

ADDENDUM

**QUANTITATIVE IMPACTS OF A COMESA CUSTOMS UNION
IN THE EAC TRADE SIMULATION MODEL**

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I.

This addendum presents the results of applying the EAC trade simulation model to the problem of quantifying the potential economic impacts of forming a customs union among the members of the Common Market for Eastern and Southern Africa (COMESA). COMESA is a particularly large regional organization for economic cooperation in Africa, with a membership of 20 countries (Table A1). Among the major East African Community (EAC) countries, both Kenya and Uganda are members of COMESA. However, Tanzania (the third major EAC country) withdrew from the organization in 2000, citing its principal interest in aligning its economy with the major economies of the Southern Africa region, under the auspices of the Southern African Development Community (SADC).

Presently, COMESA is constituted as a free trade area, under which member countries are to eliminate all barriers to intra-bloc trade but may enforce an independent tariff and nontariff barrier (NTB) regime against imports from non-member countries. Although to date not all COMESA countries have entirely eliminated their tariffs and nontariff barriers to merchandise trade originating within the free trade area, the organization has agreed in principle to establish a customs union among its members by 2004. Like the EAC customs union, the proposed COMESA customs union would eliminate all tariffs and nontariff barriers to intra-member trade while erecting a common external tariff (CET) to imports from non-member countries.

II.

Constrained by the availability of detailed statistics for international trade available on cd-rom from the United Nations Statistics Department, the EAC trade simulation model includes only seven COMESA countries (Egypt, Kenya, Madagascar, Mauritius, Sudan, Uganda, and Zimbabwe).¹ However, the seven COMESA countries in the model -- termed here the COMESA-7 -- account for a high percentage of the bloc's total and intra-regional trade (Table A2).

In principal, the EAC trade simulation model is sufficiently general to investigate the trade related impacts of a customs union formed by any subset of countries in the model. Thus, the present analysis is pursued in the same manner as the main analysis of the EAC customs union. That is, the COMESA

countries in the model are assumed to eliminate all tariffs restricting intra-union trade, while establishing a common external tariff regime. For consistency with the main analysis, it is assumed that with the establishment of the CET, NTBs are eliminated for all imports. Considering very similar CET scenarios also forges consistency with the main analysis. The first CET scenario hypothesizes that the COMESA countries adopt the *penultimate* EAC common external tariff, under which the maximum tariff band is set at 20 percent. The second CET scenario hypothesizes that the COMESA CET is everywhere set 5 percentage points higher than the *penultimate* EAC common external tariff, under the assumption that *ad valorem* tariffs are generally somewhat higher in COMESA countries than EAC countries. Finally, the third scenario considers the case of open regionalism. Under open regionalism, free trade is adopted jointly by the COMESA countries on a most-favored-nation basis rather than a preferential (i.e., discriminatory) basis.

For the COMESA customs union analysis, values of the trade price elasticities and other parameters of the EAC trade simulation model were maintained at the same central values assumed for the EAC customs union analysis. Also, while the model continues to include Ugandan input cost data for production of so-called sensitive sector products in the major EAC countries, the model has not been updated to include such cost data for all COMESA countries in the model.

III.

The results of the COMESA customs union simulations are presented in Table A3. The presentation is identical to that in Table 8 of the main report. Accordingly, many details of the simulation results are left to the reader to explore on his own, following his particular interests in the different customs union scenarios and results. Here the discussion is confined to the aggregate results for the COMESA-7 countries and the individual country results for Uganda, under the three customs union and open regionalism scenarios.

The simulation results indicate that a customs union formed by the COMESA-7 countries would be trade-diverting on a net basis, on the order of \$1.9-to-2.1 billion per annum. Overall, aggregate economic welfare (computed as the sum of changes in consumer surplus, producer surplus, and forgone

¹ Also notably, the UN import statistics on cd-rom for Sudan are grossly incomplete, leaving the EAC trade

tariff revenues) would improve by 0.7-to-1.0 percent of GDP in the seven countries. Essentially, the customs union would appreciably improve economic welfare in the seven COMESA countries in the aggregate, at some cost to economic welfare in the rest of the world.

That the COMESA-7 gain in the aggregate is explained by the fact that in moving to a CET with a maximum band of either 20 percent or 25 percent, six out of the seven COMESA countries would lower the average level of their external tariffs, implying significant unilateral trade liberalization and hence appreciable gains from expanded trade (trade creation). The prominent exception, however, is Uganda whose current, relatively liberal tariff regime lies considerably below the average tariff implied by either the 20 percent maximum CET or the 25 percent maximum CET. Thus, under the two customs union scenarios, the exchange rate for Uganda appreciates by 2.8-to-5.6 percent, and the country's economic welfare declines by 0.5-to-0.9 percent of GDP. Qualitatively, these results are similar to those for Uganda under the EAC customs union. However, the decline in economic welfare for Uganda under the COMESA customs union is somewhat smaller in magnitude than under the EAC customs union for the comparable case of the 20 percent maximum CET (see shaded areas):

Change in Variable for Uganda	EAC Customs Union (CU-20%)	COMESA Customs Union		Open Regionalism (MFN-0%)
		(CU-20%)	(CU-25%)	
Exchange rate (%)	2.6	2.8	5.6	-5.6
---- Millions of U.S. dollars, at 1999 prices ----				
Net trade creation	-61.4	-44.3	-58.6	19.0
Producer surplus	-6.7	-6.6	-14.4	22.2
Consumer surplus	-18.6	-3.0	-11.8	20.9
Forgone tariff revenue	-34.8	-24.8	-33.8	0.0
Economic welfare (% GDP)	-60.0 -0.9	-34.4 -0.5	-60.0 -0.9	43.1 0.7

simulation model results for the country highly unreliable.

This possibly implies that joining the wider COMESA customs union mitigates to some degree the expected negative impacts on Uganda of joining a customs union that raises the country's average external tariff.

According to the simulation results, however, open regionalism remains the most beneficial trade policy that the COMESA countries or Uganda individually might pursue. For the COMESA countries, open regionalism would expand the bloc's trade with the world by \$1.1 billion per annum and increase its aggregate economic welfare by 1.8 percent of GDP. For Uganda, open regionalism would expand the country's trade with the world by \$19 million per annum and increase its economic welfare by 0.7 percent of GDP.

Table A1. Economic Indicators for COMESA Countries, 1997

Member State	Area (km ²)	Merchandise Trade							
		Population		GDP US\$ (Mill.)	Exports US\$ (Mill.)	Imports US\$ (Mill.)	Intra-COMESA Trade		
		Persons (Mill.)	Density (pers/ km ²)				Exports US\$ (Mill.)	Imports US\$ (Mill.)	Total Trade (%)
Angola	1,246,700	11.6	9	7,785	3,496	2,289		23	0.4
Burundi	27,834	6.4	230	936	107	197	7	17	7.9
Comoros	2,171	0.7	322	206	12	174		22	11.8
Congo (D.R)	2,345,409	48	20	6,101	998	1,239	33	125	7.1
Djibouti	22,000	0.6	27	510	149	436	60	29	15.2
Egypt	1,001,450	64.5	64	77,676	4,937	19,862	42	152	0.8
Eritrea	121,144	3.8	31	716	130	680		0	0.0
Ethiopia	1,130,138	60.1	53	6,339	585	1,371	33	132	8.4
Kenya	582,646	29.9	51	9,652	2,386	3,578	817	77	15.0
Madagascar	587,041	15.8	27	3,758	679	875	48	68	7.5
Malawi	118,484	11.7	99	2,326	684	890	48	234	17.9
Mauritius	2,045	1.1	538	4,136	1,701	2,217	100	59	4.1
Namibia	825,418	1.6	2	3,159	364	213	16	48	11.1
Rwanda	26,338	8.4	319	1,626	83	328	1	128	31.4
Seychelles	280	0.1	357	521	189	350	1	14	2.8
Sudan	2,505,813	29.7	12	4,372	521	2,025	36	102	5.4
Swaziland	17,363	1	58	1,138	1,255	1,050	46	8	2.3
Uganda	236,036	22.6	96	6,373	414	867	19	286	23.8
Zambia	752,614	9.9	13	5,115	1,263	1,177	228	155	15.7
Zimbabwe	390,580	11.7	30	7,905	2,531	3,035	436	120	10.0
TOTAL	11,941,504	339	...	150,350	22,484	42,853	1,971	1,799	...
COMESA-7	5,305,611	175	...	113,872	13,169	32,459	1,498	864	...

