Unilateral Trade Preferences in the EU: An Empirical Assessment for the Case of Mozambican Exports

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Abstract

This paper aims to shed light on the impact of unilateral preferences on exports focusing on the case of Mozambique. We look specifically at whether unilateral preferences are valuable by i) are used to generate exports and ii) the degree of appropriation of the price margin theoretically induced by the preference margin. We concentrate on EU preferential schemes since this is the main destination market for Mozambique. Our database covers the period 2000-2005 and uses unit values at HS8-digits as proxies for *cif* prices. Our findings indicate that export growth seems weakly linked to preference considering that most products enter at MFN zero and the main exported products show lower than average use of preferences. Although utilization rates are generally high this does not translate into significant price margins captured by Mozambican exporters compared to MFN competitors. On the contrary, we cannot identify a higher price obtained by preferential exporters. Non-utilization is probably due to sporadic events linked to inefficiencies in the export process by public authorities. We also test econometrically the relationship between price margins and tariff differentials for the sample of products exported by Mozambique using a large sample of countries. After controlling for factors such as market power and quality differences, we find that MFN prices are often higher than preferential prices, and there is weak evidence of any transmission of tariff preferences to price margins for exporters. This suggests that the importance of preserving trade preferences in current negotiating *fora* (such as EPA) should not be considered the first priority for Mozambique.

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1. Introduction

Unilateral export preferences play a very important role in trade policy negotiations, especially in Less Developed Countries (LDCs). Despite most of the human capacity available in trade ministries, is devoted to negotiate reciprocal regional and preferential trade agreements (as opposed to multilateral or internal trade issues), a great deal of attention has been given to unilateral export preferences.[3]

Successive rounds of trade liberalization in developed countries under WTO agreements in recent years have reduced the margin of preference that unilateral preferences provided. This has increased the interest of LDCs to avoid the so called "erosion of preferences". As a result of this biased focus on preferential trade and the weight that unilateral preferences have in trade negotiations, one may want to ask the following question: are unilateral preferences valuable?

This paper aims to shed some light at this issue for the case of Mozambique. By "valuable" we understand two main elements: i) whether unilateral preferences are capable of creating exports that otherwise would have not been possible in the absence of a preference margin; and, ii) the degree of appropriation of the price margin theoretically induced by the preference margin.

Any analysis of unilateral export preferences in Mozambique implies a necessary focus on the EU market. Around 64% of the value of Mozambican exports in 2005 was directed to the EU market. This is equivalent to 74% of total exports excluding electricity and gas exports to SADC, and implies that 3 out of 4 non-energy products exported have the EU as the final destination market.

[3] Mozambique trade negotiations are mainly focused on the Trade Protocol of the Southern African Development Cooperation (SADC) and the Economic Partnership Agreements (EPA) with the European Union (EU).

The focus on the EU market has also the advantage of data availability, since all trade flows to the EU are recorded in the EUROSTAT database. Concretely, for the analysis, we use a rich EUROSTAT dataset during the period 2000-2005 that allows us to identify: the main source of exports, their unit values, whether these products enjoy a margin of preference and whether the preference is being utilized. We then analyze whether preference rents induced by tariff margins are created and who captures them. Finally, we compute the degree of pass-trough from the preference margin to the price margin that the exporter may enjoy.

Another important objective of this paper is to provide information that allows us to compute in a second stage the micro impact of preferences and exports on farmers via export prices. For this reason, we analyze the degree of price transmission from export unit values to producer farm prices. This information is then used to simulate the impact on households of different scenarios associated to different degrees of pass-trough and preference rent appropriation (Cirera, 2007).

The paper is organized as follows. The second section gives a brief introduction to the economic rationale of export preferences and their expected impact. The third section analyzes preference and price margins, and the degree of preference utilization by Mozambican exporters to the EU market. In the fourth section we employ econometric analysis and expand the sample to countries having same export base as Mozambique in order to analyze in more detail the degree of pass-through from tariffs to price margins. The last section concludes with the main policy implications of the paper.

2. Unilateral Export Preferences

2.1 Historical background

Unilateral export preferences are tariff concessions given by developed to developing countries that do not require reciprocity from beneficiary countries. There are several elements that justify the rationale of those preferences (see Hoekman and Ozden, 2005, for a comprehensive survey). The main element that explains unilateral export

preferences is based on the notion of Special and Differential Treatment (SDT) for developing countries (DCs) in the international trade domain. Under the SDT principle, countries recognise the specificities and difficulties of developing countries to achieve sustainable development and structural transformation. It draws upon the idea, widely influential in the 1950s and 1960s, that developing countries required protecting their markets in order to support infant industry and develop manufactures that could be exported. This would allow DCs to replace exports of primary commodities that exhibit declining terms of trade, the Prebisch-Singer hypothesis (Prebisch, 1950, Singer, 1950), by exports of manufactures. At the same time, it was widely accepted that domestic markets in DCs were often too small economically to be able to develop competitive domestic industries and, therefore, the need for expanding exports in order to increase market size and also as a source of foreign exchange.

Existing unilateral export preferences were rationalized under UNCTAD in 1968 with the introduction of the Generalized System of Preferences (GSP), and GATT articles were amended in order to allow for discrimination. For example, Article XVIII was amended in 1955 in order to allow DCs to use protection in case of balance of payment crisis or infant industry sectors.

Since the rationalization of the GSP system, several other schemes have proliferated. The EU, for instance, granted unilateral preferences to former Africa, Caribbean and Pacific colonies (ACP) since 1975 with the so-called Lomé Conventions rationalized in 2000 under the Cotonou Agreement. The US targeted specific groups of commodities and countries with acts such as the Caribbean basin Initiative (CBI). In addition, the last decade has also seen proliferation and expansion of the GSP system, with the GSP-plus and the Everything-but-Arms (EBA)[4] initiative granted by the EU, or the African Growth Opportunity Act (AGOA) granted by the US to African countries.

The coverage of such agreements differs substantially, from the nearly full coverage granted by EBA to roughly 6400 tariff lines in AGOA. Also, the countries eligible for

[4] Only valid for LDCs

preferences differ among agreements and create discrimination between DCs and LDCs. This has been the subject of some controversy. Commodity specific provisions of the Cotonou Agreement, for instance, have been repeatedly challenged in the WTO (ex. banana, sugar). As a result, EU and ACP countries already agreed in Cotonou to replace it by reciprocal free trade agreements in 2008 - the Economic Partnership Agreements (EPA). Differences among schemes also include different rules on trade defence measures and, particularly, differences in non-tariff barriers such as rules of origin – determining the eligibility of a good to be exported enjoying preference.

2.2 Economics of unilateral preferences

The analysis of unilateral export preferences is similar to the analysis of free trade agreements.[5] In a simple partial equilibrium framework, assuming perfect competition and product homogeneity across sources, we should expect that a small country receiving preference and unable to affect the international price, exports the product at the international price plus the tariff. Figure 1 illustrates this case with an example where the demand for imports in the EU is satisfied by a horizontal rest of the world export supply that pays the MFN duty, and partly with imports from Mozambique that receives preference, and therefore, does not pay duties. Clearly, if Mozambique would pay MFN duties, it would receive P^{cif} and export at point *a*. However, preferences allow Mozambique, to increase exports to *c*, and to be able to receive the full price P^{*}. In this setting, the price margin, the difference between the price that the exporter would pay under MFN regime and under the preferential scheme, should be proportional to the tariff margin, the difference between the MFN tariff and the preference tariff.

There are two main impacts of the unilateral preference. First, the price margin allows the preferential exporter to export more quantity. Second, it allows the exporter to capture a higher price than otherwise it would have captured. Note, that this is equivalent to the case of trade diversion, where unilateral preferences aim to divert trade and transfer revenue towards DCs.

[5] The General Equilibrium impact of unilateral export preferences is different from reciprocal liberalization on its impact on the terms of trade, tax revenue and allocation of the resources between protected, export sectors with preference and other sectors.

It is difficult to assess the impact that unilateral exports preferences have had in practice so far. This impact seems to be product and country specific. However, it is clear in aggregate terms that unilateral export preferences have not achieved very large increases in exports or substantial production transformation towards manufactures in DCs and LDCs.

Several factors may explain this lack of success of unilateral preferences. First, several authors have suggested that stringent rules of origin associated with these agreements may jeopardize any advantage given by tariff concessions (see Carrere and de Melo (2004) and Cadot et al. (2004)). This determines that in practice we observe preferential producers paying MFN tariffs when entering developed countries markets. Second, some authors suggest that with successive liberalization in OECD countries and the resultant preference erosion (see Hoekman, Martin and Primo Braga, 2006) the preference margin has been substantially reduced to the point that in some products it does not give any competitive advantage. Finally, it is not clear whether the price margin suggested above accrues to the exporters. Some authors suggest that in practice and due to imperfect competition on the importer side, a large share of the price wedge created by preferences is appropriated by importers and not by exporters (Olarreaga and Ozden (2005) and Ozden and Sharma (2004)).

The following section assesses the impact of trade preference schemes granted by the EU to LDCs and developing countries taking Mozambique as country case.

3. Mozambique Exports, Preference Margin and Preference Utilization

3.1 Overview of Mozambique exports to the EU

The EU is currently the main destination for Mozambique exports with more than 60% of total value exported. In 2005, Mozambique exported €1.016 billions to the EU

(Eurostat).[6] The value of products exported in the EU grew by a factor of ten over the last 6 years, recording an average rate of growth per year of 47.2% (Table 1).

A big contribution to export growth came in the year 2000 with the opening of a large aluminium smelter (MOZAL), exporting its production to Belgium and Italy[7]. Despite this rapid growth, exports remain concentrated in very few products – a negative feature shared by many developing countries. Table 2 reports main export chapters (HS2) between 2000 and 2005. In this period a mere fourteen products amounted to 99% of the total value exported to the EU. Unwrought aluminium alone represented 76% of total exports followed by fish and crustaceans and tobacco products with, respectively, 12% and 2.6%. If we exclude occasional exports[8] from the analysis, we can identify 56 products at HS 8-digits as main exports over the period 2000-2005 (see Table 3).

At first glance, what emerges from the data is the low level of processing of Mozambican exports, mainly clustered around primary agriculture products, low-processed fishery products and mineral resources. The few products that may suggest some level of processing like cotton, wood and tobacco are exported at a very low stage of processing. Cotton is only ginned in Mozambique and sent to Europe for further processing while tobacco and wood products are mainly not manufactured. The industrial products recorded under HS Chapter 84 do not match any industry recorded by both the surveys of the *Instituto Nacional de Estatistica* (INE) and the Ministry of Industry and Commerce (MIC). It is very likely therefore that such exports are actually re-exports of products made elsewhere.

In terms of Rules of origin, agriculture and fisheries products have to be "Wholly obtained" (W). For sugar there is a 30% of maximum "Value of foreign content"

[6] Data from the Instituto Nacional de Estatistica (INE) for the same period indicate a total of 1.121 billions USD (@ fob prices). Since Eurostat data refer to cif prices, and considering an average exchange rate USD/EUR of 0.8, there is an evident discrepancy between the two data. By applying a cif/fob factor of 1.2 and the exchange rate above we should get, according to EUROSTAT, an export @ fob prices equal to 881 millions USD.

[7] Mozal is actually selling to a company belonging to the same multinational group (BHP Billiton) so this export can be classified as intra-industry trade.

[8] We consider exports as "significant" (non occasional) if the amount exported from 2000 to 2005 is higher than 600,000 EUR or if in the last year (2005) the total exported is higher than 100,000 EUR. In this way we hope to capture both products being consistently exported by Mozambique in the past as well as emerging exports.

allowed (VC). In the case of fisheries, as previously mentioned, the rule per-se does not seem to be a constraint impeding the export *tout court* but may have an impact on the price margin captured by the exporter. Textile and clothing products face rather restrictive Technological process rules (TEC). In the case of clothing, the rule requires a two-stage transformation process to take place locally (or within countries covered by Cotonou's cumulation rules) in order for the product to qualify. This is an important constraint not only for Mozambique but also for other ACP countries, since the poor textile manufacturing capacity in the ACP region often implies that producers have to import textile from abroad thus becoming non-compliant. A single-transformation rule as provided by AGOA would be much more beneficial to clothing industries in ACP countries. Wood products and mineral resources face a quite relaxed rule of Change of tariff heading (CTH) at HS 4-digits while important exports such as ferro-chromium, aluminium and nickel are even offered alternative rules (CTH or VC). Last column of Table 3 reports the relevant rule for each product analysed. In general, if we exclude textiles and clothing, we can state that rules of origin for the products currently exported by Mozambique do not seem to represent a major constraint.

By looking at a simple concentration index such as the *Herfindahl index*[9] we can see that the pattern of Mozambican exports to the EU is more and more concentrated in few products. This is obviously due to the large importance assumed by MOZAL from year 2000. However, if we net out aluminium products from total exports, we may notice that some little diversification took place in our period of reference (See Figure 2), although exports still remain highly concentrated in primary products.

3.2 Preferential access to the EU market

Mozambique currently enjoys preferential market access to the EU through different schemes: *the Cotonou Agreement*, the *EBA initiative* and the *GSP*. Coverage, tariff margins and compliance procedures[10] vary between the schemes. The erosion of tariff preferences due to the ongoing multilateral liberalisation process at WTO level is a

[9] We compute here a normalised Herfindahl index aggregating products at HS2. The index varies from zero to one, with a value close to zero indicating high diversification and vice versa.
[10] Ex. Rules of origin, safeguards clause, eligibility criteria, etc.

given fact. In 2005, the EU applied duty free access to MFN exporters in around 2,000 product lines of the existing 11,000 in the product structure. Trade weighted average of MFN tariff across the board amounts to 3.4%, but being very different for agricultural products (12.3%) and non-agricultural products (3.9%)[11].

The Cotonou Agreement - The first trade preferences between the EU and ACP countries[12] (including Mozambique) date back to 1975 with the signing of the first Lomé Convention. Such non reciprocal preferences included special commodity protocols granting tariff-rate quotas to specific products (sugar, rhum, meat and veal, banana) being extended every five years. In the year 2000, a new Agreement - the Cotonou Agreement – encompassing economic and trade cooperation as well as political cooperation and development finance was signed. Within the Cotonou framework, ACP countries benefit from non reciprocal preferences until 2008 when new WTO compatible (read "reciprocal") Agreements[13] will replace them. In terms of tariff preference, Cotonou exceeds the GSP for many products. Manufactured and processed products from ACP countries are generally exempted from customs duties. The picture changes for agricultural products, especially for those that directly compete with EU producers (ex. temperate products). These products benefit from less generous preferences, tariff rate quotas, seasonal duties in order to protect EU producers at the time of harvesting, or are simply excluded from the Agreement.

In terms of coverage, in 2000 ACP countries paid duties on 856 tariff lines. Among these, 116 tariff lines have been excluded from Cotonou, 301 were granted tariff-rate quotas at all-ACP level and only the remaining 439 benefited of tariff preference without quantitative restrictions (Hoekman and Ozden (2005)). The benefits of the Commodity protocols are being reduced by the new Common Agricultural Policies (CAPs) but also because of serious challenges within the WTO (ex. banana – EU vs Central American countries; sugar – EU vs Brazil). The general perception is that Lomé and Cotonou alone have been rather unsuccessful in increasing export from ACP countries as well as encouraging diversification: from 1975 to 2000, the share of ACP exports in European markets has fallen by half, from nearly 8% to about 3%.

[11] WTO World Tariff Profiles (2006)

[12] Africa, Caribbean and Pacific

[13] The so-called Economic Partnership Agreements (EPA) currently under negotiations. It has to be noticed that the EPAs will replace only the trade regime between the EU and ACP countries as envisaged in the relevant chapter of the Cotonou Agreement while the remaining parts of the Agreement will continue to be valid and last for twenty years (2020)

To benefit from these preferences, ACP countries must conform to rules of origin, which set out the degree of processing required within ACP countries. These rules of origin are generally seen as less generous than the ones granted by the GSP in terms of general principles[14], although product specific rules are basically identical. The RoO regime for ACP countries is less restrictive than GSP qualifiers since they benefit from full cumulation rather than diagonal cumulation and they have a more favourable tolerance rule (15% tolerance for all tariff lines instead of 10% plus an exclusion of access to the tolerance rule for chapters 50 to 63 which cover textiles and apparel (T&A) for the group of GSP eligible countries). Another significant difference is on fisheries products where more favourable tariff preferences granted by Cotonou are matched with more restrictive rules of origin on vessels. This determined that some LDCs (including Mozambique), unable to catch deep sea fish (ex. tuna) due to lack of adequate fleet, have been forced[15] to revert to bilateral agreements with the EU. In these agreements, EU vessels are granted fishing quotas in exchange of fees paid to national authorities. Such fish can then benefit of the preference and enter duty free in the EU market. Actually, in the case of Mozambique, this fish does not even appear in official EU statistics being classified as of EU origin. Obviously, unless the fee paid is equivalent to the preference margin, EU private companies are capturing part – or even all - the price margin granted by Cotonou.

The EBA initiative - The EBA initiative entered into force in March 2001 as special arrangement for LDCs in the framework of the ongoing GSP scheme. It is not an Agreement but a unilateral initiative taken by the EU – a feature that the European Commission is often reminding to ACP countries presently involved in the EPA negotiations. It basically grants duty and quota free access to all LDCs with the temporary exclusion of sugar and rice (until 2009) and the permanent exclusion of arms and ammunitions. An initially excluded product – banana - has been liberalized in 2006. The exclusion of these products has been widely criticized in the past since the bulk of exports for a significant number of LDCs is concentrated in these products. Brenton (2003) shows that for the majority of LDCs, due to their narrow

[14] Tolerance rule, Cumulation, etc.
[15] The EU has first right in negotiating an agreement and only if it refuses the ACP country can negotiate with a different country and export

export base, the EBA does not bring a significant change since most of their export products have been already liberalized at MFN level or benefits of duty free access thanks to Cotonou. We have also to notice that sugar liberalisation for 2009 will only be partial, with LDCs acceding through increasing quotas at a pre-established price. Entry under each of the two regimes implies different paper work, different rules of origin and often different tariff preferences. For example, the certificate of origin needed for exporting under the EBA (EUR 1) is different from Cotonou's (EUR A) [16]. Such difference may well imply different costs of compliance for an exporter in order to qualify under one regime or another. Although we may recognize the positive contribution given by the EBA in terms of almost universal coverage (something that pushed WTO developed countries to take a similar commitment in the last Hong Kong Ministerial Conference), it is widely accepted that a modification of EBA rules of origin especially on products such as textile and clothing would prove greatly beneficial in expanding exports from LDCs.

The following sub-sections describe and assess existing preference margins for each regime, prices obtained by Mozambican exporters and the extent of preference utilization.

3.3 Preference Margins for Mozambican Exports

The main source of data related to imports in the EU is the EUROSTAT COMEXT database. It includes information on volume, quantities, country of origin and whether exports were eligible and used preferences. As the product price, we use the unit value obtained by dividing the value of exports with the correspondent number of tonnes or items. Working with unit values entails more uncertainty about the quality of the product and higher price volatility, as compared to working with actual prices. This implies the need for cleaning the data from outliers. The methodology used for obtaining unit values and cleaning outliers, Hadi (1992), and other data issues, is explained in detail in the appendix. All unit values are expressed as € *cif* values per ton.

[16] In Mozambique, certificates of origin needed for export under the Cotonou umbrella are issued by National Customs (EUR A), while certificates of origin for the EBA and the GSP (EUR 1) are issued by the Ministry of Industry and Trade (MIC).

Any Mozambican export is actually eligible for duty free access thanks to the EBA initiative.[17] This means two things: (a) the margin of preference potentially available for Mozambique is basically the MFN tariff and (b) any access through MFN would automatically signal non-use of preferences (see next section for an assessment of utilization rates in Mozambique). In terms of MFN tariffs, more than 41% of the tariff lines being exported by Mozambique already enjoy duty free access.[18] For these products, mainly cotton, tea, paprika, copra and wood products, any preferential access is therefore irrelevant. If we look at the value of exports entering through MFN zero over the total exported this share drops to a mere 4.5%. However, this is simply due to the weight of aluminium representing almost 80% of total export and facing a MFN tariff greater than zero.

Leaving aside the potential margin of preference we now focus on what exports concretely face when entering the EU market. Thus, we define the preference margin as the difference between the MFN tariff and the tariff actually applied on good *i* exported by Mozambique at time *t*:

$$Margin\_pref_{i,j,t} = MFN_{i,j,t} - Tariff_{i,j,t} \qquad (1)$$

If the MFN tariff is equal to the tariff applied or it is zero, then it means that there is no use of preference and *Margin_pref* will take the value zero. If the MFN tariff is greater than the applied tariff, then there is potential use of preference and *Margin_pref* will be positive. Since some Mozambican exports enter through Cotonou, even when preferences are used, for a few cases we expect some tariff margins lower than MFN, due to the fact that some products pays duties under Cotonou. In figure 3 we show the distribution of *(1)* in our period of reference. As we can see, a significant share of exports actually do not benefit of any margin of preference. This is due in a large share of observations (85%) to the fact that MFN is already zero and in the remaining cases to non use of preference (15%).

