Assessing the Welfare Effects of the East African Community Customs Union’s Transition Arrangements on Uganda

Sangeeta Khorana  
Aberystwyth University

Kato Kimbugwe  
Aberystwyth University

Nicholas Perdikis  
Aberystwyth University

Abstract

Regional trade arrangements are becoming an increasingly popular vehicle for the promotion of trade and growth. 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 approach this paper quantifies and evaluates the trade and welfare effects of these arrangements for Uganda, particularly for products classified as sensitive products from the Ugandan perspective. Results vary with the level of product aggregation applied which questions whether transitional arrangements confer any real benefits on the stakeholders. The policy implications that follow suggest that selecting industries...
for protection should be based on predicted welfare outcomes rather than on pressure from vested interests for the partner countries to benefit from trade liberalisation within the customs union.

- **JEL Classification**: F15, F17, O55
- **Key Words**: economic integration, trade simulation, Uganda

## I. Introduction

Regional integration arrangements (RIAs) constitute an increasingly significant feature of the world trade system. Africa and East Africa in particular is no 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). Of the 211 RIAs notified to the WTO in 2006, 14 were in Africa. The East African Community (EAC) is among the most recent RIA notified to the World Trade Organization (WTO). A previous EAC was established in 1919 but 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, Tanzania and Uganda.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 (EAC Treaty, 2001).² Under the CU protocol, tariffs were completely eliminated on some

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¹Rwanda and Burundi joined the EAC Treaty on 1 July 2007.
²The objectives of the customs union, as stipulated in Article 5.2 of the EAC treaty, include 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. Two broad areas of cooperation are highlighted in the CU - firstly, customs management and general trade matters; and, secondly, establishing and adopting uniform and common trade procedures in the Community.
³The industry perceives these products as “sensitive” because these may not be able to withstand immediate competitive pressure from Kenyan producers when tariffs are reduced to zero under the EAC CU.
products when the agreement came into force in January 2005. For Ugandan products classified as sensitive (category B products), the agreement allowed for a five year transition period with an interim tariff of 10 per cent which was reduced by 2 per cent per annum from 2005 so that all tariffs were to be eliminated in 2010. Examples of sensitive products include agricultural products, building materials, plastics, wood, paper, textiles, iron and steel and other manufactures.

This paper aims to quantify and evaluate trade and welfare effects for Uganda from the implemented transition arrangements for the listed “sensitive” products. The structure of the paper is as follows: Section II provides background information on the EAC member economies, comments on trade patterns and tariffs, in particular for Uganda. Section III provides a brief overview on the background of the EAC and discusses the existing literature on regional integration and for East Africa in particular. Section IV outlines the partial equilibrium WITS-SMART model and explains the rationale for adopting this modelling framework. This also estimates the trade and welfare effects of tariff reductions under the EAC at a disaggregated product basis. Section V concludes and suggests a way forward for Ugandan policy makers.

II. Overview of Trade and Tariff Structure in the EAC

A. Pattern and Composition of Trade

Trade data for Uganda shows that overall trade increased during 2000-2005. Total Ugandan imports were US$958 million in 2000, which grew to US$2.05 billion by 2005, mainly due to an increase of 55.7% in finished products during this period. Africa was the main supplier of Uganda’s imports (36.2% of total imports on average) followed by Asia (36%). In particular, Kenya was the main supplier and over 25% of Uganda’s imports came from Kenya in 2005. Exports also increased, from US$401 million in 2000 to US$812 million in 2005. Europe was Uganda’s principal export market with a share of 41.2% of total exports followed by Africa (35.5%) in 2005; within Africa, most of Uganda’s exports went to Kenya. The composition of trade flows shows that Uganda’s total imports are mainly petroleum products, road vehicles, cereals, and iron and steel products. Agricultural products account for by far the largest share of Uganda’s exports (over 70%). Principal exports were coffee and tea (US$224 million), fish products (US$140 million), gold (US$73 million) and cotton (US$39.2 million). Given that
the pattern of trade is characterised by reliance on intermediate and finished imports it can be assumed that Uganda enjoys a comparative advantage in agriculture or manufacturing that involves primary processing. This is substantiated by large Ugandan imports of manufactured products from Kenya (67.2% in 2005).4

Table 1 presents the trade structure for Uganda, Kenya and the rest of the world (RoW). Trade statistics show that after the EAC customs union came into force, Uganda’s imports of category B products increased. Imports of category B products from Kenya increased by 56.6% while common external tariff (CET) imports from the RoW grew by only 9.2% over 2004-2005. Further analysis reveals Uganda sources a significant share of its world imports from within the EAC (26.8%); 97% of which are intermediate inputs from Kenya. Further examination of trade flows shows that category B products comprise nearly 57% of

