

Policy paper

# Reform of the EAC Common External Tariff

Evidence from trade  
costs

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# Reform of the EAC Common External Tariff: Evidence from Trade Costs

## Policy Paper

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## EXECUTIVE SUMMARY

The East African Community (EAC) implemented its Common External Tariff (CET) in 2005, for the three countries that were then members (Kenya, Uganda, and Tanzania). Burundi and Rwanda joined later, with CET implementation taking place in 2009. At the present time (late 2017), EAC governments are conducting a review of the CET. This Policy Brief aims to inform that review.

Key points to emerge from our review of the evidence include the following:

1. The Sensitive Items (SI) list has resulted in very high rates of tariff protection in some sectors, and has complicated the relatively simple 3-band tariff scheme of the CET, which should have brought about a desirable flattening in the tariff schedule.
2. There appears to have been misclassification of goods based on assumed final uses, at least relative to international classifications like the BEC. <sup>4</sup>Although the classification process is neither simple nor free from scope for discussion, there is evidence that it has resulted in tariffs remaining higher than the CET scheme intended.
3. If the CET were set ‘optimally’, a classification of the major import sectors by tariff rates should show that imports in the 25% tariff band should be predominantly imported by the wholesale and retail sectors. Frazer (2017) shows that, in fact, for nearly for 400 tariff lines in the 25% tariff band, manufacturing is the leading import sector, and that when it comes to the Duty Remission Scheme (DRS) intended for firms in manufacturing producing for exports, it is all other sectors rather than manufacturing that benefit most from the DRS.
4. Although EAC countries recognize the importance of non-tariff measures, there is evidence that costs related to them remain very significant, and probably higher than those imposed by tariffs. The evidence for this contention is that trade costs remain much higher than tariff rates of protection, so the difference must be due to a range of other factors that insulate EAC countries from world markets, under the heading of “non-tariff measures”.

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<sup>4</sup> As shown by Frazer (2017), the distribution of tariffs for intermediate goods (as classified under the widely accepted UN BEC classification), is roughly split equally between the 0%-10%-25%) categories while the CET is supposed to classify intermediate goods in the 10% tariff category.

Comparing performance in the EAC with that elsewhere, particularly East and Southeast Asia, shows that although the CET has substantially harmonized tariff policies, it has not introduced any substantial liberalization—at a time when other world regions have been reducing tariffs significantly, with the aim of boosting global competitiveness.

Moving forward, governments should be wary of proposals to replace ad valorem with specific tariffs. Although valuation problems can attend the use of ad valorem tariffs in environments of poor compliance, specific tariffs also offer a number of inconvenient aspects. Firstly, compliance can only be ensured if goods are measured at the border, or through the use of pre-shipment inspection (now restricted by the WTO Trade Facilitation Agreement). This process would substantially increase the time taken to cross borders, and would hold back trade expansion. Second, specific tariffs can become highly distortionary if world market prices change—for instance, at a world price of \$100/ton a \$5 per ton tax is equivalent to 5% ad valorem; but if the price falls to \$50/ton and the specific tariff is unchanged, the distortion is equivalent to 10% ad valorem.

Our comparison of tariff rates of protection in EAC with other countries, particularly China and Vietnam, shows that a key dimension of a competitive trade policy has been largely missing from the CET: progressive liberalization, which brings industries into closer contact with world markets, and encourages firms to undertake productivity upgrading. Governments should resist arguments by some firms that rates of protection need to be increased so as to protect them from competitive pressures and reserve the regional market for them. Similarly, arguments to reduce transparency by moving from ad valorem to specific tariffs should also be resisted. This practice was tried in many parts of the world in earlier decades, and typically proved to have troubling dynamic implications. In particular, under this scheme there is little hard incentive for firms to become more productive—instead they have an incentive to lobby for increased protection over time. The experience of Asian countries that have moved rapidly through income levels in recent decades suggests that governments need to ensure that the incentives facing firms are the right ones. The emphasis needs to be on the development of durable competitiveness, based on the world market as a reference point. Only in such a framework can trade play a transformative role, in terms of promoting structural change.

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## 1. INTRODUCTION

The East African Community (EAC) implemented its Common External Tariff (CET) in 2005, for the three countries that were then members (Kenya, Uganda, and Tanzania). Burundi and Rwanda joined later, with CET implementation taking place in 2009. At the present time (late 2017), EAC governments are conducting a review of the CET. This Policy Brief aims to inform that review.

From a methodological point of view, our approach consists of comparing the performance of EAC countries, individually, and as a group of countries in a customs union, with other comparable countries to benchmark their performance. This is done by examining the available international data on tariffs and trade costs in the EAC for any evidence of structural changes in 2005 or 2009, taking account of pre-existing trends. The question is an important one, which gets to the heart of the changes in fact wrought by the CET following its implementation. Based on our review of the evidence, we argue that there is surprisingly little evidence that the CET reduced either tariffs or broader measures of trade costs, and indeed may even have increased them for some sectors and countries. Although the CET has indeed been effective in terms of harmonizing trade policies among EAC member countries, there is little to suggest that it has supported a process of progressive liberalization and uniformization of incentives across sectors. There are many reasons for this, but the most important are the following:

1. The Sensitive Items (SI) list has resulted in very high rates of tariff protection in some sectors, and has complicated the relatively simple 3-band tariff scheme of the CET, which should have brought about a desirable flattening in the tariff schedule.
2. There appears to have been misclassification of goods based on assumed final uses, at least relative to international classifications like the BEC.<sup>5</sup> Although the classification process is neither simple nor free from scope for discussion, there is evidence that it has resulted in tariffs remaining higher than the CET scheme intended.
3. If the CET were set ‘optimally’, a classification of the major import sectors by tariff rates should show that imports in the 25% tariff band should be predominantly imported by the wholesale and retail sectors. Frazer (2017) shows that, in fact, for nearly for 400 tariff lines in the 25% tariff band, manufacturing is the leading import sector, and that when it comes to the Duty Remission Scheme (DRS) intended for firms in manufacturing producing for export, it is all other sectors rather than manufacturing that benefit most from the DRS.
4. Although EAC countries recognize the importance of non-tariff measures, there is evidence that costs related to them remain very significant, and probably higher than those imposed by tariffs. The evidence for this contention is that trade costs remain much higher than tariff rates of protection, so the difference must be due to a range of other factors that insulate EAC countries from world markets, under the heading of “non-tariff measures”.

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<sup>5</sup> As shown by Frazer (2017), the distribution of tariffs for intermediate goods (as classified under the widely accepted UN BEC classification), is roughly split equally between the 0%-10%-25%) categories while the CET is supposed to classify intermediate goods in the 10% tariff category.

The EAC is a customs union (CU) with relatively deep integration, at least by African standards (Melo and Tsikata (2015) and Melo et al. (2017)). The objective of setting a relatively simple 3-band tariff structure with a few exceptions on an SI list was to bring transparency to the incentive system, getting closer to a level-playing field while promoting industrialization. The first outcome of this should be a fall in trade costs, generally, and also of intra-regional trade costs. This policy brief reviews the CET policy and proposed changes to the CET in light of the evolution of trade costs in the EAC from a comparative perspective. It is a continuation of previous work by Frazer (2017) and Shepherd (2016).

As an introduction to set the stage for the remainder of this policy brief, section 2 compares the evolution of intra-regional trade for the EAC with that in comparator groups. These comparisons reveal that intra-regional trade has not increased significantly across most intra-regional groupings, including the EAC. Section 3 reviews the dynamics underlying EAC trade policy, by focusing on tariffs. The approach is to put them in perspective by comparing results across years, and also using comparator countries in Africa, as well as in East and Southeast Asia. Section 4 reviews trade costs in the same way, but also including other African RECs, and important external markets. Section 5 then turns to the issue of competitiveness, to examine whether application of the CET was associated with any improvements in EAC countries' competitiveness in key industries. Section 6 analyzes the implications of a further departure from the current 3-band tariff structure by taking as illustration the leather value chain. Section 7 concludes by discussing policy implications.

## 2. COMPARING TRADE PATTERNS ACROSS RTAs

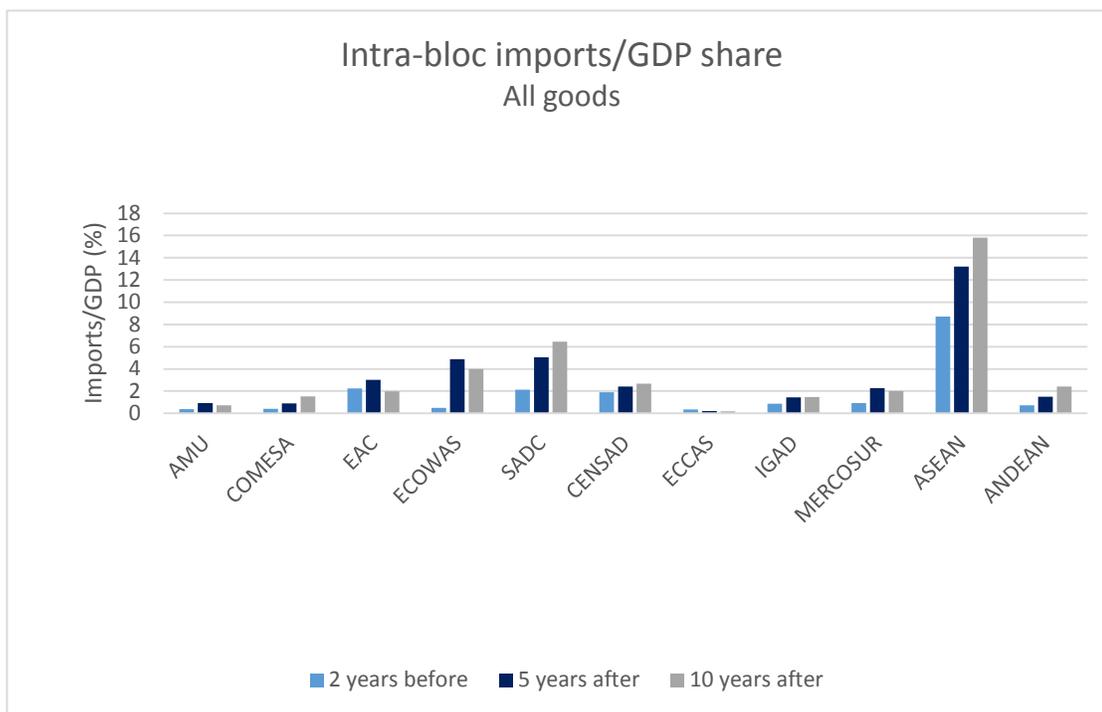
Regional cooperation and integration in Africa began in earnest with the Abuja Treaty (operational in 1994) that created 8 Regional Economic Communities RECs that would integrate at different speeds following a 'Minimum Integration Program' along six stages, all with ambitious and wide-ranging objectives reflecting the desire to accommodate the heterogeneity of interests across members. African RECs are usefully classified among two groups: RECs among groupings with a large heterogeneous membership (COMESA, ECOWAS) that would benefit from larger markets but at the cost of 'shallow integration' to accommodate heterogeneity; and small groupings (e.g. the EAC) where less diversity makes it easier to carry out 'deep integration' beyond the removal of tariff and non-tariff barriers. Figure 1 compares the pre and post-integration patterns of these 8 RECs with those of 3 other South-South RTAs: ANDEAN, ASEAN and MERCOSUR. One could think of MERCOSUR, a CU as a comparator for the EAC; ASEAN, an FTA with large membership that might serve as a comparator for COMESA or ECOWAS; and ANDEAN a smaller membership that could also serve as benchmark for the EAC even though it is an FTA. The comparisons are for an average of two years before integration and a two-year average 5 years and 10 years after integration.