[17] Except sugar. Banana and rice are not being exported.
[18] See Appendix - Table 4

On average, the tariff margin benefited by Mozambican goods is between 5% and 7% and has remained stable across the period of study. MFN and preferential tariffs have not been substantially modified in the period of reference although they have been reduced following sequenced liberalisations at MFN and preferential level.[19] Part of the variation shown from one year to the other is also due to few tariff lines facing seasonal or specific duties (ex. tobacco products HS-24, cut roses HS-06, fresh navels HS-08) at either MFN or preferential level. Results do not change significantly if we take the weighted average instead of the simple mean. Excluding the tariff lines already liberalised at MFN level shows an average margin of preference clearly a bit higher - between 9% and 12%. Table 5 and 6 summarise results at aggregate and product level.

The product showing the highest preference margin is sugar (close to 80%), thanks to the provisions of the sugar protocol (Cotonou) and of the EBA initiative, which allow the entrance of a sugar quota from Mozambique duty free and at a very favourable price. Non manufactured tobacco products (HS 24) also benefit of significant preferences – all above 6% and with a peak of 64% for tobacco refuse. Fish products (HS 03) all report an average margin of preference higher than 7% throughout the whole period with crustaceans (prawns and lobsters) recording margins of preference above 10%. Agricultural products such as cut roses (HS 06031010) benefit of a significant margin (10%) while grapefruit and cashew nuts respectively 2% and 7% on average. Textile and clothing (HS 50-63), show preference margins between 4% and 12%, but also face strict rules of origin (the so-called double transformation rule). Aluminium products have a preferential margin between 3.4% (unwrought aluminium) and 7.5%. Among products that do not benefit of any preference since they have been liberalised already multilaterally (MFN zero) we find traditional exports like cotton and tea as well as recent additions such as wood products (HS 44).

3.4 Price Margins for Mozambican Exports

In the presence of such positive tariff margins, perfect competition in the destination market among importers and similar quality in the product being exported by MFN

[19] For example GSP rates changed in 2001, some FTAs (Chile, Mexico, EUROMED, etc) came gradually into force in our period of reference.

and Mozambican exporters (*homogenous products*), we should expect: i) Mozambican exporters to get a higher price compared to MFN exporters of the same good in the same period; and, ii) the difference in prices being equal to the preference margin.

In order to analyze these price margins for Mozambican exports, we first need to select the relevant reference MFN price. The main concern when choosing the reference price is that it needs to reflect products that are very similar in terms of quality. If quality differences for the same product exported from different sources are large, price differential may be the result of these quality differentials and not related to tariff differentials. [20]

We try to correct this bias by constructing different MFN reference prices and so test for consistency of results. We first define $P_{cif}MFN_1$, $P_{cif}MFN_2$ and $P_{cif}MFN_3$ as:

- $P_{cif}MFN_1$ - the minimum *cif* unit value paid to a MFN exporter in the same month, which should be an approximation of the most efficient MFN exporter;
- $P_{cif}MFN_2$ - the average *cif* unit value paid to MFN exporters in the same month;
- $P_{cif}MFN_3$ - the *cif* unit value paid to the largest MFN exporter in the same month,

where the largest MFN exporter is the one with highest value of exports across the period. This should reduce the quality bias since we compare unit values of Mozambican exporters always with the same MFN competitor.

We then construct price ratios as unit values recorded under preference over reference MFN unit values. According to our assumptions, we expect it to be higher than one when there is a preferential margin and exporters are capturing it. If it is lower than one then it means that there is no price margin captured by Mozambique

[20] This phenomenon is well illustrated by Schott (2004). He analyses US imports over 25 years and shows that import unit values vary widely within product categories (HS 8-digits) finding evidence of a positive relationship between exporter capital endowment and unit values. That is, capital and skill abundant exporters use their endowment advantage to produce higher quality products and therefore get higher prices. If we assume that MFN exporters are generally middle-high income countries and Mozambique is a LDC, we may expect a severe quality bias in our price ratios, being biased downwards. This feature seems to be confirmed by looking at the average GNI per capita in our sample. Countries exporting through MFN regime show an income per capita two to three times higher than those exporting through preferences.

$$M\arg in\_price_k = \frac{P_{cif}Mozambique_{i,t}}{P_{cif}MFN_k} \qquad (2)$$

where $P_{cif}Mozambique_{i,t}$ is the *cif* unit value paid to the export of good *i* in month *t.* and $P_{cif}MFN_1$, $P_{cif}MFN_2$ and $P_{cif}MFN_3$ are the reference prices described above.

Comparing $P_{cif}Mozambique_{i,t}$ with the min MFN price $P_{cif}MFN_1$ we obtain ratios mostly higher than one and extremely large that are difficult to explain by any preference margin. Although some of these excessively high ratios may be due to outliers still present in our sample easily caught by the minimum price, it seems quite likely that minimum-price-MFN- exporters are not simply the most efficient but those exporting the lowest quality of good *i* among all exporters. If so, the quality bias is very high and it becomes pointless to compare the two prices since we are referring to products with very different characteristics. For these reasons we decide to drop $P_{cif}MFN_1$ from our analysis. Figure 4 and 5 show the distribution of $Margin\_price_2$ and $Margin\_price_3$ when Mozambican exporters are using preferences and MFN is greater than zero.

For a large number of observations the price paid to Mozambican exporters is actually lower than the MFN reference prices used. Using $P_{cif}MFN_2$ we have a positive price margin only for 39% of the observations while with $P_{cif}MFN_3$ this figure raises up to 52%. We then look whether at least some products show ratios only above one or in higher percentages. In the first case, we find that crayfish (HS 03061110), a couple of tobacco products (HS 24011041 and 24012020), t-shirts (HS 61091000) and leather uppers (HS 64061011) only report price ratios above one, consistent with a positive tariff margin. However, by using the alternative reference price we do not find consistency for these results since according swordfish (HS 03037987) and raw sugar (HS 17011110) display price ratios above one and only for a limited number of observations. For sugar, the low number of observations is due to the fact that only a handful of exports took place under preferences (quota filling), but they all show price ratios above one. Few products show substantially more observations above one than

below one [21] but there is no consistency using alternative reference prices. Unwrought aluminium for instance alternates price ratios above and below one.[22] In general, it is fair to say that most products show ratios below or above one in similar percentages. *Prima facie*, it seems that Mozambican exporters are not capturing a higher price than MFN competitors even in presence of tariff preference margins.

We need to be sure that results are consistent and not biased by the quality difference between Mozambican products and reference MFN. To try to overcome this problem we construct new reference prices $P_{cif}MFN_{4,5}$ based on "same country MFN exports". In our sample we find evidence of Mozambique exporting the same good through MFN and through preferential tariff along the year or even in the same month (non utilization of preferences). We try to offer some possible explanations for this in section 3.4. By comparing the price paid to the export of good *i* in month *t* entering through preferential tariff with the average price of the same good *i* entering MFN in the same period *t* or with its yearly average we may eliminate the quality issue if the quality of good *i* exported by Mozambique does not change significantly over time. We then construct $P_{cif}MFN_{4,5}$ accordingly, where $P_{cif}MFN_4$ is the average price of good *i* entering MFN in the same month *t,* while $P_{cif}MFN_5$ is the average price of good *i* entering MFN in the same year.

The dispersion of these new price ratios is much smaller than the previous ones. This may suggest that we managed to reduce the quality bias. However, and very importantly, we still find a large share of observations for which *Margin_price* is below one – 43% when using $Margin\_price_4$ and 49% when using $Margin\_price_5$. Again we look at the distribution of $Margin\_price_{4\ and\ 5}$ product by product. In the first case the number of observations is too limited to draw any conclusion. In the second

[21] HS 06031010 (cut roses) HS 08054000 (grapefruit) HS 24013000 (tobacco refuse) according to $Margin\_price_2$ and HS 03061350 (frozen shrimps) HS 08051030 (fresh navels) with $Margin\_price_3$

[22] Being aluminium export an intra-industry trade we expect prices to be influenced by tax differentials. If the exporting country offers a more liberal fiscal regime, multinational companies have the incentive to overprice the good exported in order to transfer income and reduce the tax burden. Vice versa, if the company prefers to transfer income in the destination market because of lower taxation rates or because it wants to repatriate profits, then exports will be down priced. MOZAL currently enjoys large tax exemptions in Mozambique and it is guaranteed free repatriation of profits as foreseen in the Mozambican investment law. However, as reported, we do not find evidence of any consistent down-pricing or over-pricing by MOZAL

one we find that two products having price ratios only above one, frozen shrimps (HS 03061350) and sisal fibres (HS 56072100), while other two, saltwater fish (HS 03026999) and air-cured tobacco (HS 24012050), display a large majority of observations above one. Again, we find that most products show price ratios above and below one in similar percentages. It seems that even when the same country exports a good *i* through MFN and preferential tariff, the latter often is not enough to guarantee a price margin for the exporter. This may be explained by the reasons behind non-use of preferences (see next section for a more detailed explanation). We observe that preferences are not used in sporadic cases, suggesting the existence of some event that hinders the preferential exports and force exporters to choose to go through MFN. As we know, preferential exports need additional documentation (ex. certificate of origin) compared to MFN. In case on a particular month this documentation implies an excessive delay, the exporter may choose to export MFN in order not to loose the business. In presence of rigid contract prices, the unit values obtained may be then insensitive to these episodes even when the exporter is forced to pay MFN duties.

Finally, we try to assess whether there is some degree of correlation between the tariff differential and the price ratios. We would expect to see a positive correlation between these two variables though the lack of evidence in favour of price margins casts some doubts on such a relationship. In Figures 8, 9, 10 and 11 we plot the price ratios described above against the margin of preference. As expected, there is no clear evidence of the correlation we expected to see in any of the price ratios used. Price margins vary significantly around the same level of tariff differential and do not increase positively with this latter in a substantial way.

Summarising, we find weak or non-existing evidence of higher prices for Mozambican exporters using preferences compared to MFN exporters across products. At product level we do find a limited number of products displaying some price margins but these results are not consistent when using different reference prices – except for raw sugar. Also, we do not find evidence of a positive correlation between price margins and preference margins for the products exported by Mozambique. In other words, we do not find for the case of Mozambican exports the existence of a price margin associated to tariff preferences.

Despite our sensitivity analysis, these results however are potentially biased by the inability to clean up quality differentials and the low number of existing observations for Mozambique. For this reason, section 4, analyzes in more detail, using observations also for other countries, the relationship between price margins and preference margins.

3.5 Preference Utilization

Another important issue to analyze in the context of preferences is related to the degree of preference utilization. A widespread critique made to preferential schemes applied by developed countries is that often, the products covered are the ones scarcely exported by the beneficiaries[23], thus strongly limiting the use of preferences granted. In the case of Mozambique, this critique can be considered valid for Cotonou where many agricultural products are only partially liberalised but much less true for the EBA. Temporary restrictions on rice and banana do not affect Mozambique so far since the country is not exporting any of these products. Quotas on sugar may be seen as a shortcoming. However, Mozambique EBA quotas have been increasing in the years and at a very favourable price. As a confirmation, Brenton (2003) includes Mozambique within the countries with higher expected gains from EBA. In the case of Mozambique, the joint coverage of EU preferential schemes - defined as value of exports eligible for preference over dutiable imports - is basically 100% if we exclude sugar which has limited duty-free access.

We define *utilization of preference* as the ratio between the value of exports receiving preference and the value of eligible exports – net of products having already a MFN tariff equal to zero. Table 8 shows utilization rates by product across the five years of our reference period. For a large share of tariff lines preference utilization is not relevant, since MFN is already at zero. On the remaining products, Mozambique displays quite a high utilization rate, being the average across products and years equal to 91%. In comparison with other similar studies our utilization rates appear to be quite high. Manchin (2005) finds an average utilization rate of Cotonou for non

[23] See Brenton (2003) on EBA or Manchin (2005) on Cotonou and EU GSP

LDCs in the range of 50% in 2000 and a much lower for GSP (6%). In the same year Mold (2005) finds an average utilization rate for GSP of 41% for African LDCs. However, both examine only one scheme and do not take into account competing schemes as we actually do. In a broader evaluation of the effectiveness of different EU preferential schemes available, the OECD (2004) find that utilization rates are much higher than commonly thought when competing schemes are taken into account. This is confirmed by our findings, at least for the case of Mozambique.

Interestingly, aluminium products report utilization rates below the average, especially the major export aluminium unwrought (HS 76011000) which also shows a large variability in utilization rates across the years. Fisheries products reports more than 94% of utilization, cashew nuts (HS 08051030) 95%. Grapefruit (HS 08054000) shows a variable utilization and a relatively low average (75%). Brown sugar is exported to the EU only through preferential quotas while some exports of cane molasses (HS 17031000) entered paying MFN tariff (lowest utilization rate at 53%). Tobacco products enter through preferential tariffs in almost all cases except for Stemmed air-cured tobacco (HS 24012050) and Kentucky type tobacco (HS 24011041). Textile and clothing, show high variations in the utilization of preferences with three products over seven below the overall average utilization rate – twine of sisal fibres (HS 56072100), cordage of sisal (HS 56072910) and t-shirts (HS 61091000). We find complete non-use of utilization only for three products and in specific years: fresh navels (HS 8051030) in 2005, cane molasses (HS 17031000) in 2002 and twine of sisal fibres (HS 56072100) in 2005.

We can think of two main potential explanations for lack of preference utilization. The first explanation is related to the costs of compliance attached to preferential schemes. In order to benefit of the preference granted any good exported to the EU must comply with its specific rule of origin as stated in the relevant annexes of the Cotonou Agreement and the GSP (for EBA). Compliance means that exporters have to face additional costs. For example, Cadot et al. (2006) describe two possible ways through which rules of origin, as the main component of cost of compliance, may impact on the exporters cost structure. On one side, more restrictive rules may oblige firms to purchase inputs from less efficient sources, thus increasing its production cost by a fraction X. We can call this fraction *efficiency cost.* On the other side, firms will

need to put in place a system in order to manage the documentation needed to prove compliance as well as pay for certificates emitted by public authorities. In fact, in both GSP (EBA) and Cotonou it is a designated public authority in the exporting country the only one allowed validating the certificate. We may call this second cost *administrative cost*. If the total cost of compliance is higher than the preference margin, then it makes sense for the firm not to export through preference but face a MFN tariff. Carrere and de Melo (2004) estimate (non parametrically) a cost of compliance for PANEURO rules of origin between 4.7% and 8.2% of the cif export price. Manchin (2005) obtain a similar estimate (4.5%) for tariff preference below which traders do not have the incentive to request preference.

The second explanation is still related to the rules and documentation required by preferential schemes. Consider an exporter that for some reason has to proceed to export its good in the shortest time possible. This may be due to a sudden request by the importer or to the deterioration of the quality of the product being exported (ex. perishable products). The reason that triggers this urgency may well be unexpected so that we can even model it as a random event. In these cases, any delay in the export process endangers the positive conclusion of the transaction. For example, the signatures required for the certificates of origin may be quite difficult to obtain in Mozambique as well as in other developing countries. One common complaint offered by private sector is that the person in charged is sometimes absent or far from the production site. In both cases the exporter would have to waste precious time in order to get the signature or wait a few days until the person is back to work. This entails an additional cost on top of other possible delays that a firm would face in any export process – whether through MFN or not. If the exporter believes that further delay would compromise its export, then it may decide to give up preferences in order not to lose the whole shipment.

Under the first argument, preferences are only used if the expected gain induced by the margin of preference – a higher price compared to MFN exporters - exceeds the costs of compliance. As we have seen in the previous section, the link between price margins and preference margins appears to be quite weak in the case of Mozambique. Thus, we do not expect to see any positive correlation between price margins and utilization rates. Nevertheless, the existence of tariff preferences may signal to the

exporter the possibility of additional profits and thus encouraging him or her to use the preference. If so, this would translate into a positive correlation between the tariff margin potentially available to a Mozambican exporter (the MFN tariff) and the utilization rates when the preference margin is above a certain threshold (the cost of compliance). Under the second argument, we should observe unexpected jumps in preference utilization uncorrelated with price or tariff margins.

In Figure 12 we plot the utilization rates against the (yearly average) of the MFN tariff. Despite the expected relationship seems relatively weak, there is a certain tendency for the utilization rate to be closer to one when the MFN tariff increases.

At the same time, though, there is no indication of a substantial drop in utilization rates when the MFN tariff is below a certain threshold. Even at product level, the products showing the lowest utilization rates (below 80%)[24] do not display neither the lowest MFN tariffs nor similar ones – these latter ranging from 2.4% to 12% (Table 9).

The existing narrow export base in Mozambique indicates that there is a very low number of firms exporting. This implies that most likely each product is exported by one or few more firms. At the same time, preference margins have been quite stable on time, as suggested above. Thus, if the cost of compliance would impact significantly on the choice of using preference, we would expect very low utilization rates or not utilization at all for certain products where MFN tariffs are sufficiently low. In these cases, in fact, the exporter would not choose to export the product preferentially since the compliance costs would equal the tariff preference potentially available. In contrast, in our data, we observe rather high utilization rates across products and few isolated drops of utilization rates. This seems to indicate that the second explanation, unforeseen administrative problems, may be a much better explanation for the discontinuous utilization rates in Mozambique.

[24] Aluminium unwrought and secondary aluminium (HS 76011000 and 76012091), grapefruit and fresh navels (HS 08054000 and 08051030), t-shirts and twine of sisal (HS 61091000 and 56072100) and sugar molasses (HS 17031000)

So far, we have performed an analysis based on simple correlations and the use of all the observations available for Mozambique. However, it is possible that the simple correlation analysis has not been able to isolate the quality differential between goods exported by Mozambique and those of its MFN competitors – thus biasing our analysis of price margins. In addition, we cannot exclude that other factors other than tariff differentials may impact on price margins. For these reasons, in the next section we proceed to test the relationship between prices and tariff preferences for a broader sample of countries exporting the same products as Mozambique using econometric analysis.

4 Econometric estimations using a broader sample

4.1 Analytical framework

As explained in section 1, under perfect competition and homogenous goods across sources, we should expect that preferences create a price margin and that exporters that enjoy preferential treatment will capture this price margin (Figure 1). However, as we saw in the previous section, there is no significant evidence of price rents captured by Mozambican exporters. When we compare unit values from exports entering under preference with exports of the same product entering under MFN, we find that the ratios do not tend to represent tariff differentials, and that for a large number of observations ratio of unit values are lower than one - which means that MFN exporters are able to get a higher price despite the preference.

Three main problems arise when comparing unit values and tariff differentials. First, as we said earlier, when we compare products at HS8-digits, we may be comparing very different varieties of the same product. Second, there may be significant costs of compliance with preferential procedures in certain products that may reduce the incentive of preferential margins when exporting under a preferential scheme. Third, exporters and importers may have different degrees of market power when negotiating price contracts, due to size or asymmetric information, which may impact on price rent appropriation. As a result, any robust analysis linking preference and price

margins needs to control for quality differences between varieties, market power and costs of compliance.

Several studies attempted to correct for these problems when analyzing the relationship between preference and price margins.[25] Olarreaga and Özden (2005), for example, analyze US imports of apparel from a sample of seven countries acceding through AGOA between 2001 and 2002. They find evidence that importers market power substantially impact the price margin captured by exporters and confirm that price margins tend to be partially appropriated by importers. The implication of this is that the real value of preferences is lower than theoretically expected. In order to control for quality differences, the authors compare only observations of the same country product entering under preferential scheme with exports entering under MFN. In our view, two caveats arise when using this methodology. First, it may still be possible for products from the same country entering under MFN and under preferential scheme to be different. Unfortunately, without more disaggregated data at the firm level, it is difficult to control for these differences. Second and more relevant, there is a risk of sample selection bias. The sample is based on preference non-utilization, and therefore it only uses products and countries eligible for preference that at some point enter via MFN. As we saw in section 3.4 this non-utilization may be due to unforeseen events forcing the exporter to go through MFN against his or her will. In these cases, it is difficult to believe that exporters may pass the duties paid to the importer, especially in the presence of some rigid contracts. Thus, if non-preference is dominated by these random events, we should expect low fluctuation of unit values and a very low elasticity of response of price margins to tariff differentials. However, this would be the result of a sample selection problem, rather than showing the true elasticity coefficient.

In order to correct to these problems, we use a methodology based on sensitivity analysis, using different reference prices as we have done in the Mozambican case and we attempt to correct for quality differences using country and product dummies. Finally, we also estimate a model in first differences.

[25] Özden and Sharma (2004) analyze price effects of preferential access in the context of the Caribbean basin Initiative in apparel products. Manchin (2005) estimates the impact of cost of compliance on request of preferences for non LDCs exporters in Cotonou. Anson et al. (2007) estimate the costs of compliance associated to rules of origin in NAFTA.

