

## **Regional Trade Integration in East Africa: Trade and Revenue Impacts of the Planned East African Community Customs Union**

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### **Abstract**

**T**he paper provides empirical estimates for import and revenue implications that would follow implementation of the planned customs union between the East African Community member states Kenya, Tanzania, and Uganda. We use 2002 trade and trade policy data for the three countries to simulate the effect of the common external tariff and other trade policy changes that will follow the customs union implementation on import flows and customs revenue. We also discuss customs exemptions and the effect of the customs union implementation on balance of payments.

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# **REGIONAL TRADE INTEGRATION IN EAST AFRICA:**

*TRADE AND REVENUE IMPACTS  
OF THE PLANNED EAST AFRICAN  
COMMUNITY CUSTOMS UNION*

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**August 2004**

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## **Abbreviations and Acronyms**

BoP	Balance of Payments
CBI	Cross-Border Initiative
CET	Common External Tariff
CIF	Cost, Insurance, and Freight
COMESA	Common Market of South Africa
CU	Customs Union
DOT	Direction of Trade Database
EAC	East African Community
EU	European Union
FTA	Free Trade Agreement
GE	General Equilibrium
GNI	Gross National Income
HS	Harmonized System
IMF	International Monetary Fund
MFN	Most Favored Nation
NGO	Nongovernmental Organization
NRP	Nominal Rate of Protection
NTB	Nontariff Barrier
PE	Partial Equilibrium
PTA	Preferential Trade Agreement/Area
RoO	Rules of Origin
SADC	Southern African Development Community
SAT	Simple Average Tariff
SITC	Standard International Trade Classification
UN	United Nations
VAT	Value-Added Tax
WAT	Weighted Average Tariff
WCO	World Customs Organisation
WTO	World Trade Organisation

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## SUMMARY

**Kenya, Tanzania, and Uganda are planning to form a customs union (CU).** The heads of state of Kenya, Tanzania, and Uganda signed the Customs Union Protocol on March 2, 2004. The current target date for implementation of the CU is January 2005, after ratification of the protocol and finalization of administrative structure in the customs departments.

**On June 23, 2003, the presidents of Kenya, Uganda, and Tanzania reached an agreement on the common external tariff (CET) for the planned CU.** The CET will have three tariff bands: 0 percent for meritorious goods, raw materials, and capital goods; 10 percent for intermediate goods; and 25 percent for consumer goods. The three countries are currently negotiating the detailed categorization of products; quantitative results reported in this paper are based on agreed on classifications for 5,058 of the 5,532 tariff lines; 474 items were still under negotiation at the time we received our data sets from governments (October 2003). During the first five years or the first phase of CU implementation, the CU will be “incomplete” in the sense that internal tariffs will not be entirely eliminated. Tanzania and Uganda will levy temporary tariffs on selected imports from Kenya and remove them over five years according to an agreed on schedule. In its second phase (after five years), the CU will be complete, with free trade among the member states and a most favored nation (MFN) tariff schedule of 0, 10, and 25 percent. The top tariff line is expected to be reviewed five years after CU implementation, for the third phase of the CU; after that review, the three governments are planning to reduce the top rate to 20 percent.

**The agreed on CET implies a decline in tariff rates for Kenya and Tanzania, but an increase for Uganda.** The CET will have a simple average MFN tariff (SAT) level of 10.9 percent. This implies a decline for Kenya and Tanzania, the current SAT levels of which are 16.2 and 12.1 percent, respectively. For Uganda, however, the SAT level will increase from 6.1 to 10.9 percent, a 78 percent rise. For the EAC as a whole, the SAT level will decline from the current level of 11.5 percent to 10.9 percent. Upon implementation of the CU, the three countries will phase out suspended duties and other discriminatory charges on imports, which will reduce import protection.

This working paper presents calculations of how import flows and customs revenue can be expected to change for Kenya, Tanzania, and Uganda following implementation of the EAC CU as currently envisaged. These changes are calculated using a partial equilibrium model based on 2002 data.

**Important caveat.** Of the 474 items still uncategorized for tariff purposes as of October 2003, 361 are “sensitive,” that is, have significant imports, and thus revenue; the sensitive items represent 20.8 percent of EAC total imports. In order to include these products in our simulations, we assumed that they would face the agreed on top rate of 25 percent and an additional surtax of 10 percent. The accuracy of our results thus critically depends on whether the negotiated result varies significantly from this assumption. Our main results and messages are presented in box 1 below.

### Box 1: Main Results and Messages

**Modest increase in regional trade flows as a result of the CU implementation.** In the first phase of CU implementation, there is almost no expansion of regional trade because of the temporary tariffs on selected imports from Kenya. If the CU was implemented without the temporary tariffs and a top rate of 20 percent, regional imports would increase by just less than 6 percent for Uganda, by about 2.4 percent for Tanzania, and about 1.4 percent for Kenya relative to the pre-CU situation. Almost all of this increase in regional trade would be trade diversion, which is more pervasive at the higher top tariff rate of 25 percent.

**Increase in third country imports for Kenya and Tanzania because of tariff liberalization.** The MFN tariff reduction will lead to increases of between 14.5 and 16.3 percent relative to the pre-CU situation for Tanzania, and 11.2 and 12.3 percent for Kenya, depending on which CU scenario is implemented.

**Decline in third country imports for Uganda because of the increase in MFN tariff rates.** In all CU implementation alternatives, third country imports decline for Uganda; the decline is most pronounced in the second phase.

**Modest decline in customs revenue (tariffs and domestic taxes on imports) from CU implementation.** For the first phase of CU implementation, the EAC-wide decline would amount to 11 percent of pre-CU customs revenue; it would be 16 percent for Kenya, less for Tanzania (4.2), and least for Uganda (2.9 percent). To put this into perspective: for 2002–03 the three EAC governments all reported that customs revenue contributed about 10 percent to total tax revenue; the loss from the CU implementation for the EAC would thus be roughly 1 percent of tax revenue. Without temporary tariffs on imports from Kenya the revenue losses would still be moderate. If the third phase of the CU with the 20 percent top rate were implemented, the decline for Kenya would be 17 percent of customs revenue, for Tanzania 7 percent, and for Uganda 8 percent, relative to the pre-CU baseline. In the intermediate scenario, when tariffs on Kenyan imports are eliminated but the top rate is still at 25 percent, the revenue loss for Uganda would actually be higher because of more trade diversion.

**Winners and losers.** Implementation of the CU will lead to increases in welfare for the Kenyan and Tanzanian economy, driven by the reduction in import prices, which will benefit consumers and producers using imported inputs. The situation is different for Uganda, where CU implementation will lead to more expensive imports for consumers and producers. In addition, Uganda will lose revenue because of trade diversion.

**Tariff schedule with top rate at 20 percent should be the preferred choice.** Results from our simulations of import and revenue effects show that with a top rate of 20 percent, costs and benefits of CU implementation are more balanced, although Uganda is slightly worse off compared with the pre-CU situation. However, other benefits of regional EAC integration may outweigh such costs by far.

**Options to offset the revenue loss.** The formation of the CU should offer the three countries a good opportunity to revamp their customs administration and increase efficiency to reduce customs leakage, which would serve to reduce customs revenue losses. Also, harmonization of exemptions from customs duties will become necessary as the EAC CU moves towards a “complete” CU with revenue collection at the port of entry; changes in the context of harmonization offer another source of revenue increase.

**Simplification of current plan for CU implementation.** As currently envisaged, the EAC CU does not take advantage of an opportunity for simplifying the trade regime for the EAC, in particular during the first phase of implementation. Tanzania and Uganda will levy temporary tariffs on 903 and 426 tariff lines of imports from Kenya respectively; for 361 “sensitive” products, additional protection in excess of the top tariff lines of 25 or 20 percent will be sought. The large number of exceptions implies that the trade regime will remain complicated and difficult to administer. A simplified structure would greatly add to a more transparent regime whose administration would be less of a challenge to the stretched resources in EAC customs administrations.



# 1. Trade Flows, Regional Trade Integration, and Trade Policy in East Africa<sup>1</sup>

## 1.1 The East African Community

One of the regional groupings in Eastern and Southern Africa is the East African Community (EAC), a preferential trading area consisting of Kenya, Tanzania, and Uganda. The present EAC is a revival of the original EAC, a CU that was founded in 1967 after the demise of the colonial regimes, and which collapsed in 1977 for a number of economic and political reasons. The present EAC reaches beyond the earlier attempt at regional integration by aiming at ever closer integration, first by establishing a customs union (CU), then a common market, a monetary union, and ultimately a political federation.

In 2002, the three EAC member states Kenya, Tanzania, and Uganda had a collective GDP of US\$27.5 billion.<sup>2</sup> Kenya is the largest of the three economies with a GDP of US\$12.3 billion and a population of 31.3 million; it is also the richest with US\$360 per capita gross national income (GNI—Atlas method). Tanzania's GDP is 9.4 billion, its population 35.2 million, and GNI per capita is US\$280. Uganda's GDP is US\$5.8 billion, its population 24.3 million, and its GNI per capita US\$240. The differences in GDP and per capita GNI have been declining in the past decade, during which the economies of Uganda and Tanzania grew more than Kenya for a variety of reasons.<sup>3</sup> All three countries share common borders and the Lake Victoria natural resource. Uganda is landlocked, relying on access to seaports in Kenya (Mombasa) and Tanzania (Dar-es-Salaam). All three countries are members of the World Trade Organization (WTO) and the Cross-Border Initiative (CBI);<sup>4</sup> Kenya and Uganda are members of the Common Market of South Africa (COMESA),<sup>5</sup> Tanzania is a member of the Southern African Development Community (SADC).<sup>6</sup>

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<sup>1</sup> We look at Kenya, Tanzania, and Uganda, the three signatory states of the EAC Treaty. The suggestions has been made to disaggregate the Tanzania results into mainland Tanzania and Zanzibar, since Zanzibar's revenue from import tariffs and taxation is much higher as a share of total revenue than for the EAC member states. If the government of Tanzanian desires a separate treatment of Zanzibar we could extends this analysis accordingly.

<sup>2</sup> All numbers in this paragraph refer to 2002, and are taken from the World Bank's "At-a-Glance Tables" (see <http://sima.worldbank.org/data/Otables/aag.htm>).

<sup>3</sup> See World Bank (2003) for a review of Kenya's recent economic performance, World Bank (2002) for a review of Tanzania's recent economic performance, and Collier and Reinikka (2001) for a review of Uganda's recent performance.

<sup>4</sup> CBI is a common policy framework to facilitate trade and economic integration between its fourteen members (Burundi, Comoros, Kenya, Madagascar, Malawi, Mauritius, Namibia, Rwanda, Seychelles, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe). CBI is supported by the International Monetary Fund, the World Bank, the European Union, and the African Development Bank.

<sup>5</sup> COMESA is a preferential trade agreement between 20 members (Angola, Burundi, Comoros, Democratic Republic of Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Namibia, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zimbabwe, and Zambia). Nine of the COMESA members (Djibouti, Egypt, Kenya, Madagascar, Malawi, Mauritius, Sudan, Zambia, and Zimbabwe) decided to form a free trade area (FTA) in 2000; since then Burundi and Rwanda also joined the FTA.

<sup>6</sup> SADC is a PTA between its members Angola, Botswana, Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe.

## 1.2 Direction and Patterns of Trade Flows in East Africa

**Trade between EAC members has grown over the past decade.** Table 1 shows that between 1991 and 2002 the share of exports to the region tripled, reaching 18 percent in 2002. The share of regionally sourced imports increased four-fold over the same period, accounting for about 10 percent in 2002. Disaggregated trade flows shown in table 2 reveal that intraregional trade is dominated by exports from Kenya to Uganda.

**There is a caveat on the reported magnitude of regional trade, in particular Kenyan imports into Uganda.** Tables 1 and 2 are based on the IMF's Direction of Trade (DOT) database, but alternative import data for 2002 received from government authorities in Kenya, Tanzania, and Uganda show much less significant regional trade flows. Imports from Kenya to Uganda reported from the Ugandan authorities are just over half of what is recorded in the IMF database

**Table 1: EAC Intraregional Trade 1991–2002**

	1991	1995	2002
Exports to EAC countries (% of total exports) from			
Kenya	8.0	27.0	22.7
Tanzania	2.8	4.6	9.9
Uganda	1.3	0.9	2.2
All EAC	5.9	17.4	17.7
Imports from EAC countries (% of total imports) to			
Kenya	0.4	0.9	1.4
Tanzania	3.1	12.7	7.0
Uganda	13.9	36.0	48.4
All EAC	2.7	9.7	10.4

Source: IMF, DOT database (2003).

**Table 2: Direction of EAC Intraregional Trade in 2002**

	Exports*	Imports*	Imports**
Kenya: Share of trade flows (% of total) with			
Tanzania	4.4	1.4	0.19
Uganda	18.2	0.04	0.22
Tanzania: Share of trade flows (% of total) with			
Kenya	5.9	6.6	4.63
Uganda	3.9	0.4	0.30
Uganda: Share of trade flows (% of total) with			
Kenya	0.4	45.1	24.57
Tanzania	1.8	3.2	0.65

Source: \* IMF, DOT database (2003); \*\* data from government authorities.

**Regional trade is mostly in manufactures, food, and electricity.**<sup>7</sup> Differences in the level of industrialization among the countries are reflected in the trade pattern presented in table 3. Kenya exports manufactures to Uganda; Uganda exports food products to Kenya; Kenya and Tanzania trade mainly manufactures and food products; Tanzania exports manufactures to Uganda; and Uganda's exports to Tanzania are manufactures, food products, and energy.<sup>8</sup>

<sup>7</sup> The existence of significant regional trade flows in energy surprised some experts. Therefore, we provide in table 3 a detailed breakdown of the various energy subcategories, which indicate that some but not all of the regional energy flows are likely to be re-exports.