Table 1. Uganda’s Category B Imports from Kenya and the Rest of the World (2004-2005)
(in thousand US$)

<table>
<thead>
<tr>
<th>Product Groups</th>
<th>Imports5</th>
<th>Per cent Change in Imports From</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2004</td>
<td>2005</td>
</tr>
<tr>
<td>Agricultural products</td>
<td>6,538</td>
<td>9,954</td>
</tr>
<tr>
<td>Processed food products</td>
<td>1,213</td>
<td>1,911</td>
</tr>
<tr>
<td>Tobacco products</td>
<td>926</td>
<td>819</td>
</tr>
<tr>
<td>Building materials</td>
<td>14,747</td>
<td>29,828</td>
</tr>
<tr>
<td>Detergent and its products</td>
<td>4,263</td>
<td>6,448</td>
</tr>
<tr>
<td>Plastic products</td>
<td>3,026</td>
<td>2,775</td>
</tr>
<tr>
<td>Wood products</td>
<td>780</td>
<td>2,134</td>
</tr>
<tr>
<td>Paper products</td>
<td>1,414</td>
<td>2,354</td>
</tr>
<tr>
<td>Textile products</td>
<td>783</td>
<td>9,318</td>
</tr>
<tr>
<td>Textile-manufactured products</td>
<td>410</td>
<td>469</td>
</tr>
<tr>
<td>Iron and steel products</td>
<td>2,742</td>
<td>3,258</td>
</tr>
<tr>
<td>Other manufactured products</td>
<td>1,372</td>
<td>957</td>
</tr>
<tr>
<td>Total (All Category B products)</td>
<td>38,214</td>
<td>160,160</td>
</tr>
</tbody>
</table>

(Base year: 2004)

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

4Comparative advantage is revealed by observed trade patterns, i.e. high shares of export markets (Balassa, 1977) and the assumption on Ugandan comparative advantage is based on its trade flows. This paper does not attempt to calculate the “revealed” comparative advantage.

5Import data for 2004 and 2005 have been used given that figures for 2004 and 2005 represent pre- and post EAC CU.
these imports. There is, therefore, no apparent overlap between products classified as sensitive and agricultural products like tea and coffee in which Uganda enjoys a comparative advantage. Given Uganda’s reliance on imports it may not be realistic to assume that there may be some trade creation and diversion after the formation of the EAC CU in January 2005.

Trade statistics show Uganda’s imports of category B products increased from Kenya under the EAC CU. The products that registered an increase are building materials (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%). Exceptions are plastics, wood and textile products that registered a decline. Textile products registered a decline because of the high CET (100 percent) on imports of second hand clothes.

**B. The Pre and Post EAC Tariff Schedule**

During 1990s Uganda liberalised its tariff regime; it reduced the total number of tariff bands (from 5 to 3 {at zero, 5 and 15 percent}) and cut simple average MFN ad valorem tariffs, from 60% in 1995 to 15% in 1997 which was further reduced to 9% in 2004 (which came to 11% including the import licence commission). In 1990s, 16.4 percent tariff lines were duty free, while 39.3 percent lines carried the maximum rate of 15 percent. Under the EAC CU revised tariffs were notified (in

| Table 2. Structure of MFN Tariffs in the EAC, 2006 (%) |
|----------------------------------|-----------------|-----------------|-----------------|
|                                  | MFN 2005        | Uruguay Round   |                 |
| Bound Tariff Lines              |                 |                 |                 |
| (per cent of all tariff lines)  | ..              | 14.9            | 13.5            | 15.9            |
| Duty-free Tariff Lines          | 36.2            | 0               | 0               | 0               |
| Simple Average Tariff Rate      | 12.9            | 95.6            | 120             | 73.3            |
| Agricultural Products           | 19.7            | 100             | 120             | 77.5            |
| Non-agricultural Products       | 11.8            | 54.4            | 120             | 50.4            |
| Agriculture, Hunting, Forestry  | 17.3            | 96.5            | 120             | 75.1            |
| and Fishing                      |                 |                 |                 |                 |
| Mining and Quarrying            | 5.3             | ..              | ..              | ..              |
| Manufacturing                    | 12.7            | 95.1            | 120             | 72.5            |

Source: WTO Secretariat calculations, based on data provided by the EAC and CTS database.

