Implications of AfCFTA Tariff Reductions for EAC Exports to Africa

by

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Abstract

This paper provides estimates of the potential for EAC member countries to increase exports to the rest of Africa under AfCFTA, assuming the other countries reduce tariffs on imports from the EAC. We adopt a simple approach to identify the markets (countries) and products most likely to benefit and consider only growth of existing imports from the EAC; the assumption is that EAC have evident export capacity in such products and markets, and that these products are unlikely to be excluded from liberalisation by African importing countries. Results suggest that the EAC could expand exports overall by 10-15%, largely concentrated in relatively close countries and agriculture and resource-based products. Relatively distant markets in North and West Africa do offer potential to EAC countries except Rwanda (concentrated on DRC) and Tanzania (concentrated on Southern Africa). These estimates are complemented with analysis of the welfare effects on Kenya, Tanzania and Uganda of eliminating tariffs on imports from the rest of Africa – overall imports increase by around 10% and, as these tend not to displace intra-EAC trade, the consumption gains from lower prices deliver a positive welfare effect (negligible relative to GDP). The EAC can anticipate moderate gains from AfCFTA and, by identifying the markets and products most likely to be affected, the study provides a guide to policymakers in EAC countries on sectors to target in supporting export growth within Africa.

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Outline

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1. Introduction

The African Continental Free Trade Area (AfCFTA) is a single market comprising 55 African Union (AU) countries aiming to enhance growth by promoting the free flow of goods and services across the continent. The core element is the commitment to eliminate tariffs, currently averaging 6.1 per cent, on trade within Africa guided by the *Protocol on Trade in Goods* whereby countries provide a Schedule of Tariff Concessions (STC) with product details (for HS8 tariff lines) on the nature and timing of preferential market access to be granted to products originating from the other AfCFTA State Parties. The broad aim is to remove tariffs on 90 per cent of tariff lines for non-sensitive (Category A) products over a five or 10-year period (with some variation across countries, see Appendix Table A1). A longer period is allowed for eliminating tariffs on sensitive products (that can account for seven per cent of tariff lines), and a small percentage of products can be excluded (so tariffs are maintained).

The challenge for achieving the AfCFTA aim of expanding intra-regional trade is that export product similarities in Africa, associated with dependence on primary commodities with limited exports of manufactures, suggests that several countries have comparative advantage in similar products. Neighbouring African countries tend to export similar products, such as minerals or tropical foods and beverages. These product similarities limit intra-regional trade and are one reason why intra-African trade is estimated at 10-15 per cent of total African trade compared to intra-regional trade shares of around 60 per cent (Europe), 40 per cent (North America) and 30 per cent for ASEAN (African Union, 2022). Nevertheless, numerous specific products, such as tea, coffee, plastics and textiles, are traded within Africa; identifying which destination countries and products offer the greatest potential for increased exports to RoA is facilitated by analysis at a high level of product disaggregation.

The focus of this paper is the effect of AfCFTA tariff reductions on intra-African exports of the East African Community (EAC), comprising Kenya, Tanzania, Uganda, Rwanda and Burundi (henceforth EAC5). The Democratic Republic of Congo (DRC) and South Sudan joined recently but neither is fully integrated, and they were not part of the EAC during the period covered here (prior to 2020 with export data for 2019) so are excluded. Specifically, the analysis addresses the potential for EAC members to expand regional exports to the rest of Africa (RoA). These effects will depend on which products are fully liberalised (removal of tariffs) by AfCFTA partner countries, the Category A products, and which remain subject to tariffs (the excluded products). Definitive lists of sensitive and excluded products are not available for all AfCFTA State Parties to identify the reductions implemented by the RoA trade partners of EAC5 countries. Given this limitation, potential export growth is estimated for *existing* African markets outside EAC5, focussing on the 12 largest destinations and on the most important export products within those countries. The analysis is limited to estimates for the intensive margin and does not include potential for new products (although the focus does suggest which products could target new markets).

Following a very brief overview of literature on regional integration in Africa in the next section, Section 3 provides a review of the political economy of trade policy in EAC countries to set the scene and identify the sectors of particular interest to the EAC5. Section 4 reports estimates of which markets (countries) offer the greatest opportunities; intra-African EAC5 exports are estimated to increase by 10-15% overall, in about ten different markets (except for Rwanda whose exports are almost entirely to DRC), mostly relatively close countries but including 'distant' countries in North and West Africa. Section 5 turns the focus to products; export growth to neighbouring countries includes simple manufactures, whereas agricultural products, especially tea and coffee, textiles and apparel are important for distant markets. Although not

the focus here, as EAC policymakers also care about increased imports from RoA, Appendix A presents estimates of the standard effects – trade creation, trade diversion and consumer welfare – of EAC members removing tariffs on other AfCFTA members to assess how import liberalisation impacts on EAC member states (Kenya, Tanzania and Uganda) – the welfare effects are likely to be positive but negligible relative to GDP. The conclusion in Section 6 addresses the potential effect on integration into regional value chains, defined as sectors that import inputs (from anywhere) and export products to other African countries, and acknowledges that excluding products from tariff reductions undermines the potential to increase intra-regional trade and thereby reduces benefits of AfCFTA (a similar concern arises regarding agreement on Rules of Origin, see de Melo *et al.* 2021 and discussion in Section 6).

2 Regional Integration and Trade in Africa

The AfCFTA is the culmination of regional integration activities in Africa intended to expand the degree of intra-African trade given the perception that Regional Trade Agreements (RTAs) in Africa have not been very successful. Comparisons at a continental level suggest that intra-regional trade is low in Africa, at 15% of total trade in 2019 compared to 46% in the Americas and 60% in Asia (Mold, 2022, p11). Such comparisons are misleading because the average is biased downwards (Mold, 2022, pp15-17) by some very large countries with very low levels of trade with Africa (especially Egypt and Nigeria), the dominance of oil and mineral exports for resource-rich countries and the omission of informal cross-border trade for which official data are scarce (estimates suggest it is over 10% of formal trade, and up to 50% of formal trade for small and/or landlocked countries – see also World Bank, 2020, p27). Incorporating conservative estimates of informal cross-border trade, Mold (2022, p17) estimates that intra-African trade is about 40% of total trade for non-oil resource intensive and landlocked countries, and almost 30% of total trade for Africa overall. Nevertheless, there are potential further gains from greater integration.

As of 2020, the five major RTAs or bodies in sub-Saharan Africa are SADC in Southern Africa (with 16 members), ECOWAS in Western Africa (15 members), ECCAS in Central Africa (11 members), IGAD in the Horn of Africa (8 members) and the EAC in East Africa (6 members). Overlapping membership is a feature of African RTAs: examples for EAC members are Kenya, South Sudan and Uganda also in IGAD, Tanzania also in SADC and Rwanda also in ECCAS (see Turkson *et al.*, 2023, Appendix 5). There is evidence that levels of intra-regional trade have increased despite high trade costs, similarity of production and export structures and, at least until recently, shallow integration. Turkson *et al.* (2023), estimating the effect of RTAs on intra-African trade for 43 SSA countries over 1960 to 2015, find evidence for increased bilateral trade between members in SADC, EAC and ECOWAS (see also Turkson, 2015). Mold (2022, p 13) shows that levels of intra-regional trade for 2016-2020 are higher for SADC (21%), IGAD (20%) and EAC (18%) than for MERCOSUR (12%) and CARICOM (13%), although other RTAs in Africa tend to be below 10% and all are below ASEAN (23%).

Many existing studies evaluate the potential gains from liberalisation under AfCFTA; Section 3 and Appendix D in World Bank (2020) review several studies based on computable general equilibrium (CGE) models (see also ECA, 2020, Table 3.1). Results vary according to features of the model but suggest that eliminating tariffs alone would generate gains less than one per cent of GDP; also liberalising non-tariff barriers (NTBs) would increase gains to as much as two per cent of GDP; and including trade facilitation could double gains again.

Although not addressing AfCFTA, Balistreri, Tarr and Yonezuma (2015) provide CGE analysis of deep integration for the EAC (Kenya, Tanzania, Rwanda, Uganda) and for Tripartite-Africa regions (EAC, COMESA and SADC) incorporating preferential liberalisation of trade, non-tariff barriers and services, and reduced trade costs through trade facilitation. A specific

innovation for services is incorporating liberalisation of barriers against foreign direct investors in services and non-discriminatory barriers that apply to both domestic and foreign service providers. All regions gain from liberalisation but to a varying extent for different types of reform (e.g., liberalisation of services is especially beneficial for Kenya) and tariff reforms alone provide negligible welfare gains. All four EAC countries gain from deep integration within the EAC alone; the welfare gain is lowest for Tanzania (0.9% of consumption) and highest (1.4% of consumption) for Rwanda (Balistreri *et al.*, 2015, p689). Welfare gains are greater if liberalisation is within the full Tripartite (indicative of AfCFTA), a low of 1.81% of consumption for Rwanda and a high of 2.88% of consumption for Kenya (Balistreri *et al.*, 2015, p694).

In a comprehensive study, World Bank (2020) reports results using a CGE model with 21 sectors (including 10 for services), industry employment and wages by gender, and linked to household surveys for microsimulation. Tariff liberalisation alone would only increase income by 0.2% overall (estimates are similar for EAC countries) and intra-regional trade would increase by less than 1% (World Bank, 2020, p45). Eliminating NTBs and implementing trade facilitation is required to deliver full benefits, an overall income gain from full implementation of 7% of 2014 values by 2035, with a large reduction in headcount poverty, largely by increasing employment and wages (and reducing gender pay gaps). Such full implementation would increase intra-African exports by 80% (World Bank, 2020, p4). The largest gains in intra-regional trade are for manufacturing (doubling), modest for agriculture (increasing by half) and small for services at about 14% (World Bank, 2020, p46). The Economic Commission for Africa (ECA 2018) also employed a CGE model and estimated that full tariff liberalisation could increase intra-African trade by 40% by 2040.

The ECA (2020, Chapter 4) estimates the effects of complete liberalisation for Eastern Africa (a broader definition than EAC), with a partial equilibrium approach using the WITS-SMART model and CGE calibrated for 2014. In the partial equilibrium model for the EAC countries, the estimated percentage increases in exports (Table 4.2, p49) and imports [Table 4.3, p51] are given as Kenya (10% [5%]); Tanzania (17% [1%]); Uganda (21% [3%]); Rwanda (22% [2%]); Burundi (0.4% [1%]). The differences for exports and imports arise because EAC has relatively low tariffs (and no tariffs on intra-regional trade) but benefits from exporting to other African countries that have relatively high tariffs (Ethiopian imports, for example, increase by 21%). Over half the additional exports for eastern Africa overall (not only EAC) are to DRC, almost a fifth to Zambia and 14% to South Africa. The effects are predominantly trade creation and deliver welfare increases. As tariffs account for a small share of tax revenue, the overall loss in revenue is estimated at about 1% or less of total government revenue in EAC countries. The GTAP simulations are qualitatively similar, with exports to Africa from Eastern Africa increasing by 16% on average, with the lowest increases (about 5%) for grains and meat/livestock and increases over 25% for light manufacturing, textiles & clothing, and processed food. Using trade indices and a gravity model to identify the trade-creation and trade-diversion effects, Geda and Yimer (2023) estimate a 20% to 40% increase in intra-African trade.

Existing studies provide small but positive gains from tariff liberalisation alone, less than one per cent of GDP and an increase in intra-African trade of less than 20% (estimates vary considerably). While CGE methods are valuable for estimating benefits for Africa overall and at a sector or country level, and for incorporating non-tariff measures, they are not the most appropriate to identify specific products and markets of importance to individual countries with the greatest potential to enhance intra-African trade. Partial equilibrium approaches are suitable for disaggregated analysis, such as assessing the importance of excluding sensitive products in regional liberalisation (Morrissey and Zgovu, 2011) and to identify products with the best potential for increased exports (Section 5 below).

3 Trade and Trade Policy in the EAC

The East African Community (EAC) came into force on 7 July 2000 comprising Kenya, Tanzania and Uganda (Burundi and Rwanda joined later; South Sudan joined by 2019 and DRC only joined in 2022) and established a Common External Tariff (CET) in January 2005. The founding members had implemented significant trade reforms prior to establishing the EAC; Jones & Morrissey (2008) provide an overview of changes in the tariff structure for Kenya, Tanzania and Uganda between the early 1990s and early 2000s. In Kenya, which initially had the highest average tariff (35%), the mean unweighted tariff was reduced by two-thirds to 18%; the mean tariff in Tanzania fell by less than a fifth, from 20% to 16%; and in Uganda, which had the lowest tariffs by 1994 (17%), the mean tariff was further reduced by almost a half to 9%.

