report” has, furthermore, advocated the legitimisation of time-bound protection for certain industries by countries in the early stages of industrialisation (United Nations, 2001). First, it suggests that protection should be given to those industries that are able to become competitive in the long-term. Second, protection given should be time bound (temporary) as the long-term costs of protection are not welfare enhancing. Third, it asks that if the aim is to achieve scale economies as a route to competitiveness, can this be successfully achieved in countries with small domestic markets. If the answer is no, then protection should not be offered. Finally, do governments have the ability to identify the appropriate industries and self-discipline to confine protection to them while resisting pressure from other sector lobby groups?

From an EAC perspective, these questions are pertinent and have to be addressed in light of the previous integration experience. However, it is also important to note that there are other dissenting voices against industry protection policies. Kemp (1960) and Grubel (1966) pointed out that where skills and knowledge are specific to a firm, there is no need for tariff protection to justify investment in human resources. Baldwin (1969) concurs with this view by asserting that a protective duty is no guarantee for individual entrepreneurs to undertake greater investments in acquiring technological knowledge. Johnson (1965) also pointed out that despite industry protection being designed to correct domestic distortions it causes welfare loss by raising domestic prices above world prices. Other more recent opponents (Luzio & Greenstein, 1995; Bora, Lloyd & Pangesti, 2000) of the infant industry argument doubt that any government (developed or developing) has the ability to select the right industries or appropriate degree of protection. This also raises more doubt whether domestic firms respond to protection as desired or simply become even more inefficient and less competitive. Other critics argue that political pressures make it difficult for government to implement an infant industry protection policy effectively without succumbing to various lobbies.

The evidence from, both, historical and empirical studies (Kruger & Tuncer, 1982) have not been conclusive and hence the debate has often merged with a more general one on the merits of free trade. From a historical perspective, proponents of the infant industry argument cite the experience of the United States and Germany in the 19th century as evidence of its merits. However, seen from an African perspective several World Bank inspired structural adjustment plans have failed to deliver the import substitution industries that these countries had desired. Most examples of industry protection in Africa have focussed on the manufacturing sector with the aim of

fostering industrialisation. Empirical studies of individual industries, however, seem to suggest that past protection has in general not succeeded. For example Bora et al. (2000) note that “there has been a plethora of studies that industrialisation behind protective walls has often extended beyond reasonable grounds of infancy that has led to efficiency and welfare losses as well as to foster entrenched vested interests”. In addition, recent evidence from Africa seems to suggest that these policies have not achieved what they were set out to do (Morrissey & Rudaheranwa, 1998). Besides, Tybout (2000) found that “unexploited economies of scale in developing countries were modest and as a result protection simply reduces average efficiency levels at the margin.” This, in essence, casts some doubt on the infant industry argument whether protection will lead to more efficient and competitive firms.

Despite these doubts, in East Africa a case can be made for temporary and limited industry protection based on the historical lessons of previous integration attempts. A USAID study (Fox, 2004) concurs with this view by stressing that the failure of past RIAs to support the infant industry rationale should not be interpreted as a failure in the short-run. The report goes on to offer the experience of the Asian tigers that have shown how governmental promotion and subsidization of firms can produce dramatic and positive cumulative change over the long-term. Shafaeddin (2000) argues that infant industry protection is valid and in present conditions more relevant owing to recent technological changes and innovations in the organisation of production. Thus, it is within this context that internal tariffs and non-tariff barriers (NTBs), that could hinder trade between the partner states, have to be evaluated, in order to facilitate the awareness of their cost to business and investment in the region.

Within the context of this debate the EAC Customs Union (CU) was launched after years of negotiations on 1 January 2005. The objectives of the customs union, as stipulated in the EAC treaty, included liberalisation of intra-regional trade in goods; promoting production efficiency in the Community; enhancing domestic, cross-border and foreign investment; and promoting economic development and industrial diversification (EAC, 1999). There are two broad areas of cooperation highlighted in the Customs Union - firstly, customs management and general trade matters; and, secondly, establishing and adopting uniform and common trade procedures in the Community. The CU is underpinned by a common EAC Customs Management Act and External Tariff. The CET has three tariffs bands of 0, 10 and 25 % for raw materials, intermediate goods and finished goods, respectively. In line with the CET, the EAC council reserves the right to review the tariff structure and approve measures aimed at remedying any adverse effects that a partner State may experience consequent to implementing the CET (Article 12: EAC, 1999). There are, in addition, a number of sensitive products that are exempt from the CET and may be imported at

other specific tariff levels that are higher than 25 %. These include wheat, rice, maize (not for seed), some cotton clothing, jute bags and sugar.