<sup>8</sup> Apparent inconsistencies in table 3 (exports should correspond to imports) reflect that customs records in export countries do not always match import countries' statistics. In some cases, the discrepancies are very

**Table 3: Regional Trade by Commodities in 2001 (percent of total)**

<b>KENYA</b>	<b>Imports</b> (% of total imports from Uganda & Tanzania to Kenya)		<b>Exports</b> (% of total exports from Kenya to Uganda & Tanzania)	
	<i>Uganda</i>	<i>Tanzania</i>	<i>Uganda</i>	<i>Tanzania</i>
Food products	79.8	21.6	8.4	18.8
Agricultural materials	6.1	19.3	8.4	2.8
Textile fibers	2.4	2.0	0.0	0.0
Ores, minerals and metals	0.1	11.8	3.9	3.6
Energy	0.1	2.0	26.4	15.7
Petroleum, petroleum products	0	2.0	26.1	15.7
Gas, natural and manufactured	0	0	0.3	0
Manufacturing	11.5	43.4	52.9	59.1
<b>UGANDA</b>	<b>Imports</b> (% of total imports from Kenya & Tanzania to Uganda)		<b>Exports</b> (% of exports from Uganda to Kenya & Tanzania)	
	<i>Kenya</i>	<i>Tanzania</i>	<i>Kenya</i>	<i>Tanzania</i>
Food products	3.6	18.3	64.5	34.6
Agricultural materials	6.3	8.6	11.7	0.5
Textile fibers	0.1	0.2	4.7	0.4
Ores, minerals and metals	3.5	0.3	2.8	0.0
Energy	52.7	1.4	12.9	26.4
Petroleum, petroleum products	52.4	1.4	0.1	0
Gas, natural and manufactured	0.3	0	0	0
Electricity	0	0	12.8	26.4
Manufacturing	33.8	71.3	3.3	38.2
<b>TANZANIA</b>	<b>Imports</b> (% of total imports from Kenya & Uganda to Tanzania)		<b>Exports</b> (% of total exports from Tanzania to Kenya & Uganda)	
	<i>Kenya</i>	<i>Uganda</i>	<i>Kenya</i>	<i>Uganda</i>
Food products	10.8	23.1	68.4	20.0
Agricultural materials	2.6	0.1	10.9	5.4
Textile fibers	0.2	0.1	6.0	0.6
Ores, minerals and metals	2.9	0.0	0.3	3.3
Energy	26.7	60.0	0.5	11.8
Petroleum, petroleum products	26.7	60.0	0.5	11.8
Manufacturing	56.8	16.6	13.9	58.8

Source: UN COMTRADE (2003).

**The European Union (EU) is the main trading partner of EAC countries.** Table 4 shows that while regional trade has grown somewhat, the EU remains the largest market for EAC's exports, absorbing around 40 percent. EAC imports are quite diversified: around a quarter come from the EU, and about 20 percent from Asia and the Middle East respectively

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significant. Therefore, the information provided in table 3 is only indicative of the trade flows. Some of the exports recorded as manufactures in Kenya are likely to have been recorded as petroleum products as they entered Uganda.

**Table 4: Imports and Exports of EAC Countries in 2001**

	<i>Kenya</i>		<i>Tanzania</i>		<i>Uganda</i>		<i>EAC</i>	
	EX	IM	EX	IM	EX	IM	EX	IM
Total (US\$ millions)	2,301	3,631	764	1,636	334	1,009	3,400	6,276
Share, % of total								
Industrialized countries	41.9	42.2	53.1	38.2	75.5	27.6	50.2	38.8
U.S.	8.0	8.2	3.2	4.2	4.7	2.5	6.2	6.2
EU	31.9	27.3	37.1	24.7	64.5	21.6	38.5	25.7
Japan	1.1	4.9	12.1	4.4	3.9	3.1	4.4	4.5
Developing countries	58.1	57.1	46.9	61.8	24.5	72.4	48.9	60.8
Africa	37.4	9.9	19.2	22.6	7.5	57.4	27.0	20.9
EAC	22.6	1.4	9.9	7.2	2.2	48.8	16.0	10.5
South Africa	0.5	7.2	0.6	13.1	0.7	6.8	0.5	8.7
Asia	11.8	18.4	22.5	25.0	8.6	11.3	14.1	19.0
Europe	1.1	1.1	2.2	0.9	6.6	0.8	2.2	1.0
Middle East	7.4	25.8	2.5	12.4	1.5	2.8	5.2	18.6
Western Hemisphere	0.4	1.9	0.5	0.8	0.4	0.1	0.4	1.3

Note: IM = import; EX = export.

Source: IMF, DOT database (2003).

**Outside the region, EAC's main exports are agricultural commodities, and its main imports are manufactures.** Table 5 shows that food and agricultural materials dominate the composition of exports outside the region for all three EAC countries. For Kenya, the share of these sectors is lowest with 63 percent; for Tanzania it is almost 75 percent, and more than 90 percent for Uganda. Kenya has the largest share of manufacturing exports at just above 20 percent; Tanzania's are at 14 percent, and Uganda's around 5 percent. Imports into the EAC from outside the region are dominated by manufactures which account for more than 75 percent; food products are second.

**Table 5: Nonregional Trade by Commodities in 2001  
(percent of total)**

<i>Commodity</i>	<i>EAC</i>		<i>Kenya</i>		<i>Tanzania</i>		<i>Uganda</i>	
	IM	EX	IM	EX	IM	EX	IM	EX
Food products	11.7	54.9	11.6	49.5	13.6	59.5	6.3	75.5
Agricultural materials	2.8	14.1	3.1	13.9	2.2	13.9	2.7	15.4
Textile fibers	2.3	2.9	2.4	0.7	2.1	8.1	2.4	5.1
Ores, minerals, and metals	1.3	2.8	1.6	1.7	0.8	6.6	1.0	1.7
Energy	2.5	8.4	1.7	12.0	4.4	1.5	2.2	1.9
Manufacturing	79.4	16.9	79.6	22.2	76.9	10.4	85.4	4.9

Note: IM = imports; EX = exports.

Source: UN COMTRADE data based on partner country statistics.

### 1.3 Trade Policy and Integration in the EAC Member States

**Trade liberalization and regional integration have contributed to the increase in regional trade.** The reported increase in East African intraregional trade has been fueled by domestic trade liberalization and tariff preferences granted in the EAC. In 1996, Kenya, Tanzania, and Uganda formed the East African Cooperation, which was transformed in 2001 into the East African Community, now a PTA. At the same time, the three countries

embarked upon similar programs of trade policy reform, including reducing tariff and nontariff barriers to trade. As a result, the three countries' trade regimes have somewhat converged. The reduction and simplification of tariff rates, the abolition of quantitative restrictions, and the elimination of export subsidies have been common features in the three countries' reform programs since the mid-1980s. However, the pace and depth of these trade reforms has varied.<sup>9</sup>

Table 6 details the successive tariff liberalization since the mid-1990s. Uganda and Tanzania have liberalized their tariff schedule significantly, as can be seen by the a reduction of the top rate, the number of tariff bands, and the tariff levels as measured by the Simple Average Tariff (SAT) and Weighted Average Tariff (WAT). Although Kenya's top rate and number of bands has remained unchanged over the same period, its SAT and WAT have fallen as a result of changes in tariff categorization; products have been moved from higher to lower tariff bands.

**Table 6: Evolution of Tariff Structures in Kenya, Tanzania, and Uganda**

<i>Country</i>	<i>Tariff rates</i>	<i>1997</i>	<i>1999</i>	<i>2001</i>	<i>2002</i>
Tanzania	Number of tariff bands	7	5	4	4
	Top rate	50	25	25	25
	SAT	23.5	16.4	12.8	12.1
	WAT	18.4	20.9	10.9	11.1
Kenya	Number of tariff bands	5	5	5	5
	Top rate	40	35	35	35
	SAT	20.8	15.2	16.6	16.2
	WAT	16.1	11.1	13.6	10.9
Uganda	Number of tariff bands	5	3	3	3
	Top rate	30	15	15	15
	SAT	13.2	9.2	9.1	6.1
	WAT	10.7	n.a.	7.4	7.7

n.a. = not applicable.

Sources: N'geno (2002) and World Bank Staff calculations.

Table 7 shows current tariff rates applied on an MFN basis to imports from countries with which the EAC member states do not have preferential trade agreements. Within the EAC, Tanzania and Uganda grant Kenyan imports an 80 percent tariff reduction and Kenya grants a 90 percent tariff reduction on imports from Tanzania and Uganda; the regionally applied tariff rates are thus significantly lower than the MFN rates.<sup>10</sup>

**Table 7: Ad Valorem MFN Tariff Rates (in percent), 2001–02**

	<i>Tariff band</i>				
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Kenya	0	5	10	25	35
Tanzania	0	10	15	25	—
Uganda	0	7	15	—	—

— not available.

Source: Government data.

<sup>9</sup> A detailed account of the domestic processes of trade liberalization in the EAC can be found in Rajaram and others (1999) and N'geno (2002).

<sup>10</sup> Kenya is part of the COMESA free trade zone and grants duty-free access to the eleven members of the FTA; preferences for the nine members of the PTA vary. Uganda grants an 80 percent tariff preference to COMESA members whereas Tanzania grants SADC members preferential market access

**While progress in trade liberalization and regional integration has been made, several constraints for global and regional trade persist.** In all three countries, nontariff barriers such as discriminatory surcharges, standards, and import procedures hinder trade.<sup>11</sup> In the context of the EAC CU negotiations, the three countries are addressing the problem of discriminatory surcharges, such as suspended duties or discriminatory excise taxes.<sup>12</sup> Tanzania and Uganda make extensive use of such surcharges as a means of protection. To date, Tanzania applies suspended duties at on 122 items, mostly Kenyan imports; it also applies excises, but in a nondiscriminatory fashion. Uganda does not apply suspended duties, but does impose excise taxes on 454 goods. Most of these excises (427) are only applied on imports; that is, the excises are discriminatory.<sup>13</sup> Most of the Ugandan excises are at 10 percent, notwithstanding a specific tariff equivalent of 57 percent ad valorem on petroleum products. Kenya also applies excises, but in a nondiscriminatory fashion, and imposes suspended duties only for petroleum products. See table 8 for a summary of taxes and suspended duties.

**Table 8: Discriminatory Surcharges on Imports in 2002**

	<i>Excise taxes</i>	<i>Suspended duties</i>
Kenya	n.a.	petroleum products
Tanzania	n.a.	122 items, between 10 and 40 percent
Uganda	427 items; mostly at 10 percent; few at 15 percent	n.a.

n.a. = not applicable.

Source: Government data.

#### 1.4 Towards an EAC Customs Union

In the treaty establishing the EAC, its members state their intention to form a CU by 2004. Formation of a CU requires members to:

- dismantle all barriers to trade (tariff and nontariff) between each other;
- implement a harmonized customs administration, including commodity classification, customs valuation system, customs procedures, documentation, and Rules of Origin (RoO); and
- agree on the modality of sharing the tariff revenue and the CET.

The EAC has made progress in each of these areas:

- *Phasing out internal tariffs.* EAC partner states have agreed that upon implementation of the CU protocol, Kenya will eliminate all tariffs on imports from Uganda and Tanzania, and Uganda and Tanzania will eliminate tariffs on each other's imports.<sup>14</sup> Regarding imports from Kenya, Uganda and Tanzania will eliminate tariffs on all imports except for an agreed on list of commodities for which the tariff will be

<sup>11</sup> We only focus on discriminatory surcharges in this working paper. The reason is that other nontariff barriers (NTBs) applied by Kenya, Tanzania, and Uganda do not have direct revenue implications. Investigating the role of other NTBs, however, would be an important exercise. As regional integration becomes deeper, harmonization in standards, procedures, and so forth can confer significant benefits to the CU member states.

<sup>12</sup> 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.

<sup>13</sup> Nondiscriminatory excises are levied on mineral water, alcoholic beverages, tobacco products, and sacks and bags in Uganda.

<sup>14</sup> All three countries maintain negative lists of imports banned for health and security reasons; these lists follow international rules.

reduced gradually to zero, within a period of up to five years. For Uganda, the items on that list will initially be protected by a 10 percent tariff that will be uniformly reduced to zero over five years. Tanzania's list contains various product groups, each with a different tariff reduction schedule. No initial tariff will be above 25 percent and the reduction to zero will happen within five years.<sup>15</sup> All discriminatory surcharges will be eliminated at the time the CU enters into force.

- *Rules of Origin.* The three countries agreed on a set of RoO in late 2002 that are based on the ones developed by COMESA, with a few product-specific modifications based on SADC RoO. The RoO have been sent to the World Customs Organisation (WCO), which has attested that the RoO are WTO compatible.<sup>16</sup>
- *Nomenclature.* A committee of experts from the customs authorities in the three EAC partner states has agreed on a harmonized nomenclature at the 8-digit level, as well as documentation and procedures.
- *Customs valuation.* EAC has adopted the WTO rules and regulations.
- *Customs administration and tariff sharing.* On the basis of a study,<sup>17</sup> the EAC member states have decided to keep the national customs administration as the main competent bodies to manage customs matters. A small new Customs Directorate will be established at the EAC Secretariat with the mandate of coordinating the implementation of CU dispositions. The EAC partner states have also agreed to keep collection of tariff revenues at the final port of destination, as is done today. All customs matters will be reflected in a new EAC Customs Code that is currently being finalized.<sup>18</sup>

The highly contentious decision on the CET was taken by the three heads of state on June 23, 2003. The agreed on CET has a three-band tariff structure, with a 0 minimum rate for meritorious goods, raw materials, and capital goods; a 10 percent rate for intermediate goods, and a 25 percent top rate for finished goods. The CU protocol is also expected to provide for a revision of the top rate five years after the CU enters into force. The three countries expect that the top rate will at that point be reduced to 20 percent. Table 9 provides information on the number of tariff lines included in each of the tariff bands.

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<sup>15</sup> See Annex 3 for details on the temporary tariffs on imports from Kenya and the phase-out schedule.

<sup>16</sup> A complete CU with a CET and free trade among the member states does not require RoO for internal use. However, since the EAC is planning to phase in its CU and will have temporary barriers to trade against selected imports from Kenya, agreement is needed on a set of RoO which—for internal use—can be phased out once complete dismantling of regional tariffs is achieved.

<sup>17</sup> Hope and others (2003).

<sup>18</sup> It should be noted that tariff collection at the final port of destination, as well as the provision of temporarily still allowing tariffs on selected imports from Kenya, will make the CU much less efficient than it could be. One of the main advantages of a CU compared with a FTA (or a PTA) is the fact that border controls will no longer be necessary to avoid trade deflection by using RoO. Therefore, the present arrangement with RoO and continued border checking should be transitory, and the EAC member states should aim at implementing a system with tariff collection at the port of entry as soon as the temporary tariffs on selected imports from Kenya are eliminated.

**Table 9: EAC Common External Tariff**

<i>Category</i>	<i>Number of tariff lines</i>	<i>Ad valorem tariff rate (%)</i>
All items in 0 band	1,927	0
Meritorious goods	105	0
Raw materials	1,111	0
Capital goods	711	0
Intermediate goods	1,167	10
Finished goods	1,889	25

*Note:* Table is current as of October 2003.

*Source:* World Bank Staff calculations based on 8-digit HS Classification.

A limited list of “sensitive” products will receive further protection in addition to the top rate of 25 percent. At the time of the last consultation with customs officials for this paper (October 2003), the EAC countries had not yet agreed on the tariff classification for 474 items, of which 361 were considered sensitive.<sup>19</sup> Sensitive products represent an important share of total imports and thus tariff revenue for Uganda and Tanzania (30 percent and 26 percent of imports respectively); for Kenya the share is lower (10 percent).