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Uganda abolished the import licence commission of 2% collected on the c.i.f. value of all imports upon the entry into force of the EAC common external tariff on 1 January 2005.
January 2005) on 5,429 lines at the HS eight-digit level. Table 2 presents the move from national tariffs to the CET. Tariff data shows that the shift from Uganda’s national tariff to the EAC CET led to an overall increase in average MFN tariffs (from 11% to 12.9%). Tariffs on agricultural goods under the CET are also relatively high, at an average of 19.7%. Detailed analysis of the tariff schedule shows tariffs are particularly high on dairy products (with an average rate of 42.5%), grains (28.3%), and tobacco (28.0%). On the other hand, tariffs are relatively low on non-electric machinery (with an average rate of 3.5%), chemicals and photographic supplies (4.5%), and cut flowers and plants (5.4%). This suggests that the EAC CU may have resulted in a higher level of average tariff protection in Uganda as well as in the other member countries.

The analysis of tariff schedule shows 36.2% of total tariff lines are duty free. In this case the CET raises the simple average MFN tariff rates for all Ugandan products except chemicals and related products for which the MFN tariff is 4.6% (compared to the CET of 2.5%). Of the remaining tariff lines notified under the CET, 99% tariff lines carry rates of 0% (for raw materials), 10% (intermediate products), or 25% (finished goods) and a 25% modal rate is applicable to 40% of all tariff lines. Certain products, like wheat, rice, maize (not for seed), some cotton clothing, jute bags and sugar are exempt from the CET and these products may be imported at tariffs in excess of 25%. In addition to the CET, the tariff schedule classifies 58 items as “sensitive” that are subject to a transition period of five years. For these products tariffs are reduced annually by 2% so that tariffs are completely eliminated in 2010. The schedule shows that despite the objective of the CU to dismantle tariffs on most intra-EAC trade, tariffs remain in place (until 2010) on category B products for 880 items from Kenya to Tanzania, and 443 items from Kenya to Uganda. There are additional discriminatory surcharges, such as suspended duties and discriminatory excise taxes which increases the total import costs. For instance, most Ugandan excises are at 10 percent together with a specific tariff equivalent of 57 percent ad valorem on petroleum products which make imports expensive.

In addition to the EAC CU, members also grant tariff preferences on a reciprocal

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7 On the contrary almost all Kenyan importing sectors will experience some degree of MFN tariff reduction, with a significant fall in tariff protection in some sectors such as beverages and tobacco, chemicals and related products, manufactures, and mineral fuels.

8 Suspended duties and discriminatory excise taxes are both applied on the CIF value of imports plus the tariff. Suspended duties are temporary or transitory and can be levied and removed case by case; excises are anchored item by item in the tax law and are therefore much more permanent.
basis under trade agreements in which they participate individually. Consequently, tariff preferences may differ from one country to another. Tariffs notified under the Common Market for Eastern and Southern Africa (COMESA) rates differ and are often lower than those notified under the EAC. The preferential bands applied by Uganda under COMESA are 0%, 4%, and 6% for inputs, intermediate goods, and final goods, respectively. As a result this allows importers the possibility of benefiting by importing under the COMESA rates rather than the EAC. Overlapping memberships to different RIAs, therefore, has the potential to influence the distribution of gains from regional agreements in Africa.

III. Regional Integration in East Africa and Literature Review

A. Background on Regional Integration in East Africa

The original EAC was launched in 1919 with formation of a CU between Kenya, Tanzania (then Tanganyika) and Uganda. It lasted until 1977. The main factors that contributed to its collapse were both political and economic. The literature indicates several factors that contributed to this conjuncture. The first is the EAC’s dismal record in promoting the economic growth of its members, the economic losses accounted for by trade diversion and the lack of compensatory arrangements to redistribute economic gains to the losers (Hazelwood (1975), UNECA (2004)). Secondly, the ineffectiveness of coordination mechanisms envisaged failed to achieve regional balance between member countries (Newlyn (1971), Nixon (1973), Maasdrop (1999), Mair (2000), Shams (2003)). Thirdly, high inflation rates and massive trade deficits in Tanzania and Uganda on the one hand and the industrial dominance of Kenya on the other led to regional imbalance and dissatisfaction with the EAC (Newlyn (1971), Nixon (1973), Robson (1998), Maasdrop (1999), Venebles (1999), Mair (2000), Schiff (2000), Shams (2003)). Fourthly, the dissimilar economic systems in each country together with the centralisation of the EAC’s administrative facilities in Kenya led to animosity between the countries that further added momentum to the disintegration (McKay et al. (1998)).

The new EAC treaty, drafted in 1999, was designed to address the economic factors that led to its break-up in 1977. In particular it was intended that Tanzanian and Ugandan “sensitive” industries should not be exposed to their more competitive Kenyan rivals immediately. In an effort to address this issue, the three
countries sought to establish a mechanism which would afford some temporary protection to “sensitive industries” in Uganda and Tanzania. 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 asymmetry was adopted in the phasing out of internal tariffs by providing firms located in Uganda and Tanzania an adjustment period of five years so that these firms have an opportunity to adjust their cost base.