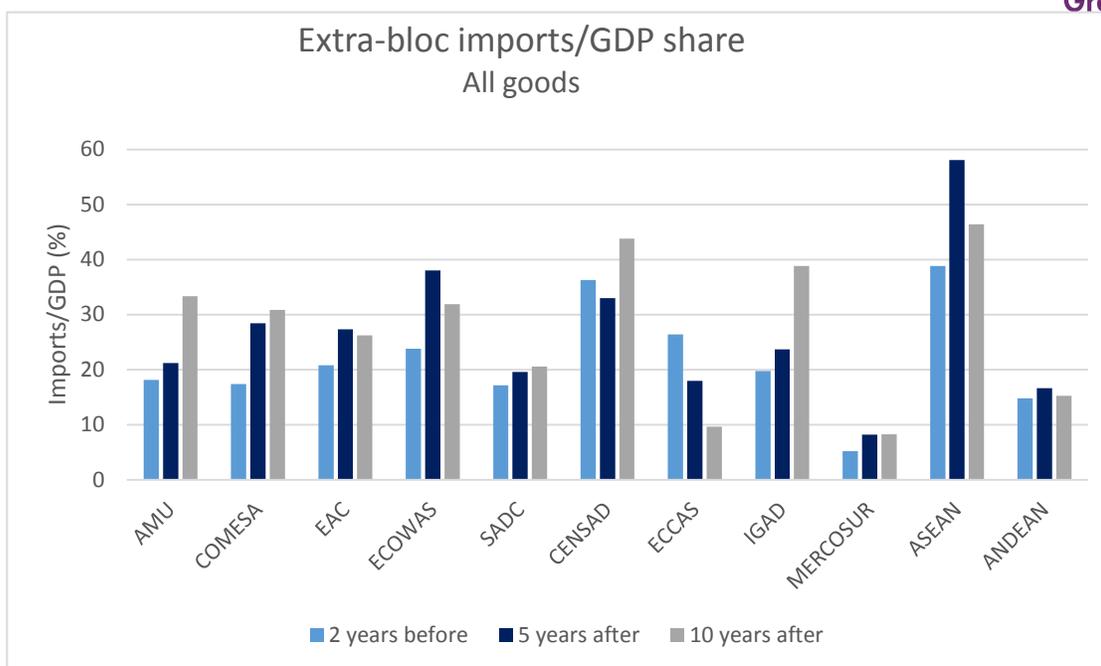
Figure 1(a) shows intra-bloc and figure 1(b) extra-bloc import shares. ASEAN stands out as the most open bloc with an average openness to trade over 50% GDP. The share of intra-regional trade grows after integration but the extra-bloc also increases, an indication of open regionalism. By contrast, the share of intra-bloc imports remains very low throughout for all RECs in spite of increases for SADC and ECOWAS. For all African RECs, ten years on, intra-bloc imports hover in the 2%-4% range. However, a similar pattern is also observed for ANDEAN and

MERCOSUR. With the exception of MERCOSUR and ANDEAN, for all RTAs, openness as measured by the share of extra-bloc imports in GDP increases ten years after the start of integration

The data do show an overall increase in openness (as measured by the extra-bloc share in GDP in figure 1b). This is a reflection that, worldwide, the elasticity of trade to GDP rose from around 2 in the 1960s to 3 until the financial crisis of 2008-9. However, there is little evidence that integration in the RECs (and in the comparator groups, ANDEAN and MERCOSUR) led to an increase in intra-regional trade. One can only conclude that in the first decade of regional integration, there was little increase in intra-regional trade among all groups, and, importantly, that intra-regional trade shares remained low across all groups except ASEAN which clearly benefitted from multiplier effects associated to being located in a fast growing region. Returning to the EAC which has carried out deeper integration than most comparator groups, it is apparent from figure that intra-regional trade patterns have not increased substantially, ten years after integration. This could be due to several factors that are explored in the following sections.

Figure 1a and 1b: Intra and extra-regional trade patterns: Before and 5 and 10 years after integration (all goods).





Source: Melo et al (2017, fig. 1).

## 2.1 Recent Developments in EAC Trade Policy

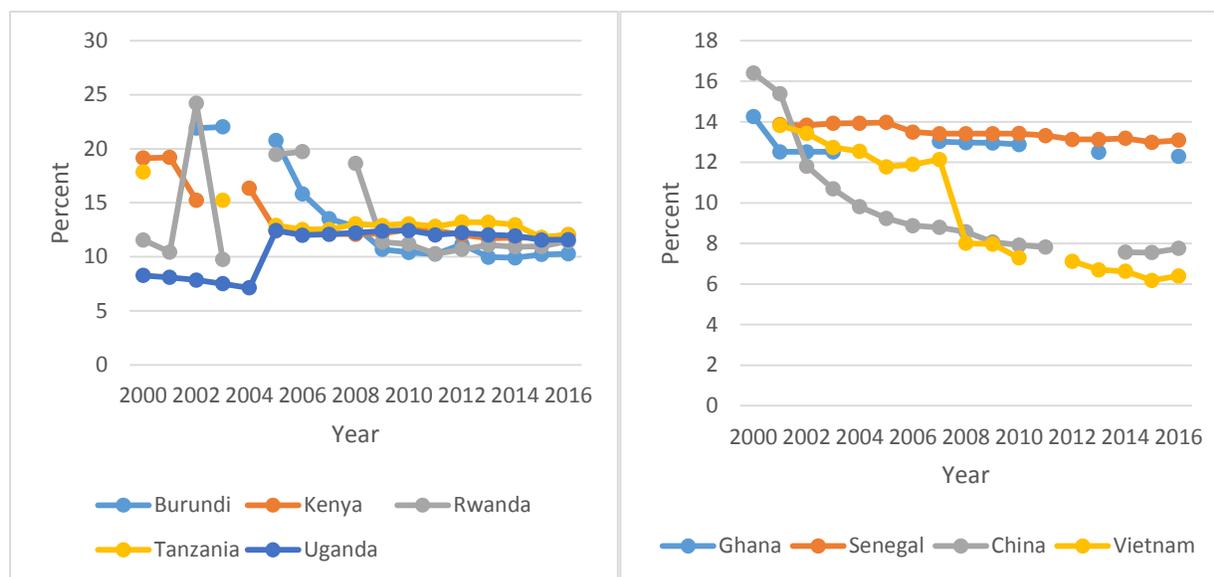
In assessing the impact of the CET thus far—as a basis for examining possible future paths for its development—it is important to have due regard to ongoing reforms that were already underway in EAC member states prior to implementation of the CET. Although a significant change from previous practice, the process of economic liberalization and reform of the trade regime had been underway in EAC countries for a substantial period of time before entry into force of the CET. The question is therefore whether or not it is possible to see any substantial changes in underlying trends in key indicators of trade policy during the period of implementation of the CET.

EAC member states implemented the CET at different times. For the three original members, Kenya, Uganda, and Tanzania, implementation began in 2005. Rwanda and Burundi began implementation in 2009. Figure 2a shows the impact the CET had on member states' applied trade policies. There is clear convergence to an average rate of 10%-12% ad valorem, with instances of significant changes taking place in 2005 and 2009. Interestingly, the CET resulted in higher applied rates of protection in Uganda, but reductions in other countries. The existence of a previous downward trend elsewhere is apparent, but the implementation dates constitute important breaks.<sup>6</sup> There is therefore significant evidence that initial implementation of the CET led to some degree of liberalization of applied policies in most cases, typically on the order of a few percentage points ad valorem. However, due to the relative difficulty of introducing changes

<sup>6</sup> We treat implementation dates as 2005 for Kenya, Tanzania, and Uganda, and 2009 for Burundi and Rwanda.

in a common arrangement, there has been no additional liberalization since joining the CET: EAC countries average tariff rates have remained quite flat since the early to late 2000s.

Figures 2a and 2b: Simple average applied tariff rates in EAC countries (a) and comparator countries (b), 2000-2016, percent.



Source: TRAINS via WITS.

It is important to compare performance in EAC with what has happened in other countries over a comparable period. Figure 2b undertakes that task, by looking at average tariff rates in selected African countries (Ghana and Senegal), and two Asian developing countries (China and Vietnam). The choice of West African comparators is designed to highlight similarities and differences at a regional level, among countries with some comparable development characteristics. The inclusion of China and Vietnam is designed to motivate a consideration of how experiences in EAC compare with what has been seen in rapidly industrializing developing countries further afield.

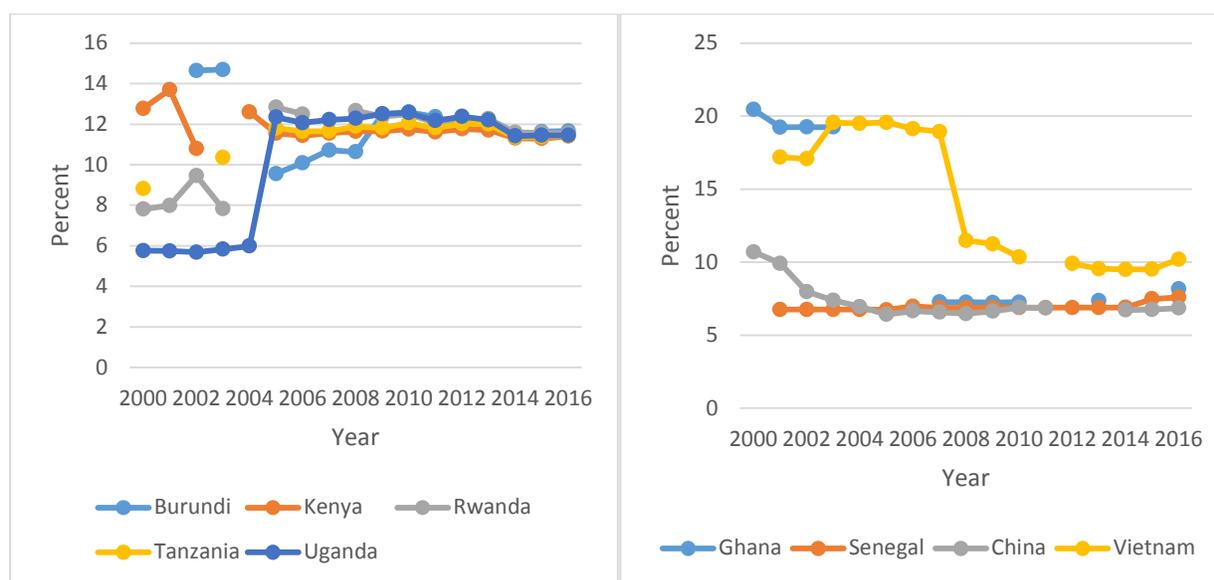
There is slight but consistent liberalization evident in Ghana and Senegal, with rates in 2016 broadly comparable, perhaps slightly higher, than what is seen in EAC. However, the experience in Asia is markedly different. China and Vietnam both liberalized consistently through the 2000s, and now have average applied tariffs of between 6 and 8 percent, which is noticeably lower than in EAC; indeed, these tariff rates are closer to what is seen in high income countries, where average applied tariff rates are typically below 5%.

The comparison between the tariff profiles of the EAC countries and those of China and Vietnam is stark. Moreover, it is reflected in a much higher degree of trade integration on the part of the Asian countries: Vietnam’s trade to GDP ratio in 2016 was 185%, compared with a range of 36.8% to 48.2% in the EAC. There is no doubt that tariffs hold back trade integration, which relies on two-way trade, imports as well as exports. The extent to which the CET may be doing so undesirably relative to other possible regimes, and the range of possible solutions, are discussed throughout this paper.

Another aspect of a country’s tariff schedule that is relevant is the degree of dispersion of rates across product lines. Successful trade policy reforms typically reduce average applied rates, and also bring about more uniform tariff rates across products. From a political economy perspective, a flatter tariff schedule reduces the incentive of industries to expend economic resources on lobbying for protection, as it is more difficult to ensure that only they receive protection, but industries from which they source inputs do not. Experiences in countries like Chile show that the limiting case of a flat tariff can be a useful way of creating a political economy environment that is conducive to progressive liberalization. Indeed, the rationale for grouping tariffs into three bands under the CET was in part to produce this kind of an outcome, at the same time as simplifying compliance, and thereby reducing costs, for affected businesses.

Figure 3a shows that the EAC CET has done little to reduce tariff rate dispersion, and indeed substantially increased it in the case of Uganda. Comparing Figure 3a with Figure 3b (comparator countries) show that after passage of the CET, tariff dispersion in EAC countries is considerably higher than in West Africa or in Asia. Whereas dispersion has been roughly constant in the West African comparators, China and Vietnam have both substantially reduced it, albeit at different times and rates. In Vietnam, for example, tariff dispersion dropped by around half between the mid-2000s and the present day.

Figures 3a and 3b: Standard deviation of applied tariffs in EAC countries and comparators, 2000-2016, percent.



