The tariff-only import regime for bananas in the European Union: Setting the tariff at right level is impossible mission

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July 2006

Invited paper prepared for presentation at the International Association of Agricultural Economists Conference, Gold Coast, Australia, August 12-18, 2006

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Abstract.
On 29 November 2005, the European Union (EU) unilaterally introduced a tariff of €176 per tonne to apply from 1 January 2006 to bananas imported from countries enjoying the Most Favoured Nation (MFN) status. The new EU trade policy includes a duty-free annual import quota of 775,000 tonnes for bananas originating from African, Caribbean and Pacific (ACP) states. This regime replaces the very complex and highly contested tariff-rate quota policy in place in the EU between 1993 and 2005. However, the banana international trade war very likely has not come to an end. Several Latin American countries have announced their intention to challenge the new EU trade policy by initiating a new WTO complaint. In this paper, we first propose an analysis of the two WTO arbitration awards that ruled against the initial EU tariff proposals. We show that the arbitrators' awards are incomplete notably because they do not explain why CIF (Cost, Insurance and Freight) import unit values in the EU-15 from MFN suppliers are much higher than FOB (Free on Board) export unit values in corresponding MFN countries adjusted by all relevant costs that should theoretically be added to transform FOB into CIF prices. One plausible explanation to this apparent paradox is that reported CIF prices include at least part of quota rents generated by the tariff-rate quota policy. On this basis, we analyse the impacts of different MFN tariff levels on EU banana imports under contrasting hypotheses regarding, first whether the price gap between CIF and FOB unit values does include at least part of quota rents, second whether banana exports to the EU from Western African ACP countries were constrained under the previous regime where a specific import quota were reserved to ACP countries. We also analyse the consequences of an "augmented" tariff-only import regime including a MFN tariff and a duty-free import quota for ACP bananas.

Keywords.
Tariff-rate quota; tariff; bananas; European Union; World Trade Organisation; Most Favoured Nation; African, Caribbean and Pacific countries

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Setting the tariff at right level is impossible mission

1. Introduction

The Common Market Organisation for bananas (CMOB) in place in the European Union (EU) between 1993 and 2005 included deficiency payments for European producers, a general tariff-rate quota open to all countries, a specific tariff-rate quota reserved to African, Caribbean and Pacific (ACP) suppliers and a very complex system of import licenses. While imports under the general quota were subject to an in-quota tariff of €75 per tonne up to a maximum of 3.113 million tonnes per year, ACP bananas entered the EU market duty free up to a maximum of 750,000 tonnes per year (2005 figures for the EU-25). Over-quota tariffs were prohibitive for all suppliers.

As part of its 2001 World Trade Organisation (WTO) agreements with both Ecuador and the United States, the EU had committed at replacing this tariff-rate quota policy by a tariff-only regime no later than 1 January 2006. From that date, bananas from countries enjoying the Most Favoured Nation (MFN) status should be subject to a single tariff while bananas from ACP sources should continue to enter the EU market duty free but without quantitative restrictions. What should change was the EU import policy, neither the level of market access granted to MFN exporters nor the level of protection offered to ACP suppliers. But in the course of negotiations to move to the tariff-only system, setting the MFN tariff at "right" level increasingly appeared as impossible mission. On 1 August 2005, the WTO arbitrators ruled against the first EU proposal of €230 per tonne because "it would not result in at least maintaining total market access for MFN banana suppliers" (WTO, 2005a). On 27 October 2005, the same arbitrators ruled again against the revised EU proposal of €187 per tonne because "it did not rectify the matter" (WTO, 2005b). Interestingly, one will note that the revised EU proposal was not strictly a tariff-only policy since it also included a duty-free annual import quota of 775,000 tonnes for ACP bananas. On 29 November 2005, the EU unilaterally decided to set the MFN tariff at €176 per tonne and the duty-free import quota for ACP bananas at 775,000 tonnes per year. Three Latin American countries (Honduras, Nicaragua and Panama) have announced their intention to challenge this policy by initiating a new WTO complaint. As a result, the banana international trade war very likely has not to come to an end (Annania, 2006).