Source: COMESA Secretariat (www.comesa.int).

Notes: COMESA-7 are Egypt, Kenya, Madagascar, Mauritius, Sudan, Uganda, and Zimbabwe.

Table A2. Current and Prospective Tariffs under a COMESA Customs Union (Percent)

Current Ad Valorem Tariffs in COMESA-7 Countries										Prospective Common External Tariff (Scenario)	
Model No.	Model Code	Product (## Sensitive Sector Products)	Kenya	Uganda	Egypt	Mada- gascar	Mau- ritius	Sudan	Zim- babwe	CU-25	CU-20
1	LIV	Live animals	9.40	12.20	23.70	16.10	16.60	11.30	19.70	15.00	10.00
2	MEA	Meat products	15.00	15.00	35.30	30.00	12.40	19.20	33.30	25.00	20.00
3	MKF	Fresh milk [>=> 4]	0.00	15.00	22.00	30.00	0.00	50.00	40.00	15.00	10.00
4	MKP	Milk products	##	25.00	15.00	17.00	30.00	0.00	50.00	15.00	20.00
5	DAI	Other dairy products	20.70	15.00	22.50	28.60	20.30	36.80	34.30	25.00	20.00
6	FSM	Fresh salmon, trout [>=> 7]	15.00	15.00	7.00	30.00	0.00	50.00	20.00	15.00	10.00
7	FFL	Fish fillets	##	15.00	15.00	7.00	30.00	0.00	0.00	25.00	20.00
8	FIS	Other fish products	15.00	14.80	20.90	29.50	13.40	39.40	13.90	25.00	20.00
9	MSD	Maize seeds [>=> 26]	0.00	7.00	3.00	10.00	15.00	25.00	30.00	15.00	10.00
10	CER	Other cereal grains	15.00	7.10	9.80	22.50	13.10	11.20	15.60	15.00	10.00
11	VEG	Vegetables	15.00	15.00	17.60	30.00	14.70	9.90	35.10	15.00	10.00
12	FRU	Fruits & nuts	15.40	15.00	38.40	30.00	21.20	20.90	31.00	25.00	20.00
13	CSG	Certain sugar, not flavored or colored [>=> 35]	0.00	15.00	12.00	30.00	15.00	25.00	30.00	15.00	10.00
14	SUG	Other sugar & honey	17.00	15.00	25.60	24.10	31.20	24.70	30.60	25.00	20.00
15	MSB	Maize bran [>=> 18]	15.00	15.00	7.00	10.00	0.00	0.00	15.00	15.00	10.00
16	CTC	Cotton cake [>=> 18]	15.00	15.00	7.00	10.00	23.00	30.00	15.00	15.00	10.00
17	FML	Fish meal [>=> 18]	10.00	15.00	7.00	10.00	0.00	0.00	15.00	15.00	10.00
18	AFS	Animal feeds	##	10.00	15.00	25.30	10.00	72.00	30.00	25.00	20.00
19	AFO	Other animal feed stuffs	14.80	14.10	8.90	10.40	30.00	12.70	19.80	15.00	10.00
20	SFS	Sunflower seeds [>=> 23]	10.00	7.00	3.00	30.00	23.00	0.00	5.00	15.00	10.00
21	OLS	Other oil seeds	11.60	7.00	10.90	30.00	18.70	16.90	7.20	15.00	10.00
22	CPO	Crude palm olean, stearin [>=> 23, 61]	11.70	15.00	10.70	20.00	15.00	25.00	27.50	15.00	10.00
23	EVO	Edible vegetable oil	##	40.00	15.00	22.00	20.00	23.00	15.00	25.00	20.00
24	FPA	Palm fatty acid distillate [>=> 61]	7.00	7.00	7.00	10.00	0.00	0.00	0.00	15.00	10.00
25	ANV	Other animal & vegetable oils & fats	17.90	11.30	14.00	17.90	16.80	16.70	16.60	15.00	10.00
26	MSF	Maize flour	##	35.00	15.00	7.00	20.00	20.00	30.00	25.00	20.00
27	CEM	Other cereal meals, flours, & preparations	21.80	11.30	14.00	17.90	16.80	16.70	16.60	15.00	10.00
28	PRV	Prepared vegetables	23.90	13.90	29.00	27.60	31.90	7.10	32.30	25.00	20.00
29	PRF	Prepared fruits & nuts	28.50	14.70	37.60	29.60	44.50	4.00	35.00	25.00	20.00
30	CFB	Coffee beans [>=> 31]	15.00	15.00	7.00	30.00	48.00	5.00	40.00	25.00	20.00
31	CFR	Roasted coffee	##	15.00	15.00	32.00	30.00	40.00	30.00	25.00	20.00
32	COF	Other coffee	15.00	12.00	24.20	30.00	28.90	16.20	25.00	25.00	20.00
33	TEA	Tea & spices	17.00	14.80	25.20	28.70	28.00	30.80	17.90	25.00	20.00

Table A2 (Cont.). Current and Prospective Tariffs under a COMESA Customs Union (Percent)

Model No.	Model Code	Product (## Sensitive Sector Products)	Current Ad Valorem Tariffs in COMESA-7 Countries							Prospective Common External Tariff (Scenario)	
			Kenya	Uganda	Egypt	Mada- gascar	Mau- ritius	Sudan	Zim- babwe	CU-25	CU-20
34	ICE	Ice [=> 7]	40.00	15.00	42.50	30.00	41.80	0.00	46.70	25.00	20.00
35	CSD	Carbonated soft drinks	40.00	15.00	43.00	30.00	88.00	0.00	50.00	25.00	20.00
36	NOA	Other nonalcoholic beverages	40.00	15.00	42.80	30.00	64.90	0.00	48.30	25.00	20.00
37	ALC	Alcoholic beverages	23.90	14.10	1209.60	28.70	43.70	84.10	40.00	25.00	20.00
38	OTP	Other processed agricultural products	20.00	12.10	29.10	28.00	31.00	12.60	31.90	25.00	20.00
39	TOR	Raw tobacco	20.00	15.00	0.00	10.00	20.30	50.00	70.00	15.00	10.00
40	TOM	Tobacco manufactures	0.00	15.00	47.70	30.00	23.00	110.00	90.00	25.00	20.00
41	HID	Hides & skins	10.50	10.30	19.30	24.10	36.30	13.60	10.70	15.00	10.00
42	RUN	Natural rubber	2.50	7.00	9.00	10.00	55.00	10.00	5.00	15.00	10.00
43	CTL	Lint cotton [=> 93]	10.00	7.00	7.00	20.00	0.00	30.00	2.50	15.00	10.00
44	NAF	Other natural fibers	14.90	13.30	9.20	15.10	0.90	6.30	4.90	15.00	10.00
45	OTA	Other agricultural raw materials	15.10	8.20	16.10	15.70	19.60	7.70	14.90	15.00	10.00
46	LIM	Lime [=> 104]	15.00	7.00	12.00	10.00	23.00	25.00	5.00	15.00	10.00
47	CLY	Clay [=> 104]	2.50	7.00	12.00	10.00	23.00	0.00	5.00	15.00	10.00
48	IRO	Iron ore [=> 104]	2.50	7.00	5.00	10.00	23.00	0.00	5.00	15.00	10.00
49	CRF	Other Crude Fertilizer & Mineral Ores	11.50	8.10	11.60	11.70	23.40	8.20	6.20	15.00	10.00
50	FRO	Furnace oil [=> 93]	10.00	7.00	7.00	0.00	28.00	25.00	5.00	15.00	10.00
51	MFL	Other Mineral Fuels	13.10	9.60	14.90	13.00	27.80	8.50	25.90	15.00	10.00
52	RLA	Refined lead and alloys [=> 75]	5.00	7.00	7.00	10.00	88.00	30.00	5.00	25.00	20.00
53	NFM	Other Non-Ferrous Metals	13.90	7.60	18.50	18.60	37.20	7.80	13.20	15.00	10.00
54	CSA	Caustic soda [=> 61]	5.00	7.00	32.00	10.00	28.00	25.00	5.00	15.00	10.00
55	OIC	Other organic & inorganic chemicals	11.00	7.10	13.00	10.10	25.00	4.30	5.30	15.00	10.00
56	DYS	Chemical and dye stuffs [=> 93]	5.00	7.00	17.00	10.00	88.00	25.00	5.00	25.00	20.00
57	INK	Printing ink [=> 115]	25.00	7.00	32.00	20.00	88.00	25.00	20.00	25.00	20.00
58	DYE	Other dyeing & tanning materials	13.90	8.60	18.00	15.70	52.50	11.30	11.10	25.00	20.00
59	PHA	Pharmaceuticals	6.80	4.80	10.90	10.00	20.30	7.70	7.20	15.00	10.00
60	DFC	Drink flavor concentrates [=> 35]	5.00	7.00	32.00	10.00	88.00	25.00	5.00	25.00	20.00
61	BSP	Bar soap	35.00	15.00	47.00	20.00	63.00	40.00	40.00	25.00	20.00
62	TOI	Other toiletry & perfumes	24.30	11.90	33.60	21.40	50.80	19.70	24.20	25.00	20.00
63	MAF	Manufactured fertilizers	0.00	1.80	13.60	10.00	29.80	25.00	4.60	15.00	10.00
64	PSM	Plastic separator materials [=> 75]	12.50	7.00	20.30	20.00	28.00	0.00	25.00	15.00	10.00
65	PLA	Other plastic materials & products	14.10	7.70	17.60	15.10	42.50	5.60	14.70	15.00	10.00
66	OTC	Other chemical materials & products	10.40	7.70	14.90	16.90	20.10	6.60	9.10	15.00	10.00