Once the CU protocol is signed it needs to be ratified by the three countries before it can be implemented. The current target date for implementation is January 2005.<sup>20</sup> The implementation of the CU will have important effects on the EAC economies and public accounts. In particular, the new tariff schedule is expected to have an impact on import flows and customs revenue.

The second part of this working paper summarizes results of simulations, derived using a partial equilibrium model, to calculate the effects of CU implementation on import flows and customs revenue.

## **2. Import and Revenue Changes from CU Formation**

Implementing the CU will impact the EAC economies through various channels. The new tariff schedule will change domestic prices of imported goods and thus demand for imports by consumers and supply by domestic producers of such goods. Changes in tariff rates for MFN and regional imports, together with the change in import flows, will affect customs revenue. The aggregate effects will determine whether the formation of the CU has positive or negative welfare effects.

The total welfare effect of the CU implementation is the sum of three variables: change in revenue, change in consumer surplus, and change in producer surplus.<sup>21</sup> To calculate the welfare effect as accurately as possible, we would need to determine the effect

<sup>19</sup> Table A in Annex 2 contains a list of these unresolved items and their main features.

<sup>20</sup> To stick to this target, customs administration officials of the three countries need to agree speedily on harmonized customs procedures. Work on an EAC Customs Code had begun in the second half of 2003 and will probably not be finished by March 2004 when the protocol signature is planned. As of November 2003, the target date for completion of the Customs Code was March 2004.

<sup>21</sup> Consumer surplus is the difference between the price of a good and the consumer’s willingness to pay for the good. Producer surplus is the difference between the price a producer receives selling his product and the marginal cost incurred for production.



of the CU formation on all consumer and producer prices, as well as the effect on all sources of government revenue.

In this working paper, we focus on two issues: the change in imports—regional and from third countries—that will result from implementing the CU; and on the effect of the CU implementation on customs revenue collection.<sup>22</sup> We discuss welfare implications from changes in import flows and revenue collection, but we do not calculate consumer and producer surplus.

The impact of a change in MFN tariffs on import demand is straightforward. If the tariff is lowered, import prices decline and imports expand; to what extent depends on import demand elasticities. If MFN tariffs are increased we observe the opposite effect, namely a decline in imports.

The effect of a preferential reduction of regional tariffs is less straightforward since it may not necessarily have an effect on domestic prices of the imports. If regional imports for any given tariff line are only a small fraction of total imports and thus dominated by third country imports on which the MFN tariff is applied, the domestic price for the imported good will be determined by the market price and the MFN tariff rate. Regional tariff preferences will thus not lead to a decrease in import prices or a change in import demand. If, on the other hand, imports of certain tariff items are predominately sourced from CU partners, the regional tariff preference will lead to a reduction in the import price for such goods and a demand expansion.

The impact of forming a CU on customs revenue is in general undetermined; it depends on a country's tariff levels prior to joining a CU, the CET, import demand elasticities, and export supply elasticities in the CU member states.<sup>23</sup> We can distinguish two effects (summarized in table 9): the effect on customs duty revenue from the change in tariff rates, and the effect on domestic tax receipts (excises and VAT) collected on imports.

- *Customs duty revenue.* A CU requires a complete elimination of all tariffs between members. Regional tariff duty revenue thus goes to zero. If there is incomplete regional liberalization as in the first phase of the EAC CU, the statement that tariff duty revenue from regional imports will decline is no longer true in general. The tariff duty revenue effect of the CET implementation, which should be lower for the CU as a whole, will be ambiguous. It will depend on the change of tariff rates and a change in the tariff base—that is, imports—whereby the change in imports in turn is determined by the magnitude of the tariff rate reduction and import demand elasticities. For each member state, the extent of the tariff duty revenue change will thus be determined by the relative share of regional imports, the difference between the pre-CU tariff schedules and the CET, and import demand elasticities.
- *Domestic tax revenue collected on imports.* The effect of the CET implementation on domestic tax revenue collected on imports is also ambiguous, depending again on the difference between the pre-CU tariff schedules and the CET, and on import demand elasticities. Elimination of discriminatory surtaxes such as suspended duties or discriminatory excise taxes will have effects similar to tariff reductions.

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<sup>22</sup> Customs revenue includes tariff duties and domestic taxes (excise duties and VAT) collected on imports.

<sup>23</sup> For a discussion of empirical evidence for revenue implications of trade policies, see Ebrill and others (1999).

**Table 10: Revenue Impact of a CU**

<i>Trade policy change</i>	<i>Revenue effect</i>
<b>Customs duty revenue</b>	
Reduction in third country MFN rates	Ambiguous. Positive if the tariff base (CIF value) increases significantly to compensate for the tariff rate reduction; negative otherwise.
Elimination of intraregional tariffs	Negative. If tariffs are completely eliminated, collection of tariff revenue from regional imports is 0; if the CU is incomplete the effect is ambiguous but likely to be still negative.
<b>Domestic tax revenue on imports</b>	
Change in the tax base for excises (CIF import value + tariff duties) and for VAT (CIF import value + tariff duty + excises)	Ambiguous. Positive if imports increase by enough that the increase in CIF import value will offset the reduction in tariff rate in the tax base; negative otherwise. A much lower import increase is needed for a positive effect of domestic tax revenue on imports compared with a positive effect on customs duty collection.
Elimination of discriminatory surcharges	Negative.

*Source:* World Bank Staff.

To calculate the effects of the EAC CU implementation on revenue collection, we need to know the changes in tariff protection and the changes in import flows that will be triggered by the change in trade policies. Changes in tariff protection can be calculated by comparing the current tariff schedules with the planned CET. The changes in import flows need to be simulated.

Before we proceed to this simulation we will look at the relative importance of customs revenue (customs duty collection) and domestic tax collection on imports as a source of government revenue.

## **2.1 Customs Revenue as Share of Revenue**

**Sales tax or VAT is the dominant revenue source in EAC countries; customs revenue is still significant but declining.** Table 11 shows that income taxes and VAT are the dominant source of revenue in the three EAC countries, and the contribution of customs revenue to total revenue is around 10 percent. Table 12 shows that the relative importance of customs revenue as a source of revenue has been declining in EAC countries.

**Table 11: Sources of Revenue in EAC Countries in 2001–02 (percent of total)**

	<i>Kenya</i>	<i>Tanzania</i>	<i>Uganda</i>
Tax revenue	82.0	90.0	92.2
Customs revenue	11.0	8.5	9.3
Excise taxes	16.3	17.0	28.8
Income taxes	28.4	21.9	22.6
Value-added tax (VAT)	25.9	33.8	31.3
Other taxes	0.4	8.8	0.0
Nontax revenue	18.0	10.0	7.8

*Sources:* IMF country reports (2003) and World Bank staff calculations.

**Table 12: Customs Revenue as Share of Tax Revenue (percent of total)**

	<i>1997–98</i>	<i>1998–99</i>	<i>1999–00</i>	<i>2000–01</i>	<i>2001–02</i>	<i>2002–03</i>
Kenya	15.9	16.9	18.7	17.3	13.4	10.2
Uganda	10.4	10.9	11.3	13.7	10.1	10.0
Tanzania	15.3	14.2	12.7	11.6	9.4	10.6

*Sources:* IMF country reports (2003) and World Bank staff calculations.

Table 13 provides insights on the structure of customs revenue. Tariff duties and VAT on imports are the most important customs revenue source. In Kenya and Tanzania, suspended duties contribute minimally to customs revenue; excises are important, particularly in Kenya. Since Kenya, Tanzania, and Uganda already grant each other significant tariff preferences, customs revenue from regional imports is less important; it is insignificant for Kenya and Tanzania, but higher for Uganda because of its large share of Kenyan imports.

**Table 13: Customs Revenue by Subcategory in 2002 (percent of total)**

<i>Category</i>	<i>Kenya</i>	<i>Tanzania</i>	<i>Uganda</i>
Tariff duties	35.4	45.3	25.2
Excise duties and suspended duties on imports	24.8	12.3	7.3
Of which suspended duties	2.4	2.1	n.a.
VAT on imports	40.1	42.3	67.6
Total	100	100	100
Of which revenue from EAC imports	1.3	1.4	11.6

n.a.= not applicable.

*Source:* Data from government authorities.

## 2.2 Changes in Tariff Protection

To calculate the change in tariff protection that will follow the CU implementation and that determines the change in import flows, we compare the current MFN schedules in Kenya, Tanzania, and Uganda with the planned CET.

At the time we collected the data for our calculations (October 2003), the three countries had not agreed on the tariff band categorization for 474 items, as mentioned above. Therefore, we had to make assumptions regarding the tariff rates that should be applied for these items. Following discussions with government officials, we assumed that the 361 “sensitive” items will fall under the top rate of 25 percent, and that an additional surcharge of 10 percent will be levied on them. For the remaining 113 “non-sensitive” items that were not yet classified, we applied the rate closest to the average of the tariffs proposals of each EAC

member in the last round of negotiations.<sup>24</sup> Tables 14, 15, 16, and 17 show the changes in tariff protection once the agreed on CET bands of 0, 10, and 25 percent—with the above assumptions—is introduced.

**Implementing the CET will slightly decrease MFN tariff protection for the EAC region as a whole.** Table 14 shows that that the implementation of the CET will slightly decrease the simple average MFN tariff rates (SAT) on third-party imports by about 0.6 percentage points for the EAC region as a whole. Kenya shows a steep fall in its SAT and its trade-weighted average tariff rate (WAT); Tanzania will experience a less significant decline in SAT and WAT. In contrast, the Ugandan SAT and WAT will rise significantly.

**Table 14: Changes in Simple Average and Weighted Average MFN Tariffs**

Change in simple average MFN tariff (SAT)				
<i>Country</i>	<i>Current</i>	<i>CET</i>	<i>Difference in percent. points</i>	<i>Change current to CET SAT (in %)</i>
Kenya	16.2	10.9	-5.3	-32.7
Tanzania	12.1	10.9	-1.2	-9.9
Uganda	6.1	10.9	4.8	78.7
EAC	11.5	10.9	-0.6	-4.9

  

Change in weighted average MFN tariff (WAT)				
<i>Country</i>	<i>Current</i>	<i>CET</i>	<i>Difference in percent. points</i>	<i>Change current to CET WAT (in %)</i>
Kenya	10.9	5.2	-5.7	-52.3
Tanzania	11.1	8.8	-2.3	-20.7
Uganda	7.7	11.7	4.0	51.9

*Source:* World Bank staff calculations based on national authorities' data.

Table 15 shows that Kenya and Tanzania will experience MFN SAT reductions for 41 and 56 percent of their total tariff lines; for Uganda this fraction is much lower at 18 percent.<sup>25</sup> If we look at the total value of imports under these tariff lines, the discrepancies are still large. For 32 percent and 52 percent of total imports into Kenya and Tanzania respectively, MFN tariffs will be lowered; in Uganda 20 percent of imports will face lower tariffs. MFN tariff increases will apply to 5 percent of imports for Kenya and 23 percent for Tanzania; this fraction now is much larger for Uganda at 56 percent.

<sup>24</sup> The list of the items not yet categorized and the assumptions we use for our simulations are discussed in Annex 2.

<sup>25</sup> The total number of tariff lines is different in tables 8 and 15. The reason for this discrepancy is that table 8 is based on the 8-digit HS Classification, and table 15 is based on the 6-digit HS Classification; the two classification schedules differ minimally. The total number of tariff lines in table 15 varies for the different countries. The reason for this variance is that the HS Classifications used at the customs offices evolve over time and in different ways as new products, and product varieties emerge.

**Table 15: Effect of CET on MFN Tariff Protection, by Tariff Lines**

<i>Bands changed to 0,10,25 percent</i>	<i>Kenya</i>	<i>Uganda</i>	<i>Tanzania</i>
Number of tariffs lowered	2,236	1,039	3,239
As fraction of all tariff lines	41%	18%	56%
As fraction of the value of total trade	31.8%	20.1%	51.7%
Number of tariffs increased	825	3,054	624
As fraction of all tariff lines	15%	53%	11%
As fraction of the value of total trade	5.1%	56.2%	22.9%
Number of tariffs unchanged	2,395	1,675	1,896
As fraction of all tariff lines	44%	29%	33%
As fraction of the value of total trade	63.0%	23.7%	25.4%

*Source:* World Bank staff estimates at 6-digit HS Classification.

To understand the changes in customs revenue that will be computed later, we look at the changes in MFN tariffs at the sector level. Table 16 shows that the CET will raise the simple average MFN tariff rates for all Ugandan sectors, with the exception of chemicals and related products. On the other hand, 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. Tanzanian imports will be affected in a more varied way, with increases in average MFN tariffs in a few sectors (mineral fuels, and to a lesser degree, food and live animals, and crude materials), and moderate declines in other sectors (such as beverages and tobacco, machinery and transport equipment). It should be noted, however, that large in-sector variations could be behind the sector averages reported here.

**Table 16: Current MFN SAT and CET SAT—Changes by Sectors**

<i>Sector</i>	<i>Kenya</i>			<i>Tanzania</i>			<i>Uganda</i>		
	MFN	CET	Change (in %)	MFN	CET	change (in %)	MFN	CET	Change (in %)
Food and live animals	15.3	21.4	40	21.1	21.4	1	8.0	21.4	168
Beverages and tobacco	26.3	14.5	-45	20.4	14.5	-29	12.3	14.5	18
Crude materials	9.2	3.6	-61	3.4	3.6	6	3.4	3.6	6
Mineral fuels	20.0	7.0	-65	0.0	7.0	n.a.	6.9	7.0	1
Animal and vegetable oils	16.0	8.3	-48	11.1	8.3	-25	4.1	8.3	102
Chemicals and related products	10.8	2.5	-77	3.9	2.5	-36	4.6	2.5	-46
Manufacturing goods	21.4	13.2	-38	15.8	13.2	-16	6.1	13.2	116
Machinery and transport equipment	10.5	5.4	-49	8.9	5.4	-39	3.2	5.4	69
Misc. manufactures	22.7	17.9	-21	19.9	17.9	-10	10.0	17.9	79
Commodities not classified elsewhere	9.4	15.9	69	16.9	15.9	-6	2.1	15.9	657
Average	16.2	10.9	-33	12.1	10.9	-48	6.1	10.9	79

n.a. = not applicable.

*Source:* World Bank staff estimates at 6-digit HS Classification, based on national authorities' data; sector classifications based on SITC-2.