As outlined under Articles 11 and 12 of the Protocol, the provisional structure and application of internal tariffs is asymmetrical thus reflecting the fact that Kenya's economy is more developed than the economies of its EAC partners. Beehnick (2003) argues that this principle of asymmetry should be carefully applied and in designing compensation mechanisms it should take cognizance of the changes that would occur with regard to winners and losers in trade and thus keep changing over time. On the implementation of the Protocol, goods exported by Tanzania and Uganda within the Community were to have a duty-free status while selected exports from Kenya to the other member countries would attract a variation of tariffs during a five-year transitional period. However, the key aim was to achieve intra-regional tariff liberalization by gradually phasing out tariffs on the selected list of Kenyan imports by 2009. Thus, this study addresses the impact of transitional arrangements on Uganda (a 2 % tariff reduction per year starting from 2005 - 2009) on trade and welfare. In addition to this new preferential tariff framework, Article 37 (3a) provides for convergence of the EAC protocol with the existing regional trade agreements that member states have agreed upon i.e. COMESA and SADC. This raises questions with regard to the management and interpretation of the treaty as to whether a phased 2 % tariff reduction under the EAC CU has trade, welfare and revenue implications for Uganda. In addition, there are other related issues regarding the difficulty in ascertaining and implementing the rules of origin under different RIAs, which can affect the success of the EAC treaty.

4. Estimation of trade effects for Uganda consequent to tariff liberalisation within the EAC customs union

This paper uses a partial equilibrium approach to estimate the effects of transitional arrangements and phased tariff reductions for sensitive products under the EAC CU protocol on Uganda. The computable general equilibrium (CGE) models like the GTAP lack data disaggregation at a country level and lists African countries under composite blocs such as "rest of Africa" or "rest of sub-Saharan Africa". Given that the GTAP region coverage includes Uganda and Tanzania but not Kenya, general equilibrium models cannot be employed to analyse trade effects of the EAC (Lang, 2006). The literature shows that the partial equilibrium model, mainly the World Integrated Trade Solution (WITS-SMART) model⁷, has been extensively and successfully used to quantify the static effects of various RIA's and market

⁷ The WITS/SMART model uses the COMTRADE, TRAINS, IDB and CTS databases and provides integrated analytical tools to simulate tariff reductions.

liberalisation policies in Africa (DeRosa, Obwona & Roningen, 2002; Busse & Shams, 2005; Stahl, 2005). This paper also employs the WITS-SMART model to quantify trade creation, trade diversion as well as welfare and revenue effects for Uganda within the EAC CU.

4.1 Modelling framework

The following are the main assumptions of the model:

- a) Export supply elasticities are assumed as infinite since Uganda is a small country, and given its burgeoning trade deficit with Kenya, the Armington assumption⁸ on substitutability between suppliers applies.
- b) The import demand elasticities for Uganda are taken (at the HS-6 digit level) from the World Bank survey conducted by Kee, Nicita & Olarreaga (2004, 2005).⁹ The rationale for updating import demand elasticities to simulate tariff reductions in the WITS-SMART model is that these were originally based on the calculations by Stern et al. (1976), which no longer reflect the present economic and trade conditions.
- c) The import substitution elasticity is assumed at 1.5. In previous studies, Hoekman et al. (2001) assume that products are perfect substitutes and the elasticity parameters are, therefore, smaller in SMART. However, a more recent development of the SMART model i.e., GSIM¹⁰ (Global Simulation model) assumes import substitution elasticity at 5 (Francois & Reinhardt, 1997; Francois & Hall, 2003). For this analysis, we have assumed import substitution elasticity at 1.5, which implies that similar products from different countries are imperfect substitutes.