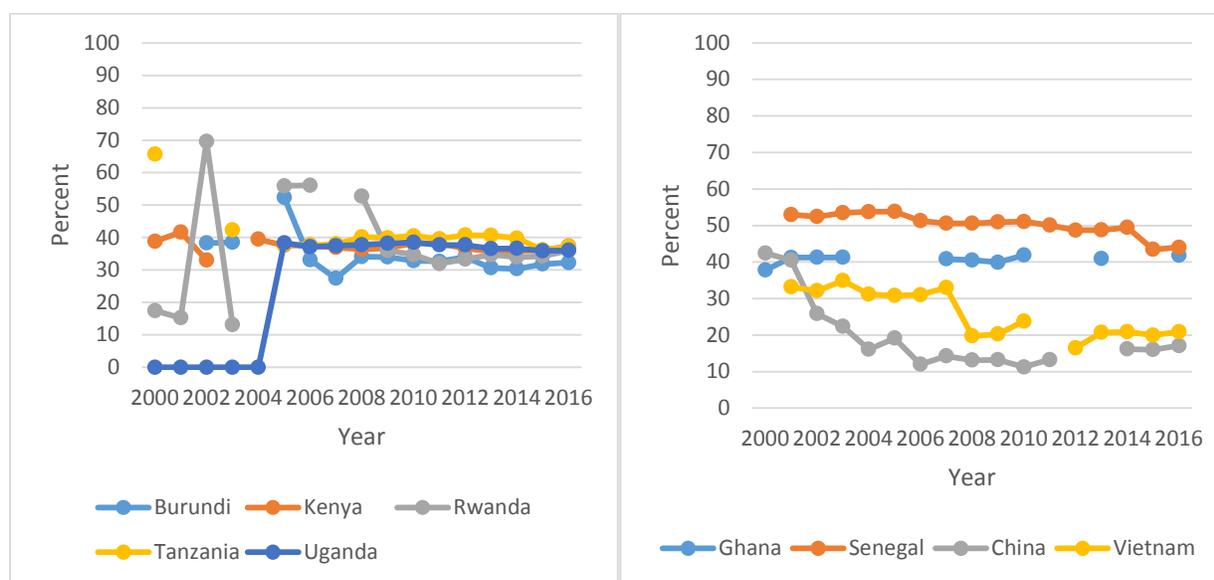
Source: TRAINS via WITS.

How could application of the CET not have substantially decreased tariff dispersion, even though it took potentially variable rates and applied just three bands? The likely reason is the Sensitive Items list adopted along with the CET, which enables EAC countries to apply higher tariffs on goods where there was seen to be potential for local production and trade, rather than global sourcing. The motivation is avowedly to protect local industries, in line with an infant industry framework in which tariff protection is seen as giving regional firms space to develop competitiveness and build export capacity. Policies such as this have had, at best, mixed results historically. Although most developing countries have used infant industry protection at one

point or another, those that have successfully moved through middle-income to high-income status have tended to ensure that local industries are globally, not just regionally, competitive—which entails bringing them into contact with world markets, and disciplining them to compete and expand, or shrink and see their resources reallocated to more productive uses.

Figure 4a shows that due to the top CET band and the Sensitive Items List, EAC countries maintain a significant proportion of tariff lines that would be regarded as peak tariffs internationally, i.e. rates greater than 15%. Figures for the EAC countries are 30-40%, and there is no evidence that that figure has been substantially lowered by the CET. Indeed, these data strongly suggest that rather than constraining member countries’ tariff schedules, the CET in fact left them considerable liberty to maintain previously existing proportions of peak tariffs.

Figures 4a and 4b: Percentage of national tariff lines above 15% applied rate in EAC countries and comparators, 2000-2016.



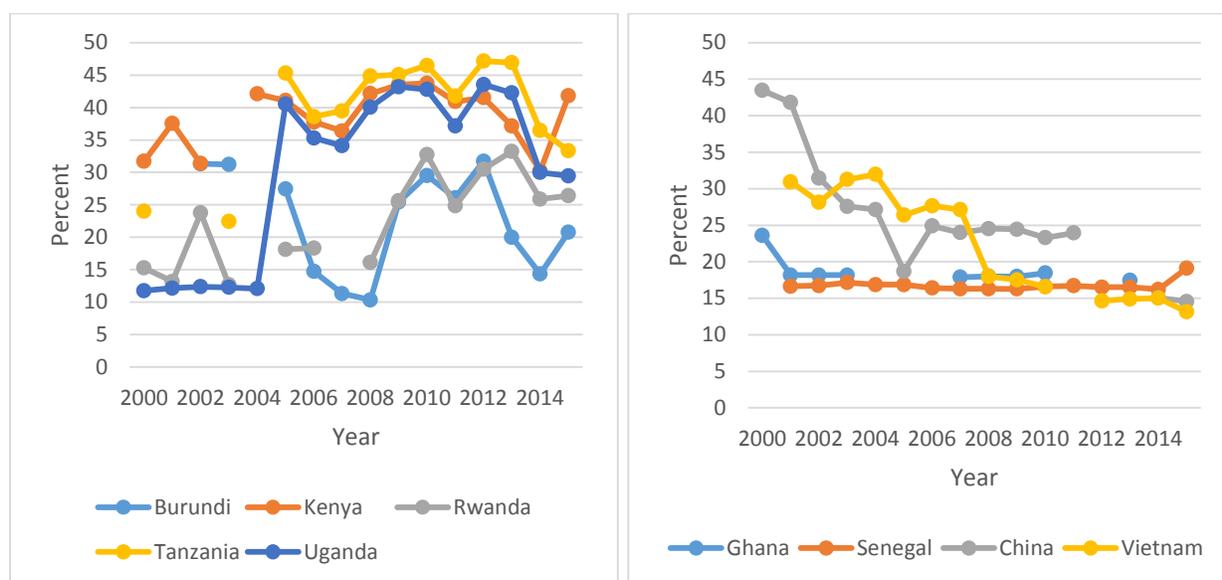
Source: TRAINS via WITS.

As noted with the other dimensions of applied trade policy discussed above, Figure 4b shows that there is a stark difference between the prevalence of peak tariffs in the EAC, and in China and Vietnam. Ghana and Senegal have similar proportions of peak tariffs, and like EAC have seen little reduction over time. China and Vietnam have far fewer peaks in their tariff schedules, at no more than around 20% of lines. Moreover, both countries substantially reduced the number of tariff peaks, in the early 2000s for China, and in around 2008 for Vietnam.

Peak tariffs in EAC are mainly related to the Sensitive Items list. Using the compilation of HS codes in Shinyekwa and Katunze (2016), Figure 5a shows simple average tariffs on sensitive items for EAC countries. Interestingly, applied tariffs continue to diverge across the zone, but there is evidence of significant convergence in line with application of the CET. Uganda, for example, quadrupled its rate of tariff protection to converge to the rates of Tanzania and Kenya. But the general process of comparing pre- and post-CET rates for sensitive items as per the data in Shinyekwa and Katunze (2016) suggests that CET negotiators tended to converge on the highest applied rate in the region for sensitive items, and indeed sometimes chose a level in

excess of that figure. By contrast, Figure 5b shows that the African comparators, Ghana and Senegal, both maintain much lower rates of applied protection on the same list of items. China and Vietnam both had rates of protection broadly comparable to those observed in the EAC at the beginning of the sample period, but have cut rates substantially over the last decade and half, and are now at the level of Ghana and Senegal.

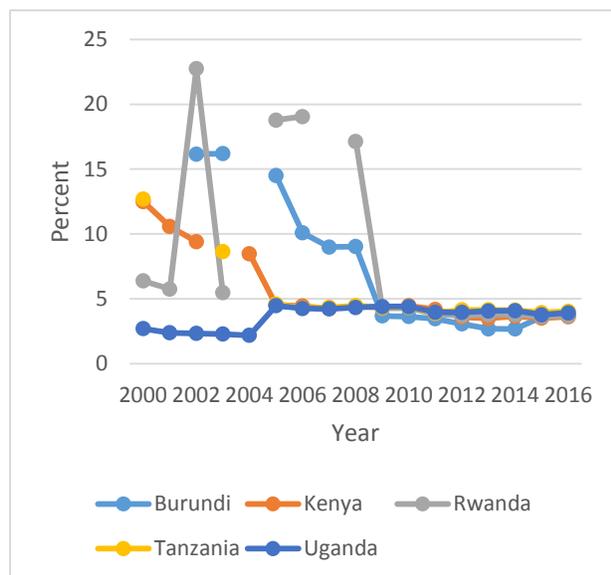
Figures 5a and 5b: Simple average applied tariffs on sensitive items in EAC countries and comparators, 2000-2016.



Source: WITS via TRAINS.

How can it be the case that although intended to simplify EAC countries’ trade policies, there is in fact little evidence that the CET either reduced applied rates of protection, or tariff dispersion? We have already mentioned the importance of the Sensitive Items list, which allowed EAC countries to maintain high rates of tariff protection selectively on particular products. An additional issue, identified by Frazer (2017) is that allocation of products to tariff bands—which was supposed to be according to assumptions as to final use—may have been seriously flawed. To see whether this may have had an impact on EAC countries applied tariff schedules, we re-aggregate the tariff data using the BEC classification, and taking only the category of capital goods not including transport equipment. Such goods should enter EAC countries duty free, under the CET. However, Figure 6 shows that capital goods continue to be taxed at non-zero rates, although lower than five percent. Nonetheless, this finding suggests that at least some capital goods must be included in other CET bands, and leaves open the possibility that this kind of misclassification is widespread in other categories as well. In passing, we again note that the time dynamic of tariff rates in the region suggests that the CET had more to do with harmonization than liberalization: in 2005, applied protection fell in Kenya, but rose by a similar amount in Uganda. In Rwanda and Burundi, by contrast, applied protection fell substantially in 2009. Nonetheless, EAC countries continue to levy higher tariffs on capital goods than does Vietnam, even though domestic production capacity is very limited, and there is a direct negative impact of these taxes on the competitiveness of manufacturing firms.

Figure 6: Average applied tariffs on capital goods for in EAC members, 2000-2016, percent.



Source: TRAINS via WITS.

### 3. INSIGHTS FROM TRADE COSTS DATA

Arvis et al. (2016) develop a global dataset of trade costs from 1990 onwards. The database is updated annually by UNESCAP and the World Bank. Trade costs in this definition capture all factors that drive a wedge between producer prices in the exporting country, and consumer prices in the importing country. They are inferred from the observed pattern of trade and production across countries, using a version of the ubiquitous gravity model, one of the best studied models in empirical economics. The model is described in annex 1. The intuition behind this approach is that keeping all other factors constant, if a country shifts part of its production towards serving distant markets rather than its domestic market, it must be because the cost of reaching those distant markets has fallen relative to the cost of reaching the domestic market.

The dataset expresses trade costs in Ad Valorem Equivalent form, but it is important to stress that the number is in fact a ratio of international to intra-national trade costs which determines the relative profitability of selling in the domestic market versus abroad. The numbers reported in the database are constructed as averages of trade costs in both directions between country pairs, i.e. from country *i* to country *j*, and from country *j* to country *i*. Reported trade costs are much higher than tariff rates of protection, because they capture all factors that increase the costs of doing business abroad, from standard non-tariff measures, to frictional barriers like poor trade facilitation, to distance and other geographical and historical factors. The UNESCAP-World Bank trade costs dataset has been used extensively in applied work, and provides important insights into the evolution of the trading environment across countries and through time.

It is important to extend the analysis above to look at trade costs, because tariffs are not the only measures that affect the EAC countries' trade integration regionally and with the rest of the world. Non-tariff measures are also important, and indeed EAC has made efforts to try and

address them. In addition to classic non-tariff measures like SPS and TBT regulations, the concept of trade costs also captures the costs inherent in a poor trade facilitation environment, due to border delays and uncertainties in shipment times.

### 3.1 EAC countries are relatively insulated from world markets

Table 1 shows the value of the trade costs index for EAC countries in 2015, or the latest available year. The aggregation methodology developed by Arvis et al. (2016) and summarized in annex 1 is used to distinguish between trade costs with other EAC countries, and with non-member countries. For example, the numbers in table 1 indicate that Uganda (row 5) has trade costs that raise the price of goods imported from EAC neighbors by 134% (column 1), and some 221% for imports from outside the EAC (column 2).<sup>7</sup> In line with the findings of Arvis et al. (2016), trade costs in both groups are relatively high by world standards, except for Kenya, which has quite a competitive level of trade costs with EAC (86%). Intra-EAC trade costs are typically around half the level of trade costs with other countries, although Tanzania is an exception, with trade costs vis-à-vis both groups quite similar (152% and 163%, respectively). It is important to stress that these numbers are much higher than tariff rates of protection because they include a wide range of other factors. In particular, geography (distance from major markets) plays a role, and this is reflected in the fact that landlocked EAC countries have higher levels of trade costs with the rest of the world than do coastal EAC countries.

**Table 1: EAC countries' trade costs with other EAC countries, and non-EAC countries, ad valorem equivalent (AVE), 2015 or latest available year.**

	EAC (AVE)	Non-EAC (AVE)
Burundi	160.63%	324.92%
Kenya	85.83%	170.77%
Rwanda	139.57%	277.92%
Tanzania	151.72%	162.83%
Uganda	133.72%	221.01%

Source: UNESCAP-World Bank Trade Costs Dataset; and authors' calculations.