Jones *et al.* (2011) argue that the trade policy reforms implemented by Kenya, Tanzania and Uganda in the 1990s were largely technocratic (concertina reforms) as recommended by the World Bank – significant reductions in the highest tariffs and reducing the mean and dispersion of tariffs through across the board reductions and rationalization of rates. Despite this broadly technocratic pattern of reform, Jones *et al.* (2011) find some evidence of political economy influences in a Grossman and Helpman (1994) sense – tariffs were reduced less in sectors with characteristics that strengthen their lobbying influence. Whereas in Kenya and Uganda higher tariffs were reduced the most (technocratic reform), in Tanzania initially high tariffs were reduced by less, preserving the relative pattern of protection so certain 'favoured' sectors were less exposed to competition from imports (in the same vein, Tanzania is often the strongest proponent of excluded products in AfCFTA). Tariffs in Tanzania tended to be highest (above 20%) for food and agriculture products, textiles and garment sectors; this was also broadly true for Kenya even if the specific products differed – some textiles sectors had especially high tariffs (consistent with protecting local manufacturing). While tariffs on manufacturing tended to be reduced less than agricultural tariffs in Kenya, there are no significant sector effects for Tanzania or Uganda. In Kenya and Tanzania larger industries appear to benefit from higher tariffs.

Thus, when the EAC was formed, Kenya and Tanzania had comparable mean tariffs, albeit with differences in composition, and Uganda had lower tariffs. Jones and Morrissey (2008) note that by the early 2000s, all three had higher tariffs (protection) for similar manufacturing and food processing sectors – such as milling products, fats, sugar and confectionary, wood and ceramic products – and addressed how the CET affected the pattern of protection. The CET provided a simplified structure, increasing Uganda's tariffs but reducing those of Kenya and Tanzania, with almost all lines zero-rated or at rates of 10% or 25% and a very small number of tariff lines at rates of 50% or more; 25% was the modal rate applying to 40% of tariff lines (WTO, 2007, p17). The simple average tariff was highest for agriculture commodities (17% compared to 13% for manufactures). Most sensitive products subject to higher tariffs were agricultural, notably milk (60%), rice (75%), maize (50%), wheat (35%) and sugar (35% or 100%); linens (at 50%) were among the few other sensitive products (WTO, 2007, pp18-19). WTO (2019, Table 3.2) shows that although the CET average fell slightly in 2011 it was back to the same level by 2018 but the average for agriculture rose while that for manufacturing fell slightly.

The CET reflects the tariff reductions each country had already implemented so did not represent significant liberalisation with respect to extra-regional imports; the relative pattern of protection for domestic sectors was maintained, and levels only changed slightly. Higher tariffs applied where there was domestic production to protect, notably agriculture products and some textiles and fabrics, such as linens. Jones and Morrissey (2008) note that import shares for protected sectors with the highest tariffs are similar in all three countries; live animals and dairy products, especially milk, are minor shares of imports, as are fabrics and to a lesser extent grains (except imports are sometimes high for Kenya) and textiles and clothing. Imports where there is little domestic production, such as chemicals and transport equipment, or inputs such as

fertiliser and capital equipment bear low tariffs. Most imports faced tariffs in the three bands (zero, 10%, and 25%) with the list of sensitive items facing higher rates ranging from 35% to 100% (WTO, 2019, p6). Appendix Table A2 below lists the main product categories with high rates – these sensitive products are mostly foods, especially dairy products, rice and sugar with rates above 50%, and fabrics

Member states do have tariff lines that deviate from CET rates (WTO, 2019, Table 3.5, p31). Rwanda has the most (over 400 lines), mostly in textiles, base metals and machinery, almost all lower than the CET. Kenya has almost 400 lines, mostly in textiles and base metals, almost all being cases where non-*ad valorem* rates are applied. Uganda has over 200 lines, most common for base metals and live animals and products, about half higher than CET rates. Only Tanzania has predominantly higher rates than CET with almost 100 lines, two-thirds for live animals and products. These exceptions are in addition to the sensitive products. Rauschendorfer and Twum (2021) document the extensive use of these deviations from the CET, at the country level and for individual firms, that undermine the intra-regional trade benefits from the EAC. Country-level deviations are used by Kenya, Tanzania and Uganda most frequently to increase applied tariffs since 2016, typically to increase protection for domestic producers, whereas Rwanda tends to reduce tariffs (to the extent of effectively reversing agreed increases in the CET on certain products in 2016). Deviations through exemptions for individual firms are almost always for tariff reductions, usually with time and quantity limits, and appear to favour specific firms (in cases offsetting country-level deviations to increase tariffs), consistent with political economy motives. The use of deviations has increased significantly since 2009; their estimates suggest that about 2% of total EAC imports by value entered under more than one tariff rate in fiscal 2017/2018 (an increase from 0.5% of imports in fiscal 2009/2010) and this is likely to have increased in recent years. In principle, if one member imports at a lower tariff than the CET it could then re-export tariff-free within the EAC, undermining competing producers in other countries. Rauschendorfer and Twum (2021) do not explore the effects on intra-EAC trade in any detail but do provide an example of how protection (political economy) influences can undermine the intentions of trade agreements.

Table 1 EAC Member's Trade with Africa (% shares 2012-2018)

	Kenya	Tanzania	Uganda	Rwanda	Burundi
Africa X					
2012-17	40	32	54	43	17
2018	33	36	48	28	18
Africa M					
2012-17	10	12	21	35	36
2018	12	13	23	32	32

Notes: Reports percentage share of AfCFTA countries in total exports and imports for each EAC member. The decline for Rwanda in 2018 is not explained in ECA (2020) and the average African share in exports was 32% over 2006-2011.

Source: Economic Commission for Africa (2020), Table 2.2 (p14).

Trade with the rest of Africa is significant for EAC members; Table 1 shows trends to 2018 (the analysis below uses data for 2020). Although there was a decline since 2012, Africa accounts for over a third of exports for all members except Burundi (and Rwanda by 2018); Africa accounts for a third of imports for Rwanda and Burundi, less than a quarter for Uganda but just over ten per cent for Kenya and Tanzania. There is potential for export growth under AfCFTA

liberalisation because although average tariffs faced by EAC exports to Africa are 6%, light manufactures and processed foods face higher tariffs and some African countries impose much higher tariffs – for example, 16.5% average for Ethiopia and over 20% on processed foods, light manufactures and garments (ECA 2020, Table 2.4, p18).

The ECA (2020, p15) shows that, for the EAC, manufactures were the largest share of intra-African exports, followed by foods, whereas food and agricultural raw materials, ores and metals accounted for more than three-quarters of exports to the rest of the world (ROW) by 2018. Intra-EAC trade accounted for 11% of total EAC trade in 2019, a decline from the peak over 2012-14 due to reduced intra-regional exports by Kenya and especially Tanzania (ECA 2020, pp16-17). Table 2 shows the declining importance of intra-EAC trade between 2012 and 2017 for all members except Uganda, and significant differences across countries in shares and patterns. Intra-EAC trade is less than ten per cent of total trade for Kenya and Tanzania because EAC imports are a small share of total imports; exports are significant for Kenya (EAC accounts for a fifth or more) but relatively low shares for Tanzania and Burundi. The EAC is an important destination for Rwandan and Ugandan exports, and accounts for a fifth or more of imports for Burundi and Rwanda. In general, the smaller the country the more important is intra-EAC trade.

Table 2 Intra-EAC Trade Shares (%) 2012 and 2017

Intra-EAC	Kenya	Tanzania	Uganda	Rwanda	Burundi
Exports					
2012	26.1	12.3	24.6	29.4	13.5
2017	19.3	10.9	28.5	18.5	7.7
Imports					
2012	2.2	5.8	10.7	24.3	19.9
2017	3.5	3.4	10.0	20.3	19.1
Total Trade					
2012	8.8	7.9	14.6	25.3	18.4
2017	7.6	6.1	16.3	19.7	17.3

Notes: Reports intra-EAC trade as percentage shares of exports, imports and total trade for each EAC member. Source only goes to 2017. For all countries except Tanzania and Uganda, intra-EAC export shares were lower in 2017 than in 2011; Kenya was the only country that increased intra-EAC import shares by 2017 compared to 2011.

Source: WTO (2019), Table A1.1 (p46).

4 AfCFTA Impact on EAC Exports – which countries?

As the focus is to identify which markets (countries) and products have the greatest potential of AfCFTA to increase EAC exports to Africa, a disaggregated approach is adopted (unlike the more aggregated modelling approaches reviewed in Section 2). The estimates are for the intensive margin, increases in current exports, given data limitations and do not include any potential new export products that may arise. Furthermore, instead of using data on EAC exports, which are limited with many missing values and do not include tariffs faced in different RoA markets, we use partner data on imports from EAC countries with the applicable tariffs. If all regions in Africa had submitted their AfCFTA Schedule of Tariffs with the list of sensitive and excluded products it would be possible in principle to identify existing intra-African export products for which tariffs will not be reduced. These schedules are not available for all EAC5 export markets, so the implicit assumption is that existing exports indicate that the EAC countries are competitive suppliers and/or the products are unlikely to be excluded from tariff

reductions by the partner. Furthermore, as the EAC5 are already exporting to the markets, they are succeeding despite the high costs of intra-African trade, a concern that is especially important for more distant markets – it often costs more to transport goods within Africa than from the rest of the world to Africa (Limao and Venables, 2001).

For simplicity, estimates ignore the phasing of tariff reductions (including that tariffs will be reduced last on sensitive products); one could interpret the estimates as for feasible export growth by 2035. It is reasonable to assume that products excluded from liberalisation are currently subject to relatively high tariffs (and are likely to be classified as sensitive); average tariffs on excluded products (Category B&C) are almost 30% in EAC (and 25% for ECOWAS) compared to just over 10% for Category A products in EAC and ECOWAS (de Melo and Soleder, 2024, Table 4, p13). Obviously, if products are excluded from tariff reduction the potential export gains will not be realised. Appendix A provides estimates of the trade and welfare effects of tariff reductions by the three largest EAC members (Kenya, Tanzania and Uganda), focussing on existing imports. Overall, RoA imports may increase by about 20% (16% for Tanzania) excluding sensitive products, and by over 23% if sensitive products are liberalised. .

Potential increase in export is estimated with a simple approach (consistent with how effects on EAC imports are estimated in Appendix A adapting Milner *et al.* 2005) using imports of RoA countries (j) from the EAC country (i) to estimate $\Delta X^i = \Sigma_j \, \Delta M^{ji}$ where

$$\Delta M^{ji} = \left(\frac{t}{1+t}\right).\eta_M^d.M_0^{ji} \qquad (1)$$

where t is j's tariff on imports from EAC country i, and ($t/1+t$) represents the relative price change; η_M^d is the price elasticity of demand for imports, and M_0^{ji} is the pre-AfCFTA value of imports from EAC country i. The estimate of the increase in imports in response to a price reduction is taken as the estimate of the increase in EAC5 exports as tariffs are eliminated. Three alternative elasticities (η) are used: unit elasticity ($\eta = 1.0$) and elastic demand ($\eta = 1.5$) for all products, and variable elasticities at the HS2 level taken from Hertel (1997) – Appendix Table B3 provides a list of the HS2 products and 'Hertel' elasticities ($\eta = $ H).

Estimation is based on the matched tariffs and import data from the Tariff and Trade Analysis option in WITS as this gives the broadest coverage with tariff rates. Estimation is carried out at the HS6 product level and then aggregated, to HS2 and for each market. The 12 RoA countries that import the most from EAC countries are included in the analyses, providing good coverage and probably accounting for more than 90% of EAC exports to RoA. Some important EAC export markets – specifically South Sudan, Sudan and Somalia – are omitted due to missing data on tariffs. Although South Sudan and DR Congo (DRC) have joined EAC they are yet to start implementing EAC trade protocols so are not analysed as members. However, as the DRC is a very important export market for the EAC countries, it is included as an RoA export markets in the analysis.