The main objective of this paper is to explain why it is so difficult to set the MFN tariff at "right" level, that is at a level that would allow maintaining total EU market access to MFN banana suppliers while preserving total EU market access for ACP banana suppliers. We investigate two main elements that contribute to make the setting of the MFN tariff at right level a very difficult, even impossible, mission. The first element relates to the rent that resulted from the binding general tariff-rate quota which has been in force until 1 January 2006. There is very few, even nearly no, information about where is this rent accounted for along the EU banana trade and distribution chain, nor on the level of this rent. This information is however crucial since the level of the MFN tariff that would let unchanged both MFN and ACP access to the EU banana market directly depends on both the "location" and the level of this quota rent. The second element relates to the export supply situation of Western African countries prior to the implementation of the tariff-only regime. Cameroon and Ivory cost have experienced substantial increases in their banana supply and exports as well as substantial reduction in their production costs over the 1993-2005 period. As a result, it is not unlikely to assume that the two West African country export supplies were constrained on the EU market under the specific quota reserved to ACP States. Such an element is also crucial as regards the "right" level of the MFN tariff. If West African countries were effectively constrained under the tariff-rate quota regime, there is no single MFN tariff that would allow to maintain EU market access simultaneously to MFN, West African and other ACP (i.e., mainly Caribbean) countries.

Section 2 briefly presents the EU banana import regime and its successive reform since 1993 when the first CMOB was put in place. It also depicts the impacts of these reforms on the EU banana market. Section 3 discusses the two 2005 WTO arbitration awards that ruled against the EU tariff proposals. In both cases, the arbitrators while acknowledging the use of the price-gap methodology to calculate the tariff to be applied on MNF bananas have questioned the validity of the prices used by the European Commission (EC). In their first award, they have criticised the choice of FAO (Food and Agriculture Organisation of the United Nations) data for internal prices. In their second award, they have expressed reservations against the change in the source of data for external prices. In practice, they have considered that the arguments put forward by the EC for departing from the initial use of EUROSTAT CIF (Cost, Insurance and Freight) unit values for external prices were not sufficiently convincing. But the arbitrators' awards are incomplete. In particular, they do not explain why CIF import unit values in the EU-15 from MFN countries are much higher than FOB (Free on Board) export unit values in corresponding MFN countries adjusted by insurance, freight and other relevant costs that should theoretically be added to FOB prices to transform them into CIF values. One plausible explanation to this apparent paradox is that CIF import unit values in the EU-15 from MNF suppliers very likely include at least part of the general quota rent. This can be shown by comparing EUROSTAT CIF prices and corresponding FAO FOB prices. On this basis, Section 4 uses an updated version of a partial equilibrium model of the world banana market to analyse the effects of different MFN tariff levels on the EU banana market and import structure under contrasting hypotheses regarding, first whether the price gap between CIF and FOB unit values does include at least part of quota rents, second whether banana exports to the EU from Western African ACP countries were constrained under the ACP specific import quota regime. We also evaluate the impacts of an "augmented" tariff-only policy, like the one in place from 1 January 2006, including a MFN tariff and a duty-free import quota for ACP bananas. Section 5 concludes.

2. The EU banana trade policy since 1990

The world banana import market is very concentrated. Two countries, the United States and the EU-15, account each for more than 30 % of world imports (FAO, 2003). While the US market is free, the EU market is highly protected. Several complaints to the WTO have necessitated successive reforms of the trade regime of the CMOB initially put in place in 1993.

Tensions around an import regime

Before 1993, European countries pursued their own trade regimes. Imports were free in Germany. Five countries (Belgium, Denmark, Ireland, Luxemburg and the Netherlands) applied a 20 % MFN tariff but ACP country exports were exempt from this duty. The six other Member States (France, Greece, Italy, Portugal, Spain and the United Kingdom) applied a 20 % MFN tariff together with additional specific nationally administrated regimes that privileged the European producing territories and/or some ACP countries. For example, the Spanish market was entirely reserved for shipments from the Canary Islands while the French market was shared between the two French overseas departments of Guadeloupe and Martinique on the one hand and the two West African ACP states of the CFA Franc zone, Cameroon and Ivory Coast, on the other hand (Read, 2001). Prior to 1993, the European market was thus highly protected and segmented.