The model measures trade creation effect as follows:

$$TC_{ijk} = M_{ijk}^1 * \eta * \Delta t_{ijk} / ((1 + t_{ijk}) * (1 - (\eta / \beta))) \quad (1)$$

TC_{ijk} – Trade creation on commodity i imported from country k into country j

M_{ijk} – Imports of commodity i to country j from exporting country k

η – Import elasticity of demand in the importing country

t_{ijk} - Tariff

β – Export supply elasticity

⁸ Armington elasticities are based on the differentiation of products with respect to their origin and assume imperfect substitution between import demand and domestic supply (Armington, 1969).

⁹ This is a modification of the GDP function approach that was employed to estimate demand elasticities (Kohli, 1991).

¹⁰ GSIM is a non-linear model; the latest version has been augmented to include sector-level employment effects and price undertakings, in addition to trade, taxes and subsidies and domestic production subsidies for 35 countries.

Equation (2) presents the trade diversion effect; this is the change in Kenyan duty paid prices relative to other prices from the RoW sources after the implementation of the CU protocol with Kenya. The extent of trade diversion depends on the elasticity of substitution and is estimated with:

$$TD_{ijk} = \frac{M_{ke}^1 * M_{row}^1 \left(\left(\frac{1+t_1}{1+t_0} \right) - 1 \right) * \lambda}{M_{ke}^1 + M_{row}^1 + M_{row}^1 \left(\left(\frac{1+t_1}{1+t_0} \right) - 1 \right) * \lambda} \quad (2)$$

TD_{ijk} – Trade diversion on commodity i imported from country k into country j

M_{ke} – Imports from Kenya

M_{row} – Imports from the Rest of the world

t_{ijk} - Tariff (t_1 & t_0 refer to post and pre integration tariffs)

λ – Substitution elasticity

The net trade effect (TE) is a summation of total trade creation and trade diversion and represented as:

$$TE = TC + TD \quad (3)$$

The net revenue effect (RE), which is the total differential of revenue with respect to import price and volume of imports after the tariff change, is:

$$\Delta R_{ijk} / R_{ijk} = (\Delta t_{ijk} / (1+t_{ijk})) * \eta * ((1+\beta) / (\beta - \eta)) \quad (4)$$

R_{ijk} - Revenue effect of tariff change

η – Import elasticity of demand in the importing country

t_{ijk} - Tariff

β – Export supply elasticity

The welfare effect, which is a summation of consumers and producers' surplus (equation 5), presents the net welfare effect¹¹ in Uganda under the EAC CU:

$$W_{ijk} = 0.5(\Delta t_{ijk} * \Delta M_{ijk}) \quad (5)$$

M_{ijk} – Imports of commodity i to country j from exporting country k

t_{ijk} - Tariff

¹¹ An important shortcoming of the WITS-SMART model is that it does not quantify consumers and producers' surplus, which makes it difficult to distinguish between the two, when we quantify the total welfare.

4.2 Application to the EAC CU

Using the WITS-SMART model, this paper simulates the following two scenarios:

- (i) Scenario I estimates the impact of an immediate intra-trade liberalisation between Uganda and Kenya under the EAC CU. This estimates elimination of the existing 10 % tariff on Uganda's imports in year 1 of implementation of the EAC treaty, i.e., in 2006.
- (ii) Scenario II estimates the impact of phased 2 % annual tariff reduction on Uganda's imports from Kenya under the EAC CU in year 5, i.e., 2010. This scenario takes into account Uganda's annual growth of imports from Kenya and the RoW, which is estimated as 1.17 % and 1.22 %, respectively; this is the simple average growth rate of Uganda's imports from Kenya and the RoW during 2001 – 2005.

Trade data on 2004 and 2005 have been taken from Uganda Bureau of Statistics (UBOS) and the Customs Department. The tariffs notified on intra regional trade and CET was obtained from the EAC CU protocol¹². The simulations have been carried out using the WITS software.