The picture of the likely impact of the agreed on CET on tariff protection must, however, be regarded with caution and cannot be interpreted as the change in overall protection that will follow the CU implementation; other changes, notably changes in surtaxes, will also have an effect. Table 17 shows that the nominal rate of protection (NRP), which measures the protection effect of tariffs and surcharges, declines much less for Kenya and Tanzania than SAT and WAT. This table reflects more accurately the change in trade protection that will result from the implementation of the CU.

**Table 17: Change in Nominal Rate of Protection**

<i>Country</i>	<i>Current</i>	<i>CET</i>	<i>Difference in percentage points</i>	<i>Change Current to CET NRP (in %)</i>
Kenya	16.6	11.6	-5.0	-30.1
Tanzania	12.1	11.6	-0.6	-5.2
Uganda	7.4	11.6	4.2	56.4
EAC	12.1	11.6	-0.5	-4.0

*Source:* World Bank Staff calculations based on national authorities' data.

- *Caveats.* Most important, the impact of the CET on the level of protection will depend on the tariff categorization of the 474 goods still under negotiation, and possible surtaxes on “sensitive” goods. Therefore, tables 14, 15, 16, and 17 may change if the outcome of ongoing negotiations is very different from our assumption.

### **2.3 Effects on Import Flows**

The import flow changes reported in this section have been calculated using a partial equilibrium model. Model specifications are detailed in Annex 1. Box 2 summarizes the scope and limitations of a partial equilibrium analysis of trade policy, and the main assumptions in the model used for the EAC simulations.

## Box 2: Partial Equilibrium Models

Partial equilibrium (PE) models are powerful quantitative tools to simulate and measure the effects of changes in trade policy. They can measure the effects of specific changes in tariffs or other trade taxes on trade flows, revenue, prices, and some measures of welfare (consumer surplus and consumer surplus) at a given point in time. PE models allow for detailed product-by-product analysis and are fairly easy to set up and implement.

A limitation of PE models is that they are static in nature, allowing only for a comparative static comparison of pre- and post-policy change when all other variables are held constant. Thus, the dynamics that effect the change are not explicitly modeled, and complex variations in the set-up cannot be considered. Since the model looks at the partial effects—that is, for one set of markets—of a policy change, PE models do not capture important feedbacks between markets. Dynamic linkages and market feedbacks can be captured in general equilibrium (GE) models, which therefore are better tools if dynamic effects and market linkages are deemed important determinants of the outcome—for example, in the case of long-term projections. However, GE models are more complex to set up and require much more information than PE models, such as up-to-date input output tables or social accounting matrices. For policy analysis in developing countries, very often GE models cannot be meaningfully used because the necessary inputs are not available.

The PE model used for the simulations and calculations below is based on a model developed by Hoekman and others (2001), modified to incorporate domestic taxes into the import demand and revenue. The model has the following usual assumptions for PE models used for trade policy analysis: (a) supply and demand elasticities are assumed to be identical across countries; (b) supply elasticities are set at 1; (c) import demand elasticities are taken from Hoekman and others (2001) (see Annex 1 table A); (d) world markets are assumed to be perfectly competitive and integrated; (e) products traded are homogenous and perfect substitutes; (f) world prices are exogenous; (g) each good (at 6-digit HS Classification) represents only a small share of the economy, so there is no cross effect on other product markets; and (h) the model uses trade data, rather than domestic supply and demand data, so we do not explicitly model substitution between domestically produced and imported goods.

To model has been tailored to the specificities of the EAC CU using the following assumptions: (a) temporary tariffs on selected imports from Kenya to Tanzania and Uganda are in place in the first phase of the CU implementation; (b) these temporary tariffs will be gradually reduced and completely eliminated after five years (see Annex 3); (c) Tanzania will eliminate all suspended duties; (d) Uganda will change the law to turn its discriminatory excises into non-discriminatory ones;<sup>26</sup> (e) taxes and tariffs on petroleum will not change as a result of the CU implementation;<sup>27</sup> (f) a list of sensitive products (see table B in Annex 2) will receive tariff protection at the maximum rate and an additional surcharge of 10 percent;<sup>28</sup> and (g) the model does not consider exemptions, or customs leakage.

We use data collected by the governments of Kenya (Kenya Revenue Authority, Customs and Excise), Tanzania (Tanzania Revenue Authority, Excise and Customs Department), and Uganda (Uganda Revenue Authority, Customs Department) on trade flows, MFN tariff rates, preferential tariff rates, customs revenue, suspended duties, and excises at the 8-digit HS level. Furthermore, we received from the Kenya Revenue Authority the

<sup>26</sup> There are three reasons for the different treatment of Tanzanian suspended duties and Ugandan discriminatory excises. First, suspended duties are temporary and transitory and can be applied on a case-by-case basis; eliminating them serves to make the tax system more transparent. Second, Tanzanian suspended duties are directed at Kenyan imports in particular, and thus intended to discriminate not only against imports, but also against *certain* imports. Finally, Uganda could also eliminate all its discriminatory excises but we do not consider this a realistic scenario; most countries apply excises, albeit in a nondiscriminatory manner. It is more realistic to assume that Uganda will in the future charge its excises on domestic as well as imported goods. Changing from a regime with discriminatory excises not applied to domestic producers to a nondiscriminatory excise is likely to trigger supply responses by Ugandan producers. This important aspect is, however, not addressed here and would need to be part of a fuller analysis of the impact of EAC implementation on the economies of member states.

<sup>27</sup> We make the assumption of petroleum revenue neutrality because revenue from petroleum product imports is usually quite important, and countries are not likely to change their tariffs and taxes on petroleum products as they form a CU with non-oil exporting countries.

<sup>28</sup> The tax base for this surtax will be the CIF value and tariff rate.

negotiated CET and a list of “sensitive” and other products for which the three countries had so far not decided tariff classification. From the IMF we received the lists of the Kenyan imports on which Tanzania and Uganda will levy temporary tariffs due to be phased out over five years according to an agreed on schedule.

Table 18 below shows the baseline 2002 import flows into the EAC member states from within and outside the region, in values and shares calculated on the basis of the data received from the authorities in the three EAC countries. Results of our simulations reported below are always in relation to this baseline.

**Table 18: EAC Regional and Total Imports Baseline**

<i>In % unless otherwise indicated</i>	<i>Kenya</i>	<i>Tanzania</i>	<i>Uganda</i>	<i>EAC</i>
Total imports (in US\$ million)	3,449.7	1,512.3	917.9	5,880.0
Imports from third countries	99.6	95.1	74.8	94.6
Imports from EAC	0.4	4.9	25.2	5.4
Imports from Kenya	—	4.6	24.6	—
Imports from Tanzania	0.19	—	0.6	—
Imports from Uganda	0.22	0.3	—	—

— not applicable.

Source: World Bank Staff calculations based on 2002 data.

The results of our simulations are as follows:

**In the first year of implementation, the CU is estimated to moderately increase regional imports.** Table 19 shows that as a result of reducing the remaining regional barriers to trade, imports from other EAC members will only moderately increase in all three EAC member states compared with the 2002 base case. An increase in imports from Kenya is being kept in check by the temporary tariffs on selected imports imposed by Tanzania and Uganda. Imports sourced from Tanzania and Uganda increase a bit more, but since they start from a low base, the value of the increase is almost insignificant.

**Implementation of the CET will significantly increase third country imports into Kenya and Tanzania and reduce them for Uganda.** For Kenya and Tanzania, the tariff reduction following the CET implementation will result in significant increases of imports from outside the EAC region. For Kenya the increase will be 11.2 percent, and for Tanzania 14.6 percent.<sup>29</sup> In Uganda, however, where protection rises with implementation of the CET, imports from outside the EAC will decline by 1.3 percent.<sup>30</sup>

<sup>29</sup> We notice that the increase in third country imports is bigger in Tanzania than in Kenya, although tables 14, 15, 16, and 17 show that protection declines by more in Kenya than in Tanzania. Still, our result is not inconsistent with this. Table 15 shows that tariffs decline for more lines in Tanzania than in Kenya, but more important is the fact that import elasticities are different for each good, and the recorded changes in import flows indicate that the tariff reduction in Tanzania is likely to have affected goods with more elastic import demand (see Annex 1 with a list of import elasticities by sectors). A similar explanation can be offered for the fact that imports from third countries to Kenya and Tanzania increase considerably while declining moderately for Uganda, although the changes in MFN tariff rates (increase or decrease) are commensurate.

<sup>30</sup> This result would be different if Uganda was to eliminate all its discriminatory excise taxes.



**Table 19: Import Changes with Top Rate at 25 Percent and Temporary Tariffs on Imports from Kenya**

<i>Changes (in %)</i>	<i>Kenya</i>	<i>Tanzania</i>	<i>Uganda</i>	<i>EAC</i>
Total imports	11.16	13.94	-0.91	9.99
Imports from third countries	11.20	14.57	-1.27	10.53
Imports from EAC	2.18	1.66	0.15	0.59
Imports from Kenya	—	1.52	0.08	—
Imports from Tanzania	3.90	—	2.78	—
Imports from Uganda	0.68	3.87	—	—

— not applicable.

Source: World Bank Staff simulations based on 2002 data.

**The increase of third country imports implies cheaper imports for Kenyan and Tanzanian consumers and producers.** For Kenya and Tanzania, the CET schedule is more liberal than the current trade policy regime. Thus, CU implementation will make third country imports cheaper, and demand for such imports will surge. For imported consumption goods, consumer surplus will increase as a result of the price decline. For producers using imported inputs production costs will decline, and producer surplus will increase. Producers of goods that compete with imports will see their profit margin shrink because of the decline in the domestic price. In the aggregate, these effects should lead to a welfare increase for the Kenyan and Tanzanian economies.

**Conversely, in Uganda, the CU implementation will increase prices for imported goods.** This is because the CET in Uganda is higher than the current tariff schedule, and the CU implementation thus leads to more expensive imports, which will cause demand to contract. Consumer surplus for consumers of import goods will decline, as will producer surplus for producers using imported inputs. Producers of import-competing goods will see their producer surplus increase. In the aggregate, the decline in third country imports signifies a welfare loss.

**Elimination of temporary tariffs would increase regional imports but further reduce third country imports into Uganda.** Table 20 shows import changes with respect to the base case that would occur if the EAC was to immediately implement the second phase of the CU wherein all transitional tariffs against imports from Kenya will be eliminated. The change in total imports will be the same as in the first phase since in a small CU, import prices will be determined by the world market and the MFN CET schedule, which is the same in the first and second CU phase. Comparing tables 19 and 20, we see that elimination of Ugandan and Tanzanian tariffs on Kenyan imports would result—as expected—in higher increases of imports from Kenya. For Tanzania, the increase would be twice as large at 3.07 percent; for Uganda, imports from Kenya increase by 6 percent. Since total import changes are the same in phase one and two, the higher increase of regional imports means a lower increase in third country imports. The difference is minimal for Tanzania where third country imports still increase by about 15 percent. For Uganda, however, the decline in third country imports is much larger if temporary tariffs on Kenyan imports are not in place. The reason for this difference is that imports from Kenya are a much larger fraction of total imports for Uganda than for Tanzania.

**Table 20: Import Changes with Top Rate at 25 Percent and No Temporary Tariffs on Imports from Kenya**

<i>Changes (in %)</i>	<i>Kenya</i>	<i>Tanzania</i>	<i>Uganda</i>	<i>EAC</i>
Total imports	11.16	13.94	-0.91	9.99
Imports from third countries	11.20	14.50	-3.26	10.26
Imports from EAC	2.18	3.12	6.05	5.20
Imports from Kenya	—	3.07	6.14	—
Imports form Tanzania	3.90	—	2.78	—
Imports from Uganda	0.68	3.87	—	—

— not applicable.

Source: World Bank staff simulations based on 2002 data.

**The welfare implication of an increase in regional trade following a CU formation is ambiguous.** By dismantling regional trade barriers, formation of a CU is expected to increase trade between the member countries. An important issue is *why* trade expands. If trade expands following international comparative advantage we speak of “trade creation,” a term originally coined by Viner (1950) who developed the theory of economic integration. If trade is created, a more competitive producer from within the CU replaces a less competitive domestic one, which increases efficiency of resource allocation and thus reduces consumer prices, and increases welfare. The formation of a CU can, however, also reduce the efficiency of resource allocation when trade between CU members expands because of the preferential market access given to CU members as compared to the rest of the world. Viner named this phenomenon “trade diversion” because imports are shifted from the most efficient source to a more expensive one within the CU. Trade diversion is not driven by competitive advance and therefore leads to a distortion in resource allocation, little or no change in consumer prices, a decline in tariff revenue,<sup>31</sup> and a decline in (overall) welfare. The balance between trade creation and trade diversion is an important determinant of the overall benefits of a CU.

**Does the EAC CU lead to trade creation or trade diversion between partner states?** The partial equilibrium model we use to calculate the changes in import flows does not allow us to address this question. For such an analysis we would need to include domestic supply functions and change the assumption that the MFN CET determines all import prices. In fact, this assumption *imposes* on the model that regional preferences will cause trade diversion. Earlier, we argued that regional tariff preferences would have an effect on import prices and import demand only if a large fraction of imports is sourced regionally. Looking at the composition of imports thus allows us to check whether this assumption is likely to be realistic or not. Table 21 shows what fraction of regional imports is in goods where the EAC countries import from a mix of third countries and regional sources.<sup>32</sup> We see that in all countries regional imports are dominated by imports from third countries. Nearly 100 percent of all regional trade flows are in goods where importing countries source predominately from third countries, and only a small fraction where EAC partners are sole suppliers of import products. It is therefore likely that all increases in regional trade are driven by substitution of regional for third country imports, that is, trade diversion.

<sup>31</sup> The revenue effect of regional trade integration is an important aspect of the welfare implication; it will be discussed in the next section.

<sup>32</sup> We looked at each tariff line to determine if EAC countries are the sole source for imports into other EAC member states. We then summed the import value of “sole supplier” imports and divided them by total imports. It turned out that Tanzania and Uganda do not supply any imports into Kenya in the case where there are no third country imports also registered in the same tariff line. For all other bilateral EAC flows there exists “sole supplier” imports, but the value is very low compared with total imports.

**Table 21: Trade Creation or Trade Diversion**

<i>From:</i>	<i>To:</i>	Fraction of regional imports where there are also third country imports in the same tariff line (in % of total)		
		<i>Kenya</i>	<i>Tanzania</i>	<i>Uganda</i>
Kenya		—	98.98	98.53
Tanzania		100	—	93.98
Uganda		100	99.98	—

— not applicable.

*Source:* World Bank Staff estimates based on 2002 data.