We assume the internal price in the EU market for good *i* coming from country *j* at time *t* to be equal to P^*. When the good enters via MFN this equals the *cif* unit value times the MFN tariff τ and a margin that represents the market power of the exporter relative to the importer *m* (equation 1). On the other hand, when the same good enters through a preferential scheme this is equal to the *cif* unit value times the preferential tariff τ^{pref} and the compliance cost[26] associated to the scheme *c* (equation 2). We assume that both internal prices are similar, and they only need to be adjusted for quality differences by a coefficient δ, which is constant on time and product specific, and measures the average difference qualities within each HS-8 category (equation 3). Rearranging equations (1), (2) and (3), we obtain equation (4), and taking logs and adding an error term, we obtain equation (5). Equation (5) implies that the ratio of *cif* prices entering under a preferential scheme and under MFN, should be explained by the tariff margin, the relative market power between exporters relative to importers, the inverse of the cost of compliance and the product specific quality adjustment.

$$P_{ijt}^{*MFN} = P_{ijt}^{cif}(1+\tau_{ijt})(1+m_{ijt}) \tag{1}$$

$$P_{ikt}^{*\Pr ef} = P_{ikt}^{cif}(1+\tau_{ikt}^{pref})(1+m_{ikt})(1+c_{ikt}) \tag{2}$$

$$P_{ijt}^{*MFN}\delta_i = P_{ikt}^{*\Pr ef} \tag{3}$$

$$P_{ikt}^{*\Pr ef} / P_{ijt}^{*MFN} = \frac{P_{ikt}^{cif}}{P_{ijt}^{cif}} = \frac{(1+\tau_{ijt})(1+m_{ijt})}{(1+\tau_{ikt}^{pref})(1+m_{ikt})(1+c_{ikt})}\delta_i \tag{4}$$

$$\ln\left(\frac{P_{ikt}^{cif}}{P_{ijt}^{cif}}\right) = \alpha + \beta\ln\left(\frac{1+\tau_{ijt}}{1+\tau_{ikt}^{pref}}\right) + \delta\ln\left(\frac{1+m_{ijt}}{1+m_{ikt}}\right) + \gamma\ln\left(\frac{1}{1+c_{ikt}}\right) + \phi\ln(\delta_i) + \varepsilon_{ikt} \tag{5}$$

[26] Exports under both preferential schemes and MFN face costs due to compliance with quality standards, sanitary and phitosanitary standards, etc. We assume these costs to be the same for both types of exports, preferential vs MFN, and included in the *cif* unit value. Here, costs of compliance refer exclusively to costs required to be able to use preferential schemes, mainly compliance with rules of origin and required documentation.

We would expect to find a positive sign for β, since an increase in the tariff differential would imply a higher price for the exporter using preferences; a negative sign for δ, since a higher market power of MFN exporters compared to the country exporting preferentially would imply less bargaining power and a smaller price margins; a positive sign for γ, the higher the cost of compliance the lower the ratio and the lower the price margin; and, a positive sign for φ, the higher the quality difference the higher the price differential commanded by the two varieties of good *i*.

The limited number of observations does not allow to test specifically (5) for Mozambique so we attempt to assess whether this relationship holds for a larger sample of countries. We thus proceed to test our baseline equation (5) using a panel of countries exporting the same 56 major export products identified for Mozambique in our period of reference.

It is important to keep in mind along the analysis is that our sample of products is not randomly selected and corresponds to Mozambique's main exports. As a result the sample is biased towards some primary products and a very low number of processed products. On the other hand focusing primarily on primary products has the advantage that quality differences should be reduced as compared to processed and manufactured products. [27]

4.2 Data and methodology

Products and countries represented in our panel are summarised in Tables 10 and 11. After cleaning for outliers,[28] we have a total of 88,283 observations for 56 products defined at HS-8 digits and 196 countries. Trade flows are reported on a monthly basis and differentiated on the basis of the type access (MFN zero or greater than zero; Preferential Tariff zero or greater than zero). The product with highest number of observations is t-shirt (HS 61091000 – 8290 obs) while the one least represented is copra (HS1203000 - 149 obs). In terms of countries, we can see that on average each

[27] Schott (2004) confirms that in his sample of US imports there is more quality difference in processed products (Ex. HS8 Cotton T-shirts) than in semi-processed or primary products (ex. HS8 ginned cotton). He shows that among the first category unit values from one country can be even 20 times the values recorded from another exporting country (ex. Japan cif price for t-shirts can be 20 times the recorder cif price for Bangladesh).

[28] See the section "Data Issues" in the Appendix.

country in our sample exports 30% of the products in range but with a large variability. There are countries exporting just one product (ex. few pacific islands) and others exporting almost all the products in the range (ex. South Africa, China, Brazil). Not surprisingly, the latter are generally middle or high-income countries while the former belong to developing countries or LDCs.

The dimensions of our panel are actually three: product, country and time (year or month). On one side the panel is unbalanced in the sense that we do not have observations for some products or countries every month. On the other side, due to the different kind of access, we may have more than one observations per time unit (ex. in the same month *t,* a country *j* could report exports through MFN and preferential).

As price ratios, we use the same variables we defined in section 3.3 for Mozambique. As tariff ratio, we use MFN and preferential tariff faced by country *j* exporting product *i* in month *t* or, alternatively, the yearly average of MFN and preferential tariffs faced by country *j* exporting product *i.* As proxy for relative margins, we take the ratio between the average market share of countries exporting product *i* through MFN during the year of reference *t* and the market share of a country *j* exporting product *i* in year *t* – where market share is defined as the ratio between the value of product *i* exported in year *t* over total imports by the EU of the same product in that year. Alternatively, when we use $Margin\_price_3$ as dependent variable we replace the numerator with one plus the market share of the reference country in year *t.*

The average MFN tariff in our sample is 7%, ranging from a minimum of zero to values above 100% for some products paying specific duties. Almost 50% of the exports recorded in our sample take place with a MFN tariff equal to zero. For these exports we cannot expect any benefit from preferences. Table 12 shows basic statistics for these explanatory variables when MFN is greater than zero and preferences are being used so that we would expect to see them to impact on price ratios. $Margin\_price_1$ displays too high values signalling a substantial quality bias and, as above, it is excluded from estimations. The other price ratios show averages very close or higher than one. When we compare the exporter *cif* price with the price obtained when the same exporter exports MFN ($Margin\_price_4$) we even obtain an average price margin of 100%. This seems to be in contrast with the indications drawn

from the Mozambican case where we noticed a certain rigidity of prices. In the broad sample, switching from MFN to preferential seems to make a difference. However the maximum recorded by this specific price ratio is excessively high, signalling a potential problem with outliers or a substantial quality difference within the same product category. An important issue to notice is that all the price ratios computed show a median slightly below one meaning that in half of the observations where we record use of preferences, the exporting country does not get a price margin. This is quite striking also considering the fact that the average tariff differential (*tdiff* in Table 12) is 10%. In terms of relative market power, we find that the preference-using exporting country has on average a comparable market power than the average MFN exporter (market ratio equals 98%). The figure obviously changes when we compare it with the market power of the largest MFN exporter. In this case the market ratio is well above 100% - being 109%.

Proxies for cost of compliance and quality differences are the most problematic to obtain, due to the fact that both are unobservable. We use two different specifications in order to deal with this problem. First we try to deal with the cost of compliance problem. Following Carrere and de Melo (2004) we assume that the utilization rate is a function of preference rate minus the compliance cost $U_i = f(\tau_i - c_i) \quad f'(.) > 0$ and that this latter depends positively on the restrictiveness of the rule of origin $c_i = \beta' RoO_i + v_i$, where RoO_i is alternatively a dummy variable or the Estevadeordal restrictiveness index for the PANEURO system of rules of origin.[29] By estimating the reduced form $u_i = \lambda + \alpha\tau_i + \theta RoO_i + \varepsilon_i$ we can obtain estimates of the cost of compliance by replacing the estimated coefficients on the cost of compliance equation: $c_i = \frac{\hat{\theta}}{\hat{\alpha}} RoO_i$.Unfortunately, our estimates using pooled OLS, fixed effects or random effects models did not give significant results. We obtain extremely low R-squared (close to zero), non significant coefficients and costs of compliance in wrong range. This goes into the direction of a poor impact of rules of origin on utilization rates through an increase in the cost of compliance for exporters.

[29] See Estevadeordal and Suominen (2003)

The fact that in our sample primary and low-processed products are over represented may be an explanation for these findings. An alternative would be to use non-parametrical estimates where compliance costs are simple average of tariff differentials when utilization rates are close to zero. However, this would be highly correlated with the tariff ratio. In order to keep cost of compliance in our equation we try to add a fixed cost equal to 4% as estimated in similar studies on EU preference schemes (ex. Manchin (2005)) to the preferential tariff. We have to bear in mind though, that even in the case of Mozambique we did not find evidence supporting the hypothesis of a fixed-percentage cost of compliance impacting on utilization rates. As suggested in the previous section, lack of compliance occurs in very few sporadic cases. Thus, we estimate two different specifications, once without fixed costs of compliance, and a second one where we subtract directly the fixed costs of compliance from the tariff ratio (*tariff_ratio2*).

To control for quality differences, we first use product (country) fixed effects to capture the product (country) specific quality adjustment coefficient. Our specification then becomes:

$$\ln\left(\frac{P_{ikt}^{cif}}{P_{ijt}^{cif}}\right) = \alpha + \beta \ln\left(\frac{1+\tau_{ijt}}{1+\tau_{ikt}^{pref}+\tilde{c}}\right) + \delta \ln\left(\frac{1+m_{ijt}}{1+m_{ikt}}\right) + \phi \ln(\delta_i) + \varepsilon_{ikt} \quad (5b)$$

Since it is possible that product fixed effects may not be able to fully control for quality differences, we estimate the model using yearly averages in first differences *t* – (*t-1*) (equation 6). The assumption is that if the quality difference factor varies between product and countries but remain constant over time, it will be wiped out when taking first differences.

$$\Delta \ln\left(\frac{P_{ikt}^{cif}}{P_{ijt}^{cif}}\right)_{t;t-1} = \beta \Delta \ln\left(\frac{1+\tau_{ijt}}{1+\tau_{ikt}^{pref}+\tilde{c}}\right)_{t;t-1} + \delta \Delta \ln\left(\frac{1+m_{ijt}}{1+m_{ikt}}\right)_{t;t-1} + \varepsilon_{ikt} \quad (6)$$

The coefficients in (6) can be interpreted as elasticities with respect changes in price margins and the expected signs of the coefficients are the same as described in (5). The following section describes the main results from the estimations.

4.3 Results

We first estimate (5b) by using pooled OLS and then repeat the estimates by using fixed effects model (FEM) and Random effects model (REM). We correct for heteroskedasticity by using Huber-White sandwich estimators in the OLS case. Though, it is worth reminding that by using OLS we do not capture the effect of the unobserved quality factor and that our estimates are likely to be biased. By estimating FEM and RE we also try to make use of the three possible dimensions of the panel using both product and time and country and time as panel dimensions. In this way we allow the (omitted) quality factor to vary alternatively across products or countries.

We then estimate (6) by using pooled OLS first and we cluster the error terms alternatively around products and countries.[30] Application of OLS to first differences provides unbiased and consistent estimators but it is not efficient. The OLS first difference estimator and FEM performed by STATA are based on similar forms of differencing, being the latter a differentiation from the group means (*within group estimator*). Thus, in this case it would be redundant to use FEM so we only proceed to an additional estimation of (6) with REM.

We also repeat estimations of (5b) and (6) by product. Although the number of observations obviously diminishes, in this way we can control whether the relationship is more significant for some products compared to others. In these estimates, panel dimensions are country and time, which implies that we are now assuming the quality factor as country specific and constant through time.

Estimations of (5b) using price margins computed on a monthly basis show poor results (Table 13). Coefficients of explanatory variables alternate positive and negative values according to the price ratio, the model (OLS, FEM, REM) and panel dimension being used. R^2 are consistently close to zero. The problem may actually lay in the almost complete lack of variation of the explanatory variables compared to a significant variation in the dependant variable. Price margins computed on a monthly

[30] In STATA the "cluster (varname)" option specifies that the observations are independent across groups but not necessarily independent within groups. varname specifies to which group each observation belongs. By specifying cluster we also imply that the Huber/White/sandwich estimator of variance is to be used in place of the traditional calculation (STATA).

basis tend to vary from one month to the other while the tariff ratio do not vary monthly, being both MFN and preferential tariff constant along the same year.[31] Variations in tariff differentials are more likely to happen on a yearly basis due to sequenced liberalisations in MFN and preferential tariffs. Market ratio is by its nature calculated on a yearly basis and both cost of compliance and quality do not vary monthly. As a reference, Table 14 shows unconditional average and standard deviation for the variables of interest.

In order to overcome this problem, we try to estimate (5b) and (6) using yearly averages. On one hand this smoothes the variation of our dependant variable and on the other hand it (slightly) increases the variance of the tariff ratio variable. We concentrate our analysis in proxies $Margin\_price_2$ and $Margin\_price_3$. By using price ratios computed using the same country exporting MFN and preferential ($Margin\_price_{5 \text{ and } 6}$) we would eliminate the market ratio variable from our equation since it would always take the value of zero ($ln(1)=0$). Thus we use $Margin\_price_2$ in order to make comparisons with the average MFN exporter, while with $Margin\_price_3$ we compare price differences between same pairs of countries for the whole period – allowing us to correct for the quality differences bias. Correlation between price margins and tariff ratios is positive, while it is negative for price margin and market ratios, but extremely weak in both cases (Table 15). Results for OLS, FEM and REM estimates for (5b) having $Margin\_price_2$ as dependant variable are reported in Table 16. We report estimates for FEM and REM using both product and country as panel dimensions and estimates for tariff ratios including and exluding the fixed cost of compliance (*tariff_ratio1* and *tariff_ratio2)*. Table 17 reports the estimates when using $Margin\_price_3$ as dependant variable.

Results are quite similar for both dependant variables. Regarding the coefficient of interest, we find a positive and statistically significant preference margin pass-through (β). The size of β is more or less stable across OLS, FEM and REM but increases when using country as panel dimension. The coefficient for market ratio is negative in the first specification and close to zero in the second – but being non significant in both. Including a fixed cost of compliance does not change significantly the results.

[31] Exception made for those few products where we have specific or seasonal duties (ex. fresh navels, grapefruit, tobacco products).

REM are preferred to FEM according to Hausman tests but rejected by Breusch-Pagan tests which is counterintuitive.

Still, a major problem in the estimations is the extremely low R^2 (close to zero) for both specifications, independently of using OLS, FEM or REM. Despite the significance of the tariff coefficient, the model seems unable to explain hardly any of the variation in price margins. This can still be determined by the different degree of variations of dependent and explanatory variables with the former showing a variation between seven and times higher than the latter.

The problem may also lay in the omitted quality variable whose effect on prices is not yet captured by FEM or REM. Thus, to correct for this bias we now proceed to estimate (6) using the same variable specifications. Results are shown in Tables 18 and 19. Correlation among variables of interest remains weak. We obtain similar results as above in terms of sign, magnitude and significance of the coefficients in both specifications. It has to be stressed that the coefficient for the tariff ratio is consistently positive (as expected) and significant. One more time, however, the R^2 are too low to support our model. Despite eliminating from our regression the non-observable quality factor through first differences, tariff differential and market power are still not able to explain the variation in price margins.

It is still possible that the issue of preference margin transmission to price margins is product specific. If this is the case, there are no benefits from pooling all the observations and estimate common coefficients. Thus, as the last attempt we proceed to estimate (5b) and (6) at product level. We do not include the fixed cost of compliance since it is likely to be product specific so it should not alter the estimations. For these specifications, we find higher explanatory power of the model for some products. Table 20 summarises results for the two coefficients of interest β and δ for those products showing highest R^2 and expected signs.[32]

We do not expect to obtain high significance levels due to the limited amount of observations. Among these products β is generally positive (i.e. fresh navels, tobacco

[32] We take products showing R^2 above 10% in at least one specification (OLS, REM). Detailed results by product are shown in Tables 21 to 24.

products, industrial trousers, ferro-chromium and aluminium unwrought) while δ shows more alternate signs. The only products showing some coherence across the different specifications are the three tobacco products: HS 24012010, HS 24012020 and HS 24013000.[33] For these products there is evidence that tariff differentials due to preference impact positively on prices, while an increase in the market power of MFN exporters compared to preferential ones is detrimental to the price obtained by these latter (as for assumptions). However, when we cross check these results with Mozambican data we do not find evidence that there exist a positive price margin between preferential and MFN exporters, since in most cases price ratios below one.

4.4 Summary of main results

Summing up the results when expanding the dataset to other exporters, we find that tariff differentials are unable to explain price margins for preferential exporters. The main challenge when carrying out the estimations is to isolate quality differences, so to ensure that we are comparing similar varieties from the same product. We first estimate different specifications using monthly data and different reference prices. We find that the results are not very robust, mainly due to the lack of variation on the tariff differential variable monthly and likely quality differences between preferential and MFN exporter.

In order to overcome these problems we first use yearly average, so variance between dependent and explanatory variables is increased. Second, we use alternatively as reference price the average MFN price - in order to estimate the impact of relative market ratio - and the price of largest MFN exporter – in order to reduce the quality bias and be able to capture these differences with product fixed effects. The results clearly indicate a positive and statistically significant coefficient on tariff differential pass-through, but lack of variance explanation of price margins. The low R^2 may still be due to large differences in variation between dependant and explanatory variables.

We finally explore the possibility that the relationship between preference margins and price margins is product specific. For this reason, we perform the same

33'HS 24012010: “Partly or wholly stemmed Virginia Tobacco”; HS 24012020: “Partly or wholly stemmed Burley Tobacco”; HS 24013000: “Tobacco refuse”

estimations product by product. The results only show some robust explanatory power of the model in the case of few products. For most of the products, tariff differences do not explain price margins. Therefore, keeping in mind the original product bias affecting our sample, we have to conclude that we do not find significant evidence of existing price margins to be explained by tariff differentials.

5. Conclusions and policy implications

The analysis of exports from Mozambique to the EU shows that in the five-years period from 2000 to 2005, Mozambique substantially increased the value of its exports by a factor of ten. Such impressive growth does not result from a broadening of the export base but merely from the opening of a large aluminium smelter and exponential increase in aluminium exports. Exports remain highly concentrated in primary or semi-processed products clustered around agriculture, fisheries and natural resources. In total, we find that around 56 products cover 99% of total exports.

The question that we made at the beginning of the paper is whether unilateral preferences in the EU have had a positive impact on Mozambican exports. The EU grants unilateral trade preferences to Mozambique through two different schemes: the Cotonou agreement and the EBA initiative. The rational of unilateral trade preferences is to allow developing countries to increase and diversify exports as well as ensure a competitive advantage to exporters which should translate into a higher *cif* price compared to MFN competitors. Previous studies show that developing countries often fails to benefit of such positive effects due to the limited coverage of many preferential schemes which exclude major exports or to the ongoing process of multilateral liberalisation, eroding the effect of the preference advantage.

The first element to be stressed is that the joint coverage of both preferential EU schemes, Cotonou and EBA reaches 100% of the products being exported and the large majority of exports entering preferential does not pay duties. This turns the whole issue of using Cotonou or EBA superfluous for Mozambique considering the present export structure, since for these goods the two schemes foresee almost identical conditions. On the other hand, more than 40% of the tariff lines currently

exported have a MFN tariff equal to zero, which means that Mozambique does not benefit of any "preferential" advantage compared to world exporters for these goods. Since Mozambican firms are exporting these goods, we can conclude that at least in these cases they are able to face competition with world exporters without the advantage of preferences. On the remaining exports, Mozambique enjoys a significant preference margin - between 9% and 12% on average depending on the reference year.

The second element to be highlighted is the relatively high utilization rates and the reasons behind sporadic non-utilization. Mozambique shows relatively high utilization rate (91% on average) and fairly stable, with no drops of utilization in correspondence of low tariff margins. In this sense, the traditional explanation of the effect of costs of compliance does not seem to be an issue for Mozambican exporters. This is not surprising if we consider that exported products are primary or with very low level of processing, meaning that rules of origin are not particularly impacting on producers' costs. However, few products show utilization rates substantially below the average. It is important to determine the reason behind this non-utilization since it may be due to inefficiencies in the certification process managed by public authorities more than to costs of compliance linked to the preference. This is an issue repeatedly raised in the past by the Mozambican private sector that deserves attention by the relevant public institutions such as the Ministry of Industry and Trade (MIC) and Customs (*Alfandegas*).

A third and more important element is that we do not find a price margin for preferential exporters compared to MFN competitors. Using data for Mozambique we observe that in roughly 50% of cases price ratios are below one, indicating a higher price for exporters under MFN. In fact, the majority of products exported by Mozambique displays in a similar percentage of observations, prices above and below MFN exporters. We can actually identify only a handful of products with price ratios above one and when we conduct some sensitivity analysis by changing reference price, the results also change showing lack of robustness. It is not surprising then that we also do not find a positive relationship between price margins and tariff margins available to Mozambican exporters.

A substantial problem that we face when doing the analysis at HS8-digits is that we are not able to distinguish between varieties of the same product. Quality may be a much stronger explanation for price differences than tariff differential. In order to take into account this factor we compare the prices obtained by Mozambican exporters when they access the EU market through preferences and MFN – assuming that the quality of the product would be the same. Even in these cases, price margins do not show the desired pattern. As suggested above, the explanation may lie in the fact that non-utilization of preferences is due to random events linked to sporadic problems in the certification system required by the preferential scheme at national level. In presence of rigid contract prices, when the exporter does not obtain relevant certification, it decides to proceed with the export acceding through MFN in order not to lose its shipment. This hypothesis seems to be confirmed by the pattern of utilization rates and the lack of evidence in favour of the cost of compliance explanation.

In order to control for quality differences, we try to assess econometrically whether price margins are positively affected by tariff margins and negatively by cost of compliance and relative market power for a sample of countries exporting the same products as Mozambique. Our attempt of estimating parametrically costs of compliance give no significant results, supporting the hypothesis that for this sample of products it may be not relevant. We continue to observe that for a high percentage of observations price ratios are below one implying that MFN prices are higher despite significant tariff differentials. In estimating the relationship between price margins and tariff differentials we control for market power and quality differences through product dummies and first-differencing the reduced form equation. We do not find robust evidence for tariff differences to explain price margins.