The principle of asymmetry draws on a recent revival of the “infant industry” argument for protection (Shafeeddin (2000). Not withstanding the traditional objectives (Kemp (1960), Johnson (1965), Grubel (1966), Luzio and Greenstein (1995)) as well as those by Tybout (2000) questioning the existence of unexploited economies of scale in developing countries and the work that suggests that production failed to deliver positive results in Africa (Bora et al. (2000), Morrissey and Rudaheranwa (1998)) a case for limited time bound protection can be made. The Zedillo Report (United Nations, 2001) advocates “time-bound” protection for industries that can achieve economies of scale quickly. That by Fox (2004) suggests long term benefits can result from protection. Shafaeddin (2000) argues that recent technological advances make protection a valid policy option. The short term nature of protection offered to category B sensitive sectors suggest an appreciation of both the older and newer literature on the subject. The nature of protection offered to these sectors which are reduced to zero over five years places pressure on businesses to become more efficient and match the competition from firms in Kenya. It is within this context that the EAC transitional arrangements for Uganda have to be evaluated. In other words do they lead to welfare gains or losses?

B. Earlier Studies on the Effects of Regional Integration

There is a range of studies that model the impact of economic partnership agreements (EPA) in the African Caribbean and Pacific (ACP) regions (Karangi et al. (2005), Busse and Grossman (2004), Milner et al. (2005) Tekere and Ndlela (2003), Keck and Piermartini (2003), Roza and Szepesi (2003), Gasiorek and

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9This 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.
These analyses find that trade liberalisation of goods trade is broadly positive though not as large as could be expected from multilateral liberalisation because of trade diversion from the more efficient RoW suppliers to the relatively more expensive partners. In the African context, economists have employed partial equilibrium (PE) modelling to quantify successfully the static effects of various RIAs and market liberalisation policies (DeRosa et al. (2002), Stahl (2005)). Other studies on the EAC also employ a PE analysis that uses dis-aggregated data to assess the trade and revenue effects (Castro et al. (2004), Stahl (2005), McIntyre (2005)). All these studies analyse the impact of the EAC at an aggregate level for the member countries. McIntyre (2005) examines trade linkages among the member countries of the EAC and the extent to which the introduction of the EAC CET will impact Kenya. This study suggests that the benefits of regional integration would be reaped mainly by Kenya but does not draw any conclusions on the potential welfare impact of the EAC CU. Stahl (2005) finds that welfare, employment and competitiveness enhancing effects of regional trade liberalisation will be small in the EAC. Castro et al. (2004) also use a PE model (based on 2002 data) to calculate how import flows and customs revenue will change for Kenya, Tanzania, and Uganda following the implementation of the EAC CU. This study estimates that the CU will moderately increase regional imports whereas Ugandan imports from the RoW will decrease. This is attributed to higher protection from the implementation of the CET given the tariff rates under the CU are higher than the pre-EAC tariff schedule. Shams and Busse (2005) also use a PE model to ascertain the need for a transitional fund in East Africa.

IV. Estimating the Trade and Welfare Effects of the Transition Arrangements for Uganda

This study employs a PE approach to estimate trade and welfare effects of tariff reductions for sensitive category B products by Uganda under the EAC CU. We were unable to apply the preferred computable general equilibrium (CGE) methodology because the necessary disaggregated data by country was not available. GTAP data groups African countries as a composite bloc such as “rest of Africa” or “rest of sub-Saharan Africa” that limits the use of CGE in this and earlier analysis. The GTAP region coverage includes Uganda and Tanzania but not Kenya as a result a CGE model cannot analyse trade and welfare effects of the
EAC (Lang (2006)). In any case recent trade policy studies have used the PE models, like the World Integrated Trade Solution (WITS-SMART) model. This paper also uses WITS-SMART model to quantify trade creation, trade diversion as well as welfare effects for category B products under the EAC CU. Results from PE models, however, need to be interpreted with caution because the modelling framework is static and assumes that tariff cuts will automatically translate into a proportionate reduction of prices, while it is likely that some of the cut will be appropriated by producers and/or importers. In addition, there are other obvious drawbacks of PE models. For instance these do not capture the dynamic effects and market linkages which are important to determine the impact of regional integration (Busse and Shams (2005)). Finally, these do not also include consumption and production accounts in an economy which is another shortcoming of this modelling technique (Emerson et al. (1988)).