To put Table 1 in perspective, Table 2 shows aggregate trade costs between comparator countries and their RTA partners, as well as those countries with which they do not have an RTA. Trade costs of all the comparator countries with their RTA partners are lower than non-RTA trade costs for EAC members, with the exception of Kenya. In the case of Senegal, China, and Vietnam, trade costs are quite substantially lower than in EAC. Moreover, trade costs between the comparator countries and the rest of the world are also much lower than what is computed in EAC. Many factors go into the difference, and although geography is relevant, it is likely not the determinative factor: China and Vietnam, for example, have RTAs with more distant countries than do the EAC members, which tends to take up trade costs in the first column of Table 2; notwithstanding this, the levels observed are much lower than in EAC.

<sup>7</sup> This implies that Ugandan consumers pay over twice the amount of producer prices for commodities imported from EAC neighbors, and over three times the magnitude of producer prices for commodities sourced from outside the region (including intermediate inputs).

Table 2: Comparator countries' trade costs with RTA partners, and other countries, ad valorem equivalent (AVE), 2015 or latest available year.

	RTA (AVE)	Non-RTA (AVE)
Ghana	122.44%	154.19%
Senegal	94.72%	140.75%
China	77.23%	93.30%
Vietnam	47.74%	86.77%

Source: UNESCAP-World Bank Trade Costs Dataset; and authors' calculations.

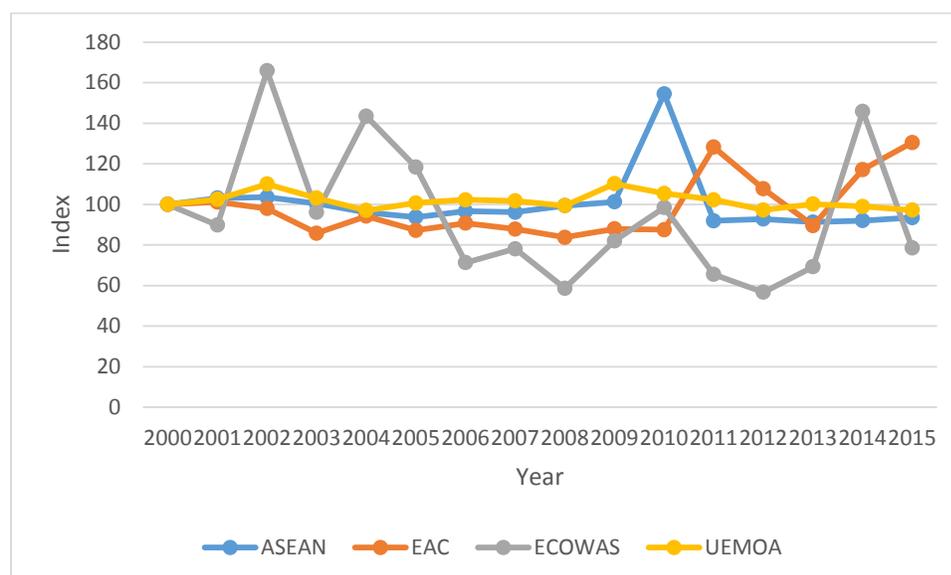
Thus far, the trade costs analysis suggests a similar conclusion to the comparative analysis of tariffs above: EAC countries are relatively more insulated from world markets than the comparator countries, in particular the two Asian countries. Moreover, results suggest that the EAC regional market is still subject to barriers of various types that hold back the free flow of goods more than is seen in comparable countries elsewhere.

### 3.2 The CET has not reduced trade costs relatively within the EAC

What has the role of the CET been in affecting trade costs in the region, in particular in comparison with other regions? Figure 6 presents a dynamic analysis, looking at intra-regional trade costs in EAC in comparison with two other African RECs, ECOWAS and UEMOA, and ASEAN. Although initial levels of trade costs are quite different across the three groups, we normalize all regions to a level of 100 in the year 2000 so that movements can be interpreted as percentage changes.

The Figure suggests that there is little evidence that the CET reduced trade costs among EAC member countries in a way substantially different to what was seen in other comparable groupings. Although trade costs see some reduction through the middle of the sample period, they in fact rise towards the end—the opposite of what was intended. ECOWAS, by contrast, has seen steady reductions in trade costs, if the observation for 2014 is regarded as anomalous. There have also been small reductions in ASEAN and UEMOA.

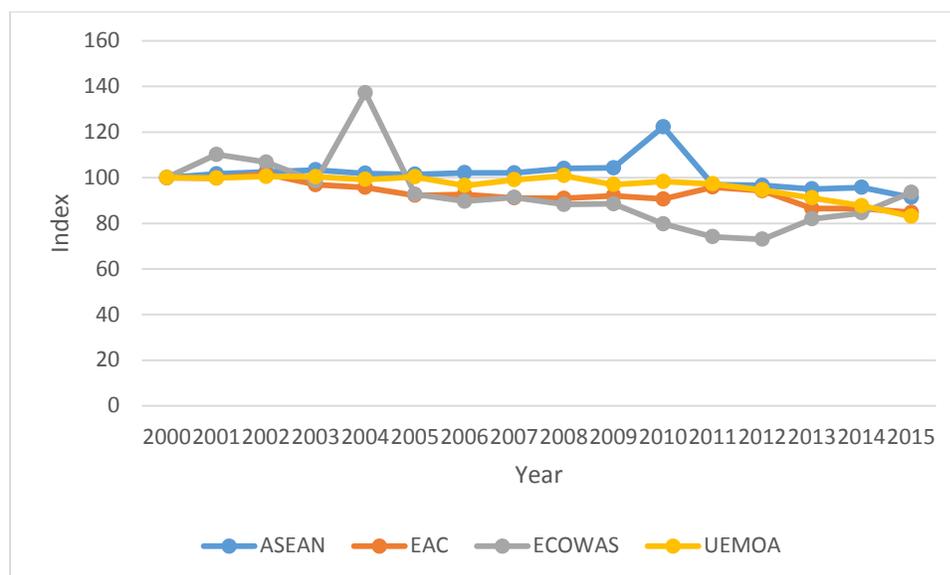
Figure 7: Intra-regional trade costs for EAC and comparators, 2000=100.



Source: UNESCAP-World Bank Trade Costs Dataset; and authors' calculations.

Figure 8 shows the evolution of extra-regional trade costs in EAC and the comparators. In this case, the time trend across groups is much more similar: all are gently downward sloping, with trade cost reductions in EAC quite similar to what was seen in UEMOA, for example. However, there is no evidence of a break in the series either in 2005 or in 2009, the two dates at which the CET entered into force for subsets of current EAC members. Again, these results lead us to question whether the CET had a major effect on the trading environment in EAC beyond what was already happening in terms of underlying trends.

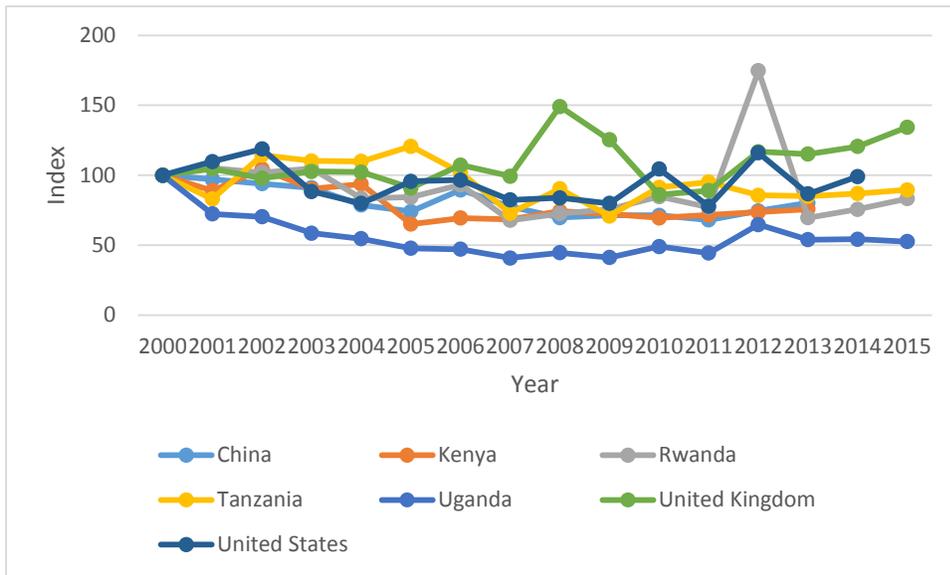
Figure 8: Extra-regional trade costs for EAC and comparators, 2000=100.



Source: UNESCAP-World Bank Trade Costs Dataset; and authors' calculations.

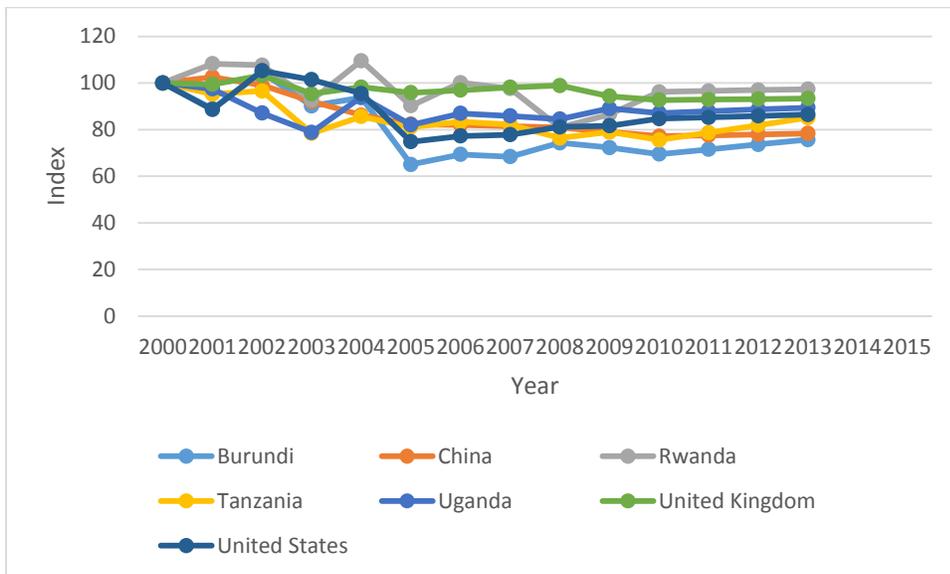
The final figures in this section delve into the EAC aggregate to look at member countries' bilateral trade costs with each other, and with a set of important external markets (China, the UK, and the USA). Results are quite variable across years and countries, but there is very little evidence of a break in 2005 or 2009 (the year of application of the CET). It is really only Kenya that sees a significant reduction in some of its bilateral trade costs upon implementation of the CET: other countries see either no change, or even a slight increase for some bilateral pairs.

Figure 9: Burundi's bilateral trade costs indices with EAC countries and comparators, 2000=100.



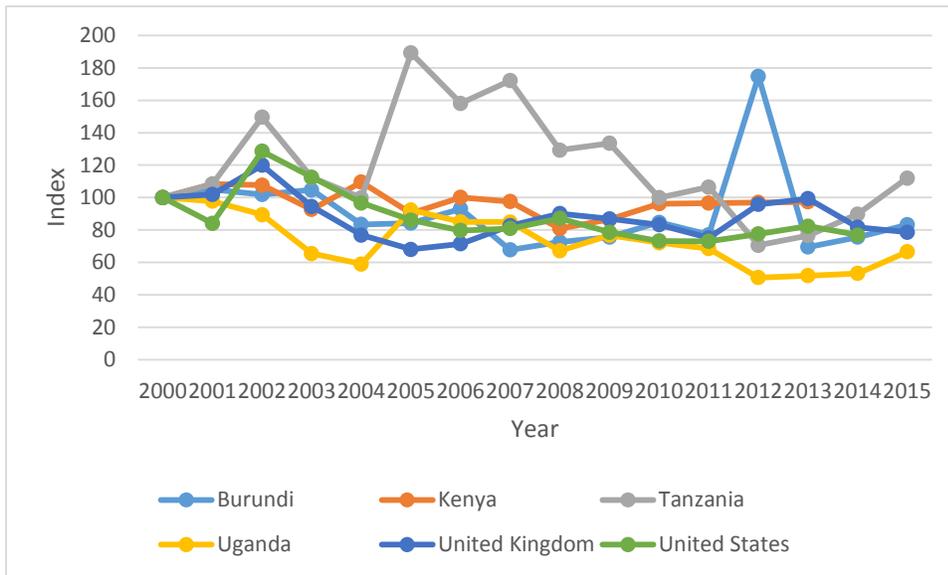
Source: UNESCAP-World Bank Trade Costs Dataset.

Figure 10: Kenya's bilateral trade costs indices with EAC countries and comparators, 2000=100.