The values for Kenya, Tanzania and Uganda of imports from (exports to) the 12 RoA countries and the average weighted tariff faced are listed in Table 3. While the same 12 RoA countries are used for each EAC country, their importance as export markets differs as can be seen by the ranking by value of imports (mostly for 2020). Note that alternative data sources provide differing values for imports and this can create anomalies; for example, TRAINS (WITS) reports Zambia as Tanzania's largest export market in RoA, whereas COMTRADE reports South Africa as the largest (which seems more plausible).[1] This implies the quantitative estimates of

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[1] Tanzania's key RoA export markets in COMTRADE has South Africa almost 20 times greater than Zambia (and DRC in second is about three times greater). However, in most cases COMTRADE is broadly consistent with

the increase in value of exports should be treated with caution. This limitation is mitigated by the focus on the countries with the greatest potential for the EAC5 and on the percentage increase in exports (based on the product composition and tariffs faced).

Table 3: EAC 'Big 3' Member's Major African Export Markets (2020)

	Kenya			Tanzania			Uganda	
	M$m	Tariff		M$m	Tariff		M$m	Tariff
Egypt (2018)	288.2	*19.9*	Zambia (2020)	147.3	*14.8*	D.R. Congo (2020)	63.5	*12.8*
Zambia (2020)	92.9	*14.8*	D.R. Congo (2020)	81.7	*12.6*	South Africa (2020)	39.6	*10.0*
Ethiopia (2020)	47.2	*19.0*	South Africa (2020)	55.3	*11.9*	Morocco (2020)	18.5	*24.3*
Mauritius (2021)	44.0	*3.2*	Malawi (2020)	39.8	*16.3*	Zambia (2020)	11.0	*14.1*
D.R. Congo (2020)	40.5	*12.4*	Zimbabwe (2020)	23.6	*21.6*	Egypt (2018)	7.6	*20.5*
South Africa (2020)	39.7	*11.7*	Ghana (2019)	13.4	*13.3*	Nigeria (2020)	3.5	*15.0*
Malawi (2020)	39.0	*12.7*	Mozambique (2020)	13.3	*10.5*	Mauritius (2021)	3.0	*1.2*
Nigeria (2020)	37.8	*14.1*	Nigeria (2020)	9.6	*13.4*	Malawi (2020)	1.9	*13.9*
Ghana (2019)	16.0	*15.5*	Morocco (2020)	8.5	*10.1*	Ethiopia (2020)	1.7	*20.2*
Morocco (2020)	10.7	*16.9*	Egypt (2018)	4.7	*17.4*	Mozambique (2020)	1.4	*13.7*
Mozambique (2020)	7.8	*9.7*	Ethiopia (2020)	3.8	*24.5*	Zimbabwe (2020)	0.5	*13.9*
Zimbabwe (2020)	6.2	*20.4*	Mauritius (2021)	0.14	*0.0*	Ghana (2019)	0.4	*15.5*
Total	**669.8**		**Total**	**401.3**		**Total**	**152.7**	

Notes: Reports major African export countries (with year for data) for each EAC member ranked in order of the value of imports in USD millions (M$m) with the average applied tariff for the products imported (these are reported as weighted averages in TRAINS although the weights are not specified).

Source: Derived from the Tariff and Trade Analysis option in WITS.

An interesting feature of the countries in Table 3 is that while most, as would be expected, are in southern and eastern Africa, Egypt (especially for Kenya) and Morocco (especially for Uganda) are important, as are Ghana (especially for Tanzania) and Nigeria. This shows that there are products EAC countries can export to African countries that are far away from the region despite what are likely to be high transport costs (and relatively high tariffs). Table 3a shows that Egypt and Morocco are relatively important for Burundi, despite a very low value of exports, while the situation is very different for Rwanda where 99% of exports are to the DRC (the DRC accounts for over a third of total Rwandan exports over 2019-22 and the only African countries with shares over 1% are EAC members).

Appendix Tables B1 & B2 provide estimates of the increase in exports of each EAC country to each RoA country, for alternative import demand elasticity values (η = H, 1.0, 1.5), ranked in

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WITS: Egypt is a leading market for Kenya while Morocco ranks high for Uganda. It is also evident that the omitted countries (South Sudan, Sudan and Somalia) are major markets for Kenya and, with the exception of Somalia, also for Uganda (they are less important for Tanzania).

order of the increase in export values. Negligible or zero increase in exports (given very low/zero initial tariffs) are not reported. The ranking of countries in terms of the increase in exports differs from the ranking by initial import values because applied tariff rates differ (and the average masks variation across the products covered). Thus, for example, for Kenya the potential increase in exports is greatest to Zambia with Egypt in second place and the top five places are largely preserved for Tanzania (Ghana falls in importance). For Uganda, DRC retains top place but South Africa falls while Egypt rises in importance. The export ranking is preserved in the change in exports ranking for Rwanda (almost entirely DRC) and Burundi, except that exports to South Africa don't increase (no tariffs). The increase in exports is in proportion to the elasticity assumption for η=1.5 and η=1.0 but may be within or outside this range for η=H as the variation includes HS2 with inelastic demand and elasticities above 1.5; this as gives a plausible range and only the η=H and η=1.0 estimates are reported (the total increase in exports is noted for all three elasticities).

Table 3a: Rwanda and Burundi Major African Export Markets (2020)

Rwanda			Burundi		
	M$'000	Tariff		M$'000	Tariff
D.R. Congo (2020)	370759.8	*12.9*	South Africa (2020)	518.6	*6.3*
Ghana (2019)	2261.4	*13.1*	Egypt (2018)	305.3	*50.0*
Morocco (2020)	649.6	*5.0*	D.R. Congo (2020)	238.6	*14.1*
South Africa (2020)	417.4	*12.3*	Morocco (2020)	219.3	*17.5*
Egypt (2018)	380.6	*5.6*	Zambia (2020)	188.3	*16.4*
Zambia (2020)	221.6	*6.3*	Nigeria (2020)	50.8	*8.8*
Ethiopia (2020)	136.7	*15.0*	Malawi (2020)	17.9	*25.0*
Mozambique (2020)	90.8	*10.2*	Ghana (2019)	9.6	*12.5*
Malawi (2020)	69.9	*18.7*	Ethiopia (2020)	9.4	*24.0*
Mauritius (2021)	27.7	*2.9*	Mozambique (2020)	0.7	*12.5*
Zimbabwe (2020)	12.3	*15.7*	Mauritius (2021)	0.3	*7.0*
Nigeria (2020)	0		Zimbabwe (2020)	0	
Total	**375,027.8**		**Total**	**1,559.0**	

Notes and Sources: As for Table 3.

Tables 4-8 report the increase in Kenyan exports for each market with their share of the increase for η=H and η=1.0 (percentage increases are reported for market-products in Section 5). Overall, total Kenyan exports may increase by 6-9% (7% for H) or $40-60 million, a fairly narrow range (Table 4). Exports to five countries account for over 10% of the increase – Ethiopia, Zambia, Egypt, DRC and Malawi – and the differences for elasticities are small and equally likely to be higher or lower for H. It is notable that although Egypt accounts for 43% of exports it only accounts for about 18% of the increase, reflecting a product composition with relatively inelastic demand (tea, as shown in Section 5).

Table 4: Kenya Export Increase in Response to Tariff Elimination

	Imports M$m	ΔX (H) $'000s	share %	ΔX (1.0) $'000s	share %
Ethiopia	47.2	9,064.5	18.81	6,923.7	17.15
Zambia	92.9	8,791.0	18.25	8,051.3	19.95
Egypt	288.2	8,021.3	16.65	7,423.1	18.39
D.R. Congo	40.5	6,121.7	12.71	4,213.5	10.44
Malawi	39	5,456.8	11.33	5,129.6	12.71
Nigeria	37.8	3,433.8	7.13	2,632.8	6.52
South Africa	39.7	2,168.2	4.50	2,159.6	5.35
Zimbabwe	6.2	2,132.3	4.43	1,449.5	3.59
Ghana	16	1,453.2	3.02	1,176.3	2.91
Mozambique	7.8	796.1	1.65	572.3	1.42
Morocco	10.7	376.6	0.78	318.3	0.79
Mauritius	44	361.3	0.75	312.4	0.77
Total	669.8	48,176.8	100.00	40,362.4	100.00
ΔX %		7.2		6.0	

Notes: For the 12 main markets listed, table reports initial imports (M$m) and estimated increase in exports in response to the import price change as tariffs are eliminated under AfCFTA. Under $\eta = 1.5$ total exports could increase by $60,543,600 (9%).

Source: Authors estimates.

Table 5: Tanzania Export Increase in Response to Tariff Elimination

	Imports M$m	ΔX (H) $'000s	share %	ΔX (1.0) $'000s	share %
Zambia	147.4	26,632.6	40.85	19,867.1	44.12
South Africa	55.3	9,598.0	14.72	5,454.2	12.11
Malawi	39.8	9,142.9	14.02	6,049.9	13.43
D.R. Congo	81.7	8,262.4	12.67	6,231.5	13.84
Zimbabwe	23.6	6,183.7	9.49	4,006.6	8.90
Mozambique	13.3	1,479.6	2.27	899.5	2.00
Ethiopia	3.8	1,320.4	2.03	694.3	1.54
Nigeria	9.6	939.9	1.44	639.9	1.42
Morocco	8.5	745.9	1.14	650.3	1.44
Ghana	13.4	711.0	1.09	395.8	0.88
Egypt	4.7	175.0	0.27	142.6	0.32
Total	401.3	65,191.40	100.00	45,031.6	100.00
ΔX %		16.3		11.2	

Notes and Sources: As for Table 4, except Mauritius omitted due to no increase in exports. Under $\eta = 1.5$ total exports could increase by $67,547,400 (16.9%).

Table 6: Uganda Export Increase in Response to Tariff Elimination

	Imports	ΔX (H)	share	ΔX (1.0)	share
	M$m	$'000s	%	$'000s	%
D.R. Congo	63.5	8,189.2	64.55	6,638.7	64.37
Morocco	18.5	1,883.1	14.84	1,669.8	16.19
Egypt	7.6	828.0	6.53	663.7	6.44
Nigeria	3.5	650.1	5.12	436.5	4.23
Zambia	11.0	391.0	3.08	212.8	2.06
South Africa	39.6	362.2	2.86	279.0	2.71
Ethiopia	1.7	144.3	1.14	194.4	1.88
Ghana	0.4	78.0	0.61	53.9	0.52
Malawi	1.9	75.9	0.60	108.9	1.06
Zimbabwe	0.5	53.6	0.42	36.9	0.36
Mozambique	1.4	30.6	0.24	18.6	0.18
Total	152.7	12,686.0	100.00	10,313.0	100.00
ΔX %		8.3		6.7	

Notes and Sources: As for Table 4, except Mauritius omitted due to no increase in exports. Under $\eta = 1.5$ total exports could increase by $15,470,000 (10.2%).

Table 7: Rwanda Export Increase in Response to Tariff Elimination

	Imports	ΔX (H)	share	ΔX (1.0)	share
	M$m	$'000s	%	$'000s	%
Congo, DR	370.76	41,878.80	99.305	37,969.3	99.139
Ghana	2.261	189.8	0.450	251.3	0.656
Morocco	0.65	51.7	0.123	46.0	0.120
Mozambique	0.091	15.4	0.037	6.3	0.016
Malawi	0.07	11.8	0.028	6.1	0.016
Egypt	0.381	10	0.024	8.6	0.022
Zambia	0.222	8.2	0.019	3.4	0.009
Ethiopia	0.137	5.3	0.013	6.7	0.017
Zimbabwe	0.012	0.9	0.002	0.6	0.002
Mauritius	0.028	0.5	0.001	0.4	0.001
Total	375.0	42,172.40	100.0	38,298.8	100.0
ΔX %		11.3		10.2	

Notes and Sources: As for Table 4, except Nigeria and South Africa omitted due to no increase in exports. Under $\eta = 1.5$ total exports could increase by $57,448,100 (15.3%).

Table 8: Burundi Export Increase in Response to Tariff Elimination

	Imports M$m	ΔX (H) $'000s	share %	ΔX (1.0) $'000s	share %
Egypt	0.305	139.5	52.05	87.3	51.66
Zambia	0.188	49.6	18.51	22.5	13.31
Congo, DR	0.239	37.5	13.99	25.9	15.33
Morocco	0.219	28.0	10.45	24.0	14.20
Malawi	0.018	4.7	1.75	3.6	2.13
Ethiopia	0.009	3.7	1.38	2.1	1.24
Nigeria	0.051	2.5	0.93	2.4	1.42
Ghana	0.01	2.2	0.82	1.4	0.83
South Africa	0.519	0.4	0.15	0.2	0.12
Mozambique	0.001	0.1	0.04	0	0.00
Total	1.6	268.2	100.07	169.4	100.24
ΔX %		16.8		10.6	

Notes and Sources: As for Table 4, except Mauritius and Zimbabwe omitted due to no increase in exports. Under $\eta = 1.5$ total exports could increase by $254,100 (15.9%).