Table A2 (Cont.). Current and Prospective Tariffs under a COMESA Customs Union (Percent)

Model No.	Model Code	Product (## Sensitive Sector Products)	Current Ad Valorem Tariffs in COMESA-7 Countries							Prospective Common External Tariff (Scenario)	
			Kenya	Uganda	Egypt	Mada- gascar	Mau- ritius	Sudan	Zim- babwe	CU-25	CU-20
67	MSS	Milled steel sheets [=> 78]	5.00	7.00	22.00	10.00	0.00	15.00	0.00	15.00	10.00
68	ZST	Zinc plated steel [=> 69]	5.00	7.00	22.00	10.00	0.00	0.00	0.00	15.00	10.00
69	RGS	Roofing sheets	##	7.00	22.00	10.00	33.00	0.00	30.00	25.00	20.00
70	MRD	Wire rods [=> 113]		7.00	22.00	10.00	34.70	30.00	20.00	15.00	10.00
71	MAI	Metal angle irons [=> 110]		7.00	37.00	20.00	23.00	0.00	27.50	15.00	10.00
72	MRT	Round metal tubing [=> 110]		7.00	32.00	20.00	44.70	0.00	26.70	25.00	20.00
73	IRS	Other Iron & Steel		6.90	18.00	14.50	27.30	7.50	11.90	15.00	10.00
74	INM	Industrial machinery		0.80	10.60	19.40	31.30	6.70	8.20	15.00	10.00
75	ABT	Automotive batteries	##	9.70	0.00	30.00	52.50	30.00	37.00	25.00	20.00
76	ABC	Automotive battery cassings [=> 75]		7.00	0.00	10.00	63.00	30.00	25.00	15.00	10.00
77	COM	Other computers & electrical machinery		7.90	11.00	25.10	39.20	7.00	22.90	15.00	10.00
78	WBR	Wheel barrows	##	7.00	57.00	20.00	23.00	30.00	27.50	25.00	20.00
79	TRA	Other transport equipment		6.40	22.20	21.10	30.60	7.70	18.40	15.00	10.00
80	PLU	Plumbing products & prefab buildings		15.00	34.80	30.00	26.90	29.40	32.50	25.00	20.00
81	LEA	Leather & travel goods		11.10	31.30	23.50	36.00	17.00	33.00	25.00	20.00
82	TUB	Round rubber tubing [=> 78]		7.00	22.00	10.00	8.00	25.00	15.00	15.00	10.00
83	TYR	Tyres [=> 78]		7.00	32.00	30.00	88.00	0.00	18.30	25.00	20.00
84	RUP	Other rubber products		8.20	25.10	23.30	42.00	9.50	17.80	25.00	20.00
85	WOO	Wood products		14.00	28.20	25.00	29.50	6.60	25.00	25.00	20.00
86	NPR	Newsprint [=> 115]		7.00	7.00	20.00	88.00	0.00	20.00	25.00	20.00
87	TET	Tetra pak materials [=> 4]		7.00	22.00	20.00	8.00	0.00	23.30	15.00	10.00
88	PCR	Paper cartons [=> 7]		7.00	37.50	20.00	0.00	40.00	40.00	25.00	20.00
89	PBG	Paper bags [=> 26]		7.00	43.00	20.00	0.00	40.00	40.00	25.00	20.00
90	PAP	Other paper products		9.70	27.20	23.00	36.20	10.10	27.70	25.00	20.00
91	YRN	Yarn [=> 98]		4.70	32.00	20.00	0.00	0.00	15.00	15.00	10.00
92	WFI	Certain woven fabric/interlining/knitted rib [=> 101, 102]		15.00	57.00	30.00	0.00	50.00	30.00	25.00	20.00
93	WFS	Certain woven fabric/Bed sheets [=> 102]	##	15.00	57.00	30.00	0.00	0.00	27.50	25.00	20.00
94	THR	Thread [=> 101]		15.00	57.00	30.00	88.00	0.00	20.00	25.00	20.00
95	KNF	Knitted fabric [=> 101]		15.00	57.00	30.00	88.00	50.00	30.00	25.00	20.00
96	RFS	Rebounded foam sheets [=> 107]		7.00	22.00	30.00	0.00	30.00	15.00	25.00	20.00
97	QLT	Quilted fabric [=> 107]		15.00	57.00	30.00	88.00	50.00	20.00	25.00	20.00
98	NET	Fish nets	##	7.00	25.30	30.00	5.30	10.00	30.00	25.00	20.00
99	JBG	Jute bags [=> 113]		15.00	38.00	30.00	88.00	25.00	30.00	25.00	20.00

Table A2 (Cont.). Current and Prospective Tariffs under a COMESA Customs Union (Percent)