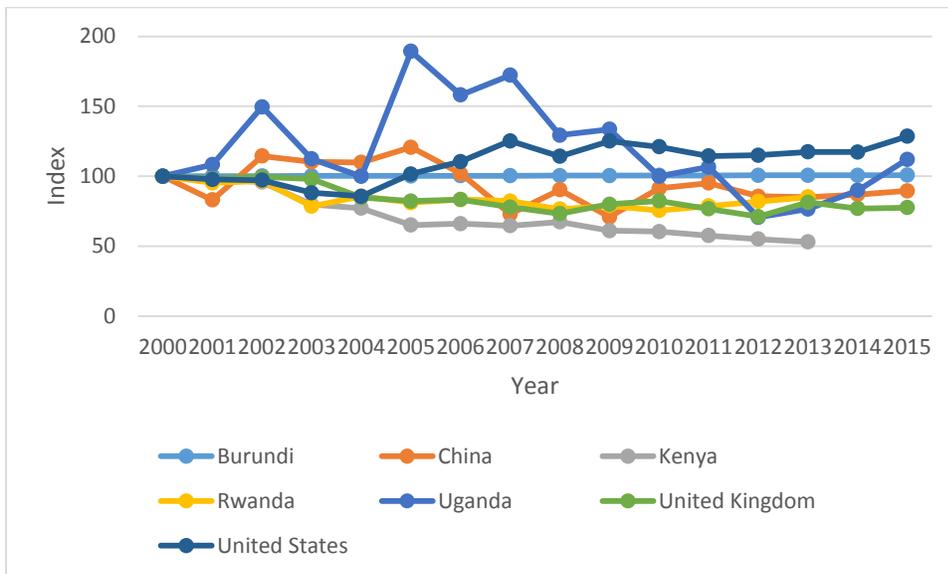
Source: UNESCAP-World Bank Trade Costs Dataset.

Figure 11: Rwanda's bilateral trade costs indices with EAC countries and comparators, 2000=100.



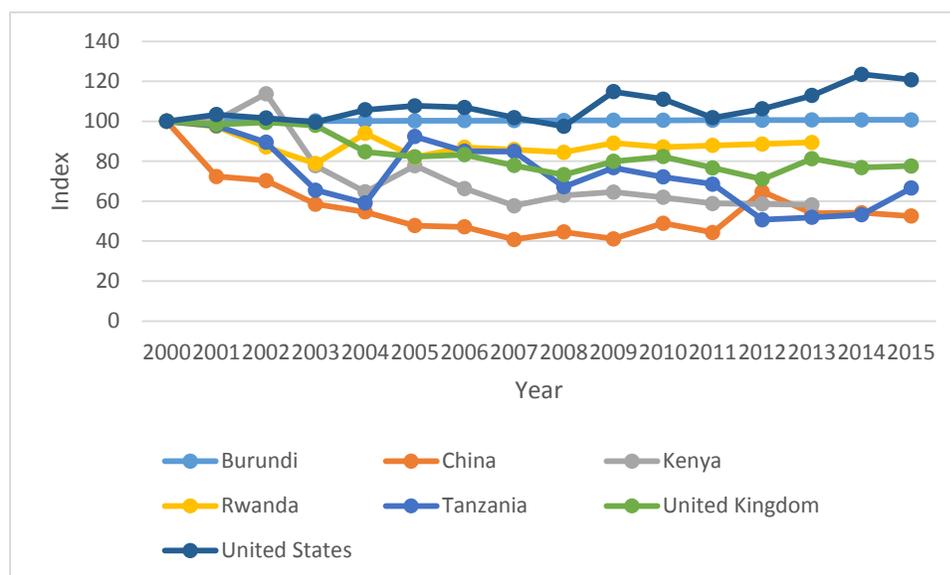
Source: UNESCAP-World Bank Trade Costs Dataset.

Figure 12: Tanzania's bilateral trade costs indices with EAC countries and comparators, 2000=100.



Source: UNESCAP-World Bank Trade Costs Dataset.

Figure 13: Uganda's bilateral trade costs indices with EAC countries and comparators, 2000=100.



Source: UNESCAP-World Bank Trade Costs Dataset.

## 4. TRADE POLICY AND COMPETITIVENESS

In the current era, competitiveness is the touchstone of trade policy. Regions like East and Southeast Asia have prospered by ensuring that their trade policies create incentives for firms to upgrade production, focusing on serving regional and world markets, rather than the domestic market alone. Outward-orientation is a key aspect of development policy, and there is a large literature showing that sectoral productivity increases following falls in tariff protection, as increased competition promotes reallocation of resources from low productivity firms to higher productivity ones and from low-productivity sectors to high-productivity sectors.<sup>8</sup>

What has been the effect of the CET on competitiveness in key industries like cotton, iron and steel, and leather? To investigate this question, we estimate gravity models for these three sectors, and take advantage of results from the theoretical literature to interpret underlying parameters in terms of competitiveness. The version of the model used is described in annex 1. In essence, it decomposes trade growth into three components: one coming from increases in effective demand abroad, a second coming from changes in trade costs, and a third coming from improvements in competitiveness in exporting countries. The measure of competitiveness is an index, comparable across countries and time periods within the model. By estimating pre- and post-CET models, we hope to be able to identify whether or not implementation of the CET affected underlying trends in competitiveness at a country level.

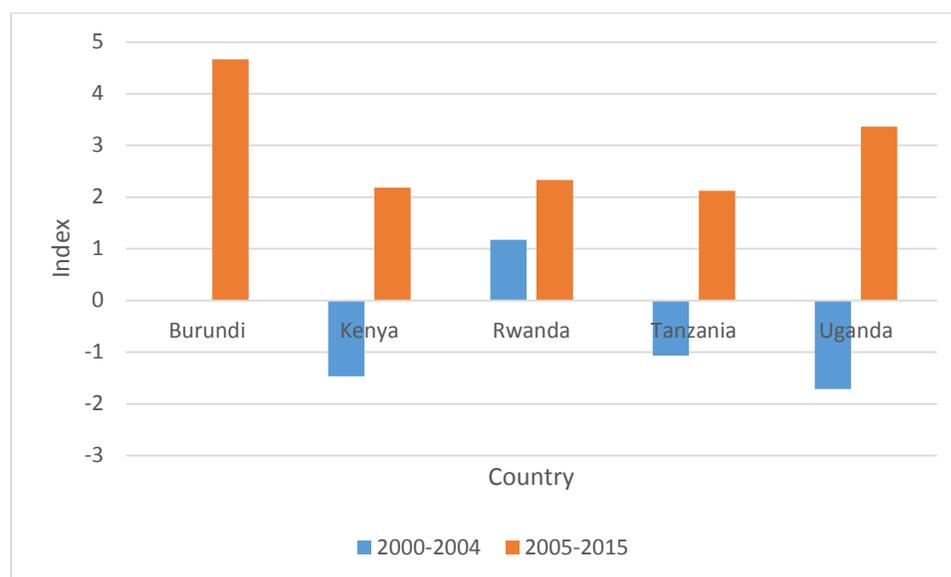
<sup>8</sup> There is a wealth of evidence in favor of this proposition, starting with Pavcnik (2002); we are not aware of any counter-examples. For evidence on Africa, see Ackah et al. (2012), study on Ghana.

Trade data are sourced from CEPII’s BACI dataset. We split the model into two periods: 2000-2004 (pre-CET), and 2005-2015 (post-CET). We have to adopt a single time split to be able to estimate the models. Implementation of the CET for Burundi and Rwanda was not until 2009, but we would still expect that to have had effects by 2015, which is the end point of the sample. The models are estimated using data for all countries, but we only report results for EAC member countries. As estimation is in first differences, trade costs variables typically used in gravity models like distance and other geographical and historical features drop out, as they are constant over time. We include an indicator of RTA membership in first differences, which has a small amount of variation through time. In addition to that variable, we include full sets of exporter and importer fixed effects.

#### 4.1 Changes in competitiveness in three sectors: leather, textiles & apparel and Iron & Steel

Results for leather are in Figure 14. A positive bar indicates an improvement in competitiveness, whereas a negative bar indicates a deterioration. For this sector, there is evidence that competitiveness generally improved across the region following implementation of the CET: Rwanda has a higher positive index between 2005 and 2015 than between 2000 and 2004, while the other countries shift from negative to positive.

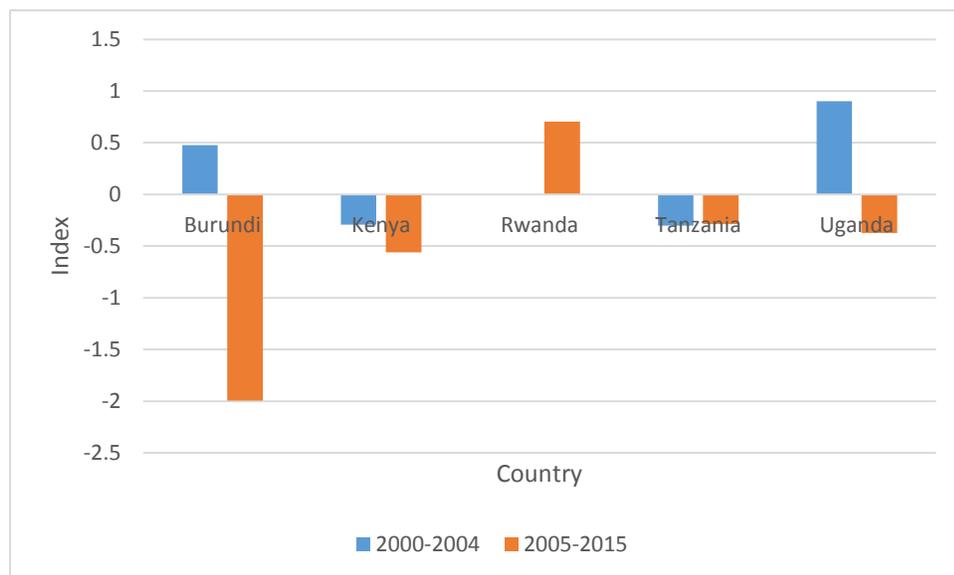
Figure 14: Changes in competitiveness in the leather sector, 2000-2004 vs. 2005-2015, EAC countries, index.



Source: Authors’ calculations.

Figure 15 shows a very different situation in the cotton sector, which is a key export earner in some EAC countries. Only Rwanda has seen its competitiveness improve between 2005 and 2015; all other countries have seen it fall, even though Burundi and Uganda had seen improvements prior to entry into force of the CET.

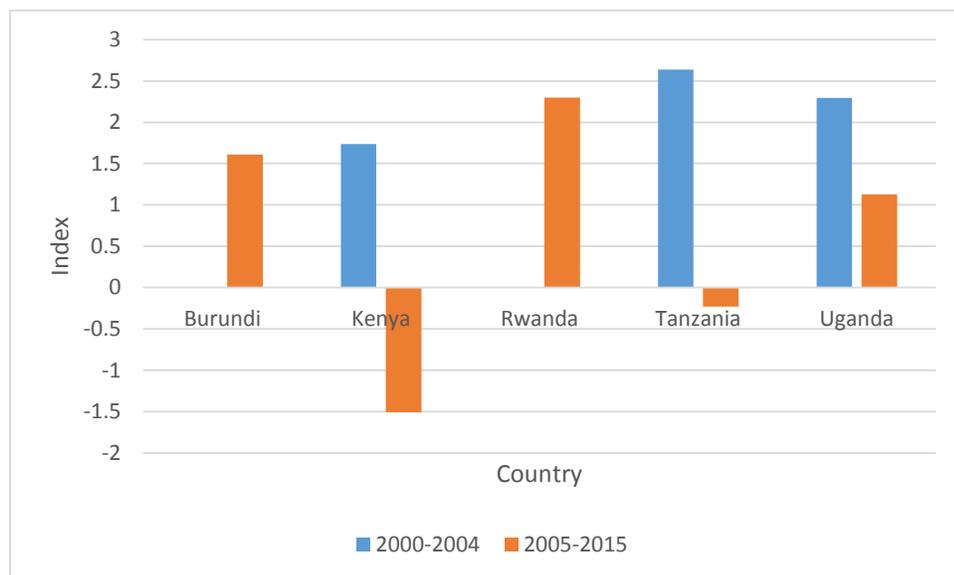
Figure 15: Changes in competitiveness in the cotton sector, 2000-2004 vs. 2005-2015, EAC countries, index.



Source: Authors' calculations.

Performance is more mixed in iron and steel (Figure 16). Burundi, Rwanda, and Uganda have all seen their competitiveness increase over the 2005-2015 period, but Tanzania and Kenya have seen it fall even though it had been improving immediately prior to entry into force of the CET.

Figure 16: Changes in competitiveness in the iron and steel sector, 2000-2004 vs. 2005-2015, EAC countries, index.



Source: Authors' calculations.