Total Tanzanian exports may increase by 11-17% (16% for H) or $45-68 million, and exports to four countries account for over 10% of the increase – Zambia (over 40%), South Africa, Malawi and DRC (Table 5). Ugandan exports could increase by 7-10% (8% for H) or $10-15 million; exports to only two countries account for over 10% of the increase – DRC (over 60%) and Morocco (Table 6). Table 7 shows that the increase in Rwandan exports is almost entirely to DRC (Ghana is the only other market with an increase above $100,000), with a potential overall increase of 10-15% (11% for H), or $38-47 million. Exports from Burundi could increase by 11-17% (17% for H) or $169,000-268,000; exports to four countries account for over 10% of the increase – Egypt (over 50%), Zambia, DRC and Morocco (Table 8) – the value of RoA exports is low but distant markets are relatively important.

Overall, EAC exports to RoA could increase by about 10%, within the range 5% to 20% and probably less than 15%. While most of the increase is to relatively close countries, in Southern Africa or Ethiopia, four distant markets are reasonably important (except for Rwanda which is very concentrated on DRC). The importance of Egypt, Ghana, Morocco and Nigeria show that EAC countries can export across Africa which increases the ability to gain from AfCFTA.

5 AfCFTA Impact on EAC Exports – which products?

Policymakers are interested in predictions of export increases but likely to be even more concerned with knowing which products that are currently exported have the greatest potential for growth. As a general rule, the closer the market the wider the range of export products – the EAC, for example, can anticipate increased exports to DRC and Zambia in several export product groups. Of more interest is the products exported to distant markets in north or west Africa (Egypt, Morocco, Nigeria and Ghana), shown in Tables 9-13 for the EAC countries

separately. Although this analysis cannot address new export products, if a country is exporting to relatively distant markets (with higher trade costs than neighbours) it may be able to export to other (new) distant markets – if Morocco is a market could the products be exported to Algeria or Tunisia? In some markets, products accounting for the largest share of initial imports experience a relatively low percentage increase because demand is inelastic, although they may still provide a significant increase in the value of exports. The highest percentage increase in export potential is often for products with low initial shares, reflecting differential tariff rates and elasticities, although they may account for a low share of the total increase. There is considerable variation in the range of products traded between the various partners; even if exports of agricultural products, textiles and apparel dominate, various light manufactures are significant (especially for Kenya and Tanzania).

Table 9: Kenya Increase Exports HS2 Products with Main Markets

HS2	Short title	Value	Share	Markets
09	Tea	8,085.4	16.78	**Egypt** (72%), **Nigeria** (16%), **Ghana** (4%)
15	Fats & oils	2,209.7	4.59	Zambia (56%)
24	Tobacco	1,622.5	3.37	**Nigeria** (32%), **Egypt** (24%)
34	Soap, etc	3,505.8	7.28	Malawi (42%), **Ghana** (4%)
39	Plastics	2,508.2	5.21	Ethiopia (42%), Zambia (35%)
48	Paper	1,975.5	4.10	**Egypt** (32%)
53	Veg textile fibres	1,202.6	2.50	**Nigeria** (55%), **Ghana** (34%), **Morocco** (11%)
63	Textiles; worn etc	1,456.8	3.02	Zambia (45%), Ethiopia (25%)
67	Feathers etc	1,378.2	2.86	Ethiopia (49%), Zimbabwe (29%)
72	Iron & steel	1,365.5	2.83	DRC (81%), Ethiopia (17%)
73	Iron, steel articles	1,349.8	2.80	DRC (48%), Ethiopia (31%), Zambia (10%)
76	Aluminium	1,939.4	4.03	Ethiopia (50%), Zambia (14, DRC (10%)
84	Mechanical	1,947.9	4.04	Zambia (56%), Ethiopia (22%), DRC (8%)
85	Electrical	2,748.4	5.70	Zimbabwe (37%), Ethiopia (14%)

Notes: Only reports products that account for at least 2.5% of the estimated increase in exports. Markets in **bold** are the **distant** markets that account for over 4% of the increase in exports and the main other markets. Ghana and Nigeria each account for about 3% of HS85 increase for Kenya.

Source: Authors estimates.

Table 10: Tanzania Increase Exports HS2 Products with Main Markets

HS2	Short title	Value	Share	Markets
24	Tobacco	2,830.7	4.34	Zimbabwe (48%), S Africa (15%), DRC (14%)
25	Salt; stone; etc	6,391.0	9.80	DRC (94%)
27	Mineral fuels, etc	7,007.5	10.75	Zambia (97%)
33	Cosmetic or toilet	1,640.2	2.52	Zambia (50%), DRC (15%), Moz. (15%)
34	Soap, etc	4,030.7	6.18	Malawi (97%)
61	Apparel knitted	4,445.2	6.82	South Africa (99%)
63	Textiles; worn etc	5,944.8	9.12	Zambia (54%), Zimbabwe (35%)
70	Glass & glassware	7,667.6	11.76	Zambia (28%), Zim. (25%), Ethiopia (12%)
72	Iron & steel	5,484.9	8.41	Zambia (96%)
90	Optical, medical etc	2,130.7	3.27	South Africa (96%)

Notes and Sources: As for Table 9.

Table 11: Uganda Increase Exports HS2 Products with Main Markets

HS2	Short title	Value	Share	Markets
09	Coffee, tea, spices	1,891.8	14.91	**Morocco** (99%)
24	Tobacco	1,617.1	12.75	**Egypt** (49%), **Nigeria** (30%)
25	Salt; stone; etc	3,274.4	25.81	DRC (100%)
72	Iron & steel	890.0	7.02	DRC (100%)
73	Iron, steel articles	707.2	5.57	DRC (99%)

Notes and Sources: As for Table 9.

Table12: Rwanda Increase Exports HS2 Products with Main Markets

HS2	Short title	Value	Share	Markets
10	Cereals	3,371.5	7.99	DRC (100%)
11	Milling products	3,510.6	8.32	DRC (100%)
15	Fats & oils	3,057.6	7.25	DRC (100%)
25	Salt; stone; etc	1,036.7	2.46	DRC (100%)
27	Mineral fuels, etc	7,566.8	17.94	DRC (100%)
34	Soap, etc	2,266.4	5.37	DRC (100%)
63	Textiles; worn etc	2,370.6	5.62	DRC (~100%)
64	Footwear	1,196.8	2.84	DRC (100%)
72	Iron & steel	2,925.6	6.94	DRC (100%)
85	Electrical machinery	3,145.5	7.46	DRC (99%)
87	Vehicles	1,322.6	3.14	DRC (99%)
94	Furniture; etc	1,114.1	2.64	DRC (~100%)

Notes and Sources: As for Table 9. In some cases, these products are likely to be re-exports (HS27; 35% of HS85 comprises batteries HS6506 and the next most important products are telephones and monitors; some 75% of HS87 is motor cars) or second hand (about 90% of HS63 is worn clothing HS6309).

Table 13: Burundi Increase Exports HS2 Products with Main Markets

HS2	Short title	Value	Share	Markets
09	Coffee, tea, spices	18.6	6.94	**Morocco** (100%)
11	Milling products	10.4	3.88	DRC (100%)
24	Tobacco	10.9	4.07	Zambia + Malawi (100%)
34	Soap, etc	6.0	2.24	DRC (100%)
62	Apparel not knitted	140.7	52.50	**Egypt** (99%)
85	Electrical machinery	44.3	16.53	Zambia (97%)
94	Furniture; etc	16.4	6.12	**Morocco** (57%), DRC (17%), **Ghana** (7%)

Notes and Sources: As for Table 9.

Tables 9-13 report the HS2 products accounting for 2.5% or more of the increase in exports, with the main markets, for each EAC country. Kenya has the most diversified product range of exports; while tea accounts for over 15% of the increase in exports, 14 HS2 products contribute more than 2.5% of the increase (Table 9). Fats & oils is the only HS2 product where only one market (Zambia) is dominant, and the distant markets are important for five HS2 products, even if tea is by far the most important. Distant markets are also important for Uganda where coffee (Morocco) and tobacco (Egypt and Nigeria) account for almost 30% of the export growth – DRC is the other major market (Table 11). Although the level of exports is low, distant markets are also important for Burundi, especially apparel to Egypt (over half of export growth) and coffee to Morocco (Table 13). Although Rwanda exports a relatively wide range of HS2 products (Table 12), over 99% goes to DRC (and includes re-exports and second-hand items). Tanzania exports a range of products but is concentrated on close countries, especially Zambia and Zimbabwe, except for glass to Ethiopia (Table 10).

Table 14: Kenyan Main Export Products (distant markets)

HS2	Product	Share M	ΔX$'000	%ΔX
	Egypt			
09	Tea [0902]	91.6	5,823.5	2.2
48	Paper [4811]	4.6	637.3	4.8
24	Tobacco [2401 & 2403]	1.4	382.4	9.7
08	Fruits, mostly dates etc [0804]	0.9	728.5	29.5
06	Cut flowers [0603]	0.3	274.7	32.0
	Morocco			
12	Seeds for sowing [1205]	49.4	148.6	2.8
53	Vegetable textile fibres [mostly 5305]	37.5	137.2	3.4
	Nigeria			
09	Tea [0902]	32.6	1,258.6	10.2
53	Mostly Jute [5303]	26.2	659.9	6.7
24	Tobacco, mostly unmanufactured [2401]	18.1	518.8	7.6
56	Cordage, ropes [5607]	4.6	275.2	15.7
90	Measuring [9031] and surveying [9015]	4.5	242.0	14.4
94	Mostly Lights [9405]	1.3	99.3	20.8
	Ghana			
53	Vegetable textile fibres [mostly 5305]	34.3	405.4	7.4
09	Tea [0902]	21.0	343.5	10.2
34	Furniture polishes [3405]	3.2	156.3	30.4

Notes: Lists the main products with potential for export expansion (increase by over $100,000), as a percentage of initial imports (Share M) and estimated increase at η=H in value (ΔX$'000) and percentage (%ΔX) terms. Although HS30 (pharmaceuticals) accounts for 18% of Ghanaian imports and 5.7% of Nigerian imports neither have potential for increased Kenyan exports given zero tariffs.

Source: Authors derived from WITS.

Tables 14-16 focus on products that account for an increase in exports of at least $100,000 to distant markets for the three big EAC countries – the only relevant product for Rwanda is insecticides (HS3808) for which Ghana accounts for 99% of exports and these could increase by $186,400 (8.3%); for Burundi the only product is tracksuits and swimwear (HS6211) where Egypt accounts for 99% of exports and these could increase by $138,800 (45.7%). Kenya exports a diverse range of products to all four distant markets, although most of the increase is

in tea to Egypt and Nigeria (Table 14). In value terms, the important products for which exports increase by more than $0.5 million are paper and fruits to Egypt, jute and tobacco to Nigeria. Textile fibres are important exports to Ghana (also tea and polishes) and Morocco (also seeds), which could link to a regional value chain. In general, products with the highest export shares have the lowest percentage growth (even if the values are the highest) due to relatively low tariffs, whereas products with the highest percentage growth, as tariffs are relatively high, tend to be low shares of current exports.

Table 15: Tanzania Main Export Products (distant markets)

HS2	Product	Share M	ΔX$'000	%ΔX
	Morocco			
09	Coffee [0901]	67.1	583.1	10.2
	Nigeria			
56	Cordage, ropes [5607]	39.2	566.3	15.0
41	Raw hides [4101 & 4103]	41.3	208.3	5.2
53	Mostly Jute [5303]	15.9	101.9	6.7
	Ghana			
53	Mostly yarn [5308] and [5305]	16.0	207.8	9.7
70	Glass containers [7010]	5.7	166.3	21.6
84	Machine tools [8463 & 8464]	9.6	164.9	12.8

Notes and Sources: As for Table 14 except: No products have an increase in exports to Egypt of at least $100,000. Although HS63 (furnishing textiles, 6304) accounts for 60% of Ghanaian imports from Tanzania there is no potential for increased exports given zero tariffs.

Source: Authors derived from WITS.

Coffee is Tanzania's major export to Morocco (Table 15) but the potential for growth is modest in percentage terms (10%); cordage (15% increase) and raw hides (5%) are the most important exports to Nigeria, while yarn (10%), glass containers (22%) and machine tools (13%) are important to Ghana. Ugandan exports are concentrated in coffee to Morocco and tobacco to Egypt and Nigeria; aluminium sheets to Nigeria is the only other important export (Table 16).