Model No.	Model Code	Product (## Sensitive Sector Products)	Current Ad Valorem Tariffs in COMESA-7 Countries							Prospective Common External Tariff (Scenario)	
			Kenya	Uganda	Egypt	Mada- gascar	Mau- ritius	Sudan	Zim- babwe	CU-25	CU-20
100	OBG	Other textile bags [=> 31]	40.00	15.00	33.00	30.00	88.00	25.00	30.00	25.00	20.00
101	SHT	Shirts	##	0.00	15.00	43.00	30.00	66.00	0.00	65.00	25.00
102	TEE	T-shirts	##	0.00	15.00	43.00	30.00	88.00	40.00	65.00	25.00
103	TEX	Other textiles & clothing		29.80	12.80	44.00	27.70	42.60	18.70	38.40	25.00
104	CMT	Cement	##	35.00	7.00	24.50	20.00	23.00	10.00	20.00	25.00
105	GLS	Glass containers [=> 35]		37.00	7.00	32.20	10.00	0.00	25.00	0.00	15.00
106	NOM	Other non-metallic mineral products		24.10	13.50	27.20	24.80	33.40	11.10	26.40	25.00
107	MAT	Spring mattresses	##	40.00	15.00	37.50	30.00	28.00	70.00	40.00	25.00
108	FRN	Other furniture		40.00	15.00	40.10	30.00	24.60	58.00	46.00	25.00
109	FTW	Footwear		28.80	12.30	36.20	26.70	29.50	32.00	52.50	25.00
110	HBD	Hospital beds	##	16.30	11.00	12.00	20.00	28.00	25.00	5.00	25.00
111	PEQ	Other professional equipment		17.20	7.70	18.10	24.10	44.00	3.80	14.20	15.00
112	WMM	Welded metal mesh [=> 110]		25.00	7.00	32.00	20.00	16.20	30.00	20.00	25.00
113	NLS	Nails	##	37.50	7.00	23.70	20.00	38.00	40.00	40.00	25.00
114	MSP	Metal springs, leaves [=> 107]		31.30	7.00	29.50	20.00	23.00	0.00	26.20	15.00
115	NPS	Newspapers, periodicals	##	20.00	7.00	7.00	20.00	0.00	5.00	5.00	25.00
116	PLC	Plastic containers [=> 23, 98, 101]		26.30	15.00	28.00	17.50	38.00	32.00	30.00	25.00
117	MTL	Other metal & other manufactured products, n.e.s.		25.00	10.60	25.30	25.00	35.10	12.10	27.10	25.00
Average, all products				17.99	10.62	33.76	21.01	31.98	19.77	23.58	20.56
Average, sensitive products				22.93	12.14	27.62	24.00	34.54	23.25	32.10	25.00

Source: EAC trade simulation model, June 14, 2002.

Table A3. COMESA: Trade and Welfare Effects under Alternative Customs Union Arrangements and "Open Regionalism"
(Millions of U.S. Dollars, at 1999 Prices)

	COMESA - 7 1/			Kenya (\$10,697 GDP)			Uganda (\$6,447 GDP)			Egypt (\$89,207 GDP)		
	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%
	2/	3/	4/	2/	3/	4/	1/	2/	3/	2/	3/	4/
Percent Change in Real Exchange Rate (U.S.\$/Lc)												
All Products	...	...	...	3.0	0.0	-9.6	5.6	2.8	-5.6	-0.1	-3.2	-12.5
Change in Real Exports												
Primary Prods	49.8	114.6	473.6	-15.5	6.2	92.9	-15.0	-7.3	18.6	57.9	61.4	197.7
Pri Foods	38.6	59.9	138.2	-3.8	1.1	18.6	-1.7	-0.4	3.6	8.6	12.3	26.7
Proc Foods	-19.5	5.7	91.4	-10.9	3.6	55.0	-12.1	-6.3	13.6	5.2	6.2	8.8
Ag Raw Mats	-14.3	6.8	74.5	-2.5	0.5	11.1	-1.2	-0.6	1.4	1.4	4.6	15.6
Oth Pri Prods	44.9	42.2	169.5	1.7	1.1	8.2	0.0	0.0	0.1	42.7	38.3	146.6
Manufactures	377.7	434.4	601.0	51.7	47.7	39.9	0.9	0.8	0.4	119.5	154.4	244.7
Chemicals	46.5	41.9	38.2	10.3	9.1	8.1	0.1	0.1	0.1	29.0	26.3	25.3
Iron & Steel	29.8	27.0	28.2	3.9	3.5	2.9	0.0	0.0	0.0	6.4	5.8	6.1
Mach & Eq	54.8	49.7	40.0	12.2	11.1	8.0	0.4	0.4	0.2	31.1	28.6	24.5
Oth Manufs	246.6	315.8	494.6	25.3	24.0	20.9	0.3	0.3	0.1	52.9	93.7	188.9
Sensitive Sectors	42.8	55.9	104.0	10.4	8.8	8.5	-0.7	0.1	2.2	0.6	6.1	21.3
All Products	427.5	549.0	1,074.5	36.2	53.9	132.8	-14.1	-6.5	19.0	177.4	215.8	442.4
Change in Real Imports = Trade Creation												
Primary Prods	100.2	134.6	83.3	3.0	16.3	12.3	8.6	8.3	7.6	80.9	91.3	43.1
Pri Foods	52.6	63.5	43.2	1.7	2.9	2.9	0.8	1.1	1.7	51.7	59.2	36.7
Proc Foods	-9.9	-7.1	33.0	-2.2	-1.1	8.4	-2.6	-1.9	2.6	-3.6	-4.0	12.5
Ag Raw Mats	23.2	19.9	10.4	1.9	2.0	1.1	1.0	1.2	1.1	12.7	9.4	1.6
Oth Pri Prods	34.3	58.2	-3.4	1.7	12.5	0.0	9.5	7.9	2.2	20.2	26.7	-7.7
Manufactures	271.6	474.2	991.2	35.6	65.4	120.5	-39.7	-28.0	11.4	-13.4	108.0	399.3
Chemicals	-21.8	42.7	47.6	-15.4	-5.5	-5.7	-6.5	-2.8	0.9	2.4	41.2	34.3
Iron & Steel	27.4	48.8	53.1	2.2	5.1	4.8	-2.0	-1.0	0.6	27.3	41.6	41.7
Mach & Eq	-256.0	-120.9	109.4	4.6	22.2	41.3	-22.5	-16.5	-2.5	-281.8	-210.4	-95.0
Oth Manufs	522.0	503.6	781.1	44.1	43.6	80.1	-8.7	-7.7	12.4	238.7	235.7	418.2
Sensitive Sectors	-5.9	-3.9	42.0	3.1	3.3	8.2	-3.8	-3.4	0.9	-3.4	-0.3	26.8
All Products	371.7	608.7	1,074.5	38.6	81.7	132.8	-31.1	-19.7	19.0	67.6	199.4	442.4
Trade Diversion												
Primary Prods	555.1	1,097.3	0.0	36.9	230.9	0.0	8.7	8.6	0.0	425.2	627.6	0.0
Pri Foods	221.8	218.7	0.0	7.4	7.2	0.0	1.5	1.4	0.0	193.6	191.3	0.0

Table A3 (Cont.). COMESA: Trade and Welfare Effects under Alternative Customs Union Arrangements and "Open Regionalism"
(Millions of U.S. Dollars, at 1999 Prices)