We repeat estimations at product level and we find that for a small number of products (8 over the 56 analysed), tariff margins positively impact on price margins although the coefficients of the other explanatory variables do not go in the direction desired. The products showing more consistency in the results and along the lines hypnotised are three tobacco products (Barley, Virginia and Tobacco refuse).

At the centre of our findings is the lack of correlation between price and tariff margins. Two main elements may explain this lack of relationship. A first element is related to contract rigidity between importers and exporters. It is possible that prices are set in contracts, which are not modified or are independent from any change in MFN tariffs. Second, it is well established that for certain products at HS8, varieties may have very different unit values reflecting very different qualities. Schott (2004) argues that unit values reflect country endowments, so capital abundant countries export capital intense varieties that are paid higher unit values. In this case, it is possible that prices for different varieties follow totally different dynamics. As a result, to properly control for quality differences a more disaggregated classification is required, in addition to be able to control for country factor endowments.

The general message of the findings is that we cannot find any evidence of an impact of preference margin nor of relative market power on price differentials accruing to preferential exporters due to trade preferences. Keeping in mind data limitations, according to these figures and with the current export structure, it is difficult to sustain that EU preferences are currently valuable for Mozambique. Export growth has been mainly achieved thanks to a single investment apparently unrelated to the existence of trade preferences, and, there is no significant diversification ongoing for Mozambique.

The fact that we cannot identify a price effect associated to preferences does not imply that preferences have no value at all. It is possible, that preferences may signal importers to choose among exporters. This is an empirical question worth analyzing in detail. Nevertheless, if this is the case, preferences provide only an initial advantage for exporting. Once exports have originated from preferential countries, exporters are subject to the same conditions than MFN exporters.

In light of these results, the priority given in defending tariff preferences in current negotiating *fora* (for example the EPA) should be re-considered.

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APPENDIX

Data Issues

In our study we use EUROSTAT COMEXT data to analyse exports to the EU. Our period of reference goes from 2000 to 2005. Although trade data are available for earlier years, tariff data needed for our analysis are only available from year 2000. This year is also the year of entering into force of the Cotonou Agreement, a relevant issue in our study. Trade flows analysed in this paper only include EU external trade thus excluding any intra EU trade or re-exports within the EU and refer to goods imported in the EU for final use only. COMEXT data report value and quantities of monthly imports at HS 8-digits. Unit values are then computed by dividing values by quantities and assumed as proxy for cif prices. Unit values so computed show large volatility and variance. This is explained by the reasons outlined in the paper but also by potential measurement errors in customs. In order to smooth the series, we apply Hadi´s (1992) methodology to eliminate outliers at 95% confidence level to the unit values series. This allows us to eliminate extreme values due to typing errors or due to large quality differences.

Other information includes country of origin and an indication of the tariff faced by product. However, concerning this latter, COMEXT only distinguishes between "MFN" (zero or greater than zero) and "Preferential tariff" (zero or greater than zero) without specifying the scheme through which the export takes place nor the actual level of the tariff applied. This is a serious shortcoming and implies, for instance, that it is not possible to compare exports taking place under EBA or Cotonou. Also, there is a significant share of imports that cannot be classified either as MFN or Preferential Export due to mistakes in customs documents. We thus proceed to eliminate such observations from our sample.

In order to get the relevant MFN tariff and the tariff actually faced by each good we cross the information provided by COMEXT with the one contained in the TARIC database. We then obtain MFN and applied tariffs for eeach good i exported by country j in period t. The creation of such database has been quite long and cumbersome due to the complexity of the EU tariff system, the number of FTAs signed by the EU (ex. Euro-Med Association Agreements, EEA, FTA-Chile, FTA-

Mexico) and its unilateral preferential schemes (EBA, Cotonou and GSP). One shortcoming of our database is that it cannot take into account eventual exemptions granted or distinguish between different tariff-rate quotas available. In these cases our tariffs would be biased (most likely upward). However, such bias, where existing, is limited to specific tariff lines and only to certain specific shipments so we believe it does not impact significantly on our analysis. The best way to eliminate such bias would be to use data on import duties. By computing the ratio between the unit value of each export and the duties collected would automatically net out any exemption and provide the exact tariff applied. Unfortunately, such information is not made publicly available by the EC.

Tables and Figures

Tables

Table 1 Mozambican export to the EU 2000/2005

	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***TOT***
Exports (millions EUR)	172.6	519.9	583.1	596.7	838.6	1016.3	3727.2
Growth rate		201.2%	12.2%	2.3%	40.5%	21.2%	

Source: EUROSTAT

Table 2 Main Mozambican export to the EU 2000/2005 by HS2 Chapter

HS 2 Chapter	Product	Value (millions EUR)	% over TOT	Cumulative
76	aluminium and articles thereof	2962.43	77.20%	77.20%
03	fish and crustaceans	464.67	12.11%	89.31%
24	tobacco and manufactured tobacco substitutes	102.82	2.68%	91.99%
52	Cotton	88.77	2.31%	94.30%
25	salt; sulphur; earths and stone; plastering material, lime and cement	50.12	1.31%	95.61%
17	sugars and sugar confectionery	45.93	1.20%	96.80%
44	wood and articles of wood; wood charcoal	24.61	0.64%	97.44%
27	mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	16.15	0.42%	97.86%
12	oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medical plants; straw and fodder	16.07	0.42%	98.28%
08	edible fruit and nuts; peel of citrus fruits or melons	8.98	0.23%	98.52%
84	nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	7.30	0.19%	98.71%
56	wadding, felt and nonwovens; special yarns; twine, cordage, rope and cable and articles thereof	6.20	0.16%	98.87%
71	natural or cultured pearls, precious or semi-precious stones, precious metals	4.49	0.12%	98.99%
72	iron and steel	4.46	0.12%	99.10%

Source: Authors' calculations based on EUROSTAT

Table 3 Main Mozambican exports (HS8)

Product description	TOT Exp 2000/2005 (1000 EUR)	Rule of Origin (EBA & Cotonou)
03026999:FRESH OR CHILLED FISH (EXCL. 0302.11-00 TO 0302.69-87)	1349.36	W
03037987:FROZEN SWORDFISH XIPHIAS GLADIUS	2416.55	W
03061110:FROZEN CRAWFISH TAILS, WHETHER IN SHELL OR NOT, INCL. CRAWFISH TAILS IN SHELL, COOKED BY STEAMING OR BY BOILING IN WATER	1043.73	W
03061190:FROZEN ROCK LOBSTER AND OTHER SEA CRAWFISH PALINURUS SPP., PANULIRUS SPP. AND JASUS SPP. , WHETHER IN SHELL OR NOT, INCL. ROCK LOBSTER AND OTHER SEA CRAWFISH IN SHELL, COOKED BY STEAMING OR BY BOILING IN WATER (EXCL. CRAWFISH TAILS)	382.77	W
03061350:FROZEN SHRIMPS OF THE GENUS PENAEUS , WHETHER IN SHELL OR NOT, INCL. SHRIMPS IN SHELL, COOKED BY STEAMING OR BY BOILING IN WATER	304337.86	W
03061380:FROZEN SHRIMPS AND PRAWNS, WHETHER IN SHELL OR NOT, INCL. SHRIMPS AND PRAWNS IN SHELL, COOKED BY STEAMING OR BY BOILING IN WATER (EXCL. PANDALIDAE , CRANGON , DEEPWATER ROSE SHRIMPS PARAPENAEUS LONGIROSTRIS AND SHRIMPS OF THE GENUS PENAEUS)	142722.62	W
03061910:FROZEN FRESHWATER CRAYFISH, WHETHER IN SHELL OR NOT, INCL. CRAYFISH IN SHELL, COOKED BY STEAMING OR BY BOILING IN WATER	643.58	W
03075910:FROZEN OCTOPUS OCTOPUS SPP. , WITH OR WITHOUT SHELL	883.84	W
05080000:CORAL AND SIMILAR MATERIALS, SHELLS OF MOLLUSCS, CRUSTACEANS OR ECHINODERMS, CUTTLE-BONE, POWDER AND WASTE THEREOF, UNWORKED OR SIMPLY PREPARED BUT NOT OTHERWISE WORKED OR CUT TO SHAPE	980.74	W
06031010:FRESH CUT ROSES AND BUDS, OF A KIND SUITABLE FOR BOUQUETS OR FOR ORNAMENTAL PURPOSES	768.44	W or VC (max 50% foreign content)
08013200:FRESH OR DRIED CASHEW NUTS, SHELLED	5282	W
08051030:FRESH NAVELS, NAVELINES, NAVELATES, SALUSTIANAS, VERNAS, VALENCIA LATES, MALTESE, SHAMOUTIS, OVALIS, TROVITA AND HAMLINS	1100.08	W
08054000:FRESH OR DRIED GRAPEFRUIT	1880.09	W
09024000:BLACK FERMENTED TEA AND PARTLY FERMENTED TEA, WHETHER OR NOT FLAVOURED, IN IMMEDIATE PACKINGS OF > 3 KG	1576.38	CH
09042030:DRIED FRUITS OF GENUS CAPSICUM OR PIMENTA, NEITHER CRUSHED OR GROUND (EXCL. SWEET PEPPERS)	365.97	W
12030000:COPRA	15764.32	W
17011110:RAW CANE SUGAR, FOR REFINING (EXCL. ADDED FLAVOURING OR COLOURING)	35923.36	VC (30% max foreign content)
17031000:CANE MOLASSES RESULTING FROM THE EXTRACTION OR REFINING OF SUGAR	6406.82	VC (30% max foreign content)
24011041:FIRE-CURED KENTUCKY TYPE TOBACCO (EXCL. STEMMED OR STRIPPED)	14309.02	W
24012010:PARTLY OR WHOLLY STEMMED OR STRIPPED FLUE-CURED VIRGINIA TYPE TOBACCO, OTHERWISE UNMANUFACTURED	1402.67	W
24012020:PARTLY OR WHOLLY STEMMED OR STRIPPED LIGHT AIR-CURED BURLEY TYPE TOBACCO, INCL. BURLEY HYBRIDS, OTHERWISE UNMANUFACTURED	24586.56	W
24012041:PARTLY OR WHOLLY STEMMED OR STRIPPED FIRE-CURED KENTUCKY TYPE TOBACCO, OTHERWISE UNMANUFACTURED	1758.11	W

Product description	TOT Exp 2000/2005 (1000 EUR)	Rule of Origin (EBA & Cotonou)
24012050:PARTLY OR WHOLLY STEMMED OR STRIPPED LIGHT AIR-CURED TOBACCO, OTHERWISE UNMANUFACTURED (EXCL. BURLEY OR MARYLAND TYPE)	56095.15	W
24013000:TOBACCO REFUSE	1139.96	W
25041000:NATURAL GRAPHITE IN POWDER OR IN FLAKES	1209.83	TEC
25161100:GRANITE, CRUDE OR ROUGHLY TRIMMED (EXCL. ALREADY WITH THE CHARACTERISTICS OF SETTS, CURBSTONES AND FLAGSTONES)	46905.91	TEC
27011290:BITUMINOUS COAL ECSC , WHETHER OR NOT PULVERIZED (EXCL. AGGLOMERATED AND COKING)	14491.65	CH
27011900:COAL ECSC , WHETHER OR NOT PULVERIZED (EXCL. AGGLOMERATED, ANTHRACITE AND BITUMINOUS COAL)	1652.5	CH
41015010: WHOLE RAW HIDES AND SKINS OF BOVINE INCL. BUFFALO OR EQUINE ANIMALS, WHETHER OR NOT DEHAIRED OR SPLIT, OF A WEIGHT PER SKIN > 16 KG, FRESH	485.41	CH
41032000:RAW HIDES AND SKINS OF REPTILES, FRESH OR SALTED, DRIED, LIMED, PICKLED OR OTHERWISE PRESERVED, (EXCL. PARCHMENT-DRESSED)	1017	CH
41041151: FULL GRAINS, UNSPLIT AND GRAIN SPLITS, IN THE WET STATE INCL. WET-BLUE , OF THE WHOLE HIDES AND SKINS OF BOVINE INCL. BUFFALO ANIMALS, WITH A SURFACE AREA OF > 2,6 M2, TANNED, WITHOUT HAIR ON (EXCL. FURTHER PREPARED)	180.86	TEC
44020000:WOOD CHARCOAL, INCL. SHELL OR NUT CHARCOAL, WHETHER OR NOT COMPRESSED (EXCL. WOOD CHARCOAL USED AS A MEDICAMENT, CHARCOAL MIXED WITH INCENSE, ACTIVATED CHARCOAL AND CHARCOAL IN THE FORM OF CRAYONS)	618.71	CH
44039995: WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK OR SAPWOOD, OR ROUGHLY SQUARED (EXCL. ROUGH-CUT WOOD FOR WALKING STICKS, UMBRELLAS, TOOL SHAFTS AND THE LIKE; WOOD CUT INTO BOARDS OR BEAMS, ETC.; WOOD TREATED WITH PAINT, STAINS, CREOSOTE OR OT	844.47	TEC
44072969:KERUING, RAMIN, KAPUR, TEAK, JONGKONG, MERBAU, JELUTONG, KEMPAS, OKOUME, OBECHE, SAPELLI, SIPO, ACAJOU D AFRIQUE, MAKORE, IROKO, TIAMA, MANSONIA, ILOMBA, DIBETOU, LIMBA, PALISSANDRE DE RIO, PALISSANDRE DE PARA AND PALISSANDRE DE ROSE, SAWN OR CUT	878.92	TEC
44072995: ABURA, AFRORMOSIA, AKO, ANDIROBA, ANINGRE, AVODIRE, BALAU, BOSSE CLAIR, BOSSE FONCE, CATIVO, CEDRO, DABEMA, DOUSSIE, FRAMIRE, FREIJO, FROMAGER, FUMA, GERONGGANG, IPE, JABOTY, JEQUITIBA, KOSIPO, KOTIBE, KOTO, LOURO, MACARANDUBA, MAHOGANY (EXCL.	1777.19	TEC
44079994:TROPICAL WOOD, SAWN OR CHIPPED LENGTHWISE, SLICED OR PEELED, OF A THICKNESS OF > 6 MM (EXCL. PLANED, SANDED OR FINGER-JOINTED, AND TROPICAL WOOD SPECIFIED IN SUBHEADING NOTE 1 TO THIS CHAPTER)	819.62	TEC
44079997: WOOD, SAWN OR CHIPPED LENGTHWISE, SLICED OR PEELED, OF A THICKNESS OF > 6 MM (EXCL. PLANED, SANDED OR FINGER-JOINTED, AND TROPICAL WOOD, CONIFEROUS WOOD, OAK QUERCUS SPP. , BEECH FAGUS SPP. AND POPLAR)	8112.78	TEC
44092091:BLOCKS, STRIPS AND FRIEZES FOR PARQUET FLOORING, NOT ASSEMBLED, OF WOOD (EXCL. THOSE OF CONIFEROUS WOOD)	664.58	TEC

Product description	TOT Exp 2000/2005 (1000 EUR)	Rule of Origin (EBA & Cotonou)
44092098: NON-CONIFEROUS WOOD, CONTINUOUSLY SHAPED TONGUED, GROOVED, REBATED, CHAMFERED, V-JOINTED BEADED, MOULDED, ROUNDED OR THE LIKE ALONG ANY OF ITS EDGES OR FACES, WHETHER OR NOT PLANED, SANDED OR FINGER-JOINTED (EXCL. MOULDINGS FOR FRAMES FOR P	358.61	TEC
47032900:SEMI-BLEACHED OR BLEACHED CHEMICAL WOOD PULP, SODA OR SULPHATE (EXCL. DISSOLVING GRADES AND CONIFEROUS CHEMICAL WOOD PULP)	172.1	CH
52010090:COTTON, NEITHER CARDED NOR COMBED (EXCL. ABSORBENT OR BLEACHED)	86025.99	CH
52081299:PLAIN WOVEN FABRICS OF COTTON, CONTAINING >= 85 % COTTON BY WEIGHT AND WEIGHING > 130 G TO 200 G PER M2, UNBLEACHED, WITH A WIDTH OF > 165 CM	1488.97	TEC
53089090:YARN OF VEGETABLE TEXTILE FIBRES (EXCL. FLAX YARN, YARN OF JUTE OR OF OTHER TEXTILE BAST FIBRES OF HEADING 5303, COIR YARN, HEMP YARN, PAPER YARN, RAMIE YARN AND WOOL YARN)	208.54	TEC
56072100:BINDER OR BALER TWINE OF SISAL OR OTHER TEXTILE FIBRES OF THE GENUS AGAVE	1720.47	TEC
56072910:TWINE, CORDAGE, ROPE AND CABLE OF SISAL OR OTHER TEXTILE FIBRES OF THE GENUS AGAVE, WHETHER OR NOT PLAITED OR BRAIDED, WHETHER OR NOT IMPREGNATED, COATED, COVERED OR SHEATHED WITH RUBBER OR PLASTIC, WITH A LINEAR DENSITY OF > 100 000 DECITEX, I.E	3686.97	TEC
56072990:TWINE, CORDAGE, ROPE AND CABLE OF SISAL OR OTHER TEXTILE FIBRES OF THE GENUS AGAVE, WHETHER OR NOT PLAITED OR BRAIDED, WHETHER OR NOT IMPREGNATED, COATED, COVERED OR SHEATHED WITH RUBBER OR PLASTIC, WITH A LINEAR DENSITY OF =< 100 000 DECITEX, I.	713.94	TEC
61091000:T-SHIRTS, SINGLETS AND OTHER VESTS OF COTTON, KNITTED OR CROCHETED	2991.77	TEC
62034211:MEN S OR BOYS INDUSTRIAL AND OCCUPATIONAL TROUSERS AND BREECHES OF COTTON (EXCL. KNITTED OR CROCHETED AND BIB AND BRACE OVERALLS)	135.98	TEC
64061011:LEATHER UPPERS, WHETHER OR NOT ATTACHED TO SOLES OTHER THAN OUTER SOLES	1969.23	CH
71031000:PRECIOUS STONES AND SEMI-PRECIOUS STONES, UNWORKED OR SIMPLY SAWN OR ROUGHLY SHAPED, WHETHER OR NOT GRADED (EXCL. DIAMONDS AND IMITATION PRECIOUS STONES AND SEMI-PRECIOUS STONES)	4363.41	CH
72024199:FERRO-CHROMIUM, CONTAINING BY WEIGHT > 6% CARBON AND > 60% CHROMIUM	2866.1	CH
75021000:NICKEL, NOT ALLOYED, UNWROUGHT	629.61	CH
76011000:ALUMINIUM, NOT ALLOYED, UNWROUGHT	2782710.6	CH or VC (50% max foreign content)
76012010:PRIMARY ALUMINIUM, ALLOYED, UNWROUGHT	102067.44	CH or VC (50% max foreign content)
76012091:SECONDARY ALUMINIUM, ALLOYED, IN INGOTS OR IN LIQUID STATE	77059.49	CH or VC (50% max foreign content)

Product description	TOT Exp 2000/2005 (1000 EUR)	Rule of Origin (EBA & Cotonou)
76051100:WIRE OF NON-ALLOY ALUMINIUM, WITH A MAXIMUM CROSS-SECTIONAL DIMENSION OF > 7 MM (EXCL. STRANDED WIRE, CABLES, PLAITED BANDS AND THE LIKE AND OTHER ARTICLES OF HEADING 7614, AND ELECTRICALLY INSULATED WIRES)	304.42	CH or VC (50% max foreign content)

Source: Authors' calculations based on EUROSTAT

Legenda: Rule of Origin: W (Wholly obtained); CH (Change of tariff heading @ HS4); TEC (Technological process); VC (Value content)

Table 4 Average MFN tariff for products exported by Mozambique

	year					
HS 8	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
03026999	15.0%	15.0%	13.8%	15.0%	15.0%	15.0%
03037987	7.5%	7.5%				
03061110	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
03061190	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
03061350	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
03061380	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
03061910	7.5%	7.5%	7.5%			
03075910	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
05080000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
06031010			8.5%	9.9%	9.4%	9.6%
08013200	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
08051030	16.0%	19.2%			16.0%	16.0%
08054000	2.4%	2.4%	2.4%		2.4%	2.4%
09024000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
09042030	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
12030000	0.0%	0.0%	0.0%			
17011110			82.0%	80.6%	80.9%	
17031000	7.5%	0.0%	4.8%	5.4%	10.2%	0.0%
24011041	7.2%	7.2%	7.4%	8.1%	9.6%	8.7%
24012010	6.5%	6.4%				
24012020	5.9%	6.4%	6.6%	7.7%	9.5%	9.8%
24012041		10.6%	11.1%			
24012050	11.8%	11.3%	11.3%	11.4%	11.4%	11.5%
24013000		57.9%	55.0%	71.9%		72.1%
25041000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
25161100	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
27011290	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
27011900	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
41015010	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
41032000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
41041151	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44020000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44039995	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44072969	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44072995	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44079996	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44079997	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44092091	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44092098	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
47032900	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
52010090	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
52081299	8.8%					
53089090		3.8%	3.8%		3.8%	3.8%
56072100	12.0%		12.0%	12.0%		12.0%
56072910	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
56072990		12.0%	12.0%	12.0%	12.0%	12.0%
61091000	12.0%	12.0%	12.0%			12.0%
62034211					12.0%	12.0%
64061011	3.0%	3.0%				
71031000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
75021000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero

	year					
HS 8	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
76011000	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
76012010		6.0%	6.0%			6.0%
76012091			6.0%	6.0%	6.0%	6.0%
76051100						7.5%