The Single European Market (SEM) of 1992 provided the impetus to eliminate internal border restrictions within the EU since it would be no longer possible to enforce Article 115 of the Treaty of Rome to prevent intra-community trade. The solution adopted in 1993 consisted in a combination of two tariff-rate quotas while EU producers were guaranteed a minimum income through deficiency payments up to 840,000 tonnes per year. The ACP specific quota allowed the twelve traditional ACP producing countries (Belize, Cameroon, Cape Verde, Dominica, Grenada, Jamaica, Ivory Coast, Madagascar, Somalia, St Lucia, St Vincent and the Grenadines, and Suriname) to enter the EU market duty free up to a maximum cumulated volume of 857,700 tonnes per year. From 1993 to 1998, there

were also country-specific allocations of the ACP quota. The annual quota for non-traditional ACP states (the Dominican Republic and Ghana) and MFN countries was initially set at 2 million tonnes for the EU-12 with an in-quota duty of €100 per tonne. This general quota was progressively raised up to 2.553 million tonnes from 1995 for the EU-15 with a reduced duty of €75 per tonne. From 1995 also, 49.3 % of the general quota was divided up into specific national quotas reserved to four Latin American countries (23.4 % for Costa Rica, 21.0 % for Colombia, 3 % for Nicaragua and 2 % for Venezuela). The general quota was managed through a very complicated system of import certificates which distinguished three categories of operators: 66.5 % of the general quota was reserved to established operators for MFN and non-traditional ACP bananas (category A), 30 % was reserved to established operators that marketed EU and traditional ACP bananas (category B), and 3,5 % was reserved to new operators who wanted to start to import bananas from non-ACP and/or non-traditional ACP sources (category C).[2] Within each category, import licenses were allocated on the basis of market shares in the various stages of the banana chain with 57 % reserved to primary importers, 15 % to secondary importers and 28 % to ripeners.

The EU banana import regime was internationally disputed from the very beginning (Read, 2001; Josling, 2003). The first GATT (General Agreement on Tariffs and Trade) complaints were made in February and July 1993 and ruled against the EU. The first WTO complaint was filed in September 1995 and resubmitted in February 1996. It also ruled against the EU and led to the 1998 reform of the CMOB that came into force on 1 January 1999. The reform eliminated the country-specific allocations of the ACP quota and reserved nearly 90 % of the general quota to four Latin American exporting countries (Ecuador, Costa Rica, Colombia and Panama). It simplified the import licensing system by suppressing the category B of operators.

Despite these changes, the EU import regime remained under heavy scrutiny. As noted by Read (2001), "very little was changed with respect to the critical issue of the use of restrictive tariff quotas and, as such, the [new] banana trade regime did not appear to comply with the WTO rules either." The dispute moved on to an arbitration panel which again ruled against the EU. After two unsuccessful proposals on 10 November 1999 and 4 October 2000, the EU finally adopted a regulation on 2 May 2001 to implement a new import regime in line with bilateral understandings arrived at with both Ecuador and the United States. The mutually agreed solution was a two-step process towards a tariff-only regime that should enter into force no later than 1 January 2006. During the transitional period 2002-2005, bananas continued to be imported into the EU under a tariff-rate quota system. The general quota of 3.113 million tonnes was open to imports from all origins. The tariff was €75 per tonne, imports from ACP countries being zero rated. The specific quota of 750,000 tonnes was duty free and reserved to ACP countries (2005 figures for the EU-25). The import licensing system was still managed on the basis of historical references. Within the general quota A/B, 83 % of licenses were allocated to traditional operators and 17 % to non-traditional operators. Within the specific quota C, the percentages were 89 and 11 %, respectively. The definition of traditional and non-traditional operators was changed. Traditional operators were now economic agents established in the EU who had purchased a minimum quantity of bananas (250 tonnes) in third countries. Traditional operators A/B had carried out this minimum quantity from MFN and/or non-traditional ACP countries while traditional operators C had carried out this minimum quantity from traditional ACP countries. Non-traditional operators were economic agents established in the EU who had been engaged in the commercial activity of importing bananas into the EU for a declared customs value of at least million €2.2 but who did not have a reference quantity as a traditional operator under the tariff quota for which they were applying for registration.