	COMESA - 7 1/			Kenya			Uganda			Egypt		
				(\$10,697 GDP)			(\$6,447 GDP)			(\$89,207 GDP)		
	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%
	2/	3/	4/	2/	3/	4/	1/	2/	3/	2/	3/	4/
Proc Foods	66.2	65.7	0.0	11.8	11.6	0.0	0.0	0.0	0.0	32.7	32.4	0.0
Ag Raw Mats	34.3	34.0	0.0	11.1	11.0	0.0	7.2	7.2	0.0	10.8	10.7	0.0
Oth Pri Prods	232.8	779.0	0.0	6.7	201.0	0.0	0.0	0.0	0.0	188.0	393.2	0.0
Manufactures	1,672.3	1,603.2	0.0	234.0	222.3	0.0	18.8	15.9	0.0	1,043.7	1,005.2	0.0
Chemicals	319.6	315.1	0.0	62.7	61.8	0.0	0.6	0.6	0.0	187.1	184.3	0.0
Iron & Steel	252.1	249.3	0.0	35.5	35.2	0.0	1.2	1.2	0.0	180.6	178.5	0.0
Mach & Eq	355.8	350.8	0.0	39.7	39.1	0.0	2.8	2.8	0.0	226.6	223.1	0.0
Oth Manufs	744.9	688.1	0.0	96.0	86.2	0.0	14.1	11.4	0.0	449.4	419.3	0.0
Sensitive Sectors	46.9	48.1	0.0	2.6	2.6	0.0	0.1	0.1	0.0	30.3	30.0	0.0
All Products	2,227.5	2,700.6	0.0	270.9	453.2	0.0	27.5	24.6	0.0	1,468.8	1,632.8	0.0
Net Trade Creation												
Primary Prods	-455.0	-962.8	83.3	-33.9	-214.6	12.3	-0.1	-0.3	7.6	-344.2	-536.3	43.1
Pri Foods	-169.3	-155.2	43.2	-5.7	-4.4	2.9	-0.7	-0.3	1.7	-142.0	-132.0	36.7
Proc Foods	-76.2	-72.7	33.0	-14.0	-12.7	8.4	-2.7	-1.9	2.6	-36.3	-36.4	12.5
Ag Raw Mats	-11.1	-14.1	10.4	-9.2	-9.0	1.1	-6.3	-6.0	1.1	1.9	-1.3	1.6
Oth Pri Prods	-198.5	-720.8	-3.4	-5.0	-188.6	0.0	9.5	7.9	2.2	-167.9	-366.6	-7.7
Manufactures	-1,400.8	-1,129.1	991.2	-198.4	-156.9	120.5	-58.5	-43.9	11.4	-1,057.0	-897.1	399.3
Chemicals	-341.5	-272.4	47.6	-78.1	-67.4	-5.7	-7.0	-3.4	0.9	-184.6	-143.1	34.3
Iron & Steel	-224.7	-200.5	53.1	-33.3	-30.0	4.8	-3.3	-2.2	0.6	-153.3	-136.9	41.7
Mach & Eq	-611.8	-471.7	109.4	-35.1	-17.0	41.3	-25.3	-19.3	-2.5	-508.4	-433.5	-95.0
Oth Manufs	-222.8	-184.5	781.1	-51.9	-42.6	80.1	-22.8	-19.1	12.4	-210.7	-183.7	418.2
Sensitive Sectors	-52.8	-51.9	42.0	0.5	0.7	8.2	-4.0	-3.5	0.9	-33.7	-30.3	26.8
All Products	-1,855.8	-2,091.8	1,074.5	-232.3	-371.5	132.8	-58.6	-44.3	19.0	-1,401.3	-1,433.4	442.4
Change in Producer Surplus												
Primary Prods	252.9	276.1	674.5	0.0	20.5	120.4	-16.7	-8.4	21.7	195.6	162.0	304.8
Pri Foods	84.5	98.9	172.4	-2.8	2.2	22.4	-1.5	-0.5	3.2	22.2	23.2	33.4
Proc Foods	-5.3	20.3	111.9	-6.2	9.3	67.5	-13.5	-7.1	16.3	13.8	13.6	11.0
Ag Raw Mats	-15.1	14.6	118.4	-2.1	1.7	17.6	-1.8	-0.9	2.1	5.1	9.3	25.1
Oth Pri Prods	188.9	142.3	271.8	11.2	7.3	13.0	0.2	0.1	0.1	154.5	115.9	235.4
Manufactures	701.0	682.4	648.5	113.5	95.3	40.5	2.3	1.8	0.5	254.6	255.2	262.2
Chemicals	98.5	78.7	40.7	23.5	18.4	8.5	0.2	0.2	0.1	60.2	48.3	27.1
Iron & Steel	66.6	51.8	29.8	7.9	6.2	2.9	0.0	0.0	0.0	13.3	10.4	6.5

Table A3 (Cont.). COMESA: Trade and Welfare Effects under Alternative Customs Union Arrangements and "Open Regionalism"
(Millions of U.S. Dollars, at 1999 Prices)

	COMESA - 7 1/			Kenya			Uganda			Egypt		
				(\$10,697 GDP)			(\$6,447 GDP)			(\$89,207 GDP)		
	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%
	2/	3/	4/	2/	3/	4/	1/	2/	3/	2/	3/	4/
Mach & Eq	116.9	95.3	42.7	28.0	23.0	8.4	1.2	0.9	0.3	64.9	53.4	26.2
Oth Manufs	419.0	456.6	535.2	54.0	47.7	20.7	0.9	0.7	0.1	116.2	143.0	202.4
Sensitive Sectors	52.8	65.7	110.9	16.4	14.1	7.2	-0.6	-0.1	1.6	2.1	7.5	22.8
All Products	953.9	958.5	1,323.0	113.5	115.8	160.9	-14.4	-6.6	22.2	450.2	417.1	567.0
Change in Consumer Surplus												
Primary Prods	176.3	252.7	146.9	4.6	31.5	18.3	17.7	16.7	12.7	138.2	164.0	77.0
Pri Foods	81.0	101.1	76.2	2.6	4.5	4.5	1.0	1.6	2.4	81.2	95.3	65.8
Proc Foods	-18.2	-12.2	52.4	-4.1	-2.2	12.1	-4.1	-2.9	3.8	-7.7	-7.2	20.6
Ag Raw Mats	40.8	36.8	24.2	2.7	3.0	1.6	1.4	1.7	1.7	22.0	17.8	7.3
Oth Pri Prods	72.7	127.0	-5.9	3.4	26.2	0.0	19.4	16.2	4.8	42.7	58.1	-16.7
Manufactures	239.9	416.0	832.4	24.7	49.7	91.0	-29.5	-19.8	8.3	-0.9	101.6	337.4
Chemicals	-11.3	38.1	42.6	-11.5	-4.1	-4.6	-4.6	-2.0	0.6	3.1	32.8	28.1
Iron & Steel	22.1	38.5	41.6	1.6	3.8	3.3	-1.1	-0.3	0.4	21.6	32.5	33.0
Mach & Eq	-193.9	-87.6	96.6	2.4	15.7	29.5	-16.4	-11.9	-1.7	-217.3	-161.6	-68.5
Oth Manufs	422.9	427.0	651.6	32.1	34.3	62.9	-7.3	-5.5	8.9	191.7	197.9	344.8
Sensitive Sectors	-3.3	-1.3	34.6	0.6	0.8	2.5	-1.8	-1.5	0.5	-2.4	0.4	24.1
All Products	416.2	668.7	979.2	29.3	81.2	109.3	-11.8	-3.0	20.9	137.3	265.6	414.4
Foregone Tariff Revenue												
Primary Prods	-101.4	-126.3	0.0	-7.4	-24.8	0.0	-6.5	-4.7	0.0	-72.2	-71.1	0.0
Pri Foods	-40.3	-28.2	0.0	-1.7	-1.1	0.0	-1.8	-1.2	0.0	-33.6	-23.6	0.0
Proc Foods	-18.7	-14.8	0.0	-2.9	-2.3	0.0	-2.1	-1.7	0.0	-8.2	-6.5	0.0
Ag Raw Mats	-6.0	-4.2	0.0	-1.7	-1.1	0.0	-1.1	-0.8	0.0	-2.3	-1.7	0.0
Oth Pri Prods	-36.4	-79.0	0.0	-1.1	-20.2	0.0	-1.5	-1.0	0.0	-28.2	-39.3	0.0
Manufactures	-366.7	-264.5	0.0	-47.4	-33.3	0.0	-27.3	-20.2	0.0	-212.4	-153.2	0.0
Chemicals	-58.3	-40.4	0.0	-10.3	-7.1	0.0	-4.9	-3.5	0.0	-31.2	-21.5	0.0
Iron & Steel	-41.3	-27.5	0.0	-5.4	-3.5	0.0	-3.3	-2.2	0.0	-27.3	-18.1	0.0
Mach & Eq	-68.0	-48.8	0.0	-7.6	-5.4	0.0	-2.8	-2.1	0.0	-41.6	-29.8	0.0
Oth Manufs	-199.1	-147.7	0.0	-24.1	-17.3	0.0	-16.4	-12.4	0.0	-112.3	-83.8	0.0
Sensitive Sectors	-15.7	-12.8	0.0	-0.7	-0.5	0.0	-4.0	-3.2	0.0	-7.6	-6.0	0.0
All Products	-468.2	-390.7	0.0	-54.8	-58.1	0.0	-33.8	-24.8	0.0	-284.6	-224.3	0.0