4.2.1 Scenario I

Table 4 shows the aggregated effects of an immediate trade liberalisation, i.e., 10 % tariff reduction in 2006, on category B products. A 10 % tariff reduction simulation shows that the net trade effect would be US\$ 10.58 million in 2006, with US\$ 11.8 and US\$ 1.3 million of trade creation and trade diversion, respectively.

Table 4: Aggregate tariff effects after immediate trade liberalisation within the EAC CU

	<i>(In US\$)</i>
	10 % tariff reduction (2006)
Trade creation	11,897,172
Trade diversion	- 1,313,408
Net trade effect	10,583,764
Net welfare	1,080,976

¹² The UNCTAD Trade Analysis and Information System (TRAINS) database, that provide access to data on trade flows and most-favoured nation (MFN) tariff rates at the HS 6-digit level of disaggregation, has not been used. This is because due to the multiplicity of Kenyan and Ugandan membership to the COMESA and the EAC, the WITS-SMART model defaults to the lower of the two existing preferential tariffs, which in this case are COMESA tariffs. The simulations, therefore, use the updated data notified under the CU protocol.

Net tariff revenue	- 3,821,395
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Source: Based on SMART simulations

A positive trade creation effect results in an increase of 19.9 % in total trade of category B products. However, there is trade diversion because trade is redirected from the more efficient RoW suppliers to the relatively more costly Kenyan exporters; this is though small amounting to only 0.8 % of the intra-regional trade between Uganda and Kenya in 2006. The estimates also show a positive total net welfare effect with the highest gains in the building material category followed by agricultural products and detergents. A positive welfare effect suggests that consumers and producers are better off under the EAC CU; unfortunately the separate magnitude of the surpluses cannot be identified with the WITS-SMART model.

Table 5: An overview of the total net trade and welfare effects of an immediate 10% tariff cut in 2006 (In US\$)

	Scenario I				
	Trade creation	Trade diversion	Trade effect	Revenue effect	Welfare effect
Agricultural products	1,216,589	- 252,117	964,472	- 653,799	- 170,804
Processed food products	250,134	- 133,819	116,315	- 121,301	- 34,895
Tobacco	350,142	- 25,279	324,863	- 92,589	5,401
Building materials	7,764,619	- 24,398	7,740,221	- 1,474,700	- 754,050
Detergent products	862,105	- 270,379	591,726	- 426,340	- 109,223
Plastic products	282,172	- 173,259	108,913	- 302,609	12,546
Wood products	17,208	- 37,452	79,756	- 77,969	4,053
Paper products	48,914	- 22,558	326,357	- 141,411	- 47,009
Textile sector	56,806	- 41,811	14,995	- 78,274	21,001
Textile manufactures	44,944	- 40,278	4,666	- 40,993	- 2,938
Iron & steel	506,961	- 206,190	300,772	- 274,242	- 25,800
Other manufactures	96,577	- 85,869	10,708	- 137,168	20,743
Total	11,897,172	- 1,313,408	10,583,764	- 3,821,395	- 1,080,976

Source: Based on SMART simulations

Table 5 presents effects of intra regional liberalisation on product category basis. The analysis suggests that there are, however, revenue and welfare losses that marginalise the total gains of the CU. An important factor that impedes the benefits of intra trade liberalisation and leads to losses are supply side rigidities, underdeveloped telecommunications and infrastructure bottlenecks, energy shortages and restrictions as well as high tolls in Uganda which in turn inflate domestic prices in Uganda and

reduce the overall welfare gains from the CU. Others are institutional factors reflected in the inability of the importers to provide relevant customs documentation under the rules of origin requirement of the CU protocol; lack of trained staff to certify products at the point of entry which together with a corrupt bureaucracy magnify total losses under the CU. Existing governmental regulations also play their part, as for instance the Kenyan Revenue Authority's (KRA) regulation that all products being transported to Uganda have to travel in escorted convoys from Mombasa to the Malaba border; similarly the Ugandan government monitors trade on the Kenyan border at Busia. Besides, even though trade between Uganda and Tanzania is fully liberalised there are also instances of "round tripping" at Mutukula on the Tanzania border.