A. Modelling Framework

The main assumptions of the WITS-SMART model are the following:

a) Export supply elasticities are assumed as infinite because Uganda is a small country, and given its burgeoning trade deficit with Kenya, the Armington assumption on substitutability between suppliers applies.

b) The import demand elasticities for Uganda are taken (at HS-6 digit level) from the World Bank survey conducted by Kee et al. (2004, 2005). The rationale for updating import demand elasticities to simulate tariff reductions in WITS-SMART model is that original elasticities were 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 as a result the elasticity parameters are smaller in SMART. However, a more recent development of the SMART model i.e., GSIM (Global Simulation model) assumes import substitution elasticity at 5 (Francois and Reinhardt (1997), Francois and Hall

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

11Armington 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).

12This is a modification of the GDP function approach that was employed to estimate demand elasticities (Kohli, 1991).

13GSIM 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.
Assessing the Welfare Effects of the East African Community Customs Union’s Transition (2003). For this analysis, we assume 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:

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

(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 $k$

$\eta$ – import elasticity of demand in the importing country

$t_{ijk}$ – tariff

$\beta$ – export supply elasticity

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:

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

(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 ($t_1$ and $t_0$ refer to post and pre integration tariffs)

$\lambda$ – substitution elasticity

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

$$TE = TC + TD$$

(3)

The welfare effect, which is a summation of consumers and producers’ surplus (equation 4), presents the net welfare effect\textsuperscript{14} in Uganda under the EAC CU:

\textsuperscript{14} An important shortcoming of the WITS-SMART model is that it does not quantify separately consumers and producers’ surplus.
\[ W_{ijk} = 0.5(\Delta t_{ijk} \cdot \Delta M_{ijk}) \]  

\( M_{ijk} \) – imports of commodity \( i \) to country \( j \) from exporting country \( k \)  
\( t_{ijk} \) - tariff

**B. Application of the Model to the EAC Customs Union**

Two scenarios are simulated with the WITS-SMART model, these are:

(i) Scenario I estimates the impact of an immediate intra-trade liberalisation between Uganda and Kenya under the EAC customs union. This estimates the impact of eliminating 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 the 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 are estimated as 1.17% and 1.22%, respectively. These are the simple average growth rates of Ugandan imports from Kenya and the RoW, respectively during 2001-2005 that do not discount for the change in imports from change in tariffs due to the short time period of 5 years involved in this analysis.

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 the CET was obtained from the EAC protocol.\(^\text{15}\) The simulations have been carried out using WITS software.

Table 3 compares the aggregated effects of an immediate and phased trade liberalisation on category B products. The simulation results for the immediate liberalisation (10% tariff reduction) shows that the net trade effect would be US$ 10.6 million in 2006, with US$ 11.8 and US$ 1.3 million of trade creation and trade diversion, respectively. In percent terms, 19.9% of trade is created and 0.8% of the intra-regional trade between Uganda and Kenya is redirected from the more efficient RoW suppliers to relatively more costly Kenyan exporters in 2006. The estimates also demonstrate that this policy would generate a positive total net welfare effect of US$ 1.07 million. This arises as a result of welfare gains through

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\(^\text{15}\) 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.
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the changes in consumer and producer surpluses. Further analysis suggests that (under scenario I) the highest net trade effect is in building materials, agricultural and agro-processed products as well as detergents. Paper, tobacco and iron and steel products follow.

The scenario II results suggest that if tariffs are reduced by 2% annually (from 10% tariffs in 2005 to 0% in 2010) there will be a positive net trade effect of US$15.3 million. Trade creation estimated at US$17.43 million and trade diversion at US$1.91 million in 2006, which is less than 10% of the total trade created under phased liberalisation in the EAC.\textsuperscript{16} The welfare effect is lower than under the immediate liberalisation scenario, at US$0.74 million. In simple terms the phased reduction leads to a loss in economic welfare for the Ugandan economy. The main underlying explanation to lower welfare is the existing cost disadvantage of the Ugandan producers which is aggravated by the existing non-tariff barriers (NTBs). Principal NTBs faced by importers are inadequate information on the customs formalities which result in exporters not providing the relevant customs documentation under the CU protocol’s rules of origin requirements; lack of trained staff to certify products at the point of entry; a corrupt bureaucracy; underdeveloped telecommunications; energy shortages and restrictions; high tolls; and so on. In addition the existing governmental regulations also act as NTBs. 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. Supply side rigidities and the existing infrastructural bottlenecks also lead to high transport costs that in turn inflate Ugandan domestic prices. These

\begin{table}
\centering
\begin{tabular}{lcc}
\hline
 & Scenario I & Scenario II \\
\hline
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 \\
Welfare Effect & 1,070,863 & 739,072 \\
\hline
\end{tabular}
\caption{Simulation Results for an Immediate and Phased Trade Liberalisation by Uganda within the EAC Customs Union (in US$)}
\end{table}