Source: Authors' calculations based on TARIC

Table 5 Average preference margins (Mozambique)

Average and weighted-average for *Margin_pref* (all tariff lines)					Average for *Margin_pref* (tariff lines with MFN>0 only)	
Year	**Average**	**Max**	**Year**	**Weighted-average**	**Year**	**Average**
2000	5.0%	15.0%	**2000**	7.0%	**2000**	9.0%
2001	6.0%	63.0%	**2001**	6.0%	**2001**	10.0%
2002	7.0%	83.0%	**2002**	8.0%	**2002**	12.0%
2003	7.0%	82.0%	**2003**	4.0%	**2003**	11.0%
2004	6.0%	81.0%	**2004**	7.0%	**2004**	10.0%
2005	6.0%	86.0%	**2005**	6.0%	**2005**	11.0%

Source: authors' calculations based on TARIC and EUROSTAT

Table 6 Average preference margins per product (Mozambique)

HS8	year 2000	2001	2002	2003	2004	2005	Average
03026999	15.0%	15.0%	13.8%	13.8%	15.0%	15.0%	14.6%
03037987	7.5%	7.5%					7.5%
03061110	10.9%	12.5%	12.5%	12.5%	12.5%	9.4%	11.7%
03061190	12.5%	12.5%	12.5%	12.5%	12.5%	8.3%	11.8%
03061350	12.0%	12.0%	12.0%	12.0%	11.0%	12.0%	11.8%
03061380	11.1%	11.1%	12.0%	9.6%	12.0%	11.1%	11.1%
03061910	7.5%	7.5%	7.5%				7.5%
03075910	8.0%	8.0%	8.0%	6.4%	8.0%	6.4%	7.5%
05080000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
06031010	8.5%	9.9%	8.7%	9.6%			9.2%
08013200	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
08051030	9.1%	7.3%	12.8%	0.0%			7.3%
08054000	1.6%	1.8%	1.2%	1.6%	1.6%		1.6%
09024000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
09042030	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
12030000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
17011110	82.0%	80.6%	80.9%				81.2%
17031000	3.8%	0.0%	0.0%	3.0%	10.2%	0.0%	2.8%
24011041	7.2%	7.2%	7.4%	6.8%	9.6%	8.7%	7.8%
24012010	6.5%	6.4%					6.4%
24012020	5.9%	6.4%	6.6%	7.7%	9.5%	9.8%	7.7%
24012041	10.6%	11.1%					10.9%
24012050	11.8%	11.3%	7.1%	6.9%	8.6%	9.8%	9.2%
24013000	57.9%	55.0%	71.9%	72.1%			64.2%
25041000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
25161100	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
27011290	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
27011900	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
41015010	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
41032000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
41041151	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44020000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44039995	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44072969	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44072995	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44079996	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44079997	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44092091	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44092098	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
47032900	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
52010090	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
52081299	8.8%						8.8%
53089090	3.8%	3.8%	3.8%	3.8%			3.8%
56072100	10.0%	12.0%	6.0%	0.0%			7.0%
56072910	10.5%	12.0%	12.0%	5.1%	12.0%	10.0%	10.3%
56072990	12.0%	12.0%	12.0%	12.0%	12.0%		12.0%
61091000	9.0%	9.0%	12.0%	0.0%			7.5%
62034211	12.0%	12.0%					12.0%
64061011	2.8%	2.5%					2.6%
71031000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero

HS8	year 2000	2001	2002	2003	2004	2005	Average
75021000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
76011000	2.0%	3.5%	4.2%	3.1%	4.2%	4.8%	3.6%
76012010	6.0%	6.0%	6.0%				6.0%
76012091	0.0%	6.0%	6.0%	6.0%			4.5%
76051100	7.5%						7.5%

Source: Authors' calculations based on TARIC

Table 7 Tabulated price ratios (Margin_price$_2$ and Margin_price$_3$) per product

Margin_price$_2$<1			
hs8	**Freq.**	**Percent**	**Cum.**
03026999	69	19.83	19.83
03037987	8	2.3	22.13
03061190	7	2.01	24.14
03061350	47	13.51	37.64
03061380	67	19.25	56.9
03061910	4	1.15	58.05
03075910	17	4.89	62.93
06031010	3	0.86	63.79
08051030	11	3.16	66.95
08054000	1	0.29	67.24
17031000	3	0.86	68.1
24012010	7	2.01	70.11
24012050	19	5.46	75.57
24013000	1	0.29	75.86
52081299	3	0.86	76.72
56072100	10	2.87	79.6
56072910	1	0.29	79.89
62034211	4	1.15	81.03
76011000	41	11.78	92.82
76012010	2	0.57	93.39
76012091	22	6.32	99.71
76051100	1	0.29	100
Total	348	100	

Margin_price$_2$>1			
hs8	**Freq.**	**Percent**	**Cum.**
03037987	2	0.63	0.63
03061110	*10*	*3.13*	*3.76*
03061190	9	2.82	6.58
03061350	23	7.21	13.79
03061380	5	1.57	15.36
03075910	7	2.19	17.55
06031010	*29*	*9.09*	*26.65*
08051030	1	0.31	26.96
08054000	*10*	*3.13*	*30.09*
17031000	1	0.31	30.41
24011041	*14*	*4.39*	*34.8*
24012010	14	4.39	39.18
24012020	*63*	*19.75*	*58.93*
24012050	26	8.15	67.08
24013000	*18*	*5.64*	*72.73*
52081299	2	0.63	73.35
53089090	8	2.51	75.86
56072910	4	1.25	77.12
56072990	6	1.88	79
61091000	*16*	*5.02*	*84.01*
64061011	*21*	*6.58*	*90.6*
76011000	20	6.27	96.87
76012010	10	3.13	100
Total	319	100	

Margin_price$_3$<1			
hs8	**Freq.**	**Percent**	**Cum.**
03026999	42	9.63	9.63
03061110	17	3.9	13.53
03061190	8	1.83	15.37
03061350	7	1.61	16.97
03061380	27	6.19	23.17
03061910	2	0.46	23.62
03075910	10	2.29	25.92
06031010	31	7.11	33.03
08051030	1	0.23	33.26
08054000	15	3.44	36.7
17031000	4	0.92	37.61
24011041	14	3.21	40.83
24012010	12	2.75	43.58
24012020	51	11.7	55.28
24012050	26	5.96	61.24
24013000	19	4.36	65.6
52081299	3	0.69	66.28
53089090	8	1.83	68.12
56072100	4	0.92	69.04
56072910	19	4.36	73.39

Margin_price$_3$>1			
hs8	**Freq.**	**Percent**	**Cum.**
03026999	27	9.41	9.41
03037987	*10*	*3.48*	*12.89*
03061110	8	2.79	15.68
03061190	12	4.18	19.86
03061350	*63*	*21.95*	*41.81*
03061380	45	15.68	57.49
03061910	2	0.7	58.19
03075910	14	4.88	63.07
06031010	1	0.35	63.41
08051030	*11*	*3.83*	*67.25*
08054000	1	0.35	67.6
17011110	*4*	*1.39*	*68.99*
24011041	2	0.7	69.69
24012010	9	3.14	72.82
24012020	14	4.88	77.7
24012050	20	6.97	84.67
52081299	2	0.7	85.37
56072100	2	0.7	86.06
56072910	5	1.74	87.8
56072990	2	0.7	88.5

Margin_price$_2$<1			
hs8	**Freq.**	**Percent**	**Cum.**
56072990	12	2.75	76.15
61091000	16	3.67	79.82
62034211	4	0.92	80.73
64061011	21	4.82	85.55
76011000	48	11.01	96.56
76012010	12	2.75	99.31
76012091	3	0.69	100
Total	436	100	

Margin_price$_2$>1			
hs8	**Freq.**	**Percent**	**Cum.**
76011000	13	4.53	93.03
76012091	19	6.62	99.65
76051100	1	0.35	100
Total	287	100	

Source: Authors' calculations

* Products highlighted in dark grey show products having price ratios only above one and in light grey products having the majority of observations above one but also some obs. below one.

Table 7 Tabulated price ratios (Margin_price$_4$ and Margin_price$_5$) per product

Margin_price$_4$<1			
hs8	**Freq.**	**Percent**	**Cum.**
03061380	4	11.11	11.11
06031010	1	2.78	13.89
08051030	1	2.78	16.67
08054000	3	8.33	25
24012050	5	13.89	38.89
56072910	4	11.11	50
61091000	3	8.33	58.33
64061011	1	2.78	61.11
76011000	14	38.89	100
Total	36	100	

Margin_price$_4$>1			
hs8	**Freq.**	**Percent**	**Cum.**
03026999	2	4.17	4.17
03061350	1	2.08	6.25
03061380	2	4.17	10.42
08051030	3	6.25	16.67
08054000	4	8.33	25
24012050	12	25	50
56072100	1	2.08	52.08
56072910	1	2.08	54.17
61091000	1	2.08	56.25
64061011	2	4.17	60.42
76011000	19	39.58	100
Total	48	100	

Margin_price$_5$<1			
hs8	**Freq.**	**Percent**	**Cum.**
03026999	1	0.68	0.68
03061110	9	6.12	6.8
03061190	2	1.36	8.16
03061380	34	23.13	31.29
03075910	6	4.08	35.37
06031010	4	2.72	38.1
08051030	2	1.36	39.46
08054000	8	5.44	44.9
17031000	2	1.36	46.26
24011041	4	2.72	48.98
24012050	9	6.12	55.1
56072910	11	7.48	62.59
61091000	13	8.84	71.43
64061011	10	6.8	78.23
76011000	32	21.77	100
Total	147	100	

Margin_price$_5$>1			
hs8	**Freq.**	**Percent**	**Cum.**
03026999	*22*	*13.84*	*13.84*
03061110	1	0.63	14.47
03061350	11	6.92	21.38
03061380	14	8.81	30.19
03075910	2	1.26	31.45
06031010	7	4.4	35.85
08051030	7	4.4	40.25
08054000	8	5.03	45.28
24012050	*32*	*20.13*	*65.41*
56072100	6	3.77	69.18
56072910	7	4.4	73.58
61091000	2	1.26	74.84
64061011	11	6.92	81.76
76011000	29	18.24	100
Total	159	100	

Source: Authors' calculations

* Products highlighted in dark grey show products having price ratios only above one and in light grey products having the majority of observations above one but also some obs. below one.

Table 8– Utilization rates – yearly (Mozambique)

HS8	2000	2001	2002	2003	2004	2005	*Average*
03026999	100%	100%	100%	99%	100%	100%	*100%*
03037987	100%	100%	.	.	.	.	*100%*
03061110	87%	100%	100%	100%	100%	77%	*94%*
03061190	100%	100%	100%	100%	100%	78%	*96%*
03061350	100%	100%	100%	100%	100%	100%	*100%*
03061380	100%	99%	100%	95%	100%	99%	*99%*
03061910	100%	100%	100%	.	.	.	*100%*
03075910	100%	100%	100%	92%	100%	73%	*94%*
05080000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
06031010	.	.	100%	100%	99%	100%	*100%*
08013200	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
08051030	96%	89%	.	.	100%	0%	*71%*
08054000	93%	86%	.	26%	90%	78%	*75%*
09024000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
09042030	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
12030000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
17011110	.	.	100%	100%	100%	.	*100%*
17031000	50%	.	0%	60%	100%	.	*53%*
24011041	100%	100%	100%	99%	100%	100%	*100%*
24012010	100%	100%	.	.	.	.	*100%*
24012020	100%	100%	100%	100%	100%	100%	*100%*
24012041	.	100%	100%	.	.	.	*100%*
24012050	100%	100%	65%	63%	93%	99%	*87%*
24013000	.	100%	100%	100%	.	100%	*100%*
25041000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
25161100	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
27011290	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
27011900	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
41015010	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
41032000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
41041151	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44020000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44039995	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44072969	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44072995	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44079996	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44079997	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44092091	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
44092098	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
47032900	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
52010090	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
52081299	100%	.	.	.	.	.	*100%*
53089090	.	100%	.	100%	100%	100%	*100%*
56072100	86%	.	100%	66%	.	0%	*63%*
56072910	96%	100%	100%	18%	100%	72%	*81%*
56072990	.	100%	100%	100%	100%	100%	*100%*
61091000	96%	98%	100%	.	.	.	*74%*
62034211	.	.	.	.	100%	100%	*100%*
64061011	98%	93%	.	.	.	.	*95%*
71031000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero
75021000	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero	MFN zero

HS8	2000	2001	2002	2003	2004	2005	*Average*
76011000	46%	97%	100%	43%	99%	81%	*78%*
76012010	.	100%	100%	.	.	100%	*100%*
76012091	.	.	0%	100%	100%	100%	*75%*
76051100	.	.	.	.	.	100%	*100%*

Source: Authors' calculations
*Missing values indicate no exports

Table 9 Products showing lowest average utilization rates

HS8	Lowest Average Utilization rates (<80%)	Average MFN tariff
76011000	78%	6.0%
08054000	75%	2.4%
76012091	75%	6.0%
61091000	74%	12.0%
08051030	71%	17.1%
56072100	63%	12.0%
17031000	53%	4.6%

Source: Authors' calculations

Table 10 Broad sample - Products frequencies

hs8	Freq.	Percent
03026999	4236	4.8
03037987	1200	1.36
03061110	550	0.62
03061190	1017	1.15
03061350	3885	4.4
03061380	3146	3.56
03061910	301	0.34
03075910	2488	2.82
05080000	1479	1.68
06031010	2600	2.95
08013200	830	0.94
08051030	1137	1.29
08054000	1164	1.32
09024000	2201	2.49
09042030	1182	1.34
12030000	149	0.17
17011110	562	0.64
17031000	551	0.62
24011041	319	0.36
24012010	1688	1.91
24012020	1301	1.47
24012041	173	0.2
24012050	1086	1.23
24013000	1612	1.83
25041000	801	0.91
25161100	1908	2.16
27011290	717	0.81
27011900	589	0.67
41015010	744	0.84
41032000	726	0.82
41041151	1644	1.86
44020000	2161	2.45
44039995	2418	2.74
44072969	1964	2.22
44072995	1928	2.18
44079996	1663	1.88
44079997	3279	3.71
44092091	2834	3.21
44092098	2465	2.79
47032900	985	1.12
52010090	2890	3.27
52081299	1951	2.21
53089090	293	0.33
56072100	331	0.37
56072910	206	0.23
56072990	247	0.28
61091000	8290	9.39
62034211	2665	3.02
64061011	2430	2.75
71031000	1124	1.27
72024199	610	0.69

hs8	Freq.	Percent
75021000	629	0.71
76011000	1719	1.95
76012010	1289	1.46
76012091	1243	1.41
76051100	683	0.77

Source: Authors' calculations

Table 11 Broad sample - Country frequencies

Country	Overall		Between products		Average GNI per capita (USD) 2000/2005
	Freq.	Percent	Freq.	Percent	
Iceland	420	0.48	22	39.29	36080.51
Norway	1709	1.94	46	82.14	44463.97
Switzerland	1427	1.62	45	80.36	43329.29
Turkey	1814	2.05	46	82.14	3189.504
Romania	1435	1.63	36	64.29	2419.54
Bulgaria	1049	1.19	31	55.36	2273.146
Albania	653	0.74	25	44.64	1690.245
Ukraine	987	1.12	33	58.93	1010.699
Belarus	499	0.57	22	39.29	1957.595
Moldova	276	0.31	21	37.5	621.2681
Russia	1564	1.77	38	67.86	2695.467
Georgia	237	0.27	19	33.93	851.9831
Armenia	58	0.07	13	23.21	1044.138
Azerbaijan	128	0.14	17	30.36	781.7969
Kasakhstan	306	0.35	14	25	1870.458
Turkmenistan	118	0.13	3	5.36	
Uzbekistan	230	0.26	10	17.86	463.7391
Tadjikistan	165	0.19	7	12.5	226.303
Kyrghistan	113	0.13	7	12.5	349.3805
Croatia	1102	1.25	36	64.29	5667.595
Bosnia and Herz.	968	1.1	26	46.43	1855.062
Serb.Monten.	872	0.99	27	48.21	1808.073
For.JRep.Mac	614	0.7	25	44.64	2089.495
Morocco	1238	1.4	38	67.86	1395.089
Algeria	420	0.48	20	35.71	2031.024
Tunisia	1169	1.32	38	67.86	2291.848
Libyan Arab Jamahiriya	12	0.01	7	12.5	4572
Egypt	1127	1.28	36	64.29	1360.453
Sudan	235	0.27	17	30.36	432.7234
Mauritania	450	0.51	13	23.21	461.9333
Mali	119	0.13	8	14.29	271.9328
Burkina Faso	95	0.11	8	14.29	293.8947
Niger	72	0.08	14	25	175.2778
Chad	92	0.1	5	8.93	257.6087
Cape Verde	110	0.12	8	14.29	1585.054
Senegal	674	0.76	23	41.07	521.1869
Gambia	223	0.25	18	32.14	294.574
Guinea Biss.	179	0.2	15	26.79	148.8827
Guinea	695	0.79	19	33.93	399.741
Sierra Leone	60	0.07	14	25	196.3333
Liberia	157	0.18	15	26.79	127.2414
Ivory Coast	1142	1.29	29	51.79	667.662
Ghana	1135	1.29	30	53.57	335.1013
Togo	334	0.38	18	32.14	274.9102
Benin	373	0.42	18	32.14	391.9571
Nigeria	935	1.06	30	53.57	380.8235
Cameroon	772	0.87	22	39.29	753.6278
Centr.Africa	246	0.28	14	25	285.2846
Equat.Guinea	162	0.18	7	12.5	710

Country	Overall		Between products		Average GNI per capita (USD) 2000/2005
	Freq.	Percent	Freq.	Percent	
S.Tome,Princ	21	0.02	4	7.14	331.8182
Gabon	502	0.57	14	25	3639.681
Congo	559	0.63	19	33.93	704.5081
Congo (Dem. Rep.)	477	0.54	19	33.93	102.0097
Rwanda	152	0.17	6	10.71	220.3947
Burundi	109	0.12	5	8.93	97.52294
Saint Helena	4	0	2	3.57	
Angola	222	0.25	15	26.79	673.1081
Ethiopia	280	0.32	14	25	124.75
Eritrea	147	0.17	11	19.64	168.3674
Djibouti	13	0.01	4	7.14	890.8333
Somalia	6	0.01	5	8.93	
Kenya	822	0.93	38	67.86	432.0803
Uganda	673	0.76	22	39.29	254.1308
Tanzania	1168	1.32	39	69.64	297.0805
Seychelles	195	0.22	11	19.64	7510.355
Mozambique	1502	1.7	55	98.21	241.1718
Madagascar	1347	1.53	37	66.07	261.4996
Mauritius	527	0.6	20	35.71	4233.454
Comoros	5	0.01	4	7.14	616.6667
Mayotte	54	0.06	3	5.36	
Zambia	476	0.54	22	39.29	359.4328
Zimbabwe	1549	1.75	32	57.14	593.6152
Malawi	741	0.84	17	30.36	153.2659
South Africa	2134	2.42	50	89.29	3271.771
Namibia	315	0.36	20	35.71	2171.016
Botswana	161	0.18	4	7.14	3956.708
Swaziland	241	0.27	14	25	1536.556
Lesotho	41	0.05	3	5.36	667.561
USA	2413	2.73	55	98.21	37655.11
Canada	1271	1.44	43	76.79	25212.2
S.Pierre,Miq	16	0.02	6	10.71	
Mexico	800	0.91	40	71.43	6214.575
Bermuda	4	0	3	5.36	
Guatemala	537	0.61	23	41.07	1959.33
Belize	207	0.23	22	39.29	3378.485
Honduras	545	0.62	26	46.43	960.789
El Salvador	124	0.14	8	14.29	2242.6
Nicaragua	279	0.32	20	35.71	755.6272
Costa Rica	462	0.52	25	44.64	4103.745
Panama	287	0.33	24	42.86	4062.021
Anguilla	1	0	1	1.79	
Cuba	519	0.59	32	57.14	
St.Ch.&Nevis	26	0.03	5	8.93	7028.125
Haiti	78	0.09	4	7.14	445.1282
Bahamas	95	0.11	18	32.14	
Turks,Caicos	40	0.05	5	8.93	
Dominican R.	286	0.32	14	25	2235.42
Virgin Isles	5	0.01	4	7.14	
Antigua,Barb	19	0.02	9	16.07	9351.429
Dominica	90	0.1	7	12.5	3453.871