The negative total customs revenue effect of the EAC CU is US\$ 3.8 million in the immediate tariff liberalisation scenario. An explanation to this is that Uganda is a member of COMESA, IGAD and the AU, and since preferential tariffs under each of these regional agreements differ the importers can choose to import products under any regime. As a result, the Ugandan importers mostly declare their imports under the COMESA for which tariffs are lower than the EAC. This leads to smuggling and customs fraud; the study by Rajaram et al. (1999) confirms this and shows that the total losses from smuggling were \$ 67 million in 1996-1997. This implies that an eventual harmonisation of customs procedures across the various RIAs is a priority from the Ugandan perspective.

4.2.2 Scenario II

Table 6 shows the aggregated effects of phased trade liberalisation, i.e., reduce tariffs annually - from 10 % in 2005 to 0 % in 2010. The simulation results indicate that the 2 % reduction by Uganda in year 1, i.e., 2006 (on the basis of the average import growth rate of 1.17 % and 1.22 % during 2001-2005) will have a positive net trade effect of US\$ 2.53 million with trade creation estimated at US\$ 2.84 million and trade diversion at US\$ 0.303 million in 2006. In total percentage terms, this is 16 % of imports from Kenya against total trade diverted from the RoW imports of 0.06 %.

Table 6: Aggregate tariff effects of a phased trade liberalisation within the EAC CU over 2005 – 2010

<i>(In US\$)</i>					
Year	Trade creation	Trade diversion	Trade effect	Welfare effect	Revenue effect
2005	2,379,434	- 250,200	2,129,235	- 216,195	- 965,282
2006	2,835,493	- 303,412	2,532,080	- 101,717	586,368
2007	3,380,121	- 368,014	3,012,107	- 119,009	924,068

2008	4,030,795	- 446,463	3,584,331	- 139,240	1,360,216
2009	4,808,501	- 541,754	4,266,747	- 162,911	1,916,601
Total	17,434,344	- 1,909,843	15,524,500	- 739,072	3,821,971

Source: Based on SMART simulations

Similarly, full tariff liberalisation in year 5, i.e., 2010 shows that the net trade effect would be US\$ 15.5 million, with US\$ 17.4 and US\$ 1.9 million trade creation and trade diversion, respectively. A positive trade creation effect suggests that inter-regional trade will grow under the EAC since imports from Kenya will be cheaper after imposition of the CET on trade with the RoW. The total magnitude of trade diversion is less than 10 % of the total trade created, and this questions the rationale for the initial pessimism expressed by the EAC treaty negotiators and phased tariff reductions within the CU protocol. The total customs revenue effect is positive, at US\$ 3.8 million, though there are losses of nearly US\$ 1 million in the first year of the CU implementation. The explanation for losses is that tariffs under the EAC (8 %) were higher than under the COMESA (6 %) in 2005 and given that tariffs will be reduced by 2 % annually, the EAC tariffs would be same and eventually lower than the COMESA tariffs in 2007 which will deter misdeclaration by the importers to benefit from lower tariffs. Scenario I substantiate this behaviour of the importers to falsely declare products as imports from COMESA in order to benefit from lower custom rates during 2006.

Table 7 disaggregates the simulation results of phased tariff reduction on a product-group basis. Results show that the highest net trade effect is concentrated in three product groups, namely, building materials (73.1 %) followed by agricultural products (9.1 %) and detergents (5.6 %), which comprise 87.8 % of the total net trade effect of all B product categories imported by Uganda from Kenya under the EAC protocol. The analysis suggests that welfare gains are also the highest for these product groups.

Table 7: An overview of the total net trade and welfare effects of the phased tariff cuts (2005 – 2009)

	<i>(In US\$)</i>				
	Scenario II				
	Trade creation	Trade diversion	Trade effect	Welfare effect	Revenue effect
Agricultural products	1,782,813	-367,912	1,414,901	-121,148	653,799
Processed food products	366,551	-194,383	172,168	-23,678	121,301
Tobacco	513,104	-36,608	476,496	-6,067	92,589
Building materials	11,378,422	-35,183	11,343,239	-411,473	1,474,700
Soap Products	1,263,345	-391,890	871,455	-78,192	426,340