**Revising the CET top rate to 20 percent would be desirable for all EAC member states.** Table 21 shows import changes compared with the pre-CU base case that would occur if the EAC would immediately go to the last phase of the CU with all transitional tariffs against imports from Kenya eliminated and the top tariff rate revised downward to 20 percent. Comparing tables 20 and 22, we see that the lower top rate would trigger—as expected—larger import changes from third countries for Kenya and Tanzania. For Uganda, imports from third countries would still decline relative to the pre-CU situation, but by much less than with the 25 percent top tariff. The increase in regional imports dominates the decline in third country imports, so that total imports increase also for Uganda, though only minimally. We observe that regional imports, which are all trade diversion, are less in table 22 compared with table 20.

**Table 22: Import Changes with Top Rate at 20 Percent and No Temporary Tariffs on Imports from Kenya**

<i>Changes (in %)</i>	<i>Kenya</i>	<i>Tanzania</i>	<i>Uganda</i>	<i>EAC</i>
Total imports	12.28	15.57	0.83	11.34
Imports from third countries	12.33	16.25	-0.84	11.72
Imports from EAC	1.45	2.35	5.79	4.8
Imports from Kenya	—	2.31	5.88	—
Imports from Tanzania	2.81	—	2.64	—
Imports from Uganda	0.28	2.91	—	—

— not applicable.

*Source:* World Bank staff simulations based on 2002 data.

**Studies of existing CUs strongly recommend that CETs should lower the pre-CU MFN tariff levels for all CU members.** Schiff and Winters (2003) compiled studies on the trade and welfare effects of CUs across the world and concluded that the elimination of regional trade integration and tariff between small developing countries is likely to generate mostly trade diversion and little trade creation. However, in many cases the formation of regional trade blocs between developing countries has been accompanied by significant tariff liberalization, and reduction in MFN tariff rates has resulted in trade creation and thus positive welfare effects for the CU member states. Results of our simulations echo this finding; we see that the dismantling of regional trade barriers leads to significant trade diversion for Uganda. Therefore, the EAC CU would lead to less skewed welfare effects if the CET was lower, at least as low as the current Uganda tariff schedule with rates of 0, 7, and 15 percent.

In the next section, we use our results from the imports effects of the CU implementation to calculate revenue implications of the CET.

## 2.4 Revenue Implications

From our simulations of the changes in *import flows* that are likely to follow the CU implementation we concluded that, for Kenya and Tanzania, the planned EAC CU is likely to be welfare enhancing because of cheaper imports for consumers and producers; Uganda is likely to be worse off.

Another welfare effect of the CU, which should ultimately guide the decisions on the CU structure and the CET, are revenue implications of changes in trade policy.

A detailed account follows of how the implementation of the CU as currently planned—with a CET of 0, 10, 25 and temporary tariffs on Kenyan imports—would affect customs revenue collection.

**Customs revenue baseline.** The calculation of the revenue effect of CU implementation requires an additional step compared with the calculation of the changes in import flow in section 2.3. For the import changes, we used as a baseline the data on import flows provided by the government authorities. For the customs revenue changes, we need to *calculate* the baseline using data on import flows, tariff schedules, excises, and VAT rates. The base customs revenue consists of three categories:

- tariff revenue (current CET schedule applied on CIF value of imports);
- excise revenue on imports (current excises rates applied on CIF value plus tariffs); and
- VAT revenue on imports (VAT rates<sup>33</sup> applied on CIF value plus tariffs plus excises/suspended duties).

We do not include suspended duties in the revenue baseline because of their temporary and transitory nature. However, because in 2002 suspended duties were a significant fraction of Tanzanian customs revenue, we trace the effect of their elimination.

Note that the resulting baseline for 2002 is *potential* customs revenue since we are not taking into consideration tariff exemptions, tax exemptions, or leakage. Therefore, the reported revenue figures are likely to be considerably larger than what has actually been collected by the customs authorities and what we report in table 23. We therefore present revenue implications in terms of percentage changes of total (baseline) customs revenue as well as in U.S. dollars. The relative change in customs revenue will be a more precise measure in the presence of significant exemptions and leakage than the difference in dollar revenue.<sup>34</sup> Table 23 shows the customs revenue baseline for Kenya, Tanzania, Uganda, and for the EAC as a whole; a separate column shows suspended duty revenue for Tanzania.<sup>35,36</sup>

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<sup>33</sup> VAT rates in the EAC are 16 percent in Kenya, 20 percent in Tanzania, and 17 percent in Uganda.

<sup>34</sup> If the extent of exemptions and leakages are not correlated to the tariff level, the percentage change of potential revenue would be a precise measure for the change in actual revenue. However, it may be more realistic to assume that exemptions and leakage increase with the tariff level. If this is true, the reported percentage change in revenue will overstate the change in actual revenue for Kenya and Tanzania, and understate it for Uganda.

<sup>35</sup> The shares in sources of customs revenue in table 23 differ markedly from those in table 13. The reason is that table 13 shows sources of *actual* revenue, while table 23 presents—as mentioned above—sources of *potential* customs revenue that would be collected in the absence of leakage and exemptions. We notice that excise duties are a much more important fraction of actual revenue indicated by the potential revenue.

**Table 23: Customs Revenue Baseline**

Customs revenue in US\$ million						
<i>Country</i>	<i>Tariff revenue from third countries</i>	<i>Tariff revenue from EAC countries</i>	<i>Excises on imports*</i>	<i>VAT on imports</i>	<i>Total customs revenue</i>	<i>Tanzania suspended duties</i>
Kenya	332.8	0.5	8.2	606.7	948.2	—
Tanzania	161.4	2.1	0.7	278.8	443.1	20.8
Uganda	47.1	4.3	4.5	127.7	183.7	—
EAC	541.3	7.0	13.4	1,013.2	1,575	—
Customs revenue in shares of total						
<i>Country</i>	<i>Tariff revenue from third countries</i>	<i>Tariff revenue from EAC countries</i>	<i>Excises on imports</i>	<i>VAT on imports</i>	<i>Total customs revenue</i>	<i>Tanzania suspended duties</i>
Kenya	35.1	0.1	0.9	64.0	100	—
Tanzania	36.4	0.5	0.2	62.9	100	4.5
Uganda	25.7	2.4	2.4	69.5	100	—
EAC	34.4	0.4	0.8	64.3	100	—

\* For Kenya, excise revenue on imports also includes the revenue from suspended duties on petroleum products.

Source: World Bank staff calculations based on 2002 data.

As a next step we use the import flow simulations for the first year of the CU implementation as reported above, applying the new CET as well as other changes in trade policy agreed on between the EAC member countries on the simulated import flows.<sup>37</sup> This way, we calculate the customs revenue that would be collected if the CU were implemented. Comparing the results with the baseline yields the expected changes.

**In the first year CU implementation is likely to cause moderate customs revenue losses.** Table 24 shows that the CET is likely to cause tariff revenue reduction of 11 percent of customs revenue in the EAC region.

**In Kenya**, the revenue change is most pronounced at 15.7 percent, which corresponds to about US\$150 million of potential customs revenue. If we look at the customs revenue subcategories, we notice that tariff revenue declines as a result of the liberalization of the tariff schedule. The significant increase in imports, however, leads to an increase in VAT collection that partly offsets the revenue loss.

**In Tanzania**, we see a revenue drop of 4.2 percent of customs revenue or just below US\$19 million, following a similar pattern as in Kenya, although the overall effect is more moderate. If we include the revenue loss from elimination of suspended duty, the decline in revenue would be twice as large. The elimination of suspended duties will thus have a significant effect on revenue for Tanzania; to avoid it, the suspended duties could be transformed into nondiscriminatory excise taxes.

<sup>36</sup> We note that revenue from excises is minimal in all three countries for the potential customs revenue; this is a marked difference to the shares reported in table 13 above. The difference in the shares of excise duty revenue from imports may be either due to data reporting discrepancies or explained by the fact that table 13 shows potential rather than actual customs revenue.

<sup>37</sup> In addition, we have to keep in mind the assumption that “sensitive” goods for which policies are still under negotiation will be in the top tariff category, with an additional surtax of 10 percent. For the revenue effects the surtax will be lumped reported together with the tariff revenue.

The revenue loss will be smallest for **Uganda** where it comes to 2.9 percent of customs revenue or US\$5.3 million. The largest share of revenue loss is caused by declining tariff revenue from third countries where the increase in MFN tariff rates does not compensate for the decline in imports. Similarly the increase of the tariff part of the VAT tax base does not offset the decline in the CIF value of imports, causing a slight decline in VAT receipts from imports in Uganda.

**Tariff barriers against imports from Kenya increase in the first year of the CU.** It should be noted that as a result of the temporary tariffs on selected Kenyan imports, tariff revenues from EAC countries increase for Tanzania and Uganda in the first year of CU implementation compared with the 2002 baseline. This indicates that the temporary tariffs are higher than the current EAC preferential tariffs applied by Tanzania and Uganda on imports from Kenya. However, total imports from Kenya do not decline as a result of this. In Tanzania, the reason for the slight increase in imports from Kenya in the first phase of CU implementation (see table 19) is the phaseout of discriminatory suspended duties. In Uganda, imports from Kenya increase marginally since the increase in MFN tariff rates on third country imports is higher than the increase in tariff protection against imports from Kenya.

**Table 24: Revenue Changes with Top Rate at 25 Percent and Temporary Tariffs on Imports from Kenya**

<i>Country</i>	Change in US\$ million					<i>As share of total customs revenue</i>
	<i>Tariff revenue from third countries</i>	<i>Tariff revenue from EAC countries</i>	<i>VAT revenue</i>	<i>Excise revenue</i>	<i>Total customs revenue</i>	
Kenya	-180.3	-0.5	31.6	0.1	-149.1	15.7
Tanzania	-53.7	3.4	31.5	0.1	-18.8	4.2
Uganda	-4.5	0.8	-1.4	-0.1	-5.33	2.9
EAC	-238.5	3.6	61.7	0.1	-173.2	11.0

*Source:* World Bank staff simulations based on 2002 data.

The next tables provide more detailed information on the sectoral breakdown of customs revenue changes following the CU implementation for Kenya, Tanzania, and Uganda.

For Kenya we observe that the drop in tariff revenue would come mainly from four sectors: machinery and transport equipment, food and live animals, crude materials, and manufactured goods. For machinery and transport equipment, which make up a large share in Kenyan imports, the revenue loss is likely to be caused by the large decline in the MFN tariff rates. For food and live animals, the change in MFN tariff protection increases on average, so the loss in tariff revenue must be caused by some tariff lines within the sector for which the rate is reduced, or from a strong demand reaction to MFN tariff increases. For crude materials and manufactured goods the losses are likely to stem from the drop in average MFN tariff rates in these sectors.

**Table 25: Kenya: Customs Revenue Change by Sector**

<i>Sector</i>	<i>Share of total imports (%)</i>	<i>Change in tariff protection*</i>	<i>Change in customs revenue</i>	
			<i>In US\$ million</i>	<i>% of customs revenue</i>
Food and live animals	6.5	40	-40.0	-4.22
Beverages and tobacco	1.2	-45	-0.1	-0.01
Crude materials, inedible, except fuels	4.1	-61	-21.1	-2.22
Mineral fuels, lubricants and related materials	1.3	-65	1.9	0.2
Animal and vegetable oils, fats and waxes	2.8	-48	-0.8	-0.09
Chemicals and related products.	15.9	-77	-14.0	-1.48
Manufactured goods classified chiefly by material	14.1	-38	-19.5	-2.05
Machinery and transport equipment	48.1	-49	-43.5	-4.59
Miscellaneous manufactured articles	5.9	-21	-0.9	0.09
Commodities and transactions not classified elsewhere	0.1	69	0.0	0.0
Total	100	—	-149.2	-15.73

\* See table 16.

— not applicable.

Source: World Bank staff simulations based on 2002 data.

In Tanzania, the revenue loss is mainly concentrated in the machinery and equipment sector, whereas manufactured goods provide an increase in revenue. Losses are also registered in food and live animals, in crude materials, and to a lesser extent in chemicals. The loss in machinery, which accounts for 40 percent of imports to Tanzania, is likely to result from the decline in average MFN tariff rates. The drop in revenue from food and live animals and from crude materials, however, is likely to come from tariff lines where there is a large downward divergence in MFN tariff change from the mean, or from strong demand reaction, since for both sectors average MFN tariff protection increases slightly. As far as the sectoral composition of the loss of suspended duty revenue is concerned, we see that the suspended duties are concentrated in three sectors: food and live animals, animal and vegetable oils, and manufactured goods. As noted above, these losses can be avoided if suspended duties were replaced by nondiscriminatory excises.

**Table 26: Tanzania: Customs Revenue Change by Sector**

<i>Sector</i>	<i>Share of total imports (%)</i>	<i>Change in tariff protection*</i>	<i>Change in customs revenue</i>		<i>Revenue loss from elimination of suspended duties (%)</i>
			<i>In US\$ million</i>	<i>% of customs revenue</i>	
Food and live animals	12.2	1	-9.0	-2.02	23
Beverages and tobacco	0.8	-29	-0.4	-0.09	0.2
Crude materials, inedible, except fuels	3.1	6	-7.9	-1.79	0.0
Mineral fuels, lubricants and related materials	0.5	n.a.	0.1	0.02	0.0
Animal and vegetable oils, fats and waxes	4.2	-25	-0.8	-0.18	35.2
Chemicals and related products.	14.1	-36	-3.7	-0.83	1.3
Manufactured goods classified chiefly by material	18.5	-16	18.2	4.12	30.6
Machinery and transport equipment	40.0	-39	-17.1	-3.85	5.0
Miscellaneous manufactured articles	6.7	-10	1.7	0.39	4.7
Commodities and transactions not classified elsewhere	0.0	-6	0.0	0.0	0.0
<b>Total</b>	<b>100</b>	<b>-48</b>	<b>-18.78</b>	<b>-4.24</b>	<b>100</b>

\* See table 16.

Source: World Bank staff simulations based on 2002 data.

In Uganda, the sectors where the largest revenue declines occur are crude materials, chemicals, and animal and vegetable oils; revenue increases are registered for food and live animals and manufactures. In crude materials, the loss is likely to be caused by large intrasectoral variations of tariff changes, and—quite possible in the case of Uganda—by large import demand reductions resulting from increases in MFN tariff rates. Significant import decline is also the most likely to cause for the decline in customs revenue for animal and vegetable oil where MFN tariffs increase by more than 100 percent.