Country	Overall		Between products		Average GNI per capita (USD) 2000/2005
	Freq.	Percent	Freq.	Percent	
Cayman Isles	26	0.03	2	3.57	
Jamaica	253	0.29	15	26.79	3053.795
St Lucia	12	0.01	4	7.14	4222.5
St Vincent	27	0.03	5	8.93	2945
Brit.Virg.Isl.	15	0.02	9	16.07	
Barbados	30	0.03	4	7.14	
Montserrat	14	0.02	5	8.93	
Trinidad,Tob	101	0.11	11	19.64	6893.366
Grenada	77	0.09	2	3.57	3589.804
Aruba	6	0.01	1	1.79	
Nl Antilles	27	0.03	9	16.07	
Colombia	946	1.07	37	66.07	1994.577
Venezuela	878	0.99	31	55.36	3528.059
Guyana	327	0.37	15	26.79	925.3405
Surinam	568	0.64	24	42.86	2142.134
Ecuador	671	0.76	32	57.14	1829.046
Peru	818	0.93	34	60.71	2233.301
Brazil	2752	3.12	51	91.07	3095.247
Chile	819	0.93	32	57.14	4788.706
Bolivia	405	0.46	18	32.14	964.1975
Paraguay	450	0.51	19	33.93	1082.356
Uruguay	376	0.43	23	41.07	4557.739
Argentina	1743	1.97	41	73.21	4950.643
Falkland Is.	3	0	3	5.36	
Lebanon	237	0.27	19	33.93	5334.093
Syria	405	0.46	22	39.29	1178.198
Iraq	4	0	2	3.57	
Iran	631	0.71	29	51.79	1967.67
Israel	733	0.83	29	51.79	16969.78
Gaza + Jericho	19	0.02	5	8.93	
East Timor	1	0	1	1.79	430
Jordan	116	0.13	10	17.86	1947.069
Saudi Arabia	217	0.25	25	44.64	9516.912
Kuwait	11	0.01	5	8.93	20278.18
Bahrain	262	0.3	16	28.57	12234.39
Qatar	30	0.03	7	12.5	
U.A.Emirates	585	0.66	33	58.93	21651.14
Oman	313	0.35	15	26.79	8230.36
Yemen	206	0.23	11	19.64	487.1359
Afghanistan	15	0.02	8	14.29	
Pakistan	917	1.04	27	48.21	526.7721
India	2470	2.8	51	91.07	545.0648
Bangladesh	603	0.68	26	46.43	406.6667
Maldives	91	0.1	5	8.93	2147.059
Sri Lanka	1059	1.2	30	53.57	932.3041
Nepal	247	0.28	7	12.5	239.1498
Bhutan	4	0	3	5.36	960
Myanmar	603	0.68	13	23.21	
Thailand	1568	1.78	41	73.21	2238.348
Lao (People s Democratic Republic)	195	0.22	12	21.43	341.7949
Vietnam	1184	1.34	38	67.86	480.5574

Country	Overall		Between products		Average GNI per capita (USD) 2000/2005
	Freq.	Percent	Freq.	Percent	
Cambodia	174	0.2	5	8.93	331.7241
Indonesia	2316	2.62	45	80.36	917.9663
Malaysia	1340	1.52	35	62.5	4017.649
Brunei	71	0.08	4	7.14	
Singapore	748	0.85	31	55.36	23581.77
Philippines	807	0.91	35	62.5	1131.115
Mongolia	42	0.05	10	17.86	562.1429
China	2390	2.71	50	89.29	1269.745
North Korea	20	0.02	6	10.71	
South Korea	700	0.79	35	62.5	12133.57
Japan	317	0.36	34	60.71	35206.47
Taiwan	595	0.67	34	60.71	
Hong Kong	445	0.5	22	39.29	26156.14
Macao	124	0.14	8	14.29	14010
Australia	1479	1.68	43	76.79	24214.69
Papua N.G.	280	0.32	14	25	577.4332
Aust.Oceania	1	0	1	1.79	
Nauru	3	0	3	5.36	
New Zealand	396	0.45	34	60.71	17569.07
Solomon Is.	49	0.06	7	12.5	588.0488
Tuvalu	1	0	1	1.79	
N. Caledonia	100	0.11	8	14.29	
Am. Oceania	10	0.01	3	5.36	
Wallis,Futun	6	0.01	1	1.79	
Kiribati	1	0	1	1.79	930
N.Z Oceania	1	0	1	1.79	
Fiji	115	0.13	9	16.07	2513.412
Vanuatu	40	0.05	3	5.36	1297.297
Tonga	6	0.01	2	3.57	1566
West. Samoa	6	0.01	1	1.79	1370
North.Mar.Is	33	0.04	3	5.36	
Fr.Polynesia	38	0.04	5	8.93	
Fed.Micron.	1	0	1	1.79	2110
Marshall Is.	3	0	1	1.79	2810
Palau	2	0	2	3.57	
Américan Samoa	3	0	3	5.36	
Guam	4	0	3	5.36	
US Minor outlying Islands	2	0	2	3.57	
Cocos Islands(or Keeling Isl.)	1	0	1	1.79	
Christmas Island	1	0	1	1.79	
Heard Island & McDonald Islan.	2	0	1	1.79	
Cook Islands	4	0	2	3.57	
Tokelau	12	0.01	3	5.36	
Bouvet Island	5	0.01	3	5.36	
South Georgia & S.Sandwich Is.	2	0	2	3.57	
TOT	88283	100			

Source: Authors' calculations

Table 12 Broad sample descriptive statistics for explanatory variables (conditional to preferences being used)

variable	mean	median	sd	min	max
***Margin_price*$_1$**	18.56	2.11	443.02	0.02	28324.83
***Margin_price*$_2$**	0.96	0.90	0.52	0.01	11.83
***Margin_price*$_3$**	1.21	1.01	0.93	0.01	20.21
***Margin_price*$_4$**	2.00	0.99	63.26	0.00	145.30
***Margin_price*$_5$**	1.05	0.98	0.88	0.01	69.37
Tdiff	10%	8%	11%	0%	186%
Mfn	12%	12%	11%	1%	186%
Tariff	2%	0%	3%	0%	95%
Mkt_ratio	98%	100%	8%	53%	143%
Mkt_ratio_ref_ country	109%	105%	15%	53%	159%

Source: Authors' calculations

Table 13 Regressions monthly - DEP VAR ln(Margin_price2), ln(Margin_price3), ln(Margin_price4), ln(Margin_price5)

DEP VAR ln(Margin_price2)	**OLS**		**OLS**	
ltratio	0.0008			
	[0.0278]			
lmkt_ratio	-0.1238***		-0.1243***	
	[0.0221]		[0.0221]	
ltratio2			-0.0074	
			[0.0279]	
Constant	-0.1624***		-0.1625***	
	[0.0023]		[0.0020]	
Observations	87302		87302	
R-squared	0		0	
Robust standard errors in brackets				
* significant at 10%; ** significant at 5%; *** significant at 1%				
DEP VAR ln(Margin_price2)	**FEM (hs8, year)**	**FEM (country, year)**	**FEM (hs8, year)**	**FEM (country, year)**
ltratio	-0.3033***	0.1291***		
	[0.0423]	[0.0324]		
lmkt_ratio	-0.0816***	-0.1725***	-0.0813***	-0.1730***
	[0.0245]	[0.0250]	[0.0245]	[0.0250]
ltratio2			-0.3373***	0.1150***
			[0.0436]	[0.0325]
Constant	-0.1526***	-0.1669***	-0.1644***	-0.1621***
	[0.0023]	[0.0021]	[0.0020]	[0.0019]
Observations	87302	87302	87302	87302
Number of hs8	56		56	
R-squared	0	0	0	0
Number of country		196		196
Standard errors in brackets				
* significant at 10%; ** significant at 5%; *** significant at 1%				
DEP VAR ln(Margin_price2)	**REM (hs8, year)**	**REM (country, year)**	**REM (hs8, year)**	**REM (country, year)**
ltratio	-0.2939***	0.1306***		
	[0.0420]	[0.0323]		
lmkt_ratio	-0.0809***	-0.1729***	-0.0807***	-0.1734***
	[0.0244]	[0.0250]	[0.0244]	[0.0250]
ltratio2			-0.3267***	0.1167***
			[0.0433]	[0.0324]
Constant	-0.1370***	-0.1685***	-0.1484***	-0.1636***
	[0.0231]	[0.0199]	[0.0230]	[0.0199]
Observations	87302	87302	87302	87302
Number of hs8	56		56	
Number of country		196		196
Standard errors in brackets				
* significant at 10%; ** significant at 5%; *** significant at 1%				

DEP VAR ln(Margin_price3)	**OLS**		**OLS**	
ltratio	0.2314***			
	[0.0396]			
lmkt_ratio_country	-0.1221***		-0.1224***	
	[0.0162]		[0.0162]	
ltratio2			0.2235***	
			[0.0399]	
Constant	0.0267***		0.0355***	
	[0.0038]		[0.0031]	
Observations	82609		82609	
R-squared	0		0	
Robust standard errors in brackets				
* significant at 10%; ** significant at 5%; *** significant at 1%				
DEP VAR ln(Margin_price3)	**FEM (hs8, year)**	**FEM (country, year)**	**FEM (hs8, year)**	**FEM (country, year)**
ltratio	-0.3255***	0.4104***		
	[0.0473]	[0.0427]		
lmkt_ratio_country	-0.1057***	-0.1057***	-0.1056***	-0.1060***
	[0.0280]	[0.0163]	[0.0280]	[0.0163]
ltratio2			-0.3610***	0.3954***
			[0.0488]	[0.0430]
Constant	0.0410***	0.0185***	0.0283***	0.0340***
	[0.0053]	[0.0040]	[0.0051]	[0.0035]
Observations	82609	82609	82609	82609
Number of hs8	55		55	
R-squared	0	0	0	0
Number of country		196		196
Standard errors in brackets				
* significant at 10%; ** significant at 5%; *** significant at 1%				
DEP VAR ln(Margin_price3)	**REM (hs8, year)**	**REM (country, year)**	**REM (hs8, year)**	**REM (country, year)**
ltratio	-0.3242***	0.4105***		
	[0.0473]	[0.0427]		
lmkt_ratio_country	-0.1050***	-0.1076***	-0.1049***	-0.1078***
	[0.0280]	[0.0162]	[0.0279]	[0.0163]
ltratio2			-0.3596***	0.3956***
			[0.0487]	[0.0430]
Constant	0.0444	0.0254	0.0319	0.041
	[0.0544]	[0.0251]	[0.0544]	[0.0251]
Observations	82609	82609	82609	82609
Number of hs8	55		55	
Number of country		196		196
Standard errors in brackets				
* significant at 10%; ** significant at 5%; *** significant at 1%				

DEP VAR ln(Margin_price4)	**OLS**		**OLS**	
ltratio	-0.2349***			
	[0.0764]			
lmkt_ratio	0.0401		0.0404	
	[0.0395]		[0.0395]	
ltratio2			-0.2504***	
			[0.0768]	
Constant	0.0215***		0.0131**	
	[0.0080]		[0.0063]	
Observations	10439		10439	
R-squared	0		0	
Robust standard errors in brackets				
* significant at 10%; ** significant at 5%; *** significant at 1%				
DEP VAR ln(Margin_price4)	**FEM (hs8, year)**	**FEM (country, year)**	**FEM (hs8, year)**	**FEM (country, year)**
ltratio	0.0928	-0.3342***		
	[0.1417]	[0.1039]		
lmkt_ratio	0.1098*	0.0673	0.1092*	0.0678
	[0.0562]	[0.0648]	[0.0562]	[0.0648]
ltratio2			0.0752	-0.3487***
			[0.1458]	[0.1044]
Constant	0.0002	0.0300***	0.0043	0.0178**
	[0.0118]	[0.0097]	[0.0076]	[0.0069]
Observations	10439	10439	10439	10439
Number of hs8	32		32	
R-squared	0	0	0	0
Number of country		120		120
Standard errors in brackets				
* significant at 10%; ** significant at 5%; *** significant at 1%				
DEP VAR ln(Margin_price4)	**REM (hs8, year)**	**REM (country, year)**	**REM (hs8, year)**	**REM (country, year)**
ltratio	0.0474	-0.3212***		
	[0.1175]	[0.1018]		
lmkt_ratio	0.1258**	0.0617	0.1254**	0.0622
	[0.0551]	[0.0643]	[0.0550]	[0.0643]
ltratio2			0.0333	-0.3353***
			[0.1199]	[0.1023]
Constant	0.0185	0.0036	0.0208	-0.008
	[0.0195]	[0.0356]	[0.0180]	[0.0349]
Observations	10439	10439	10439	10439
Number of hs8	32		32	
Number of country		120		120
Standard errors in brackets				
* significant at 10%; ** significant at 5%; *** significant at 1%				

DEP VAR ln(Margin_price5)	**OLS**		**OLS**	
ltratio	-0.1437***			
	[0.0416]			
lmkt_ratio	-0.0807***		-0.0818***	
	[0.0116]		[0.0116]	
ltratio2			-0.1584***	
			[0.0418]	
Constant	-0.0397***		-0.0456***	
	[0.0013]		[0.0018]	
Observations	65722		65722	
R-squared	0		0	
Robust standard errors in brackets				
* significant at 10%; ** significant at 5%; *** significant at 1%				
DEP VAR ln(Margin_price5)	**FEM (hs8, year)**	**FEM (country, year)**	**FEM (hs8, year)**	**FEM (country, year)**
ltratio	-0.0646	-0.1209***		
	[0.0399]	[0.0378]		
lmkt_ratio	-0.0724***	-0.0926***	-0.0728***	-0.0934***
	[0.0159]	[0.0171]	[0.0159]	[0.0171]
ltratio2			-0.0815**	-0.1338***
			[0.0413]	[0.0381]
Constant	-0.0406***	-0.0402***	-0.0435***	-0.0451***
	[0.0014]	[0.0014]	[0.0017]	[0.0016]
Observations	65722	65722	65722	65722
Number of hs8	56		56	
R-squared	0	0	0	0
Number of country		173		173
Standard errors in brackets				
* significant at 10%; ** significant at 5%; *** significant at 1%				
DEP VAR ln(Margin_price5)	**REM (hs8, year)**	**REM (country, year)**	**REM (hs8, year)**	**REM (country, year)**
ltratio	-0.0614	-0.1437***		
	[0.0396]	[0.0357]		
lmkt_ratio	-0.0702***	-0.0807***	-0.0706***	-0.0818***
	[0.0158]	[0.0155]	[0.0158]	[0.0156]
ltratio2			-0.0770*	-0.1584***
			[0.0408]	[0.0359]
Constant	-0.0336***	-0.0397***	-0.0363***	-0.0456***
	[0.0056]	[0.0014]	[0.0057]	[0.0016]
Observations	65722	65722	65722	65722
Number of hs8	56		56	
Number of country		173		173
Standard errors in brackets				
* significant at 10%; ** significant at 5%; *** significant at 1%				

Source: Authors' calculations

Table 14 Regressions monthly - unconditional mean and standard deviation of variables of interest

	Margin_price2	***Margin_price3***	***Margin_price4***	***Margin_price5***	**tratio**	**mkt_ratio**	**mkt_ratio_c**
mean	0.987855	1.310481	1.146245	1.007218	1.034848	0.992629	1.18567
sd	0.567246	1.674809	24.21294	0.41169	0.079971	0.073817	0.18337

Source: Authors' calculations

Table 15 Yearly Regressions - Correlation table log(Margin_price$_2$) log(Margin_price$_3$), log(tariff_ratio), log(tariff_ratio 2), log(market_ratio)

Margin_price$_2$	**lpratio**	**ltariff_ratio**	**ltariff_ratio2**	**lmkt_ratio**
lpratio	1			
ltariff_ratio	0.0536	1		
ltariff_ratio2	0.0541		1	
lmkt_ratio	-0.0135	-0.1151	-0.1173	1

Margin_price$_3$	**lpratio**	**ltariff_ratio**	**ltariff_ratio2**	**lmkt_ratio**
lpratio	1			
ltariff_ratio	0.0426	1		
ltariff_ratio2	0.0427		1	
lmkt_ratio	-0.0173	-0.3237	-0.3322	1

Source: Authors' calculations

Table 16 Yearly regressions - Equation (5b) DEP VAR Margin_price$_2$

DEP VAR ln(Margin_price2)	**OLS**		**OLS**	
ln(tariff_ratio)	0.4719***			
	[0.0633]			
lmkt_ratio	-0.0679		-0.0664	
	[0.0734]		[0.0734]	
ln(tariff_ratio2)			0.4779***	
			[0.0633]	
Constant	-0.1567***		-0.1386***	
	[0.0063]		[0.0054]	
Observations	12283		12283	
R-squared	0.0029		0.003	
Robust standard errors in brackets *** significant at 10%; ** significant at 5%; *** significant at 1%**				
DEP VAR ln(Margin_price2)	**FEM (hs8, year)**	**FEM (country, year)**	**FEM (hs8, year)**	**FEM (country, year)**
ln(tariff_ratio)	0.3888***	0.6264***		
	[0.1141]	[0.0844]		
lmkt_ratio	-0.0497	-0.0743	-0.0497	-0.0736
	[0.0841]	[0.0824]	[0.0841]	[0.0824]
ln(tariff_ratio2)			0.4019***	0.6242***
			[0.1177]	[0.0845]
Constant	-0.1545***	-0.1611***	-0.1395***	-0.1372***
	[0.0064]	[0.0060]	[0.0056]	[0.0054]
Observations	12283	12283	12283	12283
Number of hs8	56		56	
R-squared	0.0029	0.0029	0.003	0.003
Number of country		196		196
DEP VAR ln(Margin_price2)	**REM (hs8, year)**	**REM (country, year)**	**REM (hs8, year)**	**REM (country, year)**
ln(tariff_ratio)	0.3951***	0.6280***		
	[0.1097]	[0.0831]		
lmkt_ratio	-0.0398	-0.0765	-0.0396	-0.0757
	[0.0835]	[0.0821]	[0.0835]	[0.0821]
ln(tariff_ratio2)			0.4071***	0.6267***
			[0.1127]	[0.0833]
Constant	-0.1539***	-0.1789***	-0.1387***	-0.1550***
	[0.0227]	[0.0191]	[0.0224]	[0.0189]
Observations	12283	12283	12283	12283
Number of hs8	56		56	
R-squared	0.0029	0.0029	0.003	0.003
Number of country		196		196
Standard errors in brackets *** significant at 10%; ** significant at 5%; *** significant at 1%**				

Source: Authors' calculations

Table 17 Yearly regressions - Equation (5b) DEP VAR Margin_price$_3$

DEP VAR ln(Margin_price3)	**OLS**		**OLS**	
ln(1+mean_mfn)/(1+mean_tariff)	0.4172***			
	[0.0722]			
ln((1+mkt_share_refcountry)/(1+expindex))	-0.0182		-0.0161	
	[0.0418]		[0.0419]	
ln(1+mean_mfn)/(1+mean_tariff+cost)			0.4212***	
			[0.0721]	
Constant	0.0400***		0.0556***	
	[0.0102]		[0.0090]	
Observations	12129		12129	
R-squared	0.018		0.018	
Robust standard errors in brackets *** significant at 10%; ** significant at 5%; *** significant at 1%**				
DEP VAR ln(Margin_price3)	**FEM (hs8, year)**	**FEM (country, year)**	**FEM (hs8, year)**	**FEM (country, year)**
ln(1+mean_mfn)/(1+mean_tariff)	0.4084***	0.6151***		
	[0.1166]	[0.1005]		
ln((1+mkt_share_refcountry)/(1+expindex))	0.0022	0.0273	0.0022	0.0289
	[0.0738]	[0.0435]	[0.0738]	[0.0436]
ln(1+mean_mfn)/(1+mean_tariff+cost)			0.4231***	0.6114***
			[0.1202]	[0.1009]
Constant	0.0363**	0.0255**	0.0520***	0.0487***
	[0.0158]	[0.0115]	[0.0154]	[0.0102]
Observations	12129	12129	12129	12129
Number of hs8	56		56	
R-squared	0.018	0.018	0.018	0.018
Number of country		196		196

DEP VAR ln(Margin_price3)	REM (hs8, year)	REM (country, year)	REM (hs8, year)	REM (country, year)
ln(1+mean_mfn)/(1+mean_tariff)	0.4059***	0.6095***		
	[0.1156]	[0.0991]		
ln((1+mkt_share_refcountry)/(1+expindex))	0.0009	0.015	0.0011	0.0167
	[0.0724]	[0.0432]	[0.0724]	[0.0434]
ln(1+mean_mfn)/(1+mean_tariff+cost)			0.4200***	0.6064***
			[0.1191]	[0.0995]
Constant	0.0096	0.0185	0.0251	0.0415*
	[0.0533]	[0.0236]	[0.0532]	[0.0230]
Observations	12129	12129	12129	12129
Number of hs8	56		56	
R-squared	0.018	0.018	0.018	0.018
Number of country		196		196

Standard errors in brackets
*** significant at 10%; ** significant at 5%; *** significant at 1%**
Source: Authors' calculations

Table 18 Regressions in first differences DEP VAR Δln(Margin_price2)

DEP VAR Δln(Margin_price2 **)**	**OLS (year)**	**OLS (country)**	**OLS (year)**	**OLS (country)**
lmean_tratio[_n]-lmean_tratio[_n-1]	0.5606*	0.5606***		
	[0.2821]	[0.1918]		
lmkt_ratio[_n]-lmkt_ratio[_n-1]	-0.1143	-0.1143	-0.1147	-0.1147
	[0.2597]	[0.1854]	[0.2598]	[0.1854]
lmean_tratio2[_n]-lmean_tratio2[_n-1]			0.5787*	0.5787***
			[0.2895]	[0.1970]
Constant				
Observations	8891	8891	8891	8891
R-squared	0	0	0	0
Robust standard errors in brackets *** significant at 10%; ** significant at 5%; *** significant at 1%**				
DEP VAR Δln(Margin_price2 **)**	**REM (product year)**	**REM (country year)**	**REM (product year)**	**REM (country year)**
lmean_tratio[_n]-lmean_tratio[_n-1]	0.5651***	0.5769***		
	[0.1336]	[0.1336]		
lmkt_ratio[_n]-lmkt_ratio[_n-1]	-0.1144	-0.1198	-0.1148	-0.1202
	[0.1517]	[0.1516]	[0.1517]	[0.1516]
lmean_tratio2[_n]-lmean_tratio2[_n-1]			0.5834***	0.5956***
			[0.1375]	[0.1375]
Constant	-0.0069	-0.0056	-0.0069	-0.0056
	[0.0048]	[0.0126]	[0.0048]	[0.0126]
Observations	8891	8891	8891	8891
Number of hs8	56		56	
Number of country		174		174
Standard errors in brackets *** significant at 10%; ** significant at 5%; *** significant at 1%**				