\textsuperscript{16}Net trade diversion under both the scenarios is explained by the fact that Uganda imports finished and intermediary products from Kenya that have a high degree of import penetration in the region. The highest net trade effect is concentrated in three product groups, namely building materials, agricultural products and detergents. These products comprise over 80% of the total net trade effect under an immediate and phased tariff liberalisation scenario.
Table 4. Simulation Results on Product Group Basis for an Immediate and Phased Trade Liberalisation by Uganda within the EAC Customs Union (in US$)

<table>
<thead>
<tr>
<th>Product Groups</th>
<th>Scenario I</th>
<th>Scenario II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trade Creation</td>
<td>Trade Diversion</td>
</tr>
<tr>
<td>Agricultural Products</td>
<td>1,216,589</td>
<td>-252,117</td>
</tr>
<tr>
<td>Processed food Products</td>
<td>250,134</td>
<td>-133,819</td>
</tr>
<tr>
<td>Tobacco</td>
<td>350,142</td>
<td>-25,279</td>
</tr>
<tr>
<td>Detergent Products</td>
<td>862,105</td>
<td>-270,379</td>
</tr>
<tr>
<td>Plastic Products</td>
<td>282,172</td>
<td>-173,259</td>
</tr>
<tr>
<td>Wood Products</td>
<td>17,208</td>
<td>-37,452</td>
</tr>
<tr>
<td>Paper Products</td>
<td>48,914</td>
<td>-22,558</td>
</tr>
<tr>
<td>Textile Sector</td>
<td>56,806</td>
<td>-41,811</td>
</tr>
<tr>
<td>Manufactured Textiles</td>
<td>44,944</td>
<td>-40,278</td>
</tr>
<tr>
<td>Iron and Steel</td>
<td>506,961</td>
<td>-206,190</td>
</tr>
<tr>
<td>Total</td>
<td>11,897,172</td>
<td>-1,313,408</td>
</tr>
</tbody>
</table>

Source: Own calculations based on SMART simulations
factors increase the overall costs for the importers. Lower welfare under the phased tariff reduction scenario suggests that instead of improving matters the transition arrangements do the reverse.

Table 4 disaggregates the simulation results on a product-group basis. On the whole the trade creation, trade diversion and net trade effects reflect the aggregate results in table 3. What the disaggregated results show very clearly is the difference in the welfare effects for each product group between the two scenarios. Had agricultural products, processed food products, building materials, detergent products, paper products and other manufactures not been granted category B status then economic welfare in Uganda would have been greater. Conversely by having been granted category B status the protection of tobacco, plastic products, wood products, manufactured textiles, iron and steel Uganda experienced an increase in economic welfare. Protection of the textile sector managed to reduce the potential loss in welfare to US$1,030. What these figures suggest is that the agricultural, processed food products, building materials, detergent products, paper and other manufactures sectors were misclassified as in need of protection. In economic welfare terms it would have been better for these industries not to have been protected and to have allowed the market to adjust its structure. The negative impact on welfare also raises a question as to what criteria were used to determine which industries should receive protection. A more judicious approach based on what could be expected in terms of potential welfare would have been better than the blanket approach adopted by the authorities.

A detailed analysis of trade effects show that building materials, in particular cement, shows the largest net trade effect. The main factors for large trade creation under the EAC are firstly, the large disparity between the current CET rate (55%) on cement and the preferential tariff (10%) levied on imports from Kenya under the CU protocol. Second, Uganda has been historically dependent on Kenya for its cement imports. The current boom in the Ugandan building industry has led to an increased demand\(^{17}\) of building materials, mainly cement. Given there are high volumes of trade under the CU (at 8%) aggregate welfare is lower since cement imports become costly.

Agricultural products, mainly milk and dairy products, broken rice, vegetable fats and palm oil are affected by the CU with large trade creation and trade effects.

\(^{17}\)Against the annual demand between 600,000-700,000 metric tons the annual domestic production of cement was 350,000 tonnes in 2005, this gap was filled by imports from Kenya.
The main explanation for this is that in the pre-EAC period, nearly 65% of the total vegetable fats and palm oils were imported from Indonesia and Malaysia at the MFN tariff rate (15%). At present, most vegetable oils are imported from Kenya under the preferential tariff (8%) given that the existing CET is 17 percentage points higher (25%). 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.

Another product group with an overall net positive trade effect but with the largest trade diversion are detergents. At present, Uganda imports detergents from Kenya but this has been listed under Category B products. Before the formation of the EAC CU, detergents were imported under the COMESA rate, which was 6%, compared to the MFN rate of 15%. Since the EAC CU allows preferential access to Kenyan products at 8% in 2005 (which will be progressively reduced to zero tariffs in 2010), this leads to trade diversion under the full trade liberalisation scenario.