The key takeaway from Figures 14-16 is that changes in competitiveness vary considerably by sector and by country. There has been no general improvement in export competitiveness across EAC following implementation of the CET. Indeed, there has been a reversal of positive trends

in some cases. The dynamics in the leather sector is encouraging, and may suggest that incentives are well aligned to support durable comparative advantage. By contrast, there are clear difficulties in the cotton sector—a detailed sector study would be required to identify the precise reasons, in particular in a sector like cotton, which has seen major state involvement historically. Iron and steel also requires additional work.<sup>9</sup> Although there is evidence of a positive trend in competitiveness, it is not clear whether these sectors—which are relatively capital intensive—are well suited to current conditions in EAC. It will be important to identify the extent to which EAC countries are competing in global, rather than regional, markets.

To provide some first information, Figure 17 reports the proportion of intra-EAC exports in total exports for the EAC countries. For leather and cotton—sectors where EAC countries may have a durable comparative advantage—the proportion of intra-regional trade is relatively low, but increasing for leather and decreasing for cotton. The case of iron and steel is dramatically different: most trade is intra-regional, and the proportion decreased significantly between 2000 and 2004, before increasing sharply after 2005. There is evidence across all sectors that EAC trading arrangements including the CET may be giving firms an incentive to concentrate on regional, rather than global markets; but the evidence in the case of iron and steel is compelling. What we see in that sector is consistent with a distorted market in which intra-regional trade is primarily due to trade diversion, favored by the CET—although regional iron and steel is not productive globally, it is traded in significant quantities within the region. Given that iron and steel are inputs into many other manufactured goods, there is a real possibility that this dynamic is undercutting the competitiveness of light manufacturing in the region—a very negative effect from the point of view of promoting structural change.

Figure 16: Percentage of EAC countries’ exports in three sectors going to other EAC countries.



Source: CEPII BACI; and authors’ calculations.

<sup>9</sup> A fairly accurate picture of the competitiveness of a sector can be obtained from tariffs along the different stages of production along with estimates of input-output linkages.

## 5. FURTHER DIFFERENTIATION OF THE CET REGIME WILL OBFUSCATE THE INCENTIVE SYSTEM

Until the 1990s, the EAC pursued an inward-looking vertical industrialization strategy in which the whole stages in a sector (e.g. Textiles and apparel, leather) are produced within the country or the region, behind high trade barriers to the outside world. In that horizontal strategy, members in the regional trade agreement usually tried to build the entire supply chain domestically or, at best, within the agreement. A typical trade policy included taxes (or sometimes export bans of raw materials--e.g. of unprocessed wood) to foster growth of the downstream industry (e.g. furniture) with a higher value-added content, all this at the expense of earning needed foreign exchange to import intermediates. Tariff escalation to protect producers of final goods with low value-added was also part of the industrial development strategy. The resulting high Effective Rates of Protection (ERPs) for the low value-added final goods industries attested to the failure of that strategy of building progressively the supply chain domestically in countries (or regions) with a small market size.

This inward-looking strategy was abandoned but, as shown above, the EAC has still lagged in the reduction of tariff protection relative to other regions. This has put the EAC at a disadvantage when the Information Technology (IT) revolution lowered the cost of moving ideas. As forcefully described by Baldwin (2017), this has allowed a selected ‘Great Convergence’ for some countries and regions as the ease of outsourcing ideas has allowed high-skill high-wage labor in the North to form an alliance with low-skill low-wage workers in the South. The result has been the spectacular unbundling of production, but only in some regions of the world as shown in figure 17 below. Production is thus increasingly unbundled across countries at different levels of development reflected in the growth of Global Value Chains (GVCs). GVCs entail a vertical fragmentation of production stages: parts and components are produced in different countries and are then assembled sequentially along the chain or in a final location which is the opposite of the horizontal industrialization strategy developed under an inward industrialization strategy. A country can then find profitable niches of specialization in a specific segment or task of a production chain, or acting as a subcontractor of intermediate inputs without having to produce the final good.

Figure 2 shows the evolution of the fragmentation of production by region over the last 20 years.<sup>10</sup> It is clear from the figure that both North Africa (N/A) and SSA participate in GVCs in upstream activities. The relatively low FVA shares show that the exports from N/A and SSA use a low share of intermediate inputs in their exports from other regions. This is a reflection that, in fine, the CET structure penalizes the imports of goods along the value chain, through a

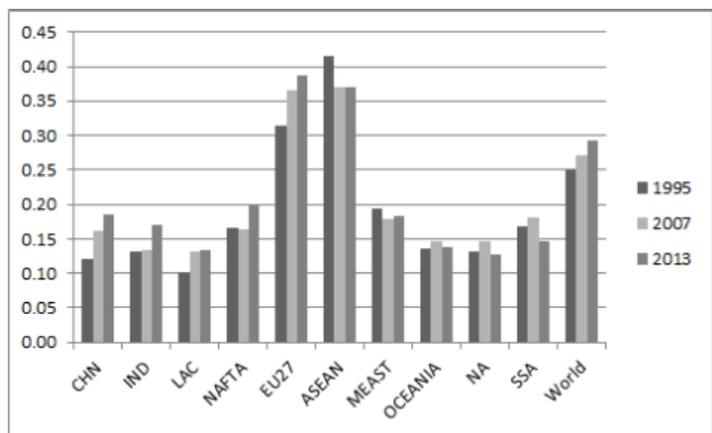
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<sup>10</sup> Figure 17a gives the foreign value-added (FVA) share of a region’s exports (i.e. intermediate imports that do not enter in the region’s GDP) .consists of inputs in other countries value-added. FVA captures the extent of GVC participation for downstream industries (FVA and domestic value-added (DVA) adds up to gross exports). A high FVA indicates a strong participation in GVCs. Figure 17b shows the share of a region’s value-added exports (DVX) embodied as intermediate inputs in other countries’ exports. A high share is an indication that the region is participating in upstream sectors in the GVC.

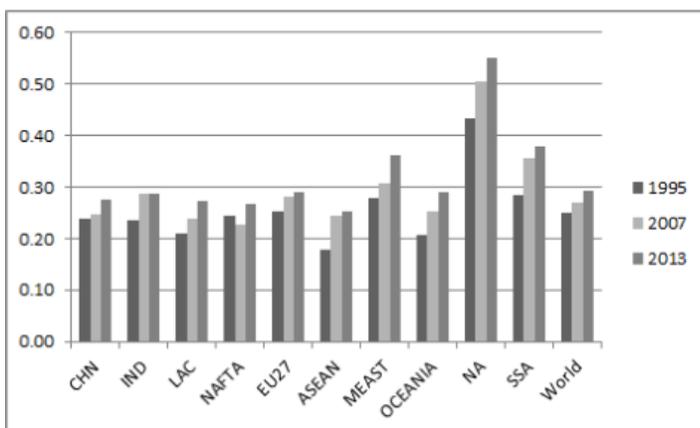
combination of policies including taxes on exports, and tariffs on imports in upstream activities, misclassification of activities and the spotty implementation of incentives across industries. In the case of the Ugandan leather industry described in Annex 2, the upstream raw hides and skin sector is heavily penalized. At an economy-wide and continental level, the FVA shares are comparatively low.

Figure 17: Participation in Global value Chains (regional averages)

17a: Foreign value-added (FVA) component of exports



17b: Domestic VA Exports (DVX) as share other regions' exports



Source: Del Prete et al. (2016, figures 4,5,6) . MRIO UNCTAD-Eora Database: for 25 ISIC sectors

Notes:

N/A : North Africa: Algeria, Egypt, Libya, Morocco, Tunisia,

SSA: 43 African countries

The shortcomings of this horizontal strategy have been amply documented since the early 1970s and progressively accepted during the 1980s when the success of the export-led development strategies of East Asian became more progressively accepted across regions. South America started first during the 1980s 'lost decade' of implementation of structural adjustment. The

adoption of the 3-band CET structure with a modest number of products on the SI list was a move in that direction even though the end result is still a relatively distorted incentive structure.

## 6. POLICY IMPLICATIONS

The conclusions of this study of tariff rates in EAC, as well as regional and bilateral trade costs, can be shortly stated: implementation of the CET continued a process of gradual convergence in trading environments, but did not have any major effect on tariff rates of protection or trade costs. This outcome has been foreshadowed by others (e.g., De Melo et al., 2017), but it is worthwhile repeating as EAC countries review the last five years of implementation, and look towards developing a strategy for the future.

As pointed out in previous work (Frazer, 2012; Frazer, 2017), the Sensitive Items list seems to have been a major factor that diminished the potential impact of the CET on applied trade policies. It has led to the persistence of tariff peaks in a way not seen in other parts of the world, such as East and Southeast Asia. Moreover, as Frazer (2012) shows, these peaks often affect goods that are consumed by the poor, with the result that the CET in fact undermines poverty reduction efforts.

This conclusion suggests that EAC countries should be mindful of not introducing additional complexities into the CET, but should instead work to simplify it further. The existing band structure is not overly complex in principle, but there are suggestions that its application has been imperfect, with some goods placed in incorrect (higher) tariff bands: even capital goods, which are not produced in a major way domestically in the region, are subject to non-zero rates of protection, which directly undermines manufacturing competitiveness. A first step should be to phase out the Sensitive Items list, so that the flattening of tariff schedules intended by the CET can in fact take place. Second, the entire classification should be re-examined from the perspective of end use of the products. To avoid an undue impact of lobbying by affected industries, it would be appropriate to use an agreed international classification, like the BEC, as the starting point for this work.

Moving forward, governments should be wary of proposals to replace ad valorem with specific tariffs. Although valuation problems can attend the use of ad valorem tariffs in environments of poor compliance, specific tariffs also offer a number of inconvenient aspects. Firstly, compliance can only be ensured if goods are measured at the border, or through the use of pre-shipment inspection (now restricted by the WTO Trade Facilitation Agreement). This process would substantially increase the time taken to cross borders, and would hold back trade expansion. Second, specific tariffs can become highly distortionary if world market prices change—for instance, at a world price of \$100/ton a \$5 per ton tax is equivalent to 5% ad valorem; but if the price falls to \$50/ton and the specific tariff is unchanged, the distortion is equivalent to 10% ad valorem.

Our comparison of tariff rates of protection in EAC with other countries, particularly China and Vietnam, shows that a key dimension of a competitive trade policy has been largely missing from the CET: progressive liberalization, which brings industries into closer contact with world markets, and encourages firms to undertake productivity upgrading. Governments should resist arguments by some firms that rates of protection need to be increased so as to protect them from

competitive pressures and reserve the regional market for them. This practice was tried in many parts of the world in earlier decades, and typically proved to have troubling dynamic implications. In particular, under this scheme there is little hard incentive for firms to become more productive—instead they have an incentive to lobby for increased protection over time. The experience of Asian countries that have moved rapidly through income levels in recent decades suggests that governments need to ensure that the incentives facing firms are the right ones. The emphasis needs to be on the development of durable competitiveness, based on the world market as a reference point. Only in such a framework can trade play a transformative role, in terms of promoting structural change.

Our analysis of trade costs also suggests that, as EAC has recognized, the regional integration agenda is not just about tariffs. Non-tariff measures of various types represent a substantial barrier to the free movement of goods within the region, and between the region and world markets. It is likely that the costs imposed by non-tariff measures, including poor trade facilitation, are substantially higher than those imposed by tariffs. While the discussion over the future direction of the CET is important, it should not overshadow the urgent need to address the full range of non-tariff measures, and to reduce trade costs. Moving forward on this part of the agenda is fully consistent with the development of a trade policy based around the idea of developing competitiveness, and supporting structural change.

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## ANNEX 1: GRAVITY MODEL

We estimate gravity models for these three sectors, and take advantage of results from the theoretical literature to interpret underlying parameters in terms of competitiveness. By estimating pre- and post-CET models, we hope to be able to identify whether or not implementation of the CET affected underlying trends in competitiveness at a country level.

The gravity model is the most commonly used platform for applied international trade analysis. Initially based on a number of plausible correlations in the data, it now has a range of theoretical supports in terms of standard microeconomic principles. One commonly used theoretical model of trade that produces a gravity-like model of bilateral exports is Eaton and Kortum (2002). Their framework is Ricardian, so trade is based on differences in productivity across countries. Country-level productivity can be interpreted in terms of competitiveness.

Two other contributions to the literature show how the Eaton and Kortum (2002) model can be used to calculate indicators of competitiveness (export side) and effective demand (import side). Costinot et al. (2012) derive a theory-consistent index of comparative advantage from this framework, and show that it can be estimated relatively easily. Hanson (2010) takes an even more intuitive approach: he shows that by estimating a gravity model in time first differences, it is possible to straightforwardly obtain indices that can be interpreted as showing changes in competitiveness (exporter fixed effects) over time, which is exactly what is of interest for the present paper. We follow Hanson's (2010) approach because it is better suited to data with a minimal degree of sectoral disaggregation, as here; the Costinot et al. (2012) data is better suited to goods trade.