Source: Authors' calculations

Table 19 Regressions in first differences DEP VAR Δln(Margin_price3)

DEP VAR Δln(Margin_price3 **)**	**OLS (year)**	**OLS (country)**	**OLS (year)**	**OLS (country)**
lmean_tratio[_n]-lmean_tratio[_n-1]	0.6234*	0.6234***		
	[0.3525]	[0.2035]		
lmkt_ratio[_n]-lmkt_ratio[_n-1]	-0.0296	-0.0296	-0.0299	-0.0299
	[0.1599]	[0.0955]	[0.1600]	[0.0955]
lmean_tratio2[_n]-lmean_tratio2[_n-1]			0.6428*	0.6428***
			[0.3620]	[0.2092]
Constant				
Observations	8727	8727	8727	8727
R-squared	0	0	0	0
Robust standard errors in brackets *** significant at 10%; ** significant at 5%; *** significant at 1%**				
DEP VAR Δln(Margin_price3 **)**	**REM (product year)**	**REM (country year)**	**REM (product year)**	**REM (country year)**
lmean_tratio[_n]-lmean_tratio[_n-1]	0.6101***	0.6198***		
	[0.1393]	[0.1394]		
lmkt_ratio[_n]-lmkt_ratio[_n-1]	-0.0177	-0.0134	-0.0181	-0.0137
	[0.0929]	[0.0930]	[0.0929]	[0.0930]
lmean_tratio2[_n]-lmean_tratio2[_n-1]			0.6289***	0.6390***
			[0.1434]	[0.1435]
Constant	0.0221***	0.0198	0.0221***	0.0198
	[0.0048]	[0.0122]	[0.0048]	[0.0122]
Observations	8727	8727	8727	8727
Number of hs8	55		55	
R-squared	0	0	0	0
Number of country		174		174
Standard errors in brackets * significant at 10%; ** significant at 5%; * significant at 1%**				

Source: Authors' calculations

Table 20 Summary selected regressions by product - DEP VAR ln(Margin_price2), ln(Margin_price3), Δln(Margin_price2) Δln(Margin_price3)

Dep Var	**MPr_5**		**MPr_6**		**Δ MPr_5**		**Δ MPr_6**	
HS8	**β**	**δ**	**β**	**δ**	**β**	**δ**	**β**	**δ**
08051030	**positive*** **	*positive*	**positive*** **	*positive****	**positive*** **	**negative**	**positive*** **	*positive*
17011110	**positive*** **	**negative**	*negative*	*positive*	.	**.**	.	.
24011041	**positive**	*positive*	**positive**	*positive*	.	**.**	.	.
24012010	**positive*** **	**negative**	**positive*** **	**negative**	**positive*** **	**negative**	**positive*** **	**negative**
24012020	**positive*** **	**negative**	**positive*** **	*mixed*	**positive*** **	**negative**	**positive**	*positive*
24013000	.	.	.	.	**positive*** **	**negative*** **	**positive*** **	**negative** **
62034211	.	.	.	.	**positive**	*positive****	.	.
72024199	.	.	.	.	**positive**	**negative**	.	.
76011000	.	.	.	.	**positive*** **	*positive** **	.	.

Source: Authors' calculations

- Positive/negative signs reported refer to persistence of sign across OLS, FEM and REM. In **bold** coefficient signs coherent with assumptions and in *italics* coefficients showing opposite sign.
- Significance levels may be interpreted as average significance across OLS, FEM and REM specifications

Table 21 Selected yearly regressions by product - Equation (5b) DEP VAR ln(Margin_price$_2$)

	HS8	**08051030**	
DEP VAR ln(Margin_price2)	**OLS**	**FEM**	**REM**
ln(tariff_ratio)	2.2827***	2.7833***	2.6745***
	[0.4810]	[0.2272]	[0.1909]
lmkt_ratio	0.0761	0.141	0.1914
	[0.2498]	[0.6625]	[0.4587]
ln(1+mean_mfn)/(1+mean_tariff)			
Constant	-0.0841***	-0.0989***	-0.0816**
	[0.0282]	[0.0160]	[0.0363]
Observations	176	176	176
R-squared	0.46	0.56	
Number of country		53	53
Robust standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			
	HS8	**17011110**	
DEP VAR ln(Margin_price2)	OLS	FEM	REM
ln(tariff_ratio)	0.2417***	0.0339	0.1267***
	[0.0486]	[0.0470]	[0.0362]
lmkt_ratio	-0.1599*	-0.1121	-0.285
	[0.0792]	[0.5350]	[0.2290]
Constant	-0.0195	0.0559**	0.0213
	[0.0249]	[0.0246]	[0.0178]
Observations	139	139	139
R-squared	0.41	0.01	
Number of country		35	35
Robust standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			
	HS8	**24011041**	
DEP VAR ln(Margin_price2)	OLS	FEM	REM
ln(tariff_ratio)	4.0629**	2.0807*	3.2780***
	[1.6267]	[1.1804]	[1.0318]
lmkt_ratio	0.8167	0.1336	0.2901
	[0.8228]	[0.5300]	[0.5175]
Constant	-0.4524***	-0.4020***	-0.3950***
	[0.0886]	[0.0521]	[0.1097]
Observations	63	63	63
R-squared	0.15	0.07	
Number of country		20	20
Robust standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			

	HS8	**24012010**	
DEP VAR ln(Margin_price2)	OLS	FEM	REM
ln(tariff_ratio)	4.0116***	2.8646***	3.3106***
	[0.6369]	[0.4801]	[0.4234]
lmkt_ratio	-1.8900**	-0.5267	-1.4304***
	[0.7640]	[0.7983]	[0.5374]
Constant	-0.2257***	-0.2363***	-0.2465***
	[0.0504]	[0.0298]	[0.0503]
Observations	172	172	172
R-squared	0.39	0.22	
Number of country		47	47
Robust standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			
	HS8	**24012020**	
DEP VAR ln(Margin_price2)	OLS	FEM	REM
ln(tariff_ratio)	5.0554***	2.4242***	2.9664***
	[0.8653]	[0.6540]	[0.5862]
lmkt_ratio	-1.8612***	0.1352	-0.8297
	[0.5656]	[0.6413]	[0.5082]
Constant	-0.2238***	-0.2379***	-0.2643***
	[0.0521]	[0.0302]	[0.0643]
Observations	132	132	132
R-squared	0.52	0.13	
Number of country		39	39
Robust standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			
	HS8	**56072100**	
DEP VAR ln(Margin_price2)	OLS	FEM	REM
ln(tariff_ratio)	-3.0142	-0.6542	-2.0299
	[1.8338]	[2.0634]	[1.4077]
lmkt_ratio	2.2554***	1.2209	2.1080***
	[0.2294]	[1.6931]	[0.7828]
Constant	-0.021	-0.1909	-0.0333
	[0.1189]	[0.1235]	[0.1178]
Observations	88	88	88
R-squared	0.27	0.01	
Number of country		32	32
Robust standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			

Source: Authors' calculations

Table 22 Selected yearly regressions by product - Equation (5b) DEP VAR ln(Margin_price$_3$)

	HS8	**03075910**	
DEP VAR ln(Margin_price3)	OLS	FEM	REM
ln(1+mean_mfn)/(1+mean_tariff)	-0.3813	-1.8284	-1.5938
	[1.5952]	[1.5948]	[1.2616]
ln((1+mkt_share_refcountry)/(1+expindex))	-2.2712***	-5.8590***	-4.8231***
	[0.7553]	[0.6447]	[0.5568]
Constant	0.2359***	0.3800***	0.3214***
	[0.0865]	[0.0814]	[0.0861]
Observations	265	265	265
R-squared	0.1	0.3	
Number of country		64	64
Robust standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			
	HS8	**08051030**	
***DEP VAR ln(Margin_price3*)**	OLS	FEM	REM
ln(1+mean_mfn)/(1+mean_tariff)	2.2793***	2.7653***	2.6540***
	[0.4804]	[0.2411]	[0.1994]
ln((1+mkt_share_refcountry)/(1+expindex))	0.2363	0.3991**	0.3896**
	[0.1816]	[0.1617]	[0.1532]
Constant	-0.1501***	-0.2028***	-0.1833***
	[0.0400]	[0.0408]	[0.0518]
Observations	176	176	176
R-squared	0.46	0.54	
Number of country		53	53
Robust standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			
	HS8	**17011110**	
***DEP VAR ln(Margin_price3*)**	OLS	FEM	REM
ln(1+mean_mfn)/(1+mean_tariff)	0.2192***	-0.0465**	-0.0221
	[0.0601]	[0.0193]	[0.0194]
ln((1+mkt_share_refcountry)/(1+expindex))	-0.041	0.2070*	0.1068
	[0.0545]	[0.1182]	[0.1149]
Constant	0.1160***	0.2151***	0.2029***
	[0.0313]	[0.0076]	[0.0173]
Observations	139	139	139
R-squared	0.39	0.08	
Number of country		35	35
Robust standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			

	HS8	24011041	
DEP VAR ln(Margin_price3 **)**	OLS	FEM	REM
ln(1+mean_mfn)/(1+mean_tariff)	3.9988**	1.3003	2.8635***
	[1.7248]	[1.1538]	[1.0472]
ln((1+mkt_share_refcountry)/(1+expindex))	0.3247	-0.3655	-0.3411
	[0.6267]	[0.4512]	[0.4603]
Constant	-0.9348***	-0.8092***	-0.8126***
	[0.1109]	[0.0534]	[0.1190]
Observations	63	63	63
R-squared	0.15	0.04	
Number of country		20	20
Robust standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			
	HS8	**24012010**	
DEP VAR ln(Margin_price3 **)**	OLS	FEM	REM
ln(1+mean_mfn)/(1+mean_tariff)	4.2277***	3.0998***	3.4908***
	[0.5673]	[0.4524]	[0.4071]
ln((1+mkt_share_refcountry)/(1+expindex))	-1.4579***	-0.167	-0.4525*
	[0.5180]	[0.2719]	[0.2523]
Constant	0.0937	-0.1871***	-0.1620**
	[0.1352]	[0.0658]	[0.0777]
Observations	172	172	172
R-squared	0.39	0.28	
Number of country		47	47
Robust standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			
	HS8	**24012020**	
DEP VAR ln(Margin_price3 **)**	OLS	FEM	REM
ln(1+mean_mfn)/(1+mean_tariff)	5.1901***	2.6506***	3.0320***
	[0.9122]	[0.6777]	[0.6314]
ln((1+mkt_share_refcountry)/(1+expindex))	-1.4190**	1.5438***	1.0037***
	[0.6987]	[0.3681]	[0.3517]
Constant	-0.5906**	-1.5749***	-1.4681***
	[0.2620]	[0.1341]	[0.1473]
Observations	132	132	132
R-squared	0.46	0.23	
Number of country		39	39
Robust standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			

	HS8	**56072100**	
DEP VAR ln(Margin_price3 **)**	OLS	FEM	REM
ln(1+mean_mfn)/(1+mean_tariff)	-3.009	-1.359	-2.1624
	[1.8648]	[2.0317]	[1.4299]
ln((1+mkt_share_refcountry)/(1+expindex))	2.1756***	0.5477	1.5780**
	[0.2146]	[0.9989]	[0.6642]
Constant	1.1690***	1.0832***	1.1935***
	[0.1092]	[0.1202]	[0.1232]
Observations	88	88	88
R-squared	0.26	0.02	
Number of country		32	32
Robust standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			

Source: Authors' calculations

Table 23 Selected first diff regressions by product - Equation (5b) DEP VAR Δln(Margin_price$_2$)

	HS8	**08051030**
DEP VAR Δln(Margin_price2)	OLS	REM
lmean_tratio[_n]-lmean_tratio[_n-1]	2.9065***	2.6634***
	[0.7534]	[0.2548]
lmkt_ratio[_n]-lmkt_ratio[_n-1]	0.0406	-0.187
	[0.6583]	[0.7741]
Constant		-0.0086
		[0.0396]
Observations	123	123
R-squared	0.56	
Number of country		35
Robust standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		
	HS8	**24012010**
DEP VAR Δln(Margin_price2)	OLS	REM
lmean_tratio[_n]-lmean_tratio[_n-1]	3.0607***	2.6750***
	[0.6925]	[0.5083]
lmkt_ratio[_n]-lmkt_ratio[_n-1]	-1.2214	-0.8139
	[1.3786]	[1.2675]
Constant		-0.0175
		[0.0412]
Observations	125	125
R-squared	0.28	
Number of country		36
Robust standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		
	HS8	**24012020**
DEP VAR Δln(Margin_price2)	OLS	REM
lmean_tratio[_n]-lmean_tratio[_n-1]	2.1422	1.9462***
	[1.7723]	[0.6621]
lmkt_ratio[_n]-lmkt_ratio[_n-1]	-0.3861	-0.3383
	[0.7427]	[0.8470]
Constant		-0.0122
		[0.0223]
Observations	93	93
R-squared	0.1	
Number of country		25
Robust standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		

	HS8	24013000
DEP VAR Δln(Margin_price2)	OLS	REM
lmean_tratio[_n]-lmean_tratio[_n-1]	0.7771***	0.8050***
	[0.2512]	[0.1260]
lmkt_ratio[_n]-lmkt_ratio[_n-1]	-1.4274***	-1.3471*
	[0.3699]	[0.8087]
Constant		-0.0141
		[0.0223]
Observations	152	152
R-squared	0.21	
Number of country		46
Robust standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		
	HS8	**56072910**
DEP VAR Δln(Margin_price2)	OLS	REM
lmean_tratio[_n]-lmean_tratio[_n-1]	-0.3822	-0.4749
	[1.0779]	[1.6979]
lmkt_ratio[_n]-lmkt_ratio[_n-1]	0.9137***	0.9440***
	[0.2289]	[0.2137]
Constant		-0.0939**
		[0.0478]
Observations	33	33
R-squared	0.36	
Number of country		11
Robust standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		
	HS8	**56072990**
DEP VAR Δln(Margin_price2)	OLS	REM
lmean_tratio[_n]-lmean_tratio[_n-1]	-11.8002***	-11.8104***
	[1.0806]	[3.2572]
lmkt_ratio[_n]-lmkt_ratio[_n-1]	-0.8647	-0.5021
	[1.0646]	[1.0226]
Constant		-0.0757
		[0.1098]
Observations	48	48
R-squared	0.21	
Number of country		17
Robust standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		

	HS8	72024199
DEP VAR Δln(Margin_price2)	OLS	REM
lmean_tratio[_n]-lmean_tratio[_n-1]	3.9968	4.5564**
	[2.8832]	[2.1805]
lmkt_ratio[_n]-lmkt_ratio[_n-1]	-0.1458	-0.3322
	[0.6958]	[0.7675]
Constant		-0.0219
		[0.0239]
Observations	36	36
R-squared	0.1	
Number of country		14
Robust standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		
	HS8	**76011000**
DEP VAR Δln(Margin_price2)	OLS	REM
lmean_tratio[_n]-lmean_tratio[_n-1]	3.2000***	2.8226***
	[0.6004]	[0.8049]
lmkt_ratio[_n]-lmkt_ratio[_n-1]	0.5117***	0.4886*
	[0.1864]	[0.2771]
Constant		-0.0039
		[0.0134]
Observations	145	145
R-squared	0.12	
Number of country		37
Robust standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		

Source: Authors' calculations

Table 24 Selected first diff regressions by product - Equation (5b) DEP VAR Δln(Margin_price$_3$)

	HS8	**08051030**
DEP VAR Δln(Margin_price3 **)**	OLS	REM
lmean_tratio[_n]-lmean_tratio[_n-1]	2.9029***	2.6743***
	[0.7938]	[0.2774]
lmkt_ratio[_n]-lmkt_ratio[_n-1]	0.1991	0.0232
	[0.2212]	[0.1936]
Constant		-0.0272
		[0.0417]
Observations	123	123
R-squared	0.52	
Number of country		35
Robust standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		
	HS8	**24012010**
DEP VAR Δln(Margin_price3 **)**	OLS	REM
lmean_tratio[_n]-lmean_tratio[_n-1]	3.0270***	2.6544***
	[0.6704]	[0.5038]
lmkt_ratio[_n]-lmkt_ratio[_n-1]	-0.0057	0.1146
	[0.5383]	[0.6616]
Constant		0.0091
		[0.0441]
Observations	125	125
R-squared	0.28	
Number of country		36
Robust standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		
	HS8	**24012020**
DEP VAR Δln(Margin_price3 **)**	OLS	REM
lmean_tratio[_n]-lmean_tratio[_n-1]	2.2199	2.0863***
	[1.5025]	[0.6399]
lmkt_ratio[_n]-lmkt_ratio[_n-1]	1.0617**	0.4716
	[0.4559]	[0.6037]
Constant		-0.0268
		[0.0243]
Observations	93	93
R-squared	0.15	
Number of country		25
Robust standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		

	HS8	24013000
DEP VAR Δln(Margin_price3)	OLS	REM
lmean_tratio[_n]-lmean_tratio[_n-1]	0.9023***	0.8398***
	[0.2297]	[0.1311]
lmkt_ratio[_n]-lmkt_ratio[_n-1]	-1.0216***	-1.2337***
	[0.3588]	[0.3459]
Constant		0.0585***
		[0.0221]
Observations	152	152
R-squared	0.25	
Number of country		46
Robust standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		
	HS8	**62034211**
DEP VAR Δln(Margin_price3)	OLS	REM
lmean_tratio[_n]-lmean_tratio[_n-1]	1.456	1.3516
	[1.9222]	[1.2014]
lmkt_ratio[_n]-lmkt_ratio[_n-1]	6.2842***	6.6194***
	[0.7677]	[0.7512]
Constant		0.1275***
		[0.0293]
Observations	232	232
R-squared	0.23	
Number of country		62
Robust standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		

Figures

Figure 1 Unilateral Preferences Under Perfect Competition and Homogenous Products