**Table 27: Uganda: Customs Revenue Change by Sector**

<i>Sector</i>	<i>Share of total imports (%)</i>	<i>Change in tariff protection*</i>	<i>Change in customs revenue</i>	
			<i>In US\$ million</i>	<i>% of customs revenue</i>
Food and live animals	21.6	168	2.0	1.09
Beverages and tobacco	0.2	18	0.0	0.01
Crude materials, inedible, except fuels	4.3	6	-4.7	-2.47
Mineral fuels, lubricants and related materials	0.9	1	-0.5	-0.28
Animal and vegetable oils, fats and waxes	3.4	102	-1.6	-0.88
Chemicals and related products.	14.8	-46	-2.5	-1.34
Manufactured goods classified chiefly by material	20.6	116	-1.0	-0.56
Machinery and transport equipment	25.3	69	1.2	0.67
Miscellaneous manufactured articles	8.8	79	1.8	0.96
Commodities and transactions not classified elsewhere	0.0	657	0.0	0.00
<b>Total</b>		<b>79</b>	<b>-5.3</b>	<b>-2.90</b>

\* See table 16.

Source: World Bank staff simulations based on 2002 data.

**Implementation of the second phase of the CU would lead to higher revenue losses for Tanzania and Uganda.** The constellation in the second phase is the same for Kenya compared with the first, so the revenue implications compared to the pre-CU baseline are identical in tables 24 and 28. For Tanzania, the customs revenue loss would be 6.3 percent compared with the pre-CU situation, mainly because of the loss from temporary tariffs on Kenyan imports. Losses from tariff receipts from third countries are also larger than for the first phase scenario because of trade diversion. VAT on imports is also slightly less in the second phase because of the trade diversion; that is, the overall CIF value of imports declines as duty free imports from Kenya replace dutiable third country imports. For Uganda, the drop in customs revenue is much larger for the second phase scenario, going from 2.9 percent to 8.6 percent of customs revenue compared with the base case. The reason is again the elimination of temporary tariffs on selected Kenyan imports and trade diversion. Duty-free imports from Kenya replace third country imports on which Uganda was collecting MFN tariffs before the implementation of the full CU.

**Table 28: Revenue Changes with Top Rate at 25 Percent and No Temporary Tariffs on Imports from Kenya**

Country	Change in US\$ million					As share of total customs revenue
	Tariff revenue from third countries	Tariff revenue from EAC countries	VAT revenue	Excise revenue	Total customs revenue	
Kenya	-180.3	-0.5	31.6	0.1	-149.1	15.7
Tanzania	-56.2	-2.1	30.4	0.1	-27.8	6.3
Uganda	-10.5	-4.3	-0.8	-0.3	-15.8	8.6
EAC	-247.0	7.0	61.3	0.1	-192.7	12.2

Source: World Bank staff calculations based on 2002 data.

**Implementing the third phase would yield a lower customs revenue loss for Uganda compared with the second phase scenario.** For Uganda, the loss in customs revenue would be 8.0 percent relative to the base case for the top rate of 20 percent compared to 8.6 percent for the top rate of 25 percent. The revenue decline would be lower because the lower top tariff would lead to less trade diversion by imports from Kenya. The difference between the revenue reduction of less than 3 percent in the first phase relative to the base case compared with the scenarios when temporary Kenyan tariffs are phased out shows that trade diversion significantly reduces customs revenue collection for Uganda.

For Kenya, the lower top tariff would lead to a slightly higher loss than the 25 percent tariff rate, with a drop of customs revenue by 17 percent compared with 15.7 percent relative to the base case. For Tanzania, the difference between going from the base case to the second or the third phase would also be small: tariff revenue would decline by 7 percent rather than by 5.8 percent.

**Table 29: Revenue Changes with Top Rate at 20 Percent and No Temporary Tariffs on Imports from Kenya**

Country	Change in US\$ million					As share of total customs revenue
	Tariff revenue from third countries	Tariff revenue from EAC countries	VAT revenue	Excise revenue	Total customs revenue	
Kenya	-196.3	-0.5	34.8	0.3	-161.8	17.1
Tanzania	-62.8	-2.1	33.6	0.1	-31.2	7.0
Uganda	-7.8	-4.3	-2.8	0.4	-14.6	8.0
EAC	-273.9	-7.0	44.1	0.8	-209.1	12.0

Source: World Bank staff calculations based on 2002 data.

**No asymmetric revenue effects.** The estimations presented in this subsection do not support concerns of asymmetric revenue effects of a CU in the EAC, in favor of the “large” partner (Kenya) and to the detriment of the relatively smaller members Tanzania and Uganda. This result—that the revenue effects of the proposed CU will not result in asymmetric revenue losses—is similar to conclusions in earlier studies.<sup>38</sup> This question has been

<sup>38</sup> Rajaram and others (1999) used a partial equilibrium model similar to ours to simulate four different scenarios for the CET. Their result for a scenario with 0, 10, and 20 percent bands is somewhat higher than ours, predicting losses of 23 percent of customs duty revenue for Kenya, 49 percent for Tanzania, and 6 percent for Uganda. A similar result for Uganda (5 percent duty revenue decline) is simulated by Maxwell Stamp (2003).

discussed in the context of the need for a compensatory fund through which imbalances in the benefits of the CU implementation could be adjusted. While our results show that in the short term there will be little or no imbalances as far as revenue implications are concerned, our results also show that benefits from the implementation of the CU will not accrue equally to all EAC member states.

**Winners and losers.** Our simulation of changes in import flows from implementation of the CET and the calculation of the consequences for revenue collection allows us to draw some conclusions on the likely distribution of benefits from regional integration. Imports from third countries will significantly increase for Tanzania and Kenya, which will have a positive welfare effect through an increase of consumer surplus and producer surplus for producers using imported inputs. Producers of import competing goods will see their profit margin shrink under the competition of imports. The overall effect will be increased welfare for the economy as a whole, although there will be winners and losers.<sup>39</sup> Cheaper imports, especially of goods consumed by the poor, and inputs for subsistence farmers will help poverty alleviation. Structural adjustment for sectors that will become less competitive needs to be well understood in advance so that government can develop a strategy to avoid displaced producers or workers falling into poverty. The situation is different for Uganda where for two CU implementation scenarios total imports decline compared with the pre-CU situation. This implies a negative economy-wide welfare effect, distributed as follows: (a) Consumers surplus and surplus for producers using imported inputs will decline whereas producers of import competing goods will benefit from the higher protection; (b) the gain for these producers reflects, however, an inefficient resource allocation. In addition, Uganda will suffer welfare losses through foregone revenue because of trade diversion.<sup>40</sup> This revenue will be “transferred” to Kenyan and to a lesser extent Tanzanian exporters, who will see producer surplus increase as they become more competitive in the Ugandan market because of duty-free market access. Thus, even for the final CU implementation stage with the top tariff of 20 percent, the Ugandan economy is likely to lose compared to the pre-CU situation: although overall imports increase, third country imports decline, and regional imports imply a loss of revenue.<sup>41</sup>

**The possible need for a compensatory fund** to address cost/benefit imbalances in the three countries has been discussed extensively during the EAC CU negotiations, in particular since the first attempt of an EAC CU had failed to address concerns in Tanzania and Uganda that Kenyan exporters got the lion share of the benefits from regional free trade, and that industries started to migrate from Tanzania and Uganda to Kenya to benefit from economic linkages. A couple of studies that addressed the question of whether a compensatory mechanism was necessary for the “new” EAC CU concluded that the relatively even distribution of revenue losses from CU implementation implied that there is no need for such a mechanism.<sup>42</sup> However, the narrow focus on short-term revenue implications does not

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<sup>39</sup> For a more detailed discussion of what makes it more likely that the formation of a CU (or more generally a PTA) is welfare enhancing see Schiff (1997).

<sup>40</sup> These are the typical welfare effects from liberalization/protection; for a more detailed discussion see Vousen (1990).

<sup>41</sup> DeRosa and others (2003) using a Vinerian model to simulate the effects of the EAC customs union find welfare effects that are qualitatively similar to our results, although the quantitative results differ significantly, mainly because DeRosa and others are using 1999 and 2000 data from international databases.

<sup>42</sup> Busse and Shams (2003) conclude that the effect of the CU implementation on the three countries’ trade balances with each other is not significant, and that therefore there is no need for a compensatory fund or mechanism. The same result was found by LawrenceTax and others (2002) who conclude that neither revenue

take into consideration the overall welfare implications of the CU implementation elaborated above. Furthermore, even if there is agreement that in the short term no compensation is necessary, it might be worthwhile to implement a review mechanism that will periodically reassess if compensation may become necessary in the medium or long term, for example, when investment location may lead to regional imbalances.

**Revenue generation will have to be adjusted.** Our results raise the concerns that the three countries may need to adjust their expenditure plans or revenue-generating activities to accommodate the modest decline in customs duties revenue. Each country will have to find its best strategy to accommodate the losses. Where additional revenue will be sought should depend on the relative cost of raising it. In the remainder of this working paper we discuss measures within the narrow customs area that could be taken to offset the loss that will be caused by the CET implementation.

## 2.5 Leakage and Exemptions

**A country's actual revenue falls short of potential revenue,** which is what we have calculated above; namely, revenue that would be generated if all imports were taxed with the applicable tariff. Musonda (1998) calculates that actual tariff revenue is only about 50 percent of potential revenue in Tanzania. For Kenya, Rajaram and others (1999) cite 1995–96 figures that indicate actual tariff revenue collections of 30 percent of the potential.

Revenue collection will legitimately fall below the potential because of official exemptions. We estimate below that official exemptions are most significant for Kenya and least significant for Uganda, which in 1998 removed the legal authority of the finance minister to offer discretionary exemptions. Furthermore, there are likely to be “unofficial” exemptions, that is, goods released without paying duty, or much less than should be paid because of weak customs control. Finally the value of imports into the country may be underestimated because of smuggling or diversion of transit goods into the domestic market.

**Addressing “unofficial” exemptions and smuggling would be key to reducing revenue loss.** In the context of the implementation of the CU, the three countries should address the weaknesses in their customs administration, border control, and transit arrangements to reduce losses of customs revenue collection. Owing to the sensitivity of this issue and the difficulty of finding data, there are few estimates of the dimension of revenue loss due to corruption and smuggling.<sup>43</sup> As a benchmark, we provide estimates of the magnitude of official exemptions for Tanzania in table 30 below.<sup>44</sup>

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nor balance of payments (BoP) effects of CU implementation are large enough to warrant the setup of a compensatory fund.

<sup>43</sup> Rajaram and others (1999) cite revenue losses of US\$67 million for Uganda in 1996–97 due to smuggling. However, much of the smuggling is supposed to be in regional trade, and elimination of regional tariffs will thus be an incentive for erstwhile smugglers to enter official transactions with their goods. This would imply an increase in customs duty revenue (through domestic taxes collected on imports). Schiff (1997) mentions that formation of a CU (or other form of PTA) may be particularly beneficial in the context of smuggling.

<sup>44</sup> We do not have similar information for Kenya or Uganda. However, previous reports on the subject of the EAC revenue collection (for example, N'geno (2002)) stressed that customs exemptions are significant in Kenya and Tanzania, but much less so in Uganda.

In fiscal year 2000–01, the largest share of exemptions was granted to private companies and individuals (28.2 percent), followed by government institutions (17.3 percent)<sup>45</sup> and beneficiaries of investment promotion related activities (17 percent).<sup>46</sup>

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<sup>45</sup> To be precise, goods procured by government are not “exempt” from duties, but “non-dutiable”; the effect is the same.

<sup>46</sup> Many of these exemptions are in the mining sector, and the government of Tanzania is currently addressing the problem with a view to significantly curbing exemptions.

**Table 30: Tanzania: Exemptions by Category of Beneficiary (percent of total)**

<i>Exemptions</i>	<i>1996–97</i>	<i>1997–98</i>	<i>1998–99</i>	<i>1999–00</i>	<i>2000–01</i>
International Trade Customs Department					
Government institutions	12.6	12.1	10.8	14.0	17.3
Parastatal organizations	17.1	14.4	1.3	2.5	1.4
Religious organizations	7.0	5.3	3.6	4.5	6.9
NGOs	9.2	10.2	15.6	16.9	13.1
Private companies and individuals	34.2	32.4	21.7	35.2	28.2
IPC/ITC	5.2	8.9	7.3	13.7	17.0
Subtotal customs	85.3	83.3	60.3	86.8	83.8
VAT department					
VAT exemptions	10.1	7.4	39.7	13.2	16.2
Excise duty exemptions	3.2	3.5			
Sales tax rebates	1.5	5.8			
Subtotal VAT	14.7	16.7	39.7	13.2	16.2
Total (in Tsh mio)	108.8	207.2	269.1	212.1	196.6

*Source:* N’geno (2002).

Below, we use a simple method to calculate the likely magnitude of tariff leakage in Kenya, Tanzania, and Uganda. We compare actual customs revenue data provided by the governments with potential revenue that would be collected if all imports were levied with the average MFN tariff. The losses from tariff revenue are compounded by the second-order effect on VAT collection.<sup>47</sup>

**Leakage leads to significant losses in customs duty revenue in EAC countries.** Tables 31, 32, and 33 provide rough estimates of the revenue impact of customs exemptions and other leakages in the EAC countries.

In Kenya, we estimate that customs exemptions amount to 22 percent of potential customs revenue. This is more compared with the loss expected from the EAC CU implementation calculated above. Therefore, addressing customs leakage—both corruption and official exemptions—could very well completely offset the expected losses in tariff revenue in Kenya. A further action to increase revenue collection would be to scrutinize VAT exemptions (not shown here) which are also significant; the effective VAT rate of 7.6 percent is less than half of the official rate of 16 percent.

<sup>47</sup> Note that the “model” used to calculate the leakage effect is not the partial equilibrium model we used earlier. This is a simple, informal calculation to estimate the extent of the loss.

**Table 31: Customs Revenue Impact of Exemptions in Kenya, 2002**

<i>Exemptions</i>	<i>US\$ millions</i>	<i>Percent</i>
Impact of exemptions on customs duty revenue		
A: Value of imports	3,631	
B: Weighted official rate of customs duties		10.9
C: Potential revenue from customs duties (AxB)	396	
D: Effective rate of customs duties (E/A)		5.6
E: Effective revenue from customs duties	202	
F: Revenue loss in customs duties due to exemptions (C – E)	194	
Impact of exemptions on VAT revenue		
G: Effective excise revenue	267	
H: Effective VAT revenue from imports	312	
J: VAT base (A+E+G)	4,100	
K: Effective VAT rate (H/J) applied on imports		7.6
L: Revenue loss in VAT due to exemptions (KxF)	15	
Impact of exemptions on customs revenue		
M: Total revenue loss due to exemptions (F+L)	209	
N: As share of total potential customs revenue		22

*Source:* World Bank Staff calculations based on 2002 data from government authorities.

In Tanzania, exemptions amount to 9.4 percent of potential customs revenue, which is less than in Kenya, but again more than the revenue losses expected from the CU implementation. We also notice that the effective VAT rate of 4.4 percent is much below the official rate of 20 percent which indicates that the scope of increasing revenue—not just from imports—from addressing VAT leakages may be very significant in Tanzania.