Competition for the lucrative EU banana market

[2] Traditional shippers of EU and ACP bananas were allocated with 30 % of import licenses with the clear intent that the extra profits they could earn by shipping non-ACP bananas and/or selling the import licenses to non-ACP shippers should be used to cross-subsidise their EU or ACP operations (Swinbank, 1996).

In 1990-1992, EU territories supplied the EU-15 with 714,000 tonnes of bananas (18.2 % of the EU market). ACP suppliers accounted for 633,000 tonnes (16.1 %) and MFN suppliers for 2.578 million tonnes (65.7 %). Total EU consumption amounted to 3.925 million tonnes.

The global supply structure of the EU-15 market is remained remarkably stable over the period 1990-2003 (Figure 1). In 2002-2003, total EU-15 consumption amounted to 4.097 million tonnes which corresponds to an increase of only 172,000 tonnes with respect to 1990-1992. The income support policy granted to European suppliers has resulted in a slightly positive growth rate of exports from EU territories. In 2002-2003, EU territory supply accounted for a little above 772,400 tonnes which corresponds to an EU market share of 18.8 %. ACP banana exports to the EU increased during the four years 1993 to 1996. They decreased between 1997 and 1999. From that date, they oscillate around 750,000 tonnes per year. In 2002-2003, ACP country supply accounted for 757,400 tonnes which represents 18.5 % of the EU market. After an important decrease in the immediate aftermath of the 1993 CMOB, EU imports from MFN countries stabilised around 2.45 million tonnes from 1995 to 1998. They slightly increased following the reforms of the CMOB implemented in 1999 and 2001. In 2002-2003, MFN country supply accounted for 2.568 million tonnes which represents 62.7 % of the EU market. Although the growth rate of MFN exports to the EU is slightly positive over the period 1993-2003 (0.3 %), their share in total EU consumption has continuously decreased with a more pronounced decline over the five years 1993-1998 corresponding to the first CMOB (65.6 % in 1990-1992, 63.3 % in 1993-1998, 62.9 % in 1999-2001 and 62.7 % in 2002-2003).

(Insert Figure 1)

Overall, the tariff-rate quota policy has thus stabilised the supply structure of the EU market. Over-quota tariffs have always been prohibitive and there have been no over-quota imports. Although open to bananas from all origins, the general quota has been almost fully used by MFN suppliers only which suggests that it has been binding on them (Figure 2). By contrast, ACP exports to the EU were remained significantly lower than the specific ACP quota until 2001. The gap has narrowed following the reduction of the ACP quota by 100 000 tonnes from 2002 so that it is not unlikely to assume that the ACP quota of 750,000 tonnes was binding from 2003, at least for the most competitive ACP suppliers (Cameroon and Ivory Coast) which were constrained from expanding their exports to the EU because of the non-availability of licenses under the ACP quota (NERA and OPM, 2004).

(Insert Figure 2)

Changes were clearly more important within the ACP country group (Figure 3). While the aggregate amount of EU imports from ACP countries remained globally constant over the period 1993 to 2003, two traditional ACP countries (Cameroon and Ivory Coast) and one non-traditional ACP state (The Dominican Republic) have experienced strong growth. By contrast, exports from traditional ACP Caribbean suppliers have dramatically decreased. Changes have not been linear and the various versions of the CMOB have had differentiated impacts. More specifically, the decline in traditional ACP Caribbean exports has been much more important after the cancellation of the country-specific allocations of the ACP quota from 1999. Inversely, exports from Cameroon and Ivory Coast have mainly increased after that date. In 1990-1992, the shares of the traditional ACP Caribbean states and the two West African countries in total ACP exports to the EU were equal to 58.5 % and 34.7 %, respectively. In 1993-1998, they were equal to 44.9 % and 44.0 %. In 2002-2003, they were equal to 24.2 % and 61.8 %. One non-traditional ACP state, the Dominican Republic, has also substantially increased its exports to the EU since 1993. It represented 13.7 % of total ACP exports to the EU in 2002-2003 while it accounted for 2.6 % in 1990-1992 and 8.7 % in 1993-2001. For a large part, export supply of the Dominican Republic corresponds to organic and/or fair trade bananas exported to the United Kingdom.