Plastic Products	413,501	-251,470	162,031	-21,743	302,609
Wood Products	171,759	-54,322	117,437	-5,295	77,969
Paper Products	511,306	-32,663	478,643	-29,976	141,411
Textile sector	83,245	-61,100	22,145	1,030	78,274
Textile manufactures	65,861	-58,675	7,187	-4,684	40,993
Iron & steel	742,911	-300,492	442,419	-33,635	274,242
Other manufactures	141,526	-125,145	16,380	-4,213	137,743
Total	17,434,343	-1,909,843	15,524,501	-739,072	3,821,971

Source: Based on SMART simulations

The cement industry sector, which is an integral part of the building materials industry in Uganda, shows the largest net trade effect under full tariff liberalisation scenario in 2010. Some of the main factors that explain the large trade creation effect in cement under the EAC are firstly, the large disparity between the current CET rates (55 %) and the preferential tariff (10 %) levied on imports of cement from Kenya under the CU Protocol. Second, Uganda has been historically dependent on Kenya for its cement imports and the current boom in the Ugandan building industry has led to an increased demand for building materials, in particular cement¹³. Among all category B products, this sector has the highest welfare effect (nearly 50 % of the total) which substantiates the importance of this product group from the Ugandan perspective.

Agricultural and agro-processed products affected by the CU are milk and dairy products, broken rice, but the impact is mainly concentrated in vegetable fats and palm oil for which the simulation results show large trade creation and trade effects. The main explanation for this is that in the pre-EAC period, nearly 65 % of the total vegetable fats and palm oils¹⁴ were imported from Indonesia and Malaysia at the MFN tariff rate (15 %); at present, these are imported from Kenya under the CU preferential tariff (8 %). Given that the existing CET is 17 percentage points higher (25 %), the total trade diversion effect is nearly 20 % of total trade in all the product groups. An increase in imports of agricultural products from Kenya, of which it is not the main producer, hints at the possibility of indirect trade though this cannot be substantiated due to lack of re-export figures.

¹³ At present, Uganda has two main cement producers, namely Hima and Tororo. In 2005, the total annual domestic production of cement was 350,000 tonnes which was unable to meet the annual estimated demand of 600,000–700,000 metric tons; the gap was filled by imports from Kenya (Uganda Bureau of Statistics, 2005).

¹⁴ Uganda's demand for vegetable cooking oil has been growing by 3 % annually. The national demand for edible oil was projected to reach 80,000 metric tons in 2005 but this increase does not commensurate with the meagre 26,000 metric tons increase in national production. This, therefore, resulted in Uganda being a net importer of over 54,000 tons edible oils in 2005 (Uganda Bureau of Statistics, 2005).

Another product group with an overall net positive trade effect, but with the largest trade diversion, are detergents. Before the formation of the EAC CU, detergents were imported under the COMESA rate which was 6 %, compared to the MFN rate of 15 %. The EAC CU allows preferential access to Kenyan products at 8 % in 2005 (which will be progressively reduced to zero tariffs in 2010), which leads to trade diversion under the full trade liberalisation scenario. Similarly, paper and its products have a positive trade effect with small trade diversion under the EAC (0.002 % of the total trade in paper during 2006). Uganda has no paper mills and over 90 % of all inputs for its paper industry are imported from Kenya that has a virtual monopoly on paper inputs. Trade statistics indicate that Uganda's imports in this sub-sector have been rising steadily from \$ 32.4 million in 2001 to \$ 50 million in 2005, which translates into a rise of over 56 % in the last 5 years (Uganda Bureau of Statistics, 2005). Given that the imports from Kenya enjoy the benefit of lower preferential tariffs under the EAC (compared to the 25 % CET imposed on paper), the simulations confirm this with a positive trade and welfare effect. Tariff reduction simulations for tobacco show a large positive net trade. Given that Uganda is heavily reliant on Kenya for the supply of cigarettes to its domestic market, tariff reductions under the CU lead to a positive welfare effect. The underlying reason for trade diversion is that the notified CET tariffs (25 %) are high compared to the preferential CU tariff (8 %). In addition, excise duties on cigarettes in Uganda are also very high, which corroborates Obwona et al. (2005) findings on smuggling of cigarettes from Kenya.