Table 16: Uganda Main Export Products (distant markets)

HS2	Product	Share M	ΔX$'000	%ΔX
	Egypt			
24	Tobacco, unmanufactured [2401]	65.6	792.9	15.8
	Morocco			
09	Coffee [0901]	99.1	1873.0	10.2
	Nigeria			
24	Tobacco [2403]	64.5	483.2	21.7
76	Aluminium, sheets [7606]	11.4	117.0	29.5

Notes and Sources: As for Table 14 except no products have an increase in exports to Ghana of at least $100,000.

6 Conclusions: EAC and Expansion of intra-African Trade

This paper provides estimates of the potential for EAC member countries to increase exports as countries in the rest of Africa reduce tariffs under AfCFTA, covering the EAC5 countries – Burundi, Kenya, Rwanda, Tanzania and Uganda; DRC joined very recently so is treated

separately (increased exports to DRC are benefits of it becoming a member rather than AfCFTA); South Sudan also joined recently but is omitted due to lack of data. Analysis of export growth is restricted to products that are imported (pre-AfCFTA) from the EAC; this implies that EAC countries have export capacity in the products to African markets, and that these products are unlikely to be excluded from liberalisation by importing countries. A simple approach to estimation is employed that only requires data on the initial value of exports, the tariffs applied by the importing country (to derive the price reduction) and a value for the (import) demand elasticity (alternative values are considered). This choice is guided by the desire for highly disaggregated analysis so the markets (countries) and products with the largest increase in potential exports (in value terms) can be identified for each EAC country.

These estimates are complemented with analysis of the welfare effects on the large EAC countries (Kenya, Tanzania and Uganda) of eliminating tariffs on imports from the rest of Africa (Appendix A), in this case considering only products that are being imported from Africa. As the focus is on the increase in existing imports from RoA in response to the price reduction as tariffs are eliminated, estimated trade diversion is low (imports from ROW continue as RoA shares are generally low and in differentiated products). Estimates suggest that EAC imports increase by around 10% and this mostly provides consumption gains from increased imports at lower prices. The increased imports only have a small effect displacing intra-EAC trade (products traded within the EAC tend to have high tariffs and low imports and are likely to be excluded from tariff reductions), so the welfare effect of the consumption gain is positive. Once trade diversion is included the welfare effect is negative except for Uganda (albeit negligible relative to GDP). Although not incorporated in Appendix A, once products are identified, if data are available on employment and production for the relevant sectors, it is possible to conduct analysis of the adjustment requirements to realize benefits from tariff elimination (Milner, Morrissey and Zgovu, 2011).

Three main conclusions emerge. First, there are opportunities to expand exports overall by 10-15%, largely concentrated in relatively close countries and agriculture and resource-based products: EAC5 countries export a diverse range of products to Africa and to about ten different markets (although DRC accounts for 99% of Rwandan exports), including distant countries in North and West Africa. Export growth to neighbouring countries includes a range of simple manufactures, such as metal products and soaps; Kenya exports machinery and electrical equipment (so does Rwanda to DRC and Burundi to Zambia but these may be re-exports). Second, export growth potential is mostly in markets near the EAC; this is almost exclusively the case for Rwanda (DRC) and Tanzania, but distant markets are significant for the other EAC5 countries. While agricultural products, especially tea and coffee, dominate export growth to distant markets, textiles and apparel are important for Kenya and Burundi. Furthermore, products that are currently a relatively low share of exports to a partner can offer opportunities for high percentage increases. Third, while HS2 products are a suitable disaggregation to present results, there can be significant differences between the products within a HS2 code – the exports of a country are generally concentrated on specific HS4 products. The potential to export these products to new African markets is not incorporated, but the products are identified.

The EAC can anticipate moderate gains from AfCFTA and, by identifying the markets and products most likely to be affected, the study provides a guide to analysts and policymakers in EAC5 countries on sectors to study in more detail. For example, with access to Customs data one could identify which firms are exporting products with growth potential, especially to distant markets. Interviewing such firms to understand their experience, constraints and strategies would inform policy interventions to promote intra-African exports. Few of the products with significant export potential are evidently a part of value chains; many are final products that probably source most inputs locally, such as tea, coffee, foodstuffs and basic

processed metals. Mensah and Van Biesebroeck (2022) distinguish sourcing of imports from sources of exports and find that whereas for global value chains export success in distant markets leads to regional export success, in the case of light manufacturing regional exports come before expanding to global (non-African) markets. Thus, some exports will have potential for at least regional value chains.

Previous work indicates that products suitable for building regional value chains are most likely to be concentrated in textiles and apparel. There is evidence for this in Tanzania. For example, Boys and Andreoni (2024) study the importance of national (NVC), regional (RVC) and global (GVC) value chains for product, process and market upgrading in the Tanzanian textiles and garments sector. Firms engaged in RVCs and NVCs benefit most because of ability for vertical integration into textile manufacturing and diversification into higher-value activities, whereas GVCs are the least beneficial because they limit firms to low-value activities (such as apparel assembly) although they have higher revenue potential. Preferential market access improves participation in RVCs and vertical integration. Saha *et al.* (2024) highlight the importance of access to imported machinery and inputs (capturing engagement in GVCs) for technology upgrading to increase production capacity and ability of Tanzanian textiles and apparel firms to integrate with value chains and move into higher value-added products. They find that cumbersome customs procedures are a significant constraint to importing inputs.

The estimated gains from AfCFTA are modest for the EAC, but plausible and provide conservative expectations for policymakers. One reason for the modest effects is that only tariff reductions for existing (pre-AfCFTA) export products (or imports for the EAC) are considered. Other measures, such as reducing non-tariff barriers and implementing trade facilitation measures, will increase the potential gains and reduce trade costs. Agreeing a common set of Rules of Origin (RoO) is fundamental for AfCFTA implementation; as de Melo *et al.* (2021) note, if a product-specific rule (PSR) is not defined for any of the more than 5,300 HS6 tariff codes it is impossible to determine if the product is eligible for preferential treatment. Without agreed RoO, AfCFTA tariff reductions cannot be applied. Whilst agreement has been reached on the various regime-wide rules (RWRs), PSRs have not been agreed for almost a fifth of HS6-level tariff lines (mostly in foodstuffs, automobiles, textiles and apparel, sectors where tariff protection is high). Furthermore, those that have been agreed tend to be relatively restrictive and inflexible; cumbersome or imprecise RoO are likely to impose high costs and reduce potential benefits from eliminating tariffs. Nevertheless, ensuring traded products can avail of tariff reductions ensures the potential for expanding intra-African trade by 10% on conservative estimates.

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Appendix A: Welfare Effects of AfCFTA on EAC Imports

Tariff elimination is guided by the *Protocol on Trade in Goods* whereby countries provide a Schedule of Tariff Concessions (STC) with product details (for HS8 tariff lines) on the nature and timing of preferential market access to be granted to products originating from the other AfCFTA State Parties. The broad aim is to remove tariffs on 90 per cent of tariff lines for non-sensitive (Category A) products over a five or 10-year period (with some variation across countries as shown in Table A1). A longer period is allowed for eliminating tariffs on sensitive products (that can account for seven per cent of tariff lines), and a small percentage of products can be excluded (so tariffs are maintained). The focus of this Appendix is estimating the welfare effect of AfCFTA import liberalisation on the three large EAC countries – Kenya, Tanzania and Uganda – which depends on which products are fully liberalised (removal of tariffs) by AfCFTA countries, the Category A products, and which remain subject to tariffs (the excluded products). While the EAC has provided the STC for Category A products there is not currently any list of sensitive and excluded products, except for the existing list of sensitive products under the EAC Common External tariff (CET).

Table A1 Tariff liberalisation under the AfCFTA

		Tariff reductions		
		For non-sensitive products	For sensitive products	For excluded products
Country classification	**Non-Least Developed Countries**	**Fully liberalized over 5 years (linear cut)**	**Fully liberalized over 10 years (linear cut)**	no cut
	Least Developed Countries	**Fully liberalized over 10 years (linear cut)**	**Fully liberalized over 13 years (linear cut)**	no cut
	Group of seven (i.e., Djibouti, Ethiopia, Madagascar, Malawi, Sudan, Zambia, Zimbabwe)	**85% fully liberalized over 10 years (linear cut); an additional 5% fully liberalized over 15 years (linear cut)**	**Fully liberalized over 13 years (linear cut)**	no cut

Source: AfCFTA negotiation forums.

In estimating the standard effects for EAC countries – trade creation, trade diversion and consumer welfare – of removing tariffs on other AfCFTA members a specific aim is to identify products traded within the EAC that could be displaced by RoA imports as these are candidates for exclusion and for EAC exports. Trade with the RoA is significant for EAC members; Africa accounts for a third of imports for Rwanda and Burundi, less than a quarter for Uganda but just over ten per cent for Kenya and Tanzania. The analysis here considers only products (at HS6 level) where imports from RoA are significant (account for at least 10% of imports) and does not shut-down ROW imports – the increase in RoA imports is as estimated by the percentage response to the price reduction and is not assumed to fully displace ROW imports.

The CET average tariff was 13% in 2018 with very few tariff lines at rates of 50% or more. Most imports faced tariffs in the three bands (zero, 10%, and 25%) with the list of sensitive items facing higher rates ranging from 35% to 100% (WTO, 2019, p. 6). Table A2 lists the main product categories with high rates – these sensitive products are mostly foods, especially dairy products, rice and sugar with rates above 50%, and fabrics. Figure A1 shows the distribution of CET for the number of tariff lines; we do not consider the effect of deviations from CET – as

discussed in the main text (Section 3), member states utilise deviations widely, but we do not have data to incorporate this.

Table A2 EAC Sensitive Products 2017

Product	No. Lines	CET
Milk and Cream	9	60%
Yoghurts, cheeses	7	60%
Wheat	2 (+ meslin 50%)	35%
Rice*	4	75%
Flour	2	50%
Sugar, Jaggery*	9	100%
Cigarettes, tobacco	4	35%
Woven fabrics, garments	12	50%
Linen	4	50%
Worn clothing, items*	3	35%
Cells, batteries	6	35%

Notes: Lines are 8-digit HS (63 sensitive lines in CET 2017); * indicates specific duties applicable if greater; fabrics/garments refer to Khanga, Kitoi and Kitenga.

Source: WTO (2019) Table A3.1, pp.49-50.

Figure A1 Tariff lines by EAC CET rates (revised 2022)
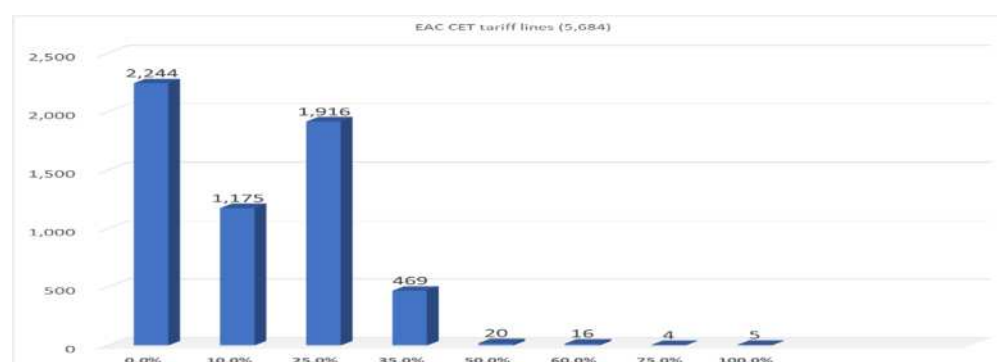
AfCFTA Impact on EAC Imports

As we want to use disaggregated trade data, especially for identifying probable excluded products and estimating export effects in the next section, a partial equilibrium approach is adopted to estimate three effects of increased imports from RoA *from the perspective of consumers* adapting Milner *et al*. (2005). First, in the case of imports for which RoA is initially a significant supplier, AfCFTA results in consumption effects (CE) – an estimate of increased imports at lower prices. This is clearly beneficial from the perspective of consumer welfare, but the new imports may be a concern for import-competing producers. Second, trade creation (TC) arises when imports from Africa displace intra-EAC trade, which will only occur if other African countries are more efficient producers, so they displace EAC producers at the new tariff-free price. While consumer welfare in the EAC importing country increases, producers in the EAC exporter lose; such products (displaced trade) are the probable candidates to be excluded from liberalisation and have potential for increased EAC exports to RoA. Third, trade diversion (TD) arises if the elimination of tariffs allows African suppliers to displace more efficient producers

in the rest of the world (RoW). As RoA only has a small share of the import market and the RoW is initially the dominant supplier, under the estimation approach RoW imports for these products are lower but not eliminated.