Table A3 (Cont.). COMESA: Trade and Welfare Effects under Alternative Customs Union Arrangements and "Open Regionalism"
(Millions of U.S. Dollars, at 1999 Prices)

	COMESA - 7 1/			Kenya (\$10,697 GDP)			Uganda (\$6,447 GDP)			Egypt (\$89,207 GDP)		
	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%
	2/	3/	4/	2/	3/	4/	1/	2/	3/	2/	3/	4/
Change in Economic Welfare												
Primary Prods	327.8	402.5	821.4	-2.8	27.1	138.7	-5.5	3.7	34.4	261.6	254.8	381.8
Pri Foods	125.2	171.8	248.6	-1.9	5.5	26.9	-2.3	-0.1	5.6	69.8	94.9	99.2
Proc Foods	-42.2	-6.8	164.3	-13.3	4.8	79.6	-19.8	-11.6	20.1	-2.0	-0.1	31.6
Ag Raw Mats	19.7	47.1	142.5	-1.1	3.6	19.2	-1.5	0.0	3.8	24.8	25.3	32.4
Oth Pri Prods	225.1	190.3	265.9	13.5	13.3	13.0	18.1	15.4	4.9	169.0	134.7	218.7
Manufactures	574.1	834.0	1,480.8	90.8	111.7	131.5	-54.5	-38.1	8.7	41.3	203.6	599.6
Chemicals	28.9	76.4	83.3	1.7	7.2	3.9	-9.3	-5.3	0.6	32.2	59.6	55.2
Iron & Steel	47.3	62.8	71.4	4.2	6.5	6.2	-4.4	-2.6	0.4	7.6	24.9	39.5
Mach & Eq	-145.0	-41.1	139.2	22.9	33.3	37.8	-18.0	-13.1	-1.4	-194.0	-138.0	-42.2
Oth Manufs	642.8	735.9	1,186.8	62.0	64.7	83.6	-22.8	-17.2	9.1	195.5	257.2	547.2
Sensitive Sectors	33.8	51.6	145.5	16.4	14.4	9.7	-6.4	-4.8	2.1	-7.9	1.9	47.0
All Products	901.9	1,236.5	2,302.2	88.0	138.8	270.3	-60.0	-34.4	43.1	302.9	458.4	981.4
% of GDP	0.7	1.0	1.8	0.8	1.3	2.5	-0.9	-0.5	0.7	0.3	0.5	1.1
Change in Tariff Revenue												
Primary Prods	-355.3	-512.5	-988.1	-21.5	-34.3	-82.2	-7.0	-12.3	-29.8	-236.5	-358.7	-709.2
Pri Foods	-128.3	-242.2	-529.2	0.9	-5.3	-20.2	0.4	-1.1	-5.5	-109.5	-205.0	-443.9
Proc Foods	-1.4	-37.4	-187.3	6.5	-0.4	-29.2	6.3	3.3	-8.2	-3.5	-23.8	-108.7
Ag Raw Mats	-37.2	-44.9	-70.6	-2.7	-3.9	-6.3	-1.0	-1.6	-3.1	-20.9	-25.6	-43.2
Oth Pri Prods	-188.4	-187.9	-201.1	-26.2	-24.8	-26.5	-12.8	-12.8	-13.0	-102.6	-104.3	-113.5
Manufactures	-570.2	-1,128.1	-2,767.8	-1.6	-73.5	-274.3	33.8	14.4	-44.7	-205.4	-548.7	-1,558.4
Chemicals	-27.8	-153.8	-436.1	15.3	-2.6	-42.7	7.4	2.5	-8.8	-34.9	-115.9	-295.7
Iron & Steel	-54.8	-89.1	-171.3	-2.3	-6.8	-16.8	0.1	-0.8	-2.9	-44.9	-69.3	-127.7
Mach & Eq	68.4	-215.0	-995.6	17.9	-18.8	-114.7	25.8	15.8	-13.2	126.2	-40.2	-500.4
Oth Manufs	-555.9	-670.3	-1,164.7	-32.4	-45.3	-100.0	0.5	-3.1	-19.9	-251.8	-323.4	-634.6
Sensitive Sectors	-12.2	-25.4	-79.0	0.3	-0.4	-3.1	-1.6	-1.6	-1.8	-5.9	-15.3	-56.1
All Products	-925.5	-1,640.6	-3,755.9	-23.1	-107.8	-356.5	26.8	2.1	-74.6	-441.9	-907.4	-2,267.6
% of GDP	-0.7	-1.3	-2.9	-0.2	-1.0	-3.3	0.4	0.0	-1.2	-0.5	-1.0	-2.5

Source: EAC trade simulation model, June 14, 2002.

Notes: 1/ Kenya, Uganda, Egypt, Madagascar, Mauritius, Sudan, and Zimbabwe.

2/ CU-25% = 25% maximum common external tariff, no NTBs.

3/ CU-20% = 20% maximum common external tariff, no NTBs.

4/ MFN-0% = Open regionalism, no tariffs or NTBs on a most-favored-nation basis.

Table A3 (Cont.). COMESA: Trade and Welfare Effects under Alternative Customs Union Arrangements and "Open Regionalism"
(Millions of U.S. Dollars, at 1999 Prices)

	Madagascar (\$3,721 GDP)			Mauritius (\$4,228 GDP)			Sudan (\$10,025 GDP)			Zimbabwe (\$5,492 GDP)		
	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%
	2/	3/	4/	2/	3/	4/	2/	3/	4/	2/	3/	4/
Percent Change in Real Exchange Rate (U.S.\$/Lc)												
All Products	1.3	-0.8	-7.4	-9.2	-11.0	-17.4	6.3	4.3	0.0	2.8	-0.7	-10.5
Change in Real Exports												
Primary Prods	0.3	4.4	22.6	35.7	41.7	65.3	-9.8	-6.8	0.0	-3.8	15.0	76.5
Pri Foods	-0.5	2.4	12.3	33.7	39.7	63.4	-0.7	-0.4	0.0	3.1	5.4	13.6
Proc Foods	-1.2	0.9	7.9	1.1	1.0	0.8	-0.8	-0.5	0.0	-0.8	0.7	5.4
Ag Raw Mats	0.1	0.4	1.3	0.6	0.6	0.8	-2.1	-1.5	0.0	-10.6	2.8	44.3
Oth Pri Prods	1.8	0.7	1.1	0.4	0.3	0.4	-6.2	-4.3	0.0	4.5	6.1	13.2
Manufactures	5.4	10.7	28.3	162.8	180.1	244.1	-0.5	-0.3	0.0	37.9	41.0	43.6
Chemicals	1.7	1.5	0.6	2.8	2.5	2.1	0.1	0.1	0.0	2.5	2.3	2.1
Iron & Steel	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	19.4	17.6	19.2
Mach & Eq	3.2	2.6	1.8	4.3	3.9	3.0	0.5	0.3	0.0	3.0	2.8	2.6
Oth Manufs	0.5	6.6	25.9	155.6	173.6	238.9	-1.0	-0.7	0.0	13.0	18.3	19.8
Sensitive Sectors	-0.5	0.4	3.1	32.8	40.1	68.1	0.1	0.0	0.0	0.1	0.5	0.8
All Products	5.7	15.1	50.8	198.6	221.8	309.4	-10.3	-7.1	0.0	34.1	56.0	120.1
Change in Real Imports = Trade Creation												
Primary Prods	2.5	3.5	5.5	-10.8	-2.9	0.0	0.0	0.0	0.0	15.9	18.1	14.8
Pri Foods	2.8	3.3	3.9	-10.1	-8.6	-6.0	0.0	0.0	0.0	5.7	5.6	4.2
Proc Foods	-0.3	0.0	1.6	-2.0	-1.2	3.6	0.0	0.0	0.0	0.9	1.1	4.3
Ag Raw Mats	0.1	0.1	0.1	-1.8	-1.6	-1.5	0.0	0.0	0.0	9.3	8.8	8.0
Oth Pri Prods	0.0	0.2	-0.1	3.0	8.5	3.9	0.0	0.0	0.0	-0.1	2.6	-1.8
Manufactures	13.0	20.1	45.3	217.8	240.0	309.4	0.0	0.0	0.0	58.3	68.6	105.4
Chemicals	-0.5	1.2	3.8	11.8	17.5	25.6	0.0	0.0	0.0	-13.7	-8.8	-11.3
Iron & Steel	-0.4	0.0	1.1	-0.2	1.4	3.5	0.0	0.0	0.0	0.5	1.7	1.4
Mach & Eq	8.4	12.9	24.0	29.9	55.9	106.0	0.0	0.0	0.0	5.3	15.0	35.7
Oth Manufs	5.4	6.0	16.5	176.3	165.3	174.4	0.0	0.0	0.0	66.2	60.7	79.5
Sensitive Sectors	-0.3	-0.3	1.5	-4.4	-6.0	0.4	0.0	0.0	0.0	2.9	2.8	4.2
All Products	15.5	23.6	50.8	207.0	237.1	309.4	0.0	0.0	0.0	74.2	86.7	120.1
Trade Diversion												
Primary Prods	5.5	9.7	0.0	41.9	131.0	0.0	0.0	0.0	0.0	36.9	89.6	0.0
Pri Foods	1.7	1.7	0.0	12.4	11.9	0.0	0.0	0.0	0.0	5.2	5.2	0.0