Imports of iron and steel consist mainly of tools with positive trade effects. The magnitude of trade diversion, as a proportion of trade created, is high (nearly 25-30 %) under phased tariff liberalisation simulation scenario. The explanation for substantial trade diversion is that since tariffs notified under the pre-EAC were 7 % (compared to the CET of 25 % under the EAC CU), trade is re-directed from the more efficient RoW supply sources to the more costly Kenyan suppliers. This is because firstly, Uganda lacks the infrastructure for producing plates, sheets or rolled iron and steel products and relies heavily on imports of rolled iron and steel products from Kenya; and, secondly, there are no significant iron ore deposits. These, therefore, result in trade diversion within the EAC.¹⁵

Uganda does not have its own petrochemical industry which makes the plastic industry heavily dependant on Kenya. As a result, the simulations present an overall

¹⁵ There are four mini-steel mills that are all dependent on intermediate imports of semi-processed steel products and scrap steel. The national demand for steel is 60,000 - 80,000 metric tons against the current domestic production, which is 7,000 tons only. Most steel products, consisting of steel billets and building materials, are imported from Kenya, China and South Africa (Uganda Bureau of Statistics, 2005).

positive trade effect but higher trade diversion under the EAC. The CET again explains large trade diversion - under the pre-EAC the notified MFN tariffs were 15 %, which has been revised to the CET rate of 25 % for third countries. Given that under the CU, imports from Kenya enjoy preferential tariffs that will progressively be reduced to zero in 2010 these products are imported from the Kenyan suppliers, which are more costly than the other existing suppliers.

4.3 A comparative analysis of immediate and phased tariff cut scenarios

The analysis of tariff reductions in Scenario I and II shows that there is a positive net trade effect with small trade diversionary effects for Uganda under the EAC CU. Membership of the EAC is, therefore, beneficial. Table 8 compares the two scenarios and suggests that an immediate tariff reduction on category B products, when compared with phased tariff liberalisation, would not have large adverse trade diversionary impact on Uganda and, therefore, the recommended option from an efficiency perspective.

Table 8: Comparison between immediate and phased trade liberalisation by Uganda within the EAC CU

	<i>(In US\$)</i>	
	Immediate 10 % tariff reduction (2006)	Phased 2 % tariff reduction (2010)
Trade creation effect	11,897,172	17,434,343
Trade diversion effect	-1,313,408	-1,909,843
Net trade effect	10,583,764	15,524,501
Revenue effect	-3,821,395	3,821,971
Welfare effect	-1,080,976	-739,072

Source: Based on SMART simulations

The simulation results of phased intra-regional tariff liberalisation between Uganda and Kenya show positive trade effects of US\$ 15.5 million in 2010, with trade creation and diversion of US\$ 17.4 million and US\$ 1.9 million, respectively. However, the simulation of an immediate 10 % tariff reduction in 2006 suggests net trade effect of US\$ 10.6 million with US\$ 11.8 and US\$ 1.3 million trade creation and trade diversion, respectively. There is a negative welfare effect in both the scenarios though positive revenue in the phased reduction scenario. Net revenue losses further strengthen the argument against implementing a phased tariff reduction in the CU which opens up the debate on the rationale to opt in for a phased tariff liberalisation on category B products under the EAC CU.

5 Implications and the way forward

From the Ugandan perspective the simulation results do not show any adverse effects from the EAC CU. The argument that Uganda's domestic industry would be exposed to the more developed and competitive Kenyan producers and that a phased tariff reduction regime would give Ugandan industries time to adjust and build the requisite competitive platforms do not seem valid. Reform policies undertaken in the 1990's, for instance policies that favoured the return of Asian entrepreneurs who had fled Uganda, investment incentives and the adoption of internationally acceptable standards, have fostered the competitiveness of Uganda's industrial sector; in this context the past cannot be used as a yardstick to measure the effects of the new era. The apprehension of the policy makers and the industrialists that trade liberalisation will negate the benefits of regional integration are, therefore, completely unfounded. On the contrary continuing tariffs as a transitional arrangement can jeopardise the benefits of the regional integration process. It is, therefore, suggested that intra-EAC tariffs be completely liberalised as this will enhance the competitiveness of Ugandan firms firstly, by triggering reallocation of resources which will in turn lower production costs and result in economies of scale; and secondly, strengthen the industrial base of the economy in the long term.