Assumptions are required to allocate imports by product into one of the three cases according to which region (RoW, Africa or EAC) is the dominant or at least significant supplier. The ability of African producers to expand exports is limited, due to capacity constraints and high trade costs – it often costs more to transport goods within Africa than from the RoW to Africa (Limao and Venables, 2001). As estimates are based on import data, we capture limited supply response by restricting the price elasticity of imports to 0.5. Furthermore, we only consider a response for African countries initially accounting for at least 10% of imports and assume that all effects are consumption gains (CE only) if there is no intra-EAC trade. If the EAC initially accounts for at least 10% of imports and Africa is also a source of imports, we allow for the TC effect. If initially the RoW is the dominant supplier (accounting for at least 50% of imports), we assume that at zero tariffs the RoA export response is constrained, so any TD effect will be modest.

FIGURE A2: Welfare Effect of AfCFTA for EAC Member
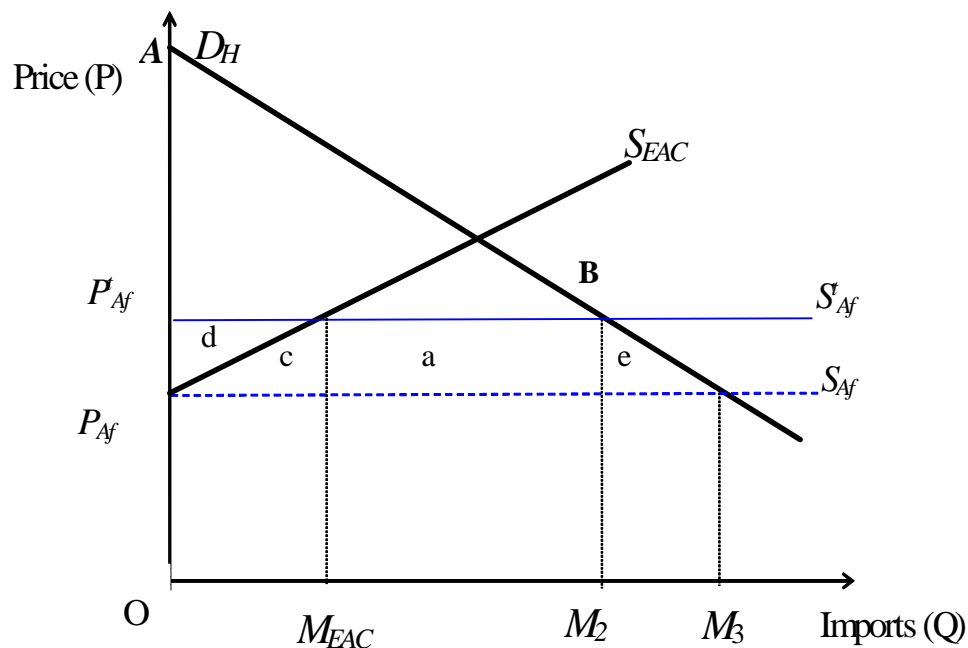
We adapt Milner *et al.* (2005) by examining the welfare effects for a small home country member (*H*) of the EAC. The analysis is partial equilibrium in nature, markets are assumed to be perfectly competitive, and there is perfect substitutability between imports from alternative sources and imported and domestically produced import substitutes. In general, the supply curves of African and EAC partner countries are upward sloping whereas the supply from the rest of the world (ROW) is assumed to be infinitely elastic. To simplify analysis we consider only African partners that are already supplying the EAC country (at the tariff inclusive price) and assume that for this market segment the (differentiated) product imported from other African countries has infinitely elastic supply relative to the EAC partner and that the ROW is not competing in that segment. This permits a very simplified exposition in Figure A2 where the supply curve of the

EAC partner (EAC) is upward sloping and the supply from the rest of Africa (*Af*) is treated as infinitely elastic.

Prior to tariff liberalisation under AfCFTA, African partner countries face a tariff-inclusive price P'_{Af}, quantity OM_{EAC} is imported from the (rest of) EAC and $M_{EAC}M_2$ is imported from Africa given home country demand D_H. Welfare (W) for the home country in terms of consumer surplus is given by the area ABP'_{Af} plus the tariff revenue (area *a*). Once tariffs are removed, price falls to P_{Af} and imports from Africa increase by M_2M_3. The trade welfare effect has two components: consumption expansion M_2M_3 and trade creation OM_{EAC} (as Africa replaces EAC suppliers) – the usual trade diversion effect is omitted as we are ignoring imports from ROW in the illustration. As African suppliers are more efficient (lower price) than the EAC suppliers, trade creation increases consumer surplus by area (*c+d*), where *c* represents the lower prices for M_{EAC} and *d* is the loss in producer surplus for the EAC partner. Consumption expansion increases consumer surplus by area *e* and although area *a* represents a loss of tariff revenue the lower price for imports increases consumer surplus. Thus, overall welfare increases by (*a+c+d+e*); this represents the gain from cheaper imports. From a political economy perspective, it is worth noting that this welfare gain is notional whereas there are real visible losses in tariff revenue and possibly for exports from EAC partners.

Consumption Effects (CE)

If Africa is initially a significant supplier but there is no intra-EAC trade, the consumption effect alone (ΔC^M) is estimated relative to existing African import volumes as (a reduction in tariffs implies an increase in import demand):

$$\Delta C^M = \left(\frac{t}{1+t}\right).\eta_M^d.M_0^{Af} \qquad (A1)$$

where *t* is the CET rate on imports from RoA, η_M^d is the price elasticity of demand for imports, and M_0^{Af} is the existing value of imports from Africa. The welfare effect is estimated as:

$$\Delta W^C = (^1/_2)t.\Delta C^M \qquad (A2)$$

Trade Creation (TC)

For the case where an EAC member supplies at least 10% of imports we estimate maximum trade creation with consumption effects by considering the case where all EAC imports are replaced by imports from RoA. This seems highly unlikely as products will be similar if not homogenous and intra-EAC trade costs are significantly lower, and it requires that the EAC price is as high as the tariff-inclusive price of imports from Africa. To allow for this, trade creation with consumption effects (ΔTC_M^C) is estimated assuming an elasticity of 0.5:

$$\Delta TC_M^C = (^1/_2)\left(\frac{t}{1+t}\right).\eta_M^d.M_0^{EAC} \qquad (A3)$$

where M_0^{EAC} is the initial value of intra-EAC imports. Welfare effects of trade creation with consumption effects can be estimated as the combination of the value of trade created by the displacement of EAC imports and consumption effects of trade creation:

$$\Delta W_{TC}^M = (M_0^{EAC}).t + (^1/_2)(t.\Delta TC_M^C) \qquad (A4)$$

Trade Diversion (TD)

We assume Africa must initially be supplying a reasonable share of imports of a product (at least 10%) to have a capacity for TD even though the RoW is the dominant supplier (so more efficient). Obviously, not all imports will be diverted from RoW, so inelastic import demand is imposed to allow for RoW supply to be more elastic and price competitive than RoA. The consumption effects due to trade diversion (ΔTD_M^C) are estimated assuming the post-AfCFTA Africa price lies midway between the RoW tariff-inclusive and exclusive prices:

$$\Delta TD_M^C = (1/2)\left(\frac{t}{1+t}\right).\eta_M^d.M_0^{ROW} \tag{A5}$$

and

$$\Delta W_{TD}^M = (1/2)[((1/2)t.\Delta TD_M^C) - (t.M_0^{ROW})] \tag{A6}$$

The main data comes from the Schedules of Tariff Concessions (STC) submitted by the EAC to the AfCFTA Secretariat. Data on trade (imports and exports), MFN tariffs and preferential tariffs are obtained from WITS and COMTRADE. A major problem we had to address is that the AfCFTA tariff schedules are based on the HS 2022 revision whereas the CET tariffs and trade data are based on HS 2017. This required constructing correspondence at the HS 6-digit level (as used in COMTRADE). A further complication is that CET and STC tariff data are at the HS 8-digit level and there are some case where two or more products at the same 6-digit level have different 8-digit tariffs.

Table A3 EAC Welfare Effects of Category A Product Imports

	Kenya	Tanzania	Uganda
Welfare Effects ($US '000)			
Consumer Surplus	52,369	28,543	206,709
Displaced EAC trade	3,870	2,622	5,259
Trade Creation (net)	*56,239*	*31,165*	*211,967*
Displaced RoW (TD)	-613,757	-300,022	-198,571
Overall Welfare Effect*	**-557,517**	**-268,858**	**13,396**

Notes: Estimates based on 2021 (2019 Uganda) trade data and tariffs for Category A (STC list provided by EAC) products only; * welfare effects in all cases less than 0.00% GDP.

Source: Authors' estimates, further results in Tables A5-A7.

Estimates of the welfare effects of import liberalisation for Kenya, Tanzania and Uganda are in Table A3 based on trade data for 2021 (2019 for Uganda) where tariffs are eliminated on Category A products only (the CET list of sensitive products and others not included in the EAC Category A STC are excluded from liberalisation). As the welfare effects for TD are notional – they represent efficiency losses that are not experienced by consumers who benefit from the lower import prices – the effect of imports from RoA is more relevant and addressed further below. The total increase in RoA imports has two elements: new imports (because goods are cheaper), captured by CE only, and the TC effect where RoA imports displace intra-EAC trade (of most concern to EAC producers). These welfare effects are positive (for consumers) but small – for all countries the estimated effects are negligible relative to GDP (less than 0.00%) and are only negative due to TD. The relatively low RoW import share for Uganda (Table A4)

is the main reason the negative trade diversion (TD) welfare effect does not offset the positive trade creation (TC) welfare effect.[2] More detailed results are in Appendix Tables A5-A7, including estimates for full liberalisation where tariffs are removed on all products (overall effects remain negligible relative to GDP).

Table A4 EAC Trade Effects, Imports Category A and All Products

	Kenya		Tanzania		Uganda	
Initial Import Shares (M_0)	**Cat A**	**All**	**Cat A**	**All**	**Cat A**	**All**
M_0 EAC (%)	2.4	4.4	3.2	4.9	15.7	16.7
M_0 RoA (%)	5.2	6.2	5.6	6.3	10.2	9.9
M_0 RoW (%)	92.6	89.4	91.2	88.8	74.1	73.4
Increased RoA Imports						
% Total M_0	1.1	1.7	0.9	1.4	2.0	2.4
% M_0 RoA	21.3	26.7	15.7	22.8	19.4	23.8
New RoA Imports only						
CE only (% M_0 RoA)	3.3	6.9	3.1	5.0	6.1	6.8
EAC Displaced by RoA						
TC only (% M_0 EAC)	2.3	4.1	1.6	3.3	3.8	4.1

Notes: Estimates based on 2021 (2019 Uganda) trade data; Category A products are those in the STC list provided by EAC; M0 denotes initial imports; Increased refers to all RoA imports post-AfCFTA; new imports are Consumption Effects (CE) only; Trade Creation (TC) is EAC imports displaced by RoA.

Source: Authors' estimates, further results in Tables A5-A7.

Policymakers and producers in the EAC will be more concerned by the increase in RoA imports and which products are affected, especially any STC listed Category A products where RoA could displace intra-EAC trade as these are strong candidates for classifying as excluded products (in the absence of an official list). The estimates in Table 7 exclude sensitive products and others omitted from the STC so any TC suggests additional products to exclude. The share of sensitive products in initial imports from RoA and EAC varies notably from 28% and 60% in Kenya, 25% and 44% in Tanzania, and 11% and 19% in Uganda (see Appendix Tables A5-A7). Thus, omitting sensitive products reduces the value of liberalised imports (Category A) by the most in Kenya, by a large amount in Tanzania but a relatively small amount in Uganda, consistent with the earlier discussion that Kenya and Tanzania had the greatest interest in protecting domestic producers. This implies a willingness to protect intra-EAC trade.