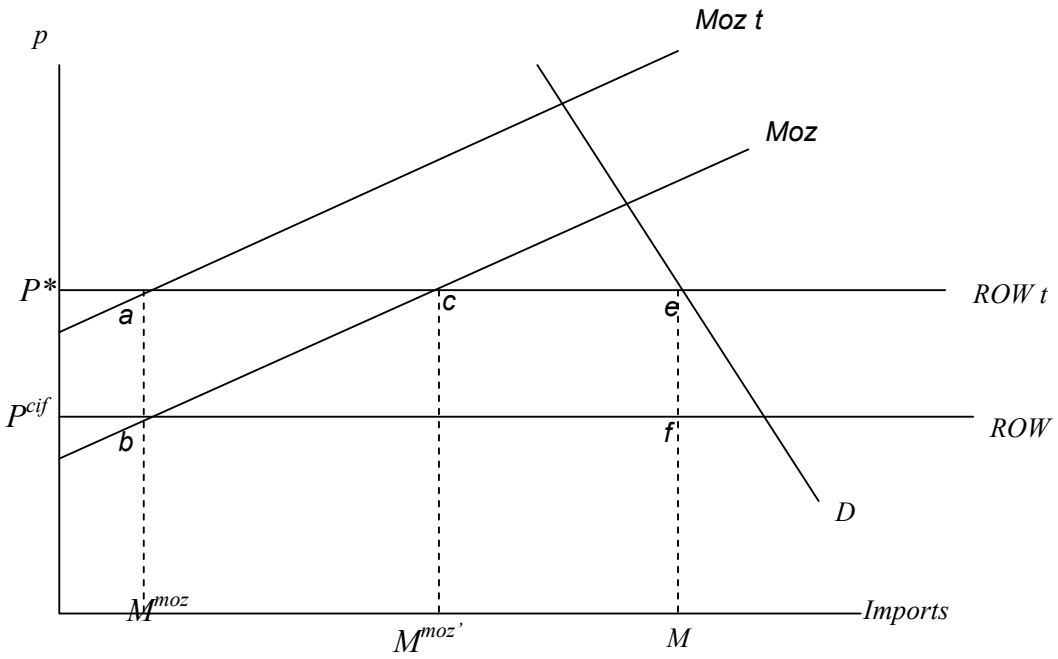
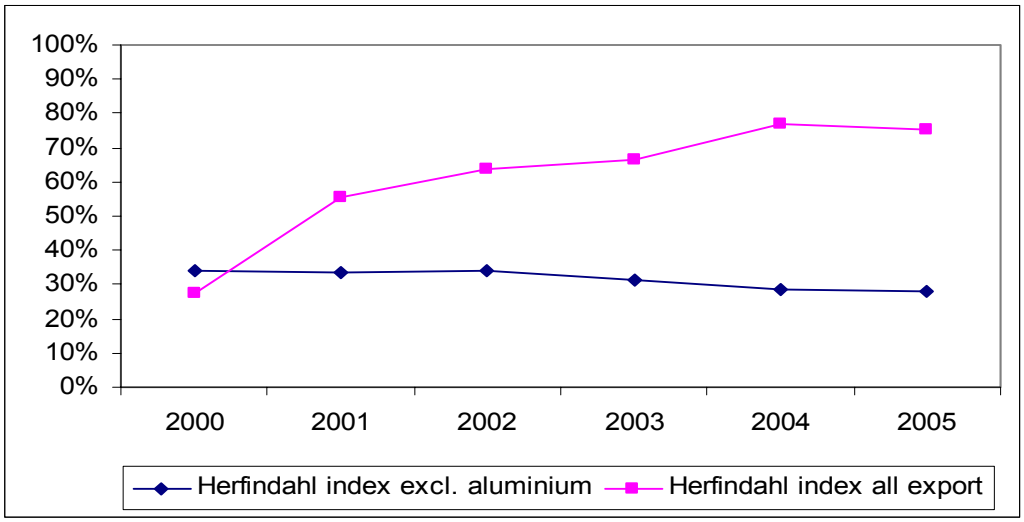
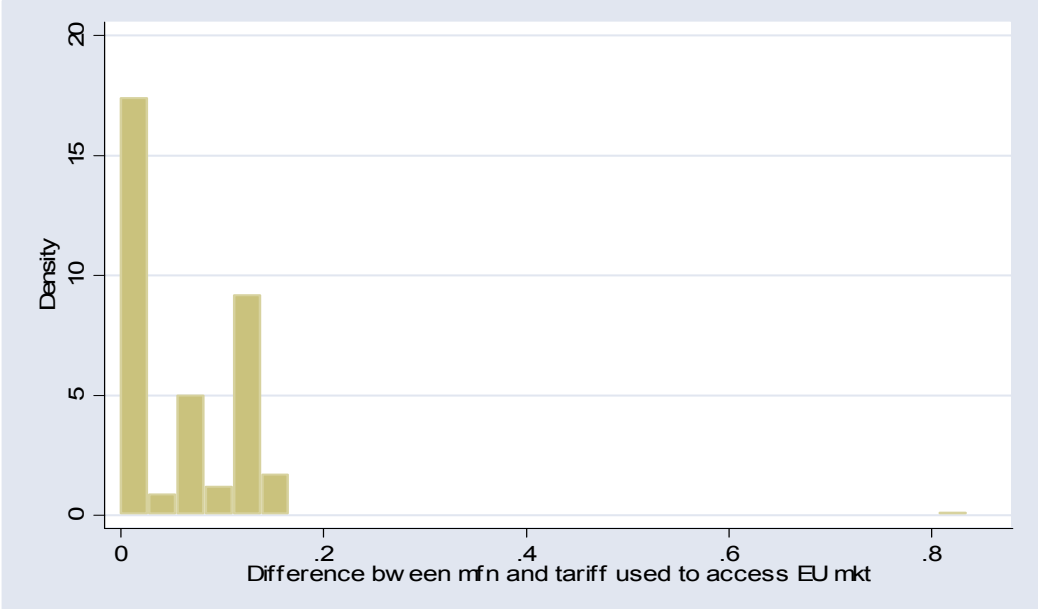


Figure 2 Herfindhal concentration index for Mozambican exports to the EU



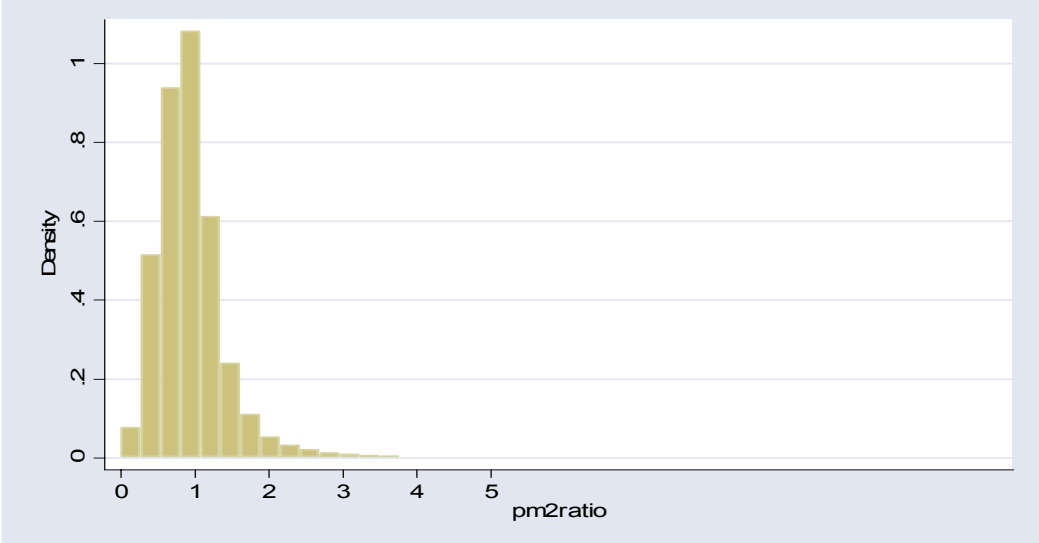
Source: Authors' calculations based on EUROSTAT

Figure 3 Distribution of actual preference margins



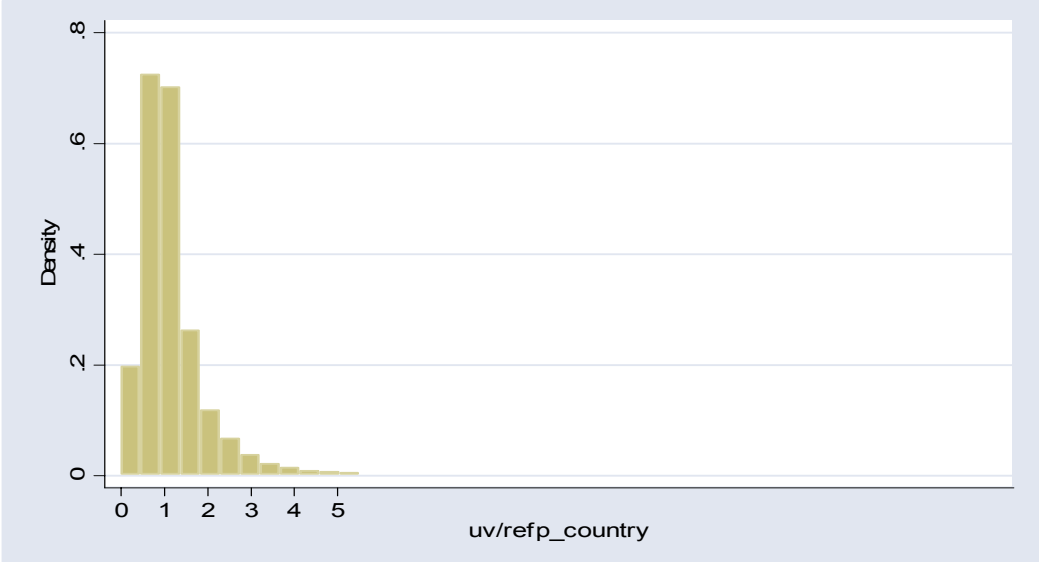
Source: Authors' calculations based on TARIC

Figure 4 Distribution of Margin_price$_2$



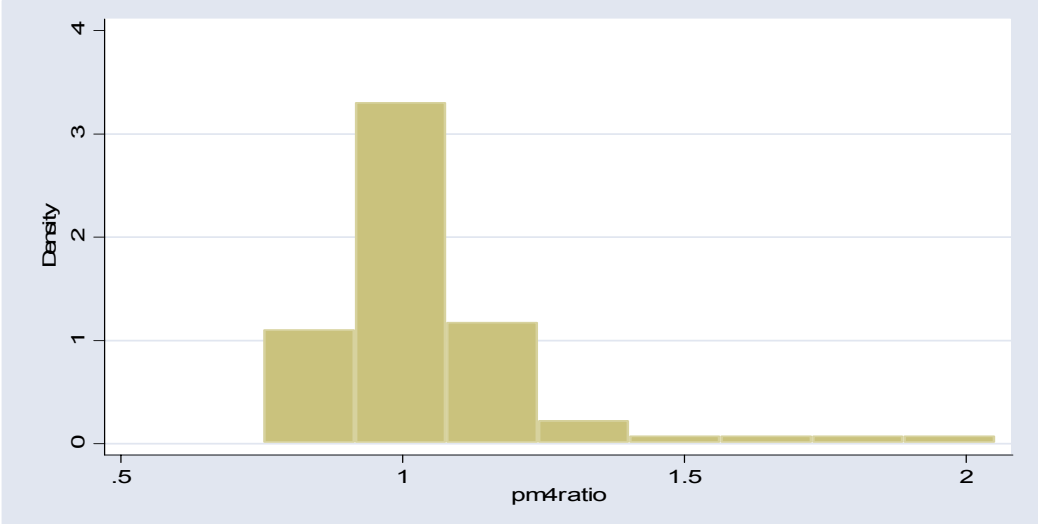
Source: authors' calculations

Figure 5 Distribution of Margin_price3



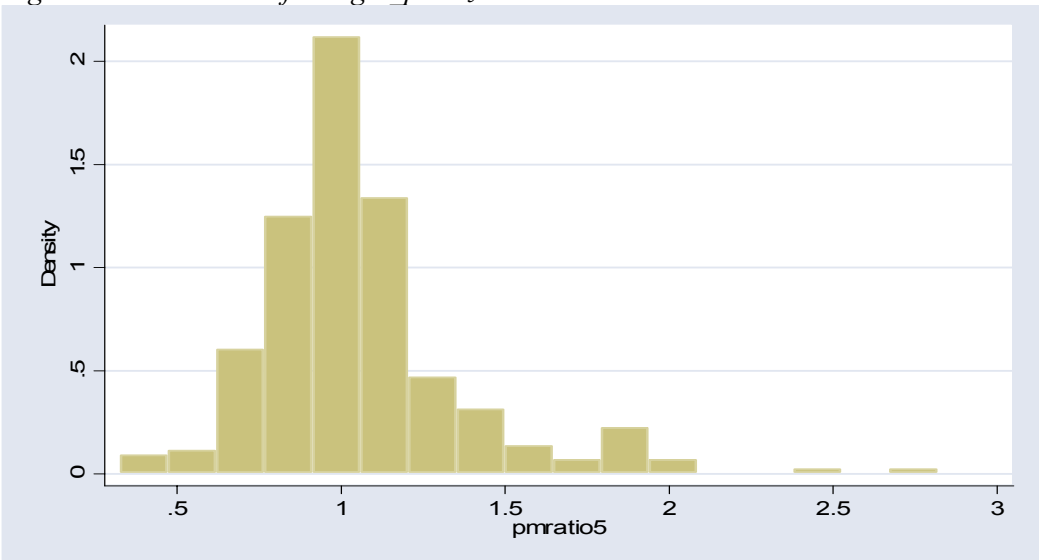
Source: authors' calculations

Figure 6 Distribution of Margin_price4



Source: authors' calculations

Figure 7 Distribution of Margin_price$_5$



Source: authors' calculations

Figure 8 Margin_price$_2$ and tariff differentials (Mozambique)

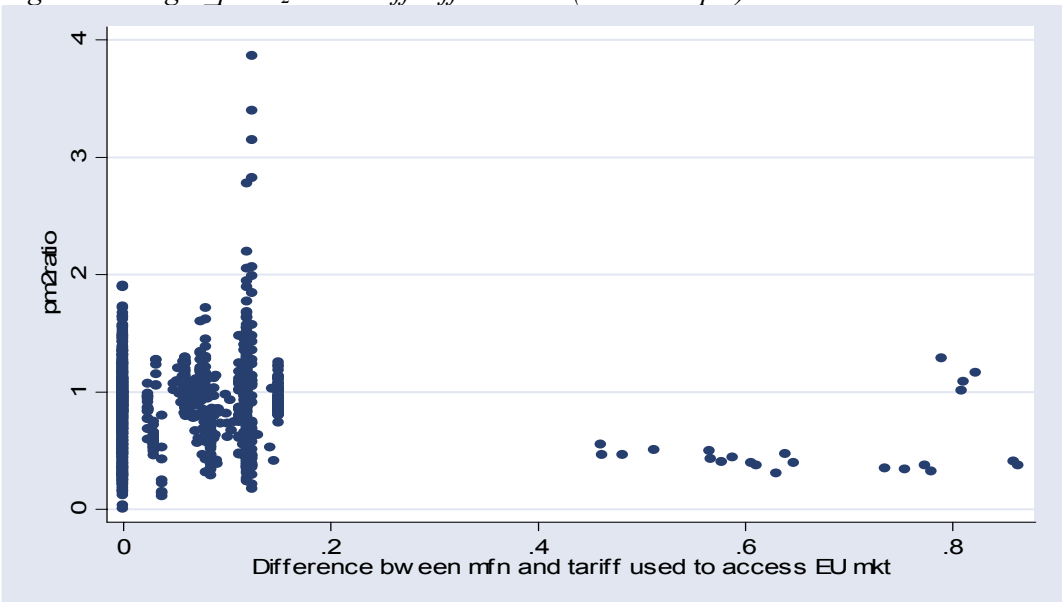


Figure 9 Margin_price$_3$ andt tariff differentials (Mozambique)

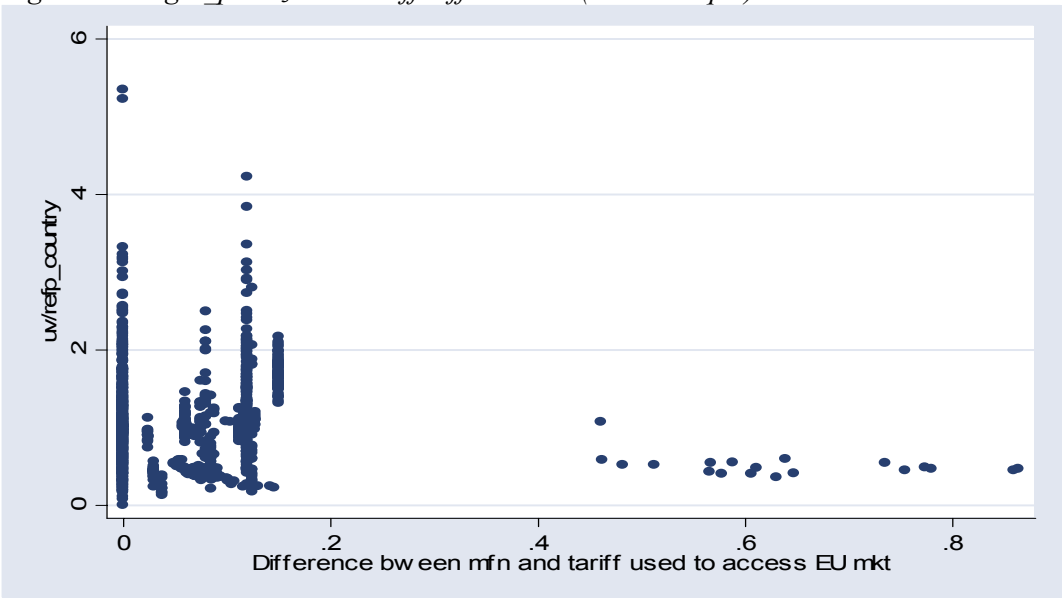


Figure 10 Margin_price$_4$ and tariff differentials (Mozambique)

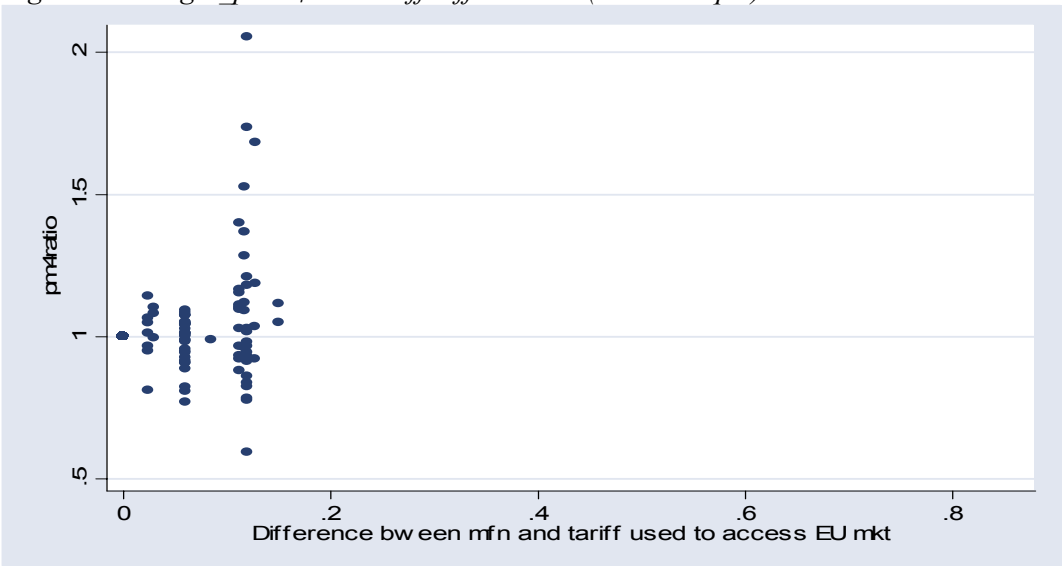


Figure 11 Margin_price$_5$ and tariff differentials (Mozambique)

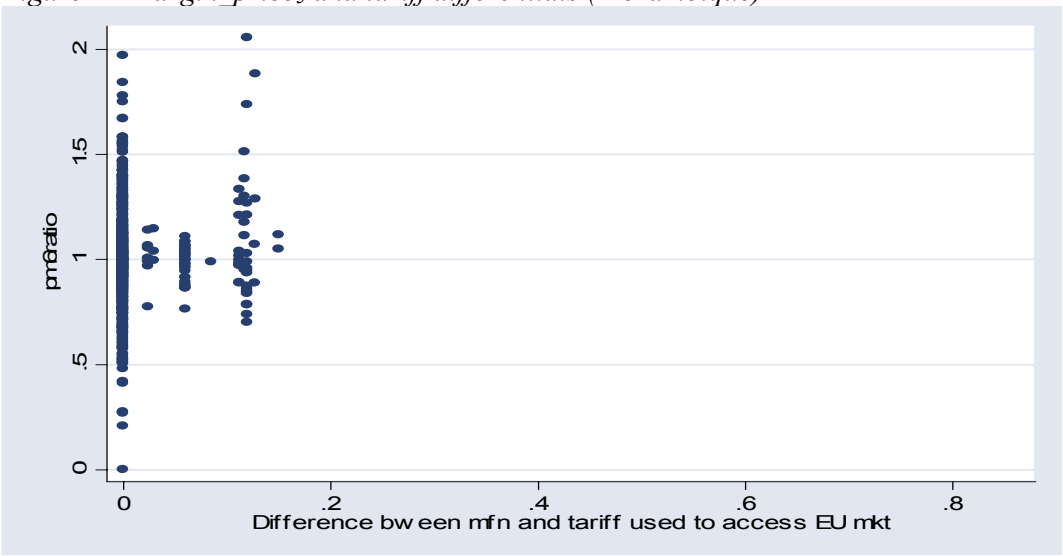
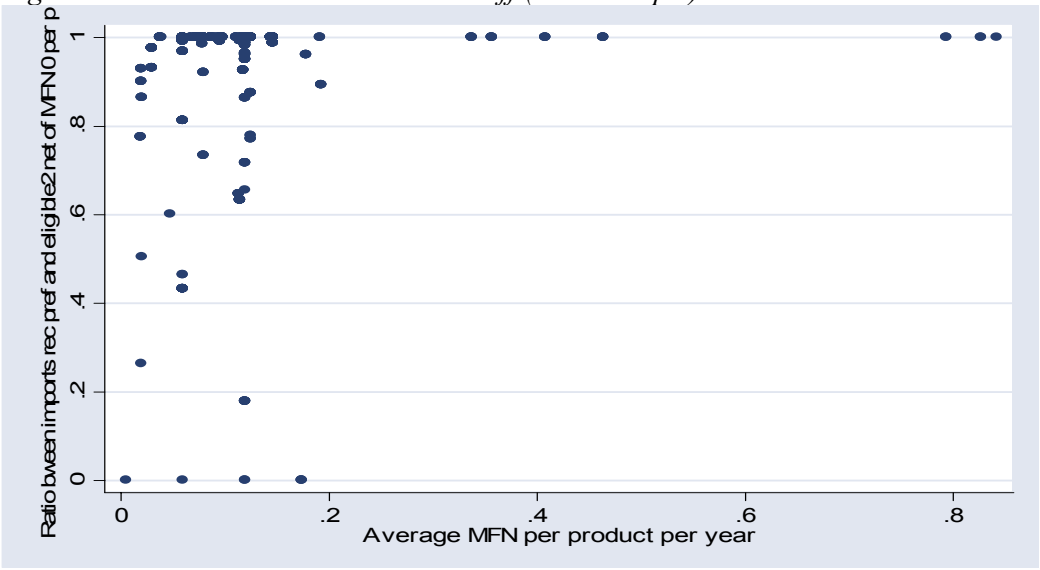


Figure 12 Utilization rates and MFN tariff (Mozambique)



Source: authors' calculations