To reap the benefits to the fullest possible extent, Uganda needs to address problems that could negate the potential benefits from the EAC CU. For instance, Ugandan policy makers need to address the problem of differential tariffs under the multiple RTAs to SADC, COMESA and the EAC. Given the variance between the COMESA and Kenyan preferential tariffs, importers often declare goods under the COMESA rules of origin to benefit from lower tariffs. This has significant implications – first, it leads to import mismanagement and often customs fraud that on the one hand, negates the benefits of preferential access allowed to the member countries' products and on the other, has an adverse impact on revenue collection in Uganda.¹⁶ Second, it hampers domestic production and the development of the local industry in Uganda. To maximise the benefits of the EAC membership, policy makers need to initiate measures to harmonise tariffs under COMESA, the EAC as well as under the different RIAs to address the shortcomings of shared jurisdiction between the different regional initiatives since the present responsibility for enforcement is not demarcated precisely.

¹⁶ The problem of tax evasion in poorer countries has received considerable attention. Bliss (1992) developed a model that recognises the limited availability of tax handles in poor economies and the concomitant role that taxes levied at the border often play in these economies. More recently, Arndt & Tarp (2007) use a stylised model of tariff avoidance through exemptions and/or smuggling to consider the implications of trade reform in Mozambique.

This will also address the problem of informal trade, which is an important drawback of the present regime that leads to revenue losses for the Ugandan government.

The existing supply side rigidities, infrastructural constraints and NTBs also need to be addressed. Some of the main examples of supply side constraints that limit the present capacity of Ugandan industries are the lack of technical knowledge and expertise to design production structures. Institutional weaknesses like unreliable business partners, unstable macro-political environment; corrupt bureaucracy; high costs in accessing business development measures like trade finance and limited capacity of the manufacturing plants add to the cost disadvantage of domestic producers. Infrastructural and energy constraints further restrict the benefits of RIA. These lead to transaction costs that impede the incentive structure for regional development. Since Uganda is landlocked, its importers are placed at a comparative cost disadvantage in terms of Kenyan or Tanzanian industries since they have to incur substantial transport costs. The East African Business survey (2005) also highlights these issues; it shows that the inability of exporters to provide the relevant customs documentation under the rules of origin requirement; lack of trained staff to certify products at the points of entry; lack of uniform direct taxation policies in the EAC countries; border delays; lack of adequate infrastructure; poor condition of the roads; high tolls for the use of roadways; underdeveloped telecommunications; and, energy restrictions inflate the final landed prices of products for the Ugandan consumers. Addressing the existing constraints are, therefore, a priority since liberalising tariffs without addressing these issues will limit the benefits of regional integration.

Additional capacity building measures are proposed to strengthen the competitive environment which will help Uganda overcome the market entry barriers which at present restricts exports to the rest of the world. Initiating measures like training and providing additional information to the producers and importers in Uganda will initiate momentum to remove barriers within the EAC which will allow domestic industry to redirect resources towards greater regional cooperation. In this context, Busse & Shams (2005) have suggested a transitional fund to finance infrastructure and private industrial projects that will enhance the overall competitiveness under the EAC CU and make regional integration in East Africa successful.

The harmonisation of tariffs under the different RIAs complemented with the lifting of barriers (both tariff and non-tariffs) and capacity building measures will lower costs and lead to an increase in overall welfare. This in turn will improve the industrial competitiveness of Ugandan industries, make the developmental strategy sustainable in the long term which will be best achieved through an immediate and complete liberalisation, given that the difference in trade effects between full and

partial liberalisation scenarios are not very large. We conclude that fearing the reappearance of the past problems that jeopardised the success of the erstwhile EAC is unjustified given that the present Ugandan economy is stronger than it was in 1967-1977. The objective of regional integration to foster closer economic ties would be fully achieved with an immediate tariff reduction as this will have far reaching and significant long-term effects in the region.

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