This is reflected in Table A4 which provides estimates of the trade (import) effects for Category A and for liberalisation of all products. It is notable that whilst intra-EAC and RoA import shares are quite similar and low for Kenya and Tanzania (around 10 per cent of the total for all or category A) they are much higher at a quarter of total imports for Uganda, about 15% from EAC and 10% from RoA. Although this does not imply that the import effects are greater for Uganda, it does imply that increased Ugandan imports from RoA are more likely to be the cost of exports from other EAC countries. It also explains why the trade effects of Category A only compared to all products are significantly lower for Kenya and Tanzania (almost halved in some

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[2] Note that TD here is only estimated for products where the initial RoW import share is at least 50%; if we use a 25% RoW import share TD is greater and the overall welfare effect is negative (but still a negligible share of GDP).

cases) but lower to a lesser extent for Uganda. This is shown in Table A4, but we only discuss estimates for Category A (as closer to the likely scenario).

Increased Category A imports from RoA in total are equivalent to about one per cent of initial imports in Kenya and Tanzania but two per cent for Uganda, equivalent to about 20 per cent of initial RoA imports in Kenya and Uganda but 16 per cent for Tanzania, indicated the benefit to other African exporters. Most relevant from the EAC perspective, RoA imports that displace EAC (TC only) are equivalent to 2.3% of EAC imports in Kenya, 1.6% in Tanzania, and 3.8% in Uganda. These are the trade effects the EAC may wish to prevent as they represent losses of exports for other EAC members. The products for which EAC imports are displaced are almost all intermediate goods for Uganda; about 75% consumer and 25% intermediate for Tanzania; and 37.5% raw materials, 37.5% intermediate and 25% consumer goods for Kenya (see Appendix Tables A5-A7). The new imports (CE only) are equivalent to about three per cent of initial RoA imports in Kenya and Tanzania but six per cent in Uganda; the products deserve investigation from an EAC perspective as domestic producers may be affected.

These trade and welfare effects of AfCFTA are only measured from the perspective of import liberalization; increased exports to the RoA will benefit producers and offset the negative welfare effects of trade diversion. Furthermore, these estimates assume an immediate impact whereas tariff reductions will be implemented over 10 to 15 years so in principle countries can adjust. This is shown in Figure A3 – while the excluded products will remain at an unchanged average of 30% (but many rates may be higher), it will be 10 years before the majority of tariff lines are reduced to zero. Knowing which products are likely to be most affected provides guidance for any adjustment measures.

Figure A3 Tariff profile of reductions over AfCFTA import liberalisation timeframe
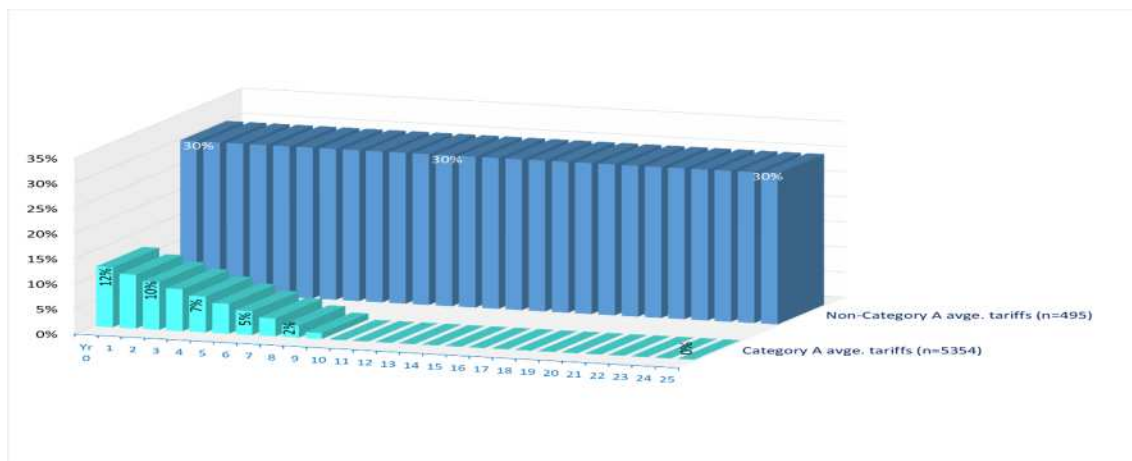
Table A5 KENYA entering FTA with RoA, Import effects (US$ '000)

	Category A only [1]	All products [2]	[1]-[2]/[2] %
Pre-FTA imports by origin:			
(a). Existing imports from RoA	871,930	1,219,368	*-28.5*
(b). Existing imports from EAC	363,033	862,934	*-57.9*
(c). Existing imports from RoW	15,423,434	17,500,725	*-11.9*
(d). Total existing imports	**16,658,397**	**19,583,028**	*-14.9*
Post-FTA Import-side effects:			
(e). Consumption effects (new imports from RoA)	28,615	83,801	*-65.9*
(f). Trade creation (RoA displacing EAC)	8,252	35,134	*-76.5*
(g). Trade diversion (RoA displacing RoW)	148,618	206,671	*-28.1*
(h). Total from RoA	**185,485**	**325,606**	*-43.0*
Percentage changes:			
(i). New imports from RoA / RoA M_0: (e)/(a)	*3.3*	*6.9*	*-52.2*
(j). New imports from RoA /Total M_0: (e)/(d)	*0.2*	*0.4*	*-59.9*
(k). Total new from RoA /Total M_0: (h)/(d)	*1.1*	*1.7*	*-33.0*
(l). Displaced from EAC /EAC M_0: (f)/(b)	*2.3*	*4.1*	*-44.2*
(m). Displaced from RoW /RoW M_0: (g)/(c)	*1.0*	*1.2*	*-18.4*
Import effects (displaced EAC) by product use:			
Raw material products	3,091	13,873	*-77.7*
% similar imports from EAC	*3.4*	*5.4*	
Intermediate goods	3,024	8,629	*-65.0*
% change over similar imports from EAC	*1.8*	*3.3*	
Capital Goods	9	18	*-50.0*
% change over similar imports from EAC	*0.6*	*1.0*	
Consumer products	2,128	12,614	*-83.1*
% change over similar imports from EAC	*4.1*	*4.6*	
Import effects (new from RoA) by product use:			
Raw material products	3,896	16,136	*-75.9*
% increase over similar imports from RoA	*2.5*	*3.6*	
Intermediate goods	15,540	19,581	*-20.6*
% increase over similar imports from RoA	*3.7*	*4.3*	
Capital Goods	556	706	*-21.3*
% increase over similar imports from RoA	*2.1*	*2.5*	
Consumer products	8,624	47,378	*-81.8*
% increase over similar imports from RoA	*5.8*	*13.4*	

Notes: Authors estimates based on 2021 trade and tariff data at HS 6-digit level. Rest of AfCFTA (RoA) must initially have at least a 10% share of imports; Trade Creation (TC) displacing EAC (where its initial share is at least 10%); Trade Diversion displacing rest of World (RoW, initial share at least 50%).

Table A6 TANZANIA entering FTA with RoA, Summary Import effects (US$ '000)

	Category A only [1]	All products [2]	[1]-[2]/[2] %
Pre-FTA imports by origin:			
(a). Existing imports from RoA	516,300	684,182	*-24.5*
(b). Existing imports from EAC	295,615	526,024	*-43.8*
(c). Existing imports from RoW	8,444,302	9,622,655	*-12.2*
(d). Total existing imports	**9,256,217**	**10,832,861**	*-14.6*
Post-FTA Import-side effects:			
(e). Consumption effects (new imports from RoA)	16,131	33,986	*-52.5*
(f). Trade creation (RoA displacing EAC)	4,692	17,611	*-73.4*
(g). Trade diversion (RoA displacing RoW)	60,431	104,770	*-42.3*
(h). Total from RoA	**81,253**	**156,366**	*-48.0*
Percentage changes:			
(i). New imports from RoA / RoA M_0: (e)/(a)	*3.1*	*5.0*	*-37.1*
(j). New imports from RoA /Total M_0: (e)/(d)	*0.2*	*0.3*	*-44.5*
(k). Total new from RoA /Total M_0: (h)/(d)	*0.9*	*1.4*	*-39.2*
(l). Displaced from EAC /EAC M_0: (f)/(b)	*1.6*	*3.3*	*-52.6*
(m). Displaced from RoW /RoW M_0: (g)/(c)	*0.7*	*1.1*	*-34.3*
Import effects (displaced EAC) by product use:			
Raw material products	434	1,155	*-62.4*
% change over similar imports from EAC	*2.2*	*4.5*	
Intermediate goods	1,032	5,009	*-79.4*
% change over similar imports from EAC	*1.6*	*3.5*	
Capital Goods	66	168	*-60.5*
% change over similar imports from EAC	*0.5*	*1.1*	
Consumer products	3,159	11,278	*-72.0*
% change over similar imports from EAC	*2.1*	*3.9*	
Import effects (new from RoA) by product use:			
Raw material products	2,943	3,405	*-13.6*
% increase over similar imports from RoA	*0.6*	*0.5*	
Intermediate goods	7,985	14,739	*-45.8*
% increase over similar imports from RoA	*3.5*	*5.1*	
Capital Goods	894	1,013	*-11.7*
% increase over similar imports from RoA	*1.9*	*2.2*	
Consumer products	4,309	14,829	*-70.9*
% increase over similar imports from RoA	*4.8*	*9.6*	

Notes: As for Table A5.

Table A7 UGANDA entering FTA with RoA, Summary Import effects (US$ '000)

	Category A only [1]	All products [2]	[1]-[2]/[2] %
Pre-FTA imports by origin:			
(a). Existing imports from RoA	674,371	761,022	*-11.4*
(b). Existing imports from EAC	1,031,966	1,277,815	*-19.2*
(c). Existing imports from RoW	4,883,071	5,609,873	*-13.0*
(d). Total existing imports	**6,589,408**	**7,648,710**	*-13.8*
Post-FTA Import-side effects:			
(e). Consumption effects (new imports from RoA)	40,924	51,730	*-20.9*
(f). Trade creation (RoA displacing EAC)	39,508	51,775	*-23.7*
(g). Trade diversion (RoA displacing RoW)	50,135	77,423	*-35.2*
(h). Total from RoA	**130,567**	**180,927**	*-27.8*
Percentage changes:			
(i). New imports from RoA / RoA M_0: (e)/(a)	*6.1*	*6.8*	*-10.7*
(j). New imports from RoA /Total M_0: (e)/(d)	*0.6*	*0.7*	*-8.2*
(k). Total new from RoA /Total M_0: (h)/(d)	*2.0*	*2.4*	*-16.2*
(l). Displaced from EAC /EAC M_0: (f)/(b)	*3.8*	*4.1*	*-5.5*
(m). Displaced from RoW /RoW M_0: (g)/(c)	*1.0*	*1.4*	*-25.6*
Import effects (displaced EAC) by product use:			
Raw material products	1,619	1,716	*-5.7*
% change over similar imports from EAC	*1.6*	*1.6*	
Intermediate goods	33,606	35,585	*-5.6*
% change over similar imports from EAC	*4.6*	*4.5*	
Capital Goods	84	178	*-52.8*
% change over similar imports from EAC	*0.5*	*0.9*	
Consumer products	4,199	14,296	*-70.6*
% change over similar imports from EAC	*3.0*	*4.7*	
Import effects (new from RoA) by product use:			
Raw material products	147	952	*-84.5*
% increase over similar imports from RoA	*0.0*	*0.1*	
Intermediate goods	38,904	40,442	*-3.8*
% increase over similar imports from RoA	*7.2*	*7.3*	
Capital Goods	282	313	*-9.7*
% increase over similar imports from RoA	*1.4*	*1.6*	
Consumer products	1,590	10,024	*-84.1*
% increase over similar imports from RoA	*4.4*	*12.2*	

Notes: As for Table A5.