Similarly, paper and its products have a positive trade effect with small trade diversion (only 0.002% of the total trade in paper during 2006). Uganda has no paper mills and over 90% of inputs of the paper industry are imported from Kenya. 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 reveal a positive trade effect. Welfare is lower because the pre-EAC MFN tariffs on paper and its products were 7% compared to the 8% preferential tariffs under the EAC CU. As a result the Ugandan consumers pay more under the EAC CU.

The tariff reduction simulations for tobacco show a large positive net trade but a small welfare effect. Uganda is heavily reliant on Kenya for its supply of cigarettes. As a result, despite the CU reduction in tariffs there is negative and overall low welfare because trade is diverted from the cheaper RoW suppliers. The underlying reasons for trade diversion are the high notified CET tariffs (25%) compared to the 8% tariff notified under the CU.

Imports of iron and steel, mainly tools under the EAC also shows positive trade effects, the magnitude of trade diversion is however nearly 25 - 30% of the total trade created, under the tariff liberalisation simulation scenario. The explanation for large trade diversion is that since the tariffs notified under the pre-EAC were 7% (compared to the CET of 25% under the EAC CU), trade is redirected from the more efficient RoW suppliers to less efficient Kenyan suppliers. Given Uganda lacks the infrastructure for production of plates, sheets or rolled iron and steel
products, the existing iron and steel sector in Uganda relies heavily on imports of rolled iron and steel products from Kenya which leads to an overall low welfare within the EAC CU.

The Ugandan plastics industry is also heavily dependent on Kenya since Uganda does not have its petrochemical industry. As a result the simulations suggest an overall positive trade effect but a higher trade diversion under the EAC CU. The tariffs notified under the CET again explain the large trade diversion. Under the pre-EAC, the notified MFN tariffs were 15% which were revised to 25% CET rate for third countries. Under the EAC CU, imports from Kenya at present enjoy preferential tariffs which will be progressively reduced to zero in 2010. These products are now imported by Uganda from the more costly Kenyan suppliers.

Aggregate results can though cloud the picture. If specific sectors are the beneficiaries of the phased regime then it is possible that they may individually yield welfare gains to the Ugandan economy. It is then more appropriate to look at the disaggregated picture and examine the welfare gains and losses that result from the awarding of category B status at this level. If we examine the welfare gains and

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Scenario I</th>
<th>Scenario II</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS 15 - Vegetable Fats and Palm Oil</td>
<td>- 106,356</td>
<td>- 21,271</td>
</tr>
<tr>
<td>HS 17 - Sugar</td>
<td>- 47,946</td>
<td>- 9,589</td>
</tr>
<tr>
<td>HS 22 - Beverages</td>
<td>- 39,159</td>
<td>- 7,832</td>
</tr>
<tr>
<td>HS 25 - Cement</td>
<td>- 753,153</td>
<td>- 150,631</td>
</tr>
<tr>
<td>HS 32 - Paint</td>
<td>- 897</td>
<td>- 179</td>
</tr>
<tr>
<td>HS 34 - Soap Products</td>
<td>- 98,764</td>
<td>- 19,753</td>
</tr>
<tr>
<td>HS 39 - Plastics</td>
<td>13,854</td>
<td>2,771</td>
</tr>
<tr>
<td>HS 44 - Wood Products</td>
<td>4,647</td>
<td>929</td>
</tr>
<tr>
<td>HS 48 - Paper Products</td>
<td>- 46,979</td>
<td>- 9,396</td>
</tr>
<tr>
<td>HS54 - Yarn</td>
<td>4,159</td>
<td>832</td>
</tr>
<tr>
<td>HS 55 - Fabrics</td>
<td>4,495</td>
<td>974</td>
</tr>
<tr>
<td>HS 62 - Manufactured Cotton Products</td>
<td>757</td>
<td>151</td>
</tr>
<tr>
<td>HS 72 - Iron and Steel</td>
<td>- 4,404</td>
<td>- 881</td>
</tr>
<tr>
<td>HS 73 - Articles of Iron and Steel</td>
<td>- 19,511</td>
<td>- 3,902</td>
</tr>
<tr>
<td>HS 82 - Tools</td>
<td>- 28,356</td>
<td>- 5,671</td>
</tr>
<tr>
<td>HS 85 - Machinery</td>
<td>5,375</td>
<td>1,041</td>
</tr>
<tr>
<td>HS 96 - Misc. Manufactured Articles</td>
<td>18,922</td>
<td>3,784</td>
</tr>
</tbody>
</table>

Source: Own calculations based on SMART simulations
losses implied by granting category B status at the HS classification then a further set of results follows with even more significant welfare implications. Table 5 lists the net welfare effects on HS groups with the highest trade values in each category. In the vegetable fats and palm oil (HS 15) and sugar (HS17) sub-groups of agricultural products we can see that welfare losses are smaller under the phased tariff cuts than under total liberalisation. The same is true for beverages, cement, paint, soap products, paper products, iron and steel, articles of iron and tools sectors. Exceptions to this are plastics, wood products, yarn, fabrics, manufactured cotton products, machinery and miscellaneous manufactured products.