Table A3 (Cont.). COMESA: Trade and Welfare Effects under Alternative Customs Union Arrangements and "Open Regionalism"
(Millions of U.S. Dollars, at 1999 Prices)

	Madagascar			Mauritius			Sudan			Zimbabwe		
	(\$3,721 GDP)			(\$4,228 GDP)			(\$10,025 GDP)			(\$5,492 GDP)		
	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%
	2/	3/	4/	2/	3/	4/	2/	3/	4/	2/	3/	4/
Proc Foods	2.9	2.9	0.0	13.8	13.7	0.0	0.0	0.0	0.0	5.0	5.0	0.0
Ag Raw Mats	0.4	0.4	0.0	3.4	3.4	0.0	0.0	0.0	0.0	1.4	1.4	0.0
Oth Pri Prods	0.4	4.7	0.0	12.4	102.0	0.0	0.0	0.0	0.0	25.3	78.1	0.0
Manufactures	31.8	30.1	0.0	166.3	158.6	0.0	0.0	0.0	0.0	177.8	171.1	0.0
Chemicals	5.4	5.4	0.0	20.3	20.3	0.0	0.0	0.0	0.0	43.6	42.7	0.0
Iron & Steel	3.2	3.3	0.0	10.7	10.7	0.0	0.0	0.0	0.0	20.8	20.4	0.0
Mach & Eq	6.9	6.9	0.0	37.8	37.8	0.0	0.0	0.0	0.0	41.9	41.0	0.0
Oth Manufs	16.2	14.5	0.0	97.6	89.8	0.0	0.0	0.0	0.0	71.5	66.9	0.0
Sensitive Sectors	2.0	2.1	0.0	10.1	11.5	0.0	0.0	0.0	0.0	1.7	1.8	0.0
All Products	37.3	39.8	0.0	208.2	289.6	0.0	0.0	0.0	0.0	214.7	260.7	0.0
Net Trade Creation												
Primary Prods	-2.9	-6.1	5.5	-52.7	-133.9	0.0	0.0	0.0	0.0	-21.1	-71.5	14.8
Pri Foods	1.1	1.6	3.9	-22.5	-20.5	-6.0	0.0	0.0	0.0	0.5	0.5	4.2
Proc Foods	-3.3	-3.0	1.6	-15.8	-14.9	3.6	0.0	0.0	0.0	-4.1	-3.9	4.3
Ag Raw Mats	-0.3	-0.3	0.1	-5.2	-5.0	-1.5	0.0	0.0	0.0	7.9	7.5	8.0
Oth Pri Prods	-0.5	-4.5	-0.1	-9.4	-93.5	3.9	0.0	0.0	0.0	-25.3	-75.5	-1.8
Manufactures	-18.8	-10.0	45.3	51.5	81.4	309.4	0.0	0.0	0.0	-119.5	-102.4	105.4
Chemicals	-5.9	-4.2	3.8	-8.5	-2.8	25.6	0.0	0.0	0.0	-57.3	-51.5	-11.3
Iron & Steel	-3.7	-3.2	1.1	-10.8	-9.3	3.5	0.0	0.0	0.0	-20.3	-18.8	1.4
Mach & Eq	1.5	6.0	24.0	-7.9	18.0	106.0	0.0	0.0	0.0	-36.6	-26.0	35.7
Oth Manufs	-10.8	-8.5	16.5	78.7	75.5	174.4	0.0	0.0	0.0	-5.3	-6.2	79.5
Sensitive Sectors	-2.3	-2.4	1.5	-14.5	-17.5	0.4	0.0	0.0	0.0	1.2	1.1	4.2
All Products	-21.8	-16.2	50.8	-1.3	-52.5	309.4	0.0	0.0	0.0	-140.5	-173.9	120.1
Change in Producer Surplus												
Primary Prods	8.6	10.7	28.2	50.2	56.4	84.6	-5.3	-3.7	0.0	20.5	38.7	114.8
Pri Foods	1.6	4.5	14.9	45.4	52.2	81.7	6.7	4.7	0.0	12.9	12.7	16.8
Proc Foods	-1.2	1.1	9.6	2.4	2.2	1.0	-0.4	-0.2	0.0	-0.3	1.4	6.6
Ag Raw Mats	1.0	1.1	2.0	1.3	1.2	1.3	-3.0	-2.2	0.0	-15.5	4.4	70.3
Oth Pri Prods	7.2	4.0	1.7	1.0	0.8	0.6	-8.5	-6.1	0.0	23.4	20.3	21.0
Manufactures	16.7	19.2	29.4	220.8	230.2	269.8	0.9	0.7	0.0	92.2	80.0	46.2
Chemicals	3.7	3.1	0.6	4.7	3.8	2.4	0.3	0.2	0.0	5.8	4.7	2.2
Iron & Steel	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	45.1	34.9	20.3

Table A3 (Cont.). COMESA: Trade and Welfare Effects under Alternative Customs Union Arrangements and "Open Regionalism"
(Millions of U.S. Dollars, at 1999 Prices)