The Eaton and Kortum (2002) gravity model can be written as follows:

$$\frac{X_{ij}}{X_i} = \frac{T_j(c_j d_{ij})}{\Phi_i}$$

Where  $X_{ij}$  is purchases by country  $i$  from country  $j$ ;  $X_i$  is total purchases by country  $i$  from all other countries;  $T_j$  is a factor encompassing country  $j$ 's comparative advantage;  $c_j$  is the cost of one unit of inputs;  $d_{ij}$  is bilateral "iceberg" transport costs; and  $\Phi_i = \sum_h T_h(c_h d_{ih})^{-\theta}$  describes country  $i$ 's price distribution, which depends on production costs and trade costs across all bilateral partners, as well as the parameter  $\theta$ , which captures dispersion in productivity.

Taking log first differences and using fixed effects to group exporter and importer terms together gives the following model that can easily be taken to the data:

$$\Delta \log(X_{ij}) = f_i + f_j - \theta \Delta \log d_{ij} + e_{ij}$$

The  $f$  terms are fixed effects by exporter and importer, and  $e$  is an error term satisfying standard assumptions. Typical trade cost variables, like distance, are time invariant, so their inclusion in the model allows for changes in the sensitivity of bilateral trade with respect to observable trade costs over time.

The key to the model’s power in the present context lies in the interpretation of the fixed effects. The exporter fixed effect is an indicator of the way in which comparative advantage and production costs have changed over time. A positive coefficient indicates that a country has increased its level of competitiveness, as commonly understood in the policy literature. A negative coefficient indicates a loss of competitiveness. On the importer side, a positive coefficient indicates an increase in effective demand (i.e., market size adjusted for “remoteness”), whereas a negative coefficient indicates a decrease in effective demand. Reporting average coefficients across relevant country groups give an appreciation of how the competitiveness or effective demand of the group’s members has changed over time, although there can still be notable differences at the level of individual members.

Trade data are sourced from CEPII’s BACI dataset. We split the model into two periods: 2000-2004 (pre-CET), and 2005-2015 (post-CET). We have to adopt a single time split to be able to estimate the models. Implementation of the CET for Burundi and Rwanda was not until 2009, but we would still expect that to have had effects by 2015, which is the end point of the sample. The models are estimated using data for all countries, but we only report results for EAC member countries. As estimation is in first differences, trade costs variables typically used in gravity models like distance and other geographical and historical features drop out, as they are constant over time. We include an indicator of RTA membership in first differences, which has a small amount of variation through time. In addition to that variable, we include full sets of exporter and importer fixed effects.

## ANNEX 2: TARIFF REFORMS AND UGANDA'S LEATHER INDUSTRY

This annex describes in some detail the value chain in the leather industry. This structure with strong inter-industry linkages is typical of most industrial sectors around the world.

### Overview

The leather industry in Uganda benefits from access to a sizable and high quality raw material base. Uganda's cattle population was estimated at 14 million heads of cattle in 2014, which more than doubled since the year 2000.<sup>11</sup> Hides and skins from Uganda are of high quality, texture, and heavy substance, enabling the production of quality heavy upper and vegetable tanned soled leather.<sup>12</sup>

Exports of leather, leather manufactures, and dressed fur skins have demonstrated the highest growth among products in Uganda's merchandise export portfolio from 2010 to 2015.<sup>13</sup> Since 1995, the leather and leather products group expanded its share of total exports from 0.11% to 2.82%. This increase was accompanied by a declining export share of raw hides, skins and fur skins exports from 2% to a negligible share of total exports, over the same period, suggesting that a process of value chain upgrading took place.<sup>14</sup> Mugisa (2017) notes that the introduction of an export levy on raw hides and skins coupled with an import duty of 10% on wet blue and crust leather imports (as part of the EAC CET), may have encouraged a number of tanneries to start-up in Uganda for purposes of value addition.<sup>15</sup>

These outcomes should be expected when considering the incentive estimates to the leather value chain reported in table 2. The Effective Rate of Protection (ERP) for leather is 63% while is -58% for raw hides and skins.

Leather and leather manufactures are primarily exported to markets outside of the East African Community, with only 6% of products sold within the region in 2014. In the same year, 64% of leather exports were sold to OECD countries, implying that the Ugandan leather industry is able to satisfy the associated regulations and high product quality standards. Moreover, between 2005 and 2015, the leather industry exported over 91 products at the Harmonized System (HS) 4-digit level of classification, with relatively high rates of product and firm survival - of 2.37 years and

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<sup>11</sup> Abdulsamad & Gereffi (2016)

<sup>12</sup> UIA Leather Sector Profile. Accessed 28<sup>th</sup> August 2017.

<sup>13</sup> Measured as a share of the export portfolio. This was also the fourth fastest growing product group among merchandise exports over the 20 year period from 1995 to 2015. Source: Shepherd (2016).

<sup>14</sup> Shepherd (2016)

<sup>15</sup> The Finance Amendment) Act 2011 (Amendment No. 2/2011) instituted a specific tax of \$ 0.8/kilo on the export of raw hides and skins (revised upward from a 20% ad valorem tax, as per Mugisa, 2017). This roughly corresponds to a 35% ad valorem tax, as the average unit value of exports from CY 2012 to 2016 was \$2.26/kilo (calculated from [https://www.bou.or.ug/bou/rates\\_statistics/statistics.html](https://www.bou.or.ug/bou/rates_statistics/statistics.html))

4.15 years, respectively.<sup>16</sup> The combination of a high number of products exported, with long product and firm survival is indicative of maturing firm capabilities and competitiveness of Uganda's leather industry. As such, and as shown in the gravity simulations in the main report, leather and leather manufactures appears to be a promising, high-growth, and high-productivity industry that merits some prioritization by the Ugandan Government.

Among the issues facing the government in this sector, and other sectors like Textiles and Apparel (T&A) and Iron and Steel (I&S) is the extent to which downstream sectors like leather products, should be protected via the CET and other incentives like export taxes, at the expense of upstream sectors, like raw skins and hides, that have substantial foreign earnings potential, at least in the short to medium run. This annex discusses the tradeoffs involved in designing the incentive structure for the leather value chain.

### The Leather Value Chain in Uganda

Currently, the leather value chain in Uganda has eight major tanneries that process Hides and Skins (H&S) to produce wet blue or crust leather for export. There is only one company (Leather Industries of Uganda, Jinja) that has the capability to produce finished leather – which is sold to

Production Stages in the Leather Industry				CET Rate on Imports (In %)	Export Levy (if any)
(1)	(2)	(3)	(4)	(5)	(7)
Output (O) [CET Rate] Stages	Inputs (I)	Input coefficient	Value added	Inputs	-
<b>(i) Live Animals [25%]</b>	Veterinary Medicine, Dips, Sprays & Vaccines	0.13	0.67	0%	-
	Animal Feed/Fodder	0.13		10%	
	Artificial Insemination	0.01		0%	
	Other <sup>17</sup>	0.07		N/A	
<b>(ii) Raw Hides &amp; Skins (H&amp;S) [10%]</b>	Live Animals	0.50	0.32	25%	\$0.8/Kg or 35% (AVE) on H&S
	Disinfectants	0.04		0%	
	Machines	0.07		0%	
	Solid & Liquid Waste mgmt.	0.07		N/A	
<b>(iii) Wet blue, crust leather &amp; finished leather [10%]</b>	Raw hides & skins	0.48	0.20	10%	\$0.8/Kg or 35% (AVE)
	Biocide	0.02		0%	
	Sodium	0.02		0%	
	Lime	0.12		0%	
	Tannery Waste Management	0.16		N/A	
<b>(iv) Leather Products [25%]</b>	Finished leather	0.50	0.20	10%	-
	Accessories	0.30		10%, 25%	

<sup>16</sup> Product survival rates are calculated as the average time that an exporter exports an HS-4 level product. Source: Shepherd (2016).

<sup>17</sup> Includes expenses on other inputs at the farm level such as water, electricity, fuels, lubricants, repairs & maintenance, etc. Expenditure on breeding animals is excluded, as this is regarded as capital expenditure. Source: UBOS National Accounts (FY 2009/10)

mid-sized enterprises for the manufacture of shoes for schools, and safety boots, mainly for the domestic market.<sup>18</sup>

**Table 3: Leather Value Chain and Applicable CET Rates<sup>19</sup>**

The linkages and the incentives along the leather industry are described in table 1. The value chain comprises the following four stages– (i) animal production at the farm level; (ii) collection of hides and skins from slaughter houses/abattoirs or the farm; (iii) processing of hides & skins in tanneries to produce wet blue, crust leather for export or finished leather; (iv) production of leather products from finished leather.

Table 1 depicts segments of the Leather industry and applicable tariffs under the current CET regime for inputs (I) and outputs (O) at each stage. Column 1 describes the outputs and the CET tariff rate on imports, column 2 the inputs, column 3 the input coefficients and column 4 the value-added at that stage of production (on the assumption that the input coefficients provided by the industry and the input-output table of 2009-10 are a reasonable representation of the industry linkages). These coefficients are used to calculate the ERPs reported in table 2. Column 4 shows that value-added per unit of output falls as one goes down the value chain. Column 5 gives the ad-valorem CET rate applied and column 6 the export tax on H&S.

Two characteristics of the value chain deserve to be noticed. First, the falling value-added ratios as one goes down the value chain contribute to increasing ERPs along the chain. Second is the escalating Nominal Rates of Protection (NRP) as one goes down the value chain which also contributes to the escalation of ERPs down the chain.

Columns 5 and 6 display EAC’s CET structure of escalating tariffs across the successive stages of the leather value chain. This escalating structure adopted to foster the development of the local industry, has been used extensively to promote industrialization in many developing countries. As shown in the first row of table 1, for phase (i) of the chain, cattle farmers in Uganda have access to high quality inputs from international markets through duty free access to critical inputs for animal breeding (e.g. veterinary drugs, vaccines, and pesticides). Cattle farmers also benefit from protection in the output market, as the import of live animals from outside the region pay an import duty of 25%. This tariff allows the cost of production of animals to exceed import prices by up to 25% (plus the presumably higher freight costs to slaughter houses that have to be borne by importers relative to domestic producers).

In the second segment of the chain (row 2), slaughter houses have duty free access to imported inputs (other than live animals) such as machines and disinfectants. In this segment, there is also

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<sup>18</sup> Mugisa (2017)

<sup>19</sup> Data sources for Table 1 include: Mugisa (2017) and EAC (2017) for data on tariffs; UBOS National Accounts (corresponding to FY 2009/10) for input coefficients & value added at the farm level; Interview with Uganda Leather and Allied Industries Association (ULAIA) for input-coefficients at the slaughter house, tannery and manufacturing level. We thank Dr. Chris Ndatira Mukiza & Echoku Samuel from the Uganda Bureau of Statistics (UBOS), Mr. Muhammad Muzamil from the Uganda Manufacturers’ Association (UMA), Mr. Kityo Saul from ULAIA and Mr. John SSengendo from the Bata Company for facilitating access to required data.

an export tax of 35% imposed on exports of raw hides and skins (H&S) produced by slaughter houses. Note that the 25% CET on imports of live animals: it protects the production of live animals, while it penalizes the H&S sector which uses live animals as an input.

In the third row (segment (iii) of the value chain), tanneries process H&S to produce wet blue, crusted leather or finished leather. Tanneries benefit from the export levy on H&S as it reduces the price tanneries have to pay for H&S. This export tax, a subsidy for tanneries, reduces foreign exchange earnings from exports of H&S. It is imposed to encourage in-country value addition in the expectation that not only will this lead to the creation of jobs, but also to foreign exchange earnings from the exports of products with a greater degree of processing. Tanneries also benefit from an import duty (10%) on outputs.

At the final stage of the value chain (row (iv)), finished leather is combined with accessories such as buttons, zippers, lining fabrics, cardboard, glue-cement, thread, etc. to produce leather products. Some of these products, when sold in high-income markets, are sensitive to rapidly changing fashions and require close to just-in-time delivery. In addition to incentives, this requires well-performing logistics. Currently, the region does not produce competitively these products at the current tariff rates of 10%-25%. Furthermore, Mugisa (2017) points to increasing competition from imported synthetic leather products faced by domestic footwear manufacturers. Is this diagnostic, implicitly suggestion further protection for leather products, justified?