Dividing the data into HS sectors suggests that in some cases the application of category B status, while not leading to welfare gains, did minimise the welfare losses which were significant in some product groups. The granting of category B status in other sectors deprived the Ugandan economy of welfare gains.

V. Conclusions and Implications for Ugandan Policymakers

Most countries establish and adopt transition arrangements when forming economic blocs that involve a free trade area or CU. They do this for both political and economic reasons. The political reasons are largely aimed at binding the members of the bloc together in recognition of the potential opposition to its formation from vested interests which would deny the participants from the perceived long term economic benefits. The economic arguments for limited protection suggest that after a short period of time the uncompetitive sectors would adjust their cost bases and they will then be able to compete with their bloc rivals. In other words the short run loss in economic welfare from not freeing trade immediately is either matched or exceeded by the longer term welfare gains brought about by allowing slower adjustment. Whether this positive result materialises is an empirical question. This paper has attempted to do that by examining the welfare gains and losses for Uganda in adopting category B status for its most sensitive industries over the transition period. It finds that the welfare effects differ according to the level of aggregation used for the analysis. At the aggregate or broad industry level adopting the transition arrangements leads to an overall welfare loss for the Ugandan economy. At the individual product level we note that the temporary protection of some industries gives rise to welfare gains while in others it gives rise to losses. Taking our analysis at the finer HS level a further and different set of gains and losses arise for some industries protection at
this level leads to lower welfare losses than non protection or the immediate removal of tariffs.

Our results lead to a number of conclusions for both Ugandan and policy makers in general involved in drawing up and implementing transition arrangements. Firstly, the impact that these arrangements may have on welfare needs to be ascertained in advance. Secondly, the analysis needs to be carried out on the basis of forecasting welfare outcomes rather than on the perceived non competitiveness of an industry or sector based on either pressure group activity or generalised perceptions. Thirdly, transition arrangements based on the lowering of tariffs over a period of time may not be enough to help some industries. Wider aspects may need to be taken into account. For example, Uganda needs to address problems that could negate the potential benefits from the EAC CU. For example, Ugandan policy makers need to address the problem of differential tariffs under its multiple memberships to SADC, COMESA and the EAC. Given the present variance between COMESA and Kenyan preferential tariffs, importers often declare goods under the COMESA rules of origin to benefit from lower tariffs. To maximise the benefits of EAC membership, policy makers need to initiate measures to harmonise tariffs under COMESA, the EAC as well as under different RIAs to address the shortcomings of shared jurisdiction between the different regional initiatives since the present responsibility for enforcement is not demarcated precisely. 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 also add to the cost disadvantage of domestic producers. Finally, NTBs, 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 greater comparative cost disadvantage in terms of Kenyan or Tanzanian industries since they have to incur substantial transport costs. Though as part of the CU, the member states have committed to eliminate all existing NTBs on intra-EAC trade “with immediate effect” and to refrain from introducing new NTBs, which result from deliberate policies and procedures though some types of NTBs cannot be eliminated by policy and procedure corrections in the short to medium term. Examples of these are high transport and communication costs due to deficient road infrastructure and telecommunications networks and the lack of information on trade opportunities. Addressing the existing constraints are, therefore, a priority
since liberalising tariffs without addressing these issues will limit the benefits of regional integration. But the elimination of such structural NTBs will need time, significant investment, information campaigns and monitoring.\textsuperscript{18}

Additional capacity building measures are needed to strengthen Uganda’s competitive environment and help it overcome the market entry barriers that restrict its exports. Initiating training measures and providing additional information to Ugandan producers and importers will initiate momentum to remove barriers within the EAC and will allow domestic industry to redirect resources. In this context, Busse and Shams (2005) have suggested a transitional fund to finance infrastructure and private industrial projects to enhance overall competitiveness under the EAC CU and make regional integration in East Africa successful.

To conclude, the harmonisation of tariffs under the different RIAs complemented with the lifting of barriers (both tariff and NTBs) and capacity building measures will lower costs and lead to an increase in overall welfare under the EAC CU. This in turn will improve the industrial competitiveness of Ugandan industries and make the developmental strategy sustainable in the long term.

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\textsuperscript{18}The effects of NTBs on welfare may also have to be assessed before definite conclusions can be reached on the impact that transition arrangements have on a countries’ welfare though the estimation of NTBs has not attempted in this paper.
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