**Table 32: Customs Revenue Impact of Exemptions in Tanzania, 2002**

<i>Exemptions</i>	<i>US\$ millions</i>	<i>Percent</i>
Impact of exemptions on customs duty revenue		
A: Value of imports	1,855	
B: Weighted official rate of customs duties		13.0
C: Potential revenue from customs duties (AxB)	242	
D: Effective rate of customs duties (E/A)		10.9
E: Effective revenue from customs duties	202	
F: Revenue loss in customs duties due to exemptions (C – E)	40	20
Impact of exemptions on VAT revenue		
G: Effective excise revenue	42	
H: Effective VAT revenue from imports	91	
J: VAT base (A+E+G)	2,098	
K: Effective VAT rate (H/J) applied on imports		4.4
L: Revenue loss in VAT due to exemptions (KxF)	1.7	
Impact of exemptions on customs revenue		
M: Total revenue loss due to exemptions (F+L)	41.7	
N: Of total potential customs revenue		9.4

*Source:* World Bank Staff calculations based on 2002 data from government authorities.

As noted above, Uganda has a moderate exemptions regime and we find that only 5.2 percent of potential customs revenue are lost because of tariff leakage. We also note that the effective VAT rate is much closer to the actual rate of 17 percent. Thus, there may be less scope of reducing leakage in Uganda. However, the foregone customs revenue is still more than the revenue loss from the CU implementation.

**Table 33: Customs Revenue Impact of Exemptions in Uganda, 2002**

<i>Exemptions</i>	<i>US\$ millions</i>	<i>Percent</i>
Impact of exemptions on customs duty revenue		
A: Value of imports	837	
B: Weighted official rate of customs duties		7.5
C: Potential revenue from customs duties (AxB)	63	
D: Effective rate of customs duties (E/A)		6.5
E: Effective revenue from customs duties	54	
F: Revenue loss in customs duties due to exemptions (C – E)	8	13.5
Impact of exemptions on VAT revenue		
G: Effective excise revenue	14.6	
H: Effective VAT revenue from imports	117.3	
J: VAT base (A+E+G)	905.3	
K: Effective VAT rate (H/J) applied on imports		13
L: Revenue loss in VAT due to exemptions (KxF)	1.1	
Impact of exemptions on customs revenue		
M: Total revenue loss due to exemptions (F+L)	9.56	
N: Of total potential customs revenue		5.2

*Source:* World Bank Staff calculations based on 2002 data from government authorities.

**Harmonizing exemptions can help avoid trade deflection.** The formation of a CU will provide a good argument for harmonization of exemptions. If exemptions are not harmonized, there is an incentive to import the goods in the country where they are exempt, and then to sell them elsewhere where they are not tariff exempt; this phenomenon is called trade deflection. As long as the EAC CU is incomplete—that is, as long as border posts will be in place to collect tariffs on imports at the country of destination—there will be a need for RoO, and trade deflection can be avoided. However, as the countries progress to deeper integration with the complete removal of tariffs on regional trade, and with tariff collection at the port of entry, exemptions will have to be harmonized to avoid trade deflection. If harmonization will lead to a reduction of exemption, the reform will have positive effects for revenue collection.

## 2.6 Balance of Payment Implications

This working paper's main focus is import flow and revenue implications; however, we include in this section a brief discussion of likely balance of payment (BoP) implications of introducing the CET. Trade policy changes, especially liberalization, may trigger an immediate import demand response. Conversely, the export supply response, which in the long term needs to be commensurate, may be somewhat sluggish, leading to temporary imbalances in the BoP accounts.

Table 34 below shows the BoP in the base case, of 2002 before the implementation of the CU. All three countries have a negative current account balance (before official transfers). The deficit is very small for Kenya at just half of a percent of GDP, for Tanzania it is 7.6 percent of GDP, and for Uganda it is 13.4 percent of GDP. For Tanzania and Uganda, however, large official transfers cover more than half of the current account deficit, which ultimately comes to 3 percent for Tanzania and 6.4 percent for Uganda.



**Table 34: Current Account Balance in 2002 (pre-CU) Baseline**

<i>Transfers</i>	<i>Unit</i>	<i>Kenya</i>	<i>Tanzania</i>	<i>Uganda</i>
Balance on goods	US\$ millions	-1,012	-611	-611
Merchandise exports	US\$ millions	2,169	903	472
Merchandise imports	US\$ millions	3,181	1,514	1,083
Services (net)	US\$ millions	500	-47	-329
Income (net)	US\$ millions	-122	-52	-124
Current account balance (excluding official transfers)	US\$ millions	-57	-712	-788
	% of GDP	-0.5	-7.6	-13.4
Official transfers	US\$ millions	27	427	414
Current account balance (including official transfers)	US\$ millions	-30	-285	-374
	% of GDP	-0.2	-3.0	-6.4

Source: IMF Balance of Payments Statistics 2004, and World Bank staff calculations.

Table 35 shows that the significant tariff liberalization in Kenya and Tanzania would lead to a widening of the current account deficit. In Kenya it would still be moderate at 3.3 percent of GDP. For Tanzania it would amount to almost 10 percent of GDP before transfers. For Uganda the deficit would be marginally reduced because of the decline in total imports following the MFN tariff increase.<sup>48</sup>

**Table 35: Current Account Balance with Top Rate at 25 Percent and Temporary Tariffs on Imports from Kenya**

<i>Transfers</i>	<i>Unit</i>	<i>Kenya</i>	<i>Tanzania</i>	<i>Uganda</i>
Balance on goods	US\$ millions	-1,367	-822	-611
Merchandise exports	US\$ millions	2,169	903	472
Merchandise imports	US\$ millions	3,536	1,725	1,073
Services (net)	US\$ millions	500	-47	-329
Income (net)	US\$ millions	-122	-52	-124
Current account balance (excluding official transfers)	US\$ millions	-412	-923	-778
	% of GDP	-3.3	-9.8	-13.3
Official transfers	US\$ millions	27	427	414
Current account balance (including official transfers)	US\$ millions	-385	-496	-364
	% of GDP	-3.1	-5.3	-6.2

Source: IMF Balance of Payments Statistics 2004, and World Bank staff calculations.

Table 36 shows that the implementation of the final CU tariff schedule with a top rate of 20 percent and elimination of all remaining regional tariff barriers does not lead to a significantly worse trade balance compared with the first year CU scenario depicted in table 35. Before official transfers, Kenya's current account deficit is still moderate at 3.6 percent of GDP, Tanzania's is now just above 10 percent, and Uganda's marginally larger than in the pre-CU situation. Official transfers will reduce Tanzania's and Uganda's deficits to single

<sup>48</sup> This is the outcome of a static analysis where only merchandise imports change. If we add the dynamic impact of the multiplier in the GDP equation  $Y = C + I + G + (EX-IM)$ , the effects will be more pronounced; Kenya's current account deficit in the first year of CU implementation would then be 6.5 percent, Tanzania's 11.4 percent, and Uganda's 13.1 percent before official transfers.

digits; if Kenya's official transfers would increase to just half of the level for Tanzania or Uganda, the effect of tariff liberalization on the current account balance would be almost unnoticed.

**Table 36: Current Account Balance with Top Rate at 20 Percent and No Temporary Tariffs on Imports from Kenya**

<i>Transfers</i>	<i>Unit</i>	<i>Kenya</i>	<i>Tanzania</i>	<i>Uganda</i>
Balance on goods	US\$ millions	-1,403	-847	-620
Merchandise exports	US\$ millions	2,169	903	472
Merchandise imports	US\$ millions	3,572	1,749	1,092
Services (net)	US\$ millions	500	-47	-329
Income (net)	US\$ millions	-122	-52	-124
Current account balance (excluding official transfers)	US\$ millions	-447	-947	-797
	% of GDP	-3.6	-10.1	-13.6
Official transfers	US\$ millions	27	427	414
Current account balance (including official transfers)	US\$ millions	-420	-521	-383
	% of GDP	-3.4	-5.5	-6.5

*Source:* IMF Balance of Payments Statistics 2004, and World Bank staff calculations.

## CONCLUSIONS

Our summary is presented at the beginning of the paper. In addition, we draw attention to the following conclusions and observations.

**The results are sensitive to our assumptions regarding “sensitive goods.”** We mentioned several times that our results are partly driven by the assumption regarding the treatment of the 361 “sensitive” goods; that is, that these goods would be levied with the top tariff rate of either 25 or 20 percent plus a 10 percent surcharge. The “sensitive” goods make up a large fraction of imports into EAC countries (16 percent of imports into Kenya, 26 percent of imports into Uganda, and 30 percent of imports into Tanzania). Any negotiated outcome that will significantly reduce or increase protection for these goods implies that we would have to revise upward or downward our results for changes in import flows and customs revenue.

**There is a moderate increase in regional competition.** Our results indicate that regional trade flows will only change moderately. This conclusion might diffuse fears in the business communities of Tanzania and Uganda that the EAC CU would lead to a massive influx of Kenyan imports, displacing domestic producers who are still catching up on industrial development compared to their Kenyan neighbors.

**Moderate revenue effects could be counteracted by addressing leakage and harmonizing tariff exemptions.** Our results show that revenue effects of the planned CU are moderate, and modest efforts by the three countries to address leakages due to inefficient customs administrations may be enough to compensate for them. Addressing tariff leakage—and maybe also VAT leakage which could be even more significant—would thus be one possibility to address the revenue gap following CU implementation. Furthermore, the three countries will have to harmonize their tariff exemptions regime to avoid trade deflection once internal border posts are dismantled for full CU implementation. Agreement on a stringent exemptions regime can also contribute to revenue increases.

**Moderate changes in balance of payments are indicated.** Looking at the current balance of payments deficit in the three countries, and adding the import changes that would result from the EAC CU implementation shows that the current account deficit would widen for all three countries, but not by much. For Kenya, moderate increase in official transfers, much less than currently received by Uganda and Tanzania, would suffice to balance any effect of import increases following the CU implementation.

**Benefits from CU formation are highest with a top rate of 20 percent.** The decision on how to implement the planned EAC CU should be guided by the expected overall welfare effects. Our calculations indicate that the implementation of the MFN CET would be more advantageous for Kenya and Tanzania because it implies tariff liberalization for them. For Uganda, the immediate implications of the CU formation may be negative. However, benefits from deeper regional integration such as efficiency gains from increased trade facilitation in joint customs operation (see below) may well offset the welfare loss. Our results show that among the CET scenarios presently discussed, the scenario with the top rate

of 20 percent is clearly the most beneficial and equitable and the working paper provides strong arguments for implementing the CET with the maximum tariff of 20 percent.

**Effects of the EAC CU tariff schedule on effective rates of protection should be carefully assessed.** The CET tariff schedule will not only affect consumers of import goods but also producers who use imported inputs for production, and whose end products will be protected by one of the three tariff rates. The concept of effective protection considers the effects of protection of inputs as well as outputs and thus provides a better assessment of the overall consequences of protection on producer incentives than measures of tariff protection, or the nominal rate of protection. Therefore, in order to assess the effect of implementing the CET the countries should undertake an assessment how effective rates of protection will change for various sectors with the implementation of the EAC CET. This should be done soon to avoid the result that the new set of incentives may lead to unwelcome imbalances in economic performance.

**Lessons can be learned from the demise of the first EAC CU.** It should be noted that the first attempt at regional integration between Kenya, Tanzania, and Uganda failed in 1977 because of perceived or real imbalances in the gains of integration. At the time, the industrial dominance of Kenya led to growing deficits of Tanzania and Uganda in their trade with Kenya. In addition, industries started to cluster in Kenya, moving away from Tanzania and Uganda. Attempts to improve the competitiveness of Uganda and Tanzania failed, and the persistence of trade imbalances and perceived unequal distribution of benefits from integration among the three partner states was one of the main reasons for the collapse of the EAC.<sup>49</sup> To prevent another collapse of regional integration, which confers many benefits that go well beyond trade integration, the new EAC CU should be carefully crafted to avoid imbalances. The fact that Tanzania and Uganda have somewhat caught up with Kenya in terms of economic development might be a safeguard. However, it may be prudent to review the planned structure and implementation of the EAC CU again, critically evaluating the cost and benefits as they would be distributed if the current proposal was implemented.

**The EAC CU should be considered in the regional context.** As mentioned above, the three EAC member states are currently also members of other regional groupings, namely the COMESA FTA (Kenya), the COMESA PTA (Uganda), and the SADC PTA (Tanzania). If they form a CU, the EAC member states will have to follow a common external trade policy and the full implementation of the CU will thus make it impossible for Kenya, Uganda, and Tanzania to continue membership in different PTAs or FTAs.<sup>50</sup> So far, decisions on the EAC CU have been slowed down because of ongoing discussions on how to rationalize or harmonize different obligations towards partner states, as well as variations in tariff structure, preferences, RoO, customs procedures, and so forth. The situation may be further complicated by the negotiations of Economic Partnership Agreements (EPAs) between the EU and various regional groupings in sub-Saharan Africa. EPA negotiations will

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<sup>49</sup> Other contributing factors were the concentration of regional administrative facilities in Kenya and contradictory economic orientations; Tanzania pursued a variant of a socialist economy, Kenya was a market economy, and Uganda pursued a mixed system. In addition to economic problems there were political tensions between the leaders of the three countries. Idi Amin's regime sharply clashed with the regime established by Nyerere in Tanzania.