	Madagascar (\$3,721 GDP)			Mauritius (\$4,228 GDP)			Sudan (\$10,025 GDP)			Zimbabwe (\$5,492 GDP)		
	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%
	2/	3/	4/	2/	3/	4/	2/	3/	4/	2/	3/	4/
Mach & Eq	7.0	5.2	1.8	7.7	6.4	3.3	1.3	0.9	0.0	6.9	5.5	2.7
Oth Manufs	5.9	10.9	26.9	208.2	219.8	264.1	-0.7	-0.5	0.0	34.5	34.9	21.0
Sensitive Sectors	-0.4	0.4	3.2	34.5	42.6	75.3	0.1	0.1	0.0	0.7	1.0	0.8
All Products	25.2	29.9	57.6	271.0	286.7	354.4	-4.3	-3.1	0.0	112.7	118.8	160.9
<u>Change in Consumer Surplus</u>												
Primary Prods	3.8	5.6	8.5	-15.6	2.2	4.9	0.0	0.0	0.0	27.5	32.7	25.6
Pri Foods	4.4	5.1	5.9	-16.9	-14.0	-9.2	0.0	0.0	0.0	8.7	8.7	6.7
Proc Foods	-0.6	-0.1	2.5	-3.3	-1.8	6.5	0.0	0.0	0.0	1.6	1.9	6.9
Ag Raw Mats	0.1	0.1	0.1	-2.7	-2.5	-2.2	0.0	0.0	0.0	17.3	16.7	15.7
Oth Pri Prods	-0.1	0.4	-0.1	7.3	20.4	9.8	0.0	0.0	0.0	-0.2	5.5	-3.7
Manufactures	9.6	15.7	34.9	187.7	211.7	274.1	0.0	0.0	0.0	48.2	57.0	86.7
Chemicals	-0.3	0.9	2.8	11.9	16.8	23.7	0.0	0.0	0.0	-9.9	-6.2	-8.0
Iron & Steel	-0.4	0.0	0.8	-0.1	1.2	3.0	0.0	0.0	0.0	0.4	1.3	1.2
Mach & Eq	6.6	10.0	18.4	25.9	48.0	90.3	0.0	0.0	0.0	4.9	12.2	28.5
Oth Manufs	3.7	4.7	12.8	150.0	145.8	157.1	0.0	0.0	0.0	52.8	49.8	65.0
Sensitive Sectors	-0.2	-0.2	1.1	-2.6	-3.8	1.9	0.0	0.0	0.0	3.1	3.0	4.3
All Products	13.4	21.2	43.3	172.1	213.9	279.0	0.0	0.0	0.0	75.7	89.7	112.2
<u>Foregone Tariff Revenue</u>												
Primary Prods	-1.1	-1.3	0.0	-8.0	-14.8	0.0	0.0	0.0	0.0	-6.2	-9.6	0.0
Pri Foods	-0.3	-0.2	0.0	-2.2	-1.5	0.0	0.0	0.0	0.0	-0.8	-0.5	0.0
Proc Foods	-0.7	-0.6	0.0	-3.4	-2.7	0.0	0.0	0.0	0.0	-1.3	-1.0	0.0
Ag Raw Mats	-0.1	0.0	0.0	-0.5	-0.4	0.0	0.0	0.0	0.0	-0.3	-0.2	0.0
Oth Pri Prods	-0.1	-0.5	0.0	-1.9	-10.2	0.0	0.0	0.0	0.0	-3.8	-7.8	0.0
Manufactures	-6.9	-5.0	0.0	-36.9	-27.0	0.0	0.0	0.0	0.0	-35.9	-25.8	0.0
Chemicals	-1.0	-0.7	0.0	-3.9	-2.9	0.0	0.0	0.0	0.0	-7.0	-4.7	0.0
Iron & Steel	-0.5	-0.4	0.0	-1.7	-1.1	0.0	0.0	0.0	0.0	-3.2	-2.1	0.0
Mach & Eq	-1.3	-1.0	0.0	-6.9	-5.0	0.0	0.0	0.0	0.0	-7.8	-5.6	0.0
Oth Manufs	-4.0	-2.9	0.0	-24.4	-17.9	0.0	0.0	0.0	0.0	-17.9	-13.4	0.0
Sensitive Sectors	-0.5	-0.4	0.0	-2.5	-2.3	0.0	0.0	0.0	0.0	-0.4	-0.4	0.0
All Products	-8.0	-6.2	0.0	-44.9	-41.8	0.0	0.0	0.0	0.0	-42.1	-35.4	0.0

Table A3 (Cont.). COMESA: Trade and Welfare Effects under Alternative Customs Union Arrangements and "Open Regionalism"
(Millions of U.S. Dollars, at 1999 Prices)

	Madagascar			Mauritius			Sudan			Zimbabwe		
	(\$3,721 GDP)			(\$4,228 GDP)			(\$10,025 GDP)			(\$5,492 GDP)		
	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%	CU-25%	CU-20%	MFN-0%
	2/	3/	4/	2/	3/	4/	2/	3/	4/	2/	3/	4/
Change in Economic Welfare												
Primary Prods	11.3	14.9	36.6	26.6	43.9	89.5	-5.3	-3.7	0.0	41.8	61.9	140.3
Pri Foods	5.7	9.4	20.8	26.4	36.7	72.5	6.7	4.7	0.0	20.8	20.8	23.5
Proc Foods	-2.5	0.5	12.1	-4.3	-2.4	7.5	-0.4	-0.2	0.0	0.1	2.3	13.5
Ag Raw Mats	1.0	1.1	2.1	-1.9	-1.6	-0.9	-3.0	-2.2	0.0	1.5	20.8	86.0
Oth Pri Prods	7.0	3.9	1.6	6.5	11.1	10.4	-8.5	-6.1	0.0	19.4	18.0	17.3
Manufactures	19.4	29.9	64.3	371.7	415.0	543.9	0.9	0.7	0.0	104.5	111.2	132.8
Chemicals	2.4	3.3	3.4	12.7	17.7	26.0	0.3	0.2	0.0	-11.1	-6.2	-5.8
Iron & Steel	-0.9	-0.3	0.8	-1.6	0.3	3.1	0.0	0.0	0.0	42.3	34.1	21.4
Mach & Eq	12.3	14.3	20.3	26.7	49.4	93.6	1.3	0.9	0.0	3.9	12.1	31.2
Oth Manufs	5.6	12.7	39.8	333.9	347.7	421.2	-0.7	-0.5	0.0	69.4	71.3	85.9
Sensitive Sectors	-1.2	-0.2	4.4	29.4	36.5	77.2	0.1	0.1	0.0	3.3	3.7	5.2
All Products	30.6	44.9	100.9	398.3	458.8	633.4	-4.3	-3.1	0.0	146.4	173.1	273.2
% of GDP	0.8	1.2	2.7	9.4	10.9	15.0	0.0	0.0	0.0	2.7	3.2	5.0
Change in Tariff Revenue												
Primary Prods	-4.2	-6.5	-13.5	-58.8	-66.9	-97.5	0.0	0.0	0.0	-27.4	-33.8	-56.0
Pri Foods	-3.6	-5.1	-8.6	-10.7	-16.7	-34.7	0.0	0.0	0.0	-5.9	-9.0	-16.4
Proc Foods	0.1	-0.7	-4.1	-10.4	-12.7	-23.2	0.0	0.0	0.0	-0.5	-3.1	-13.9
Ag Raw Mats	-0.1	-0.2	-0.2	0.1	-0.3	-1.3	0.0	0.0	0.0	-12.6	-13.5	-16.5
Oth Pri Prods	-0.5	-0.5	-0.5	-37.8	-37.3	-38.2	0.0	0.0	0.0	-8.4	-8.2	-9.3
Manufactures	-10.0	-20.1	-51.6	-368.3	-420.2	-583.6	0.0	0.0	0.0	-18.7	-80.1	-255.1
Chemicals	0.0	-1.9	-6.4	-28.1	-34.2	-49.4	0.0	0.0	0.0	12.5	-1.8	-33.0
Iron & Steel	-0.1	-0.5	-1.9	-6.6	-8.0	-11.8	0.0	0.0	0.0	-1.0	-3.8	-10.3
Mach & Eq	-4.5	-10.1	-26.4	-110.0	-141.2	-229.5	0.0	0.0	0.0	12.9	-20.6	-111.4
Oth Manufs	-5.4	-7.6	-17.0	-223.7	-236.8	-292.8	0.0	0.0	0.0	-43.1	-54.0	-100.4
Sensitive Sectors	0.1	-0.3	-1.9	-3.1	-5.2	-10.6	0.0	0.0	0.0	-1.9	-2.6	-5.6
All Products	-14.2	-26.5	-65.1	-427.1	-487.1	-681.0	0.0	0.0	0.0	-46.1	-113.9	-311.1
% of GDP	-0.4	-0.7	-1.8	-10.1	-11.5	-16.1	0.0	0.0	0.0	-0.8	-2.1	-5.7

Source: EAC trade simulation model, June 14, 2002.

Notes: 1/ Kenya, Uganda, Egypt, Madagascar, Mauritius, Sudan, and Zimbabwe.

2/ CU-25% = 25% maximum common external tariff, no NTBs.

3/ CU-20% = 20% maximum common external tariff, no NTBs.

4/ MFN-0% = Open regionalism, no tariffs or NTBs on a most-favored-nation basis.