Likewise, within the MFN supplier category, three countries (Ecuador, Costa Rica and Colombia) have experienced strong growth winning EU market shares away from Panama, Honduras and other smaller Latin American producing countries. However, these changes cannot not be entirely attributed

to the EU banana trade policy and its successive reforms. Other factors (weather related events, industrial disputes, crop diseases, increasing irrigation costs, increasing sanitary costs due to higher black sigatoka infestation, etc.) have contributed to decrease supply and exports from Panama and Honduras (FAO, 2003).

(Insert Figure 3)

The CMOB in place between 1993 and 2005 has thus limited total banana supply in the EU essentially by putting a ceiling on imports from MFN suppliers. The second effect of this policy has been to modify the export structure within the ACP category, in favour of Cameroon and Ivory Coast and to the detriment of traditional ACP Caribbean suppliers.[3] In that context, the challenge the EU has to face is to set the MFN tariff of the tariff-only import regime at "right" level. That is a level that ensures that European production will be protected, maintains a level of preference to the ACP countries equivalent to that afforded by the enlarged EU-25 and offers equivalent access for bananas from non-preferential country suppliers. Of course, the ACP countries call for a tariff as high as possible arguing that a level of at least €275 per tonne is necessary to protect them from competition from the MFN countries. Unsurprisingly, the MFN countries call for a tariff as low as possible, more precisely a zero tariff or at worst a tariff of €75 per tonne (Agra Europe London, 11 April 2005). Squaring the circle is not easy.

It is theoretically possible to define the static tariff equivalent to the general import quota if one admits that bananas originating from various sources are perfect substitutes, markets are competitive and the specific ACP import quota is not binding. The price and output effects of the general quota and the tariff equivalent would be the same but the welfare effects would be different. The static equivalence could not hold in a dynamic framework where productivity changes would be accounted for. Of course, if the ACP quota is constraining, it is no longer possible to replace the two import quota policy by a single tariff that would have the same short-run price and output effects. Furthermore, even if the ACP quota is assumed not binding, the static equivalence could not hold under the conditions of imperfect competition (see, for example, Helpman and Krugman, 1989). In practice however, in the course of negotiations to move to the tariff-only regime, attention is focused on one very concrete point only, namely the price data that should be used to evaluate the protective effect of the tariff-rate quota policy and ensure that "the tariff-only regime would result in at least maintaining total market access for MFN suppliers" (WTO, 2005a, 2005b). It is mainly because the price data used by the EC for calculating the MFN tariff have been considered as inappropriate that the WTO arbitrators ruled against the successive EU tariff proposals of €230 and €187 per tonne.

3. Why the EU tariff proposals have been rejected by the WTO arbitrators?

On 31 January 2005, the EU notified the WTO members its initial intention to set the MFN tariff at €230 per tonne. Two months later, nine Latin American countries (Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Panama, Venezuela, Nicaragua and Brazil, hereafter the interested parties) decided to request WTO arbitration considering that such a tariff level would not result in at least

[3] The third effect of the CMOB was to modify the relative positions of the five banana multinational companies (Chiquita, Dole, Del Monte, Fyffes and Noboa) in the EU. In 2003, Chiquita was still the leader although its EU market share substantially decreased, from 30 % in 1992 to 21.5 % in 2003. Inversely, Fyffes significantly increased its EU market share, from 10 % in 1992 to 20 % in 2003. The 2003 EU market shares of Dole and Del Monte were twice as low (respectively, 13 and 9.5 %). Fyffes and Dole