<sup>50</sup> The current situation of overlapping membership in different PTAs and FTAs has evolved historically. Originally, the EAC integration towards a CU was conceived as a fast track towards a COMESA CU; at that time all three EAC member states were only part of one other PTA, COMESA. The complication of overlapping membership arose when Tanzania decided to withdraw from COMESA and to join SADC, while still seeking integration with Kenya and Uganda for the EAC CU.

set out the timetable for the progressive removal of barriers to trade between the EU and the various regional groupings in accordance with WTO rules. Problems could be created by the fact that Tanzania has decided to join SADC for its EPA negotiation with the EU whereas Kenya and Uganda will negotiate with a group of Eastern and Southern African countries. However, the dynamic that will be started with the EPA negotiation may also make it imperative to resolve quickly the current situation, which causes uncertainty for politicians, businessmen, and potential investors alike. A fast decision on how to resolve the overlapping membership in trade agreements through rationalization or harmonization will be very welcome and open the door for more efficient and faster regional integration in Africa. This has also been recognized by the EAC Secretariat, which will have to play a catalytic role if the EAC CU is to be implemented as scheduled by 2004. The Secretariat has developed a program towards CU implementation and the main issue that needs to be resolved is clarification of the relationship between the planned CU and other existing trade agreements, to which some but not all of the EAC member states are party.<sup>51</sup>

**The current plan for CU implementation should be simplified.** As currently envisaged, the EAC CU does not take advantage of the opportunity to simplify the trade regime for the EAC, particularly during the first phase of implementation. Tanzania and Uganda will levy temporary tariffs on 903 and 426 tariff lines respectively, and for 361 “sensitive” goods additional protection in excess of the top tariff lines of 25 or 20 percent will be sought. The large number of exceptions implies that the trade regime will remain complicated and difficult to administer. We also note that by negotiating tariff rate categorizations line by line the three countries forewent the chance to significantly simplify the tariff rate structure. An alternative procedure could have been to agree on tariff rates for complete HS chapters, which would have resulted in a much simpler tariff administration. A simplified structure would greatly assist a more transparent trade regime whose administration would be less of a challenge to the stretched resources in EAC customs administrations. Furthermore, since Tanzania and Uganda will continue to levy tariffs on imports from Kenya for the first five years of CU implementation, these countries will not at first be able to abandon internal border posts and implement a simplified RoO regime. However, the dismantling of internal border posts and obviating the need to check RoO several times are two of the most important advantages of forming a CU compared with implementing a less deep form of regional trade integration such as an FTA.<sup>52</sup>

**FTAs can be a stepping stone towards a CU, and can help avoid large imbalances in benefits from integration into a CU.** This is especially true when countries are heterogeneous with regard to their tariff structure. By requiring its member states to agree on a common trade policy, customs procedures, harmonization of exemptions, and modalities for tariff collection and distribution, CUs entail the creation of common rules and institutions to a much larger extent than a FTA, which mainly needs to agree on a set of RoOs. Thus, CUs require a greater degree of compromise than FTAs and are thus more costly to negotiate, and because of the need for common institutions and processes, are also more costly to implement. FTAs share a number of benefits with CUs (mainly provision of a forum for deeper integration—see below), but they leave member states the freedom to independently

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<sup>51</sup> Another step that has to be finalized before the signature of the protocol is the draft Customs Law. After signature and dissemination of the protocol, the Secretariat’s priorities are to establish mechanisms to monitor nontariff barriers; improve trade facilitation; implement the EAC Competition and Customs laws; agree on harmonized rules for Export Processing Zones; and to establish and staff a Trade and Customs Directorate under the EAC Secretariat in Arusha that will coordinate between the three EAC customs departments.

<sup>52</sup> See for example Krueger (1997) and Schiff (2000).

determine their trade policy. Also, as long as there is coordination and harmonization between RoOs, countries can be members of several FTAs. Implementing an FTA as a stepping stone towards deeper integration in form of a CU, a common market, or a monetary union may thus be a useful alternative to the tensions that the implementation of a CU may generate if members are heterogeneous with respect to their development level, tariff schedule, and membership in other regional trade agreements. However, in the medium term, creation of a CU should certainly be pursued to eliminate costly border controls and enforcement of RoOs on regional trade.<sup>53</sup>

**Benefits from regional or “deep” integration can certainly be very significant.**<sup>54</sup>

Conversely, direct benefits from increased regional trade may not be very large. By fostering closer economic ties, trade integration makes it easier for countries to agree on a number of “deep” integration issues. Therefore, regional trade integration should also be pursued for the benefits of regional cooperation on other issues such as trade facilitation (implementing a more efficient customs and border administration), political stability and security, shared natural resources, and large infrastructure projects. This is another argument for trade integration as an integral part of regional integration that—to maximize benefits—should be equitable, carefully sequenced, and tailored to the capacity to carry out the necessary reforms. Large imbalances in the costs and benefits from regional (trade) integration or overstressing administrative capacity at ports, customs, and borders should be avoided to ensure that regional trade integration fuels rather than hampers other aspects of regional integration.

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<sup>53</sup> If the EAC were to consider formation of a FTA before a CU, the FTA would not be much different from what has been termed the first phase of CU implementation in this paper. The decision to continue tariff collection at the port of destination, and the continued tariffs on selected imports from Kenya, makes it necessary to maintain customs controls at every border for either the planned CU or an FTA; the only difference would be that all three countries would maintain their independent tariff schedules instead of implementing the CET. If Kenya and Tanzania would liberalize their tariff regime over the next five years, implementation of the CU after elimination of the remaining regional trade barriers might then be much easier than it appears now.

<sup>54</sup> See Yeats (1998), Schiff and Winters (2002, 2003), and World Bank (2000).

## ANNEXES

### Annex 1: PARTIAL EQUILIBRIUM MODEL SPECIFICATION

In order to assess the likely effects of different common external tariff (CET) scenarios on tariff revenue and flows, we use a modified version of a model developed initially by Hoekman and others (2001). This is a partial equilibrium model of total import demand and export supply disaggregated at a 6-digit HS level. The model assumes perfectly competitive markets and homogeneous products. For the present analysis, the model was tailored in order to include tariff exemptions, excise taxes, and other surcharges.

Import demand for each HS-6-digit product of country  $i$  = Kenya, Uganda and Tanzania is given by:

$$M_i = \frac{A_i}{(1 + T_i)^E} \quad (1)$$

where  $T_i$  is MFN tariff rate in country  $i$ ;  $A_i$  is a demand parameter in country  $i$ ; and  $E$  is the demand import elasticity, assumed to be equal in all three countries' economies.

Demand elasticities at the 6-digit level were obtained from the UN COMTRADE database. Table A shows these elasticities by sector.

**Table A: Import Demand Elasticities by Sector**

<i>Sectors</i>	<i>Import demand elasticity</i>
Food and live animals	1.0
Beverages and tobacco	1.0
Crude materials	1.2
Mineral fuels	1.6
Animal and vegetable oils	1.3
Chemicals and related products	1.7
Manufacturing goods	1.8
Machinery and transport equipment	1.7
Misc. manufactures	2.7
Commodities not classified elsewhere	1.1

*Source:* Hoekman and others (2001); sector classifications according to SITC-2.

Export supply of country  $j$  to country  $i$  is given by:

$$X_{j \rightarrow i} = B_j \left( 1 + T_i \prod_{i \rightarrow j} \right)^\Theta \quad (2)$$

where  $\Theta$  is the export supply elasticity assumed to be equal to 1 in all three countries' economies.<sup>55</sup>  $\prod_{i \rightarrow j}$  is the level of tariff preference granted by country  $i$  to exports from  $j$ .

<sup>55</sup> We performed a sensitivity test setting the supply elasticity equal to 0.5, which did not affect the results.

Thus, if  $\Pi_{i \rightarrow j} = 0$ , imports of  $i$  from  $j$  have to pay country  $i$ 's MFN tariff. Likewise if  $\Pi_{i \rightarrow j} = 1$ , exports from  $j$  enter duty free into  $i$ .  $B_j$  is a supply parameter.

All demand and supply parameters are calibrated at the 6-digit level of the Harmonized System using data from national authorities.<sup>56</sup> For the MFN tariffs, national tariff schedules at the 8-digit level were transformed into the 6-digit level by using the sample average.

The supply and demand parameters are estimated as follows:

$$B_j = \frac{X_j}{[1 + T_i \Pi_{i \rightarrow j}]^{\Phi}} \quad A_i = M_i [1 + T_i]^E \quad (3)$$

Using  $A_j$  and  $B_j$  supply and demand parameters, the model estimates imports and exports as a result of the CET and estimates changes in customs duty revenue and trade flows.

The main modification with the original model developed by Hoekman and others (2001) is the incorporation of excise taxes and other surcharges and value-added taxes (VAT) into the import demand and revenue equations.

Taking into account surtaxes, the domestic value of imports is defined for the consumers in the importing country as:

$$M_i = \frac{A_i}{[(1 + T_i)(1 + \Phi_i)]^E} \quad (4)$$

where  $\Phi$  is an excise duty, surcharge, or any other discriminatory tax imposed on imports.

Note that export supply of country  $j$  to country  $i$  is still given by equation (2) since exporters do not have to face such additional duties.

To model the direct and indirect effects of the customs union for total customs duty revenue revenues, we define different equations for tariffs, excise duties, and other surtaxes and value-added taxes (VAT).

The initial tariff revenue is given by:

$$TR_0 = T_i (M_{tot} - M_{i \rightarrow j}) + M_{i \rightarrow j} [T_i (1 - \Pi_{i \rightarrow j})] \quad (5)$$

where  $M_{tot}$  is total imports and  $M_{i \rightarrow j}$  is imports of country  $i$  from country  $j$ .

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<sup>56</sup> All trade and tariff data are from national statistical and fiscal authorities.



The original excise duty revenue is given by:

$$ER_0 = \Phi_i \left[ M_{tot} (1 + T_i) + M_{i \rightarrow j} (1 + T_i (1 - \Pi_{i \rightarrow j})) \right] \quad (6)$$

where  $\Phi$  represents various surtaxes such as excise duties and suspended duties.

Finally, the original revenue from VAT on imports is defined as:

$$VR_0 = \Psi_i [M_{tot} + TR_0 + ER_0] \quad (7a)$$

where  $\Psi_i$  is the VAT rate on imports.

Therefore, total customs duty revenue is calculated as follows:

$$R_0 = TR_0 + ER_0 + VR_0 \quad (7b)$$

Tariff, excise and surtaxes, VAT, and total customs duty revenues after the implementation of the CET are given by:

$$TR_{CET} = T_{CET} (M_{CET}) \quad (8)$$

$$ER_0 = \Phi_i [M_{CET} (1 + T_{CET})] \quad (9)$$

$$VR_{CET} = \Psi_i [M_{CET} + TR_{CET} + ER_{CET}] \quad (10)$$

$$R_{CET} = TR_{CET} + ER_{CET} + VR_{CET} \quad (11)$$

where the legend CET refers to the new values estimated using the common external tariff.

Thus, the change in tariff revenue is simply:

$$\Delta TR = TR_{CET} - TR_0 \quad (12)$$

The changes in excise and surtaxes ( $\Delta ER$ ), VAT ( $\Delta VR$ ), and total revenues ( $\Delta R$ ) are estimated following the same specification.

The change in consumer surplus of the importing country, which is not reported in the paper, would be estimated as follows:

$$\Delta CS = \frac{A_i}{E-1} \left[ \frac{1}{[(1+T_i) + (1+\Phi_i)]^{E-1}} - \frac{1}{(1+T_{CET})^{E-1}} \right] \quad (13)$$

The change in exporter surplus is given by:

$$\Delta XS = \frac{1}{(\Theta+1)} \left[ (1+T_{CET})^{\Theta+1} - (1+T_i \Pi_{i \rightarrow j})^{\Theta+1} \right] B_j \quad (14)$$

As a result, the change in total welfare in the importing country in our partial equilibrium model is given by the sum of the changes in producer and consumer surplus and the change in government revenue:

$$\Delta W = \Delta XS + \Delta CS + \Delta R \quad (15)$$

In the estimation results presented in the main text we focus on the last term, that is, the change in government revenue, and provide qualitative indications of likely changes in consumer and producer surplus.

## **ANNEX 2: METHODOLOGY APPLIED TO ITEMS WITH UNRESOLVED CET**

At the time the simulations for this paper were undertaken, the EAC countries had not yet agreed on the tariff classification for 474 items. These items fall into two groups: “sensitive” products and “nonsensitive” products. Table A summarizes the items included and the main features of each of these groups. As these products represent an important share of EAC total imports, we decided to incorporate the “sensitive” and the remaining items where the CET is still unresolved in the simulations, based on the following methodology. First, we averaged the tariffs proposed by each country in the last round of negotiations to obtain a “preferred” common external tariff. Second, we made compatible this “preferred” rate with the common external tariff structure recently agreed. The three-band scheme of 0, 10, and 25 percent was represented for the unresolved products as follows: 0 percent tariff on goods currently facing a “preferred” average tariff lower than 10 percent; 10 percent on products facing average tariffs higher than 10 percent and lower than 25 percent; and 25 percent for traded goods already facing that rate. For the 361 “sensitive” items where the “preferred” rate is higher than the agreed on top rate, we applied a tariff rate of 25 percent and a surtax of 10 percent. These “sensitive” products currently enjoy high levels of protection in the EAC countries, with rates that range from 30 percent to over 100 percent, and in some cases are further protected by a surtax or a combination of surcharges. Therefore it is reasonable to expect that the final common external tariff to be adopted will have at least a similar tariff and surtax protection to the one assumed in our simulations. Finally, we merged this list of “sensitive” products with the list of items where the CET has been decided.

**Table B: Items with Unresolved Common External Tariffs in the EAC**

	<b>"Nonsensitive" items</b>	<b>"Sensitive" items</b>
Items	Barching oils Barley Brake linings Beverage vending machines Clinker Headgear Insecticides Iron and steel Malt Palm oil Paper Petroleum coke/bitumen Petroleum gases Petroleum jelly Pharmaceutical products Pigments Plastics Printing inks Telephone sets Tubes Tires Un/denatured spirits Unmanufactured tobacco White cement Yarn	Cigarettes Dry cell batteries Fabrics Garments Matches Milk Other cement Packing materials of plastics Palm oil RBD Sugar Tires Used clothes Vehicles Vehicles chassis Wheat Wheat flour
<b>Summary statistics</b>		
Average of the EAC countries' tariffs proposals	13.0%	34%
Number of tariff lines (at 8 digits)	113	361
<b>Percent of total imports</b>		
Kenya	0.6%	16.1%
Uganda	1.5%	25.9%
Tanzania	3.3%	30.0%
EAC	1.3%	20.8%

RBD = refined, bleached, deodorized.

Source: World Bank staff calculation based on national authorities' data.

### ANNEX 3: TEMPORARY TARIFFS ON KENYAN IMPORTS

As a temporary measure, Uganda and Tanzania can apply tariffs to selected Kenyan imports for a period of up to five years; after five years Kenyan imports will be entering Uganda and Tanzania at a zero-tariff level. This provision has been made to account for the varying degrees of industrialization and development in the three EAC member states.

Table B below shows summary statistics of the temporary tariffs, and what percentage of imports from Kenya into Tanzania and Uganda will be affected by the temporary regional tariff barriers. Table C shows the phaseout schedule that has been agreed on by the three governments.

**Table C: Tariffs on Kenyan Imports—Summary**

	<i>Tanzania</i>	<i>Uganda</i>
Summary statistics		
Number of non-0 tariff lines	903	426
Simple average tariff on Kenyan imports	3.8%	10%
Maximum tariff on Kenyan imports	25%	10%
Affected imports		
Share of imports from Kenya (%)	63.1	21.7
Share of total imports (%)	2.9	5.3

*Source:* Data from government authorities.

**Table D: Tariffs on Kenyan Imports—Liberalization Schedule**

<i>Country</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>	<i>Year 6</i>
Tanzania	8	6	5	3	2	0
Uganda	10	8	6	4	2	0

*Source:* Data from government authorities.

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