Appendix B

Table B1: Estimated Increase in EAC Exports to RoA ('Big' 3)

Exporter	Destination	Values		Percentage Change		
		M$m	ΔX$'000 (*H*)	*η = H*	*η* =1.0	*η* =1.5
Kenya	Ethiopia	47.2	9,064.5	19.2	14.7	22.0
	Zambia	92.9	8,791.0	9.5	8.7	13.0
	Egypt	288.2	8,021.3	2.8	2.6	3.9
	D.R. Congo	40.5	6,121.7	15.1	10.4	15.6
	Malawi	39.0	5,456.8	14.0	13.2	19.7
	Nigeria	37.8	3,433.8	9.1	7.0	10.5
	South Africa	39.7	2,168.2	5.5	5.4	8.2
	Zimbabwe	6.2	2,132.3	34.4	23.4	35.1
	Ghana	16.0	1,453.2	9.1	7.4	11.1
	Mozambique	7.8	796.1	10.2	7.4	11.0
	Morocco	10.7	376.6	3.5	3.0	4.5
	Mauritius	44.0	361.3	0.8	0.7	1.1
Tanzania	Zambia	147.4	26,632.6	18.1	13.5	20.2
	South Africa	55.3	9,598.0	17.4	9.9	14.8
	Malawi	39.8	9,142.9	23.0	15.2	22.8
	D.R. Congo	81.7	8,262.4	10.1	7.6	11.4
	Zimbabwe	23.6	6,183.7	26.2	17.0	25.5
	Mozambique	13.3	1,479.6	11.1	6.7	10.1
	Ethiopia	3.8	1,320.4	35.0	18.4	27.6
	Nigeria	9.6	939.9	9.8	6.6	10.0
	Morocco	8.5	745.9	8.8	7.7	11.5
	Ghana	13.4	711.0	5.3	3.0	4.4
	Egypt	4.7	175.0	3.7	3.0	4.5
Uganda	D.R. Congo	63.5	8,189.2	12.9	10.5	15.7
	Morocco	18.5	1,883.1	10.2	9.0	13.6
	Egypt	7.6	828.0	10.8	8.7	13.0
	Nigeria	3.5	650.1	18.8	12.6	18.9
	Zambia	11.0	391.0	3.5	1.9	2.9
	South Africa	39.6	362.2	0.9	0.7	1.1
	Ethiopia	1.7	144.3	8.3	11.1	16.7
	Ghana	0.4	78.0	19.9	13.8	20.6
	Malawi	1.9	75.9	3.9	5.6	8.4
	Zimbabwe	0.5	53.6	10.8	7.4	11.1
	Mozambique	1.4	30.6	2.1	1.3	1.9

Notes: Reports for each EAC member the partners, ranked in order of the increase in exports ($'000s) for the Hertel import elasticities (*H*), with initial value of imports ($millions) and percentage increases for all three values of the elasticities (*h*). Negligible values for Mauritius for Tanzania and Uganda omitted (low values and negligible tariffs so no increase).

Source: Authors calculations from WITS data.

Overall, total Kenyan exports may increase by 6-9% (7% for H) or $40-60 million, a fairly narrow range. Exports to five countries increase by more than 10% – Ethiopia, Zambia, Egypt, DRC and Malawi – and the differences for elasticities are small and equally likely to be higher or lower for H. It is notable that although Egypt accounts for 43% of exports it only accounts for about 18% of the increase, implying a product composition with relatively inelastic demand. Total Tanzanian exports may increase by 11-17% (16% for H) or $45-68 million, and exports to four countries increase by more than 10% – Zambia (over 40%), South Africa, Malawi and DRC (Table B1). Ugandan exports could 7-10% (8% for H) or $10-15 million; exports to only two countries increase by more than 10% – DRC (over 60%) and Morocco (Table B2).

Table B2: Estimated Increase in Burundi & Rwanda Exports to RoA

Exporter	Destination	Values		Percentage Change		
		M$m	ΔX$'000 (H)	$\eta = H$	$\eta = 1.0$	$\eta = 1.5$
Rwanda	Congo, DR	370.760	41,878.8	11.3	10.2	15.4
	Ghana	2.261	189.8	8.4	11.1	16.7
	Morocco	0.650	51.7	8.0	7.1	10.6
	Mozambique	0.091	15.4	17.0	7.0	10.4
	Malawi	0.070	11.8	16.9	8.8	13.2
	Egypt	0.381	10.0	2.6	2.3	3.4
	Zambia	0.222	8.2	3.7	1.5	2.3
	Ethiopia	0.137	5.3	3.8	4.9	7.4
	Zimbabwe	0.012	0.9	7.5	5.2	7.8
	Mauritius	0.028	0.5	1.7	1.3	2.0
	South Africa	0.417	0.0	0.0	0.0	0.0
Burundi	Egypt	0.305	139.5	45.7	28.6	42.9
	Zambia	0.188	49.6	26.3	12.0	17.9
	Congo, DR	0.239	37.5	15.7	10.8	16.3
	Morocco	0.219	28.0	12.8	11.0	16.4
	Malawi	0.018	4.7	26.0	20.0	30.0
	Ethiopia	0.009	3.7	39.3	22.6	33.9
	Nigeria	0.051	2.5	4.9	4.8	7.2
	Ghana	0.010	2.2	23.1	14.2	21.3
	South Africa	0.519	0.4	0.1	0.0	0.0
	Mozambique	0.001	0.1	11.0	6.7	10.1

Notes: Reports initial value of imports and then increase in exports for each EAC member in USD '000s and for percentage change (η=1), ranked in order of the value of initial imports. Negligible values for Nigeria for Rwanda, Mauritius & Zimbabwe for Burundi omitted.

Source: Authors calculations from WITS data.

Table B3: Full List of HS2 Products with 'Hertel' Import Demand Elasticities

HS2	Definition	Short title	$\eta = H$
01	Animals; live	Animals live	0.4
02	Meat and edible meat offal	Meat & offal	0.6
03	Fish and crustaceans, molluscs and other aquatic invertebrates	Fish etc	1.15
04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included	Dairy, eggs etc	1.05
05	Animal originated products; not elsewhere specified or included	Animal nes	1.1
06	Trees and other plants, live; bulbs, roots and the like; cut flowers and ornamental foliage	Trees, plants, flowers	1.125
07	Vegetables and certain roots and tubers; edible	Vegetables etc	1.15
08	Fruit and nuts, edible; peel of citrus fruit or melons	Fruit & nuts	1.15
09	Coffee, tea, mate and spices	Coffee, tea, spices	1.15
10	Cereals	Cereals	1.15
11	Products of the milling industry; malt, starches, inulin, wheat gluten	Milling products	1.15
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit, industrial or medicinal plants; straw and fodder	Oil seeds etc	0.6
13	Lac; gums, resins and other vegetable saps and extracts	Gums, resins etc	0.75
14	Vegetable plaiting materials; vegetable products not elsewhere specified	Veg products nes	0.4
15	Animal or vegetable fats and oils and their cleavage products; prepared animal fats; animal or vegetable waxes	Fats & oils	0.75
16	Meat, fish or crustaceans, molluscs or other aquatic invertebrates; preparations thereof	Meat, fish etc prep	1.1
17	Sugars and sugar confectionery	Sugars etc	1.1
18	Cocoa and cocoa preparations	Cocoa & preparations	0.7
19	Preparations of cereals, flour, starch or milk; pastrycooks' products	Prep cereals etc	0.4
20	Preparations of vegetables, fruit, nuts or other parts of plants	Prep vegetables etc	1.6
21	Miscellaneous edible preparations	Misc edible	1.3
22	Beverages, spirits and vinegar	Beverages	1.25
23	Food industries, residues and wastes thereof; prepared animal fodder	Food residues	1.3
24	Tobacco and manufactured tobacco substitutes	Tobacco	0.8
25	Salt; sulphur; earths, stone; plastering materials, lime and cement	Salt; stone; etc	0.4
26	Ores, slag and ash	Ores	0.4
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	Mineral fuels, etc	0.75
28	Inorganic chemicals; organic and inorganic compounds of precious metals; of rare earth metals, of radio-active elements and of isotopes	Inorganic chemicals	0.75
29	Organic chemicals	Organic chemicals	1.65
30	Pharmaceutical products	Pharmaceuticals	1.65
31	Fertilizers	Fertilizers	1.65
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints, varnishes; putty, other mastics; inks	Tanning, dyeing etc	1.65
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations	Cosmetic or toilet	1.65
34	Soap, organic surface-active agents; washing, lubricating, polishing or scouring preparations; artificial or prepared waxes, candles and similar articles, modelling pastes, dental waxes and dental preparations with a basis of plaster	Soap, etc	1.65
35	Albuminoidal substances; modified starches; glues; enzymes	Modified starches etc	0.75
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations	Explosives etc	0.75
37	Photographic or cinematographic goods	Photographic etc	0.75
38	Chemical products n.e.c.	Chemical products	1.1
39	Plastics and articles thereof	Plastics	1.1
40	Rubber and articles thereof	Rubber	1.125

41	Raw hides and skins (other than furskins) and leather	Hides & leather	1.125
42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut)	Articles of leather; etc	1.125
43	Furskins and artificial fur; manufactures thereof	Furskins & furs	1.125
44	Wood and articles of wood; wood charcoal	Wood	1.125
45	Cork and articles of cork	Cork	0.75
46	Manufactures of straw, esparto or other plaiting materials; basketware and wickerwork	Manufactures of straw, etc	0.75
47	Pulp of wood or other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard	Pulp etc	1.65
48	Paper and paperboard; articles of paper pulp, of paper or paperboard	Paper	1.65
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans	Printing products	1.65
50	Silk	Silk	1.4
51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric	Wool, etc	1.65
52	Cotton	Cotton	1.65
53	Vegetable textile fibres; paper yarn and woven fabrics of paper yarn	Veg textile fibres	1.65
54	Man-made filaments; strip and the like of man-made textile materials	Man-made textiles	1.6
55	Man-made staple fibres	Man-made fibres	1.6
56	Wadding, felt and nonwovens, special yarns; twine, cordage, ropes and cables and articles thereof	Nonwovens, etc	1.65
57	Carpets and other textile floor coverings	Carpets etc	1.65
58	Fabrics; special woven fabrics, tufted textile fabrics, lace, tapestries, trimmings, embroidery	Fabrics woven etc	1.625
59	Textile fabrics; impregnated, coated, covered or laminated; textile articles of a kind suitable for industrial use	Textile fabrics etc	1.6
60	Fabrics; knitted or crocheted	Fabrics knitted	1.3
61	Apparel and clothing accessories; knitted or crocheted	Apparel knitted	1.4
62	Apparel and clothing accessories; not knitted or crocheted	Apparel not knitted	1.4
63	Textiles, made up articles; sets; worn clothing and worn textile articles; rags	Textiles; worn etc	2.25
64	Footwear; gaiters and the like; parts of such articles	Footwear	2
65	Headgear and parts thereof	Headgear	2
66	Umbrellas, sun umbrellas, walking-sticks, seat sticks, whips, riding crops; and parts thereof	Umbrellas, etc	2.375
67	Feathers and down, prepared; and articles made of feather or of down; artificial flowers; articles of human hair	Feathers etc	2.375
68	Stone, plaster, cement, asbestos, mica or similar materials; articles thereof	Stone, cement, etc	2
69	Ceramic products	Ceramic products	3.25
70	Glass and glassware	Glass & glassware	2.25
71	Natural, cultured pearls; precious, semi-precious stones; precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin	Natural, precious, etc	3.25
72	Iron and steel	Iron & steel	3.25
73	Iron or steel articles	Iron, steel articles	3.25
74	Copper and articles thereof	Copper & articles	2.25
75	Nickel and articles thereof	Nickel & articles	2.75
76	Aluminium and articles thereof	Aluminium & articles	2.25
78	Lead and articles thereof	Lead & articles	2.25
79	Zinc and articles thereof	Zinc & articles	1.4
80	Tin; articles thereof	Tin & articles	2
81	Metals; n.e.c., cermets and articles thereof	Metals; nes	2.5
82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof, of base metal	Tools, etc	2.5
83	Metal; miscellaneous products of base metal	Products base metal	2
84	Machinery and mechanical appliances, nuclear reactors, boilers; parts thereof	Mechanical	2

85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles	Electrical machinery	2.5
86	Railway, tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipment of all kinds	Railway etc	1.25
87	Vehicles; other than railway or tramway rolling stock, and parts and accessories thereof	Vehicles	2.5
88	Aircraft, spacecraft and parts thereof	Aircraft	2.5
89	Ships, boats and floating structures	Ships, boats	2.5
90	Optical, photographic, cinematographic, measuring, checking, medical or surgical instruments and apparatus; parts and accessories	Optical, medical etc	2.5
91	Clocks and watches and parts thereof	Clocks & watches	1.25
92	Musical instruments; parts and accessories of such articles	Musical	1.25
93	Arms and ammunition; parts and accessories thereof	Arms	1.25
94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, n.e.c.; illuminated signs, illuminated name-plates and the like; prefabricated buildings	Furniture; etc	2.5
95	Toys, games and sports requisites; parts and accessories thereof	Toys, sports etc	0.4
96	Miscellaneous manufactured articles	Misc manufactured	0.6
97	Works of art; collectors' pieces and antiques	Art & antiques	1.15

Notes: Estimates taken from Hertel (1997) where available, otherwise estimated.