### **Alternative incentive scenarios for the CET**

The incentive structure in the leather industry described in table 1 is typical of countries wishing to encourage industrialization by favoring downstream industries at the expense of upstream industries producing raw materials that can be sold competitively in world markets. Examples include export controls of raw cashmere in Mongolia and unprocessed wood in Romania. Takacs (1994) estimated that these controls resulted in substantial rent transfers to the downstream industries and to a net loss of foreign exchange earnings for the economy as the foreign exchange losses from reduced exports of raw materials exceeded foreign exchange earnings of downstream activities. Estimates of these losses were exacerbated if the downstream industry was assumed to have monopsony power. In the case of the leather value chain in Uganda, the export tax on raw hides and skins (H&S) is likely to produce a similar outcome.

### Box: ERP and Resource pull formulas

#### Notation and formula for calculating ERP:

$X_i =$  gross output, sector  $i$

$P_i =$  gross price, sector  $i$

$PN_i =$  Net price (value – added price) sector  $i$

$a_{ji} = \frac{X_{ji}}{X_i} =$  input of  $j$  in sector  $i$  (Leontief assumption)

$Z_i = \sum_j X_{ji}P_j$  intermediate purchases (in value terms) of sector  $i$

$VA_i = P_iX_i - Z_i$  value – added in sector  $i$

$va_i^d = \frac{VA_i}{X_i} = PN_i = P_i - \sum_j a_{ji}P_j$  per unit value – added price (at tariff inclusive price)

$P_i = \overline{wp}_i(1 + t_i)ER$  Unit domestic price in sector  $i$   
(1)

$t_i$  is ad valorem tariff or nominal rate of protection (NRP). By choice of units, set  $\overline{wp}_i = 1$

$va_i^w = 1 - \sum_j a_{ji} ; va_i^d = (1 + t_i) - \sum_j a_{ji}(1 + t_j)$  (2)

Effective rate of protection definition

$ERP_i \equiv \frac{va_i^d}{va_i^w} - 1 = \frac{t_i - \sum_j a_{ji}(1+t_j)}{1 - \sum_j a_{ji}}$  (3)

#### Back of the envelope resource pull estimates

Let gross output be produced by a Leontief production function for intermediates  $Z$ , and  $VA$ . A Leontief production function is also assumed across intermediates).  $VA$  is produced by a Cobb-Douglas function of capital and labor with labor the only mobile factor (capital is fixed in the short-medium term).

$X_i = G^i(\text{Min}(Z_i, VA_i); Z_i = (\text{Min}(a_{1i} \cdots a_{ni}))$  (4)

$VA_i = F(\overline{K}_i, L_i) = L_i^{\alpha_i} K_i^{\beta_i} = C_i L_i^{\alpha_i}$  (5)

Price-taking (in input and output markets) profit maximizing firms hire factors by equating VMP with factor cost for labor. The FOC for profit-maximization for hiring labor is:

$L_i = (\alpha_i PN_i VA_i) / w$  (6)

Total differentiation of (5) and (6) assuming unchanged wages gives the output response to a change in tariffs (a hat indicates a percentage change)

$\widehat{VA}_i = \frac{\alpha_i}{(1-\alpha_i)} \widehat{PN}_i$  (7)

This estimate neglects firm heterogeneity, market structure issues and potential economies of scale

Table 2 uses the input coefficient estimates, tariffs and export tax estimates of table 1 to show the difference between the nominal rates of protection (NRP) and the Effective Rates of Protection (ERP) for the leather industry using the formula in the box. Column 3 gives estimates under the current CET tariff structure set of incentives along the value chain in the industry. ERP rates under alternative tariffs and export tax rates for H&S are reported in cols. 4 to 9

Production Stages in the Leather Industry		Current Scenario	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Output [CET rate]	Nominal/ Effective Protection	EAC-CET 2017	5% tariff on hides & skins (H&S)	20% tariff on tannery (WB, CL, FL)	0% tariff on accessories	100% export levy on H&S	0% export levy on H&S
Live Animals [25%]	NRP	25%	25%	25%	25%	25%	25%
	ERP	27.2%	27.2%	27.2%	27.2%	27.2%	27.2%
	Change in Output (%)	-	-	-	-	-	-
Raw Hides & Skins [10%]	NRP	-25% (10% tariff & export levy ~35%)	-30% (5% tariff & export levy ~35%)	-25% (10% tariff & export levy ~35%)	-25% (10% tariff & export levy ~35%)	-90% (10% tariff & export levy =100%)	10% (10% tariff & export levy =0%)
	ERP	-58.1%	-66.6%	-58.1%	-58.1%	-169.2%	1.7%
	Change in Output (%)	-	<b>-7.6%</b>	<b>0%</b>	<b>0%</b>	<b>-99%</b>	<b>+53%</b>
Wet blue, crust leather & finished leather (WB, CL, & FL) [10%]	NRP	10%	10%	20%	10%	10%	10%
	ERP	27.9%	31.0%	49.6%	27.9%	68.4%	6.08%
	Change in Output (%)	-	<b>+6%</b>	<b>+40%</b>	<b>0%</b>	<b>+75%</b>	<b>-40%</b>
Leather Products [25%]	NRP	25%	25%	25%	25%	25%	25%
	ERP	63.3%	65.3%	55.2%	66.1%	88.6%	49.7%
	Change in Output (%)	-	<b>+1.6%</b>	<b>-6.6%</b>	<b>+2.2%</b>	<b>+21%</b>	<b>-11.1%</b>

**Table 2: Impact of Tariff Reform Scenarios on Uganda's Leather Industry**

Notes: NRP=Nominal rate of Protection; ERP= Effective rate of protection. See formulas for ERP and Change in Output (%) in the box : Equations 3-7.

Column 3 shows that the current CET structure is highly skewed along the value chain under the current CET. If incentives were neutral across the four segments of the chain, nominal and effective rates of protection would be equal (NRP=ERP). Except for live animals where nominal and effective rates are almost equal, incentives are tilted towards the tanneries (ERP=27.9%;

NRP=10%) and especially towards leather products (ERP=63.3%; NRP=25%). Because of the 35% export tax, raw H&S have a negative NRP of 25% in spite of a tariff of 10% on imports of raw H&S. This situation worsens once one takes into account the 25% tariff on live animals which is a tax on raw H&S. The CET heavily penalizes Raw H&S (ERP=-58.1%; NRP=-25%).

In conclusion, the current CET structure protects heavily the leather industry at the expense of the other segments of the chain, particularly raw H&S. The disparity in incentives between the negative ERP of (-58%) for raw H&S and the (+63%) leather products is very large by international standards.

Columns 4 to 8 estimate the effect of propositions discussed for the new CET, most of which would provide further incentives for the leather sector. These incentives would come at the expense of the raw H&S sector as can be seen by comparing the current ERP for Leather products with those in columns 4 to 8.

Start with Columns 4 and 5 (scenarios 1 and 2) that contrast two scenarios suggesting that raw H&S and tannery should not be treated equally with a 10% tariff but that stronger incentives should be given to tannery.<sup>20</sup> Halving the tariff on raw H&S (scenario 1) penalizes further the H&S sector with a higher taxation and an estimated contraction of 7.6% while the benefits to the tannery sector through higher effective protection would lead to an expansion of 6%. The more direct incentive of doubling the tariff on imports (scenario 2) would lead to a large expansion of the sector (40%), but this tariff structure would penalize leather products, the last segment of the chain that the EAC wishes to incentivize. This problem, encountered during the failed inward-industrialization strategy in the 1960s and 1970s, can only be avoided by having few bands in the CET structure. The 0% tariff on accessories, an input for leather products (scenario 3), is a preferable option to incentivize the leather sector as it does not penalize the upstream industries.

The last two scenarios (4 and 5) deal with changing the current export tax rate of 35% on H&S. Increasing the tax to 100% would provide a boost to the leather sector (estimated expansion of 21%), but at the expense of a strong disincentive for the H&S sector (the estimate of output contraction is probably exaggerated because of the implicit assumption that domestic production and imports are perfect substitutes). However, the contraction of H&S sector would likely be sizable. Removing the export tax on raw H&S would penalize the leather products sector, but would be expected to increase foreign exchange earnings. Comparing all the scenarios, this scenario is closest to moving towards a strategy in which further incentives are given to the final leather industry, but not at the expense of the raw H&S sector. Indeed, it narrows significantly the disparity of ERPs along the chain. As mentioned above, this disparity is very high by international standards.

### **Further characteristics of Uganda's Leather Industry**

Even if excessive disparities in incentives along a value chain must weigh heavily in recommendation for a new CET structure, other criteria should also be taken into account.

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<sup>20</sup> See the proposition by the Kenyan manufacturer's association in "KAM Study on the Review of the East African Community Common External Rates (2016)", Kenya Association of Manufacturers, 2017.

**Table 3** gives such further information on the leather industry to consider. These highlight further the significance of imported products that are primarily used as inputs in the downstream leather industry (e.g. by footwear manufacturers) and for exports. Recommendations for the CET in column 3 are from Frazer (2017). The rationale for tariff recommendations presented for each product should be interpreted as a combination of factors including the:

- Percentage of total imports being imported by the manufacturing sector (>70%) and used by exporters (>70%);
- Percentage of total imports from within the EAC region (<5%);
- average employment size of manufacturing firms importing the commodity (>100);
- actual tariff paid by manufacturing firms as observed in the ASYCUDA customs data (>30% of the CET rate).

These products are primarily imported by large manufacturers from outside the region, and potentially influence export competitiveness. Moreover, manufacturers are unable to obtain duty remissions/tax exemptions for these imported inputs. For example, the uppers and parts of footwear (e.g. the vamp, the tongue or the lining which are typically made of leather, satin, suede or canvas— HS 64061000 in table 3) are primarily imported from outside the EAC by manufacturing firms with an average of over 100 employees. Over 70% of the imports of this product are also used by firms that produce for export.

### **Recommendations and Uganda's Leather Industry**

Two preliminary recommendations emerge from the estimates in table 2 and other considerations of the leather industry in table 3.

- The tariff on accessories which enter significantly in the production of leather products should be reduced from 25% to 10%
- The AVE of the current export tax on raw H&S (35%) should be abolished

In view of the impressive export growth and maturing capabilities of firms in this product group over the past 20 years (in spite of the adverse impact of the CET) - a further review of tariff lines along with a further disaggregation of critical input coefficients beyond the rough estimates in table 2, would help improve the preliminary diagnostic given here.

**Table 3: CET Recommendation for the Leather Industry**

<b>Colum</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>	<b>(8)</b>	<b>(9)</b>
<b>HS CODE</b>	<b>HS DESC</b>	<b>CET (%)</b>	<b>Recommended Tariff (%)</b>	<b>Tariff Paid by Manuf. Firms (%)</b>	<b>Imports (Million UGX)</b>	<b>Percentage of Imports from EAC</b>	<b>Avg. Employment for Importing Manuf.</b>	<b>Percentage of Imports that go to Exporters</b>	<b>Percentage of Imports that go to Manuf.</b>
83089000	Other Clasps, frames with clasps, buckles, buckle-clasps, hooks, eyes, eyelets and the like, of base metal, of a kind used for clothing or clothing accessories, footwear,...,leather goods,...;(incl. parts)	10	0	10	624.3	0.4	389	99.5	99.5
64061000	Uppers and parts of footwear thereof other than stiffeners	10	0	7.2	276.4	1.2	125	73.3	96.6
35040000	Peptones and their derivatives; other protein substances and their derivatives, not elsewhere specified or included; hide powder, whether or not chromed. <sup>21</sup>	10	0	10	96.1	0.0	1149	99.6	98.9
42034000	Other clothing accessories of leather or composition of leather <sup>22</sup>	25	10	25.0	3.6	0.0	272.0	77.4	77.3

Source: Frazer (2017)

Notes:

<sup>21</sup> Hide powder is used in the analysis of tannins and tanning materials (e.g. to measure the tan capacity of vegetable tanning materials and extracts)

<sup>22</sup> Clothing accessories under heading 42034000 applies, among other things, to aprons and other protective clothing, braces, and wrist straps, but excluding watch straps.

Notes: description of cols

Col. (3).

Col. (4). The effective tariff rate paid by manufacturing firms on imports from outside of the EAC derived this from the ASYCUDA database. Source: Frazer (2017).

Col. (5). Average annual total imports at HS-8 product line over the period 2013-2015 in current 2017 million UGX.

Col. (6). Percentage of total imports in a given product line sourced from Kenya, Rwanda, Tanzania or Burundi (EAC member states)

Col. (7). Average annual employment for these firms employing over 100 persons over the period 2013-2015. If firms have not been operating over the entire period 2013 through 2015, the average is calculated for the years during which the firm is operating.

Col. (8). Percentage of the total imports in this product line that are known to go to firms that do at least some exporting.

Col. (9). Percentage of imports that are imported into firms operating in the manufacturing sector in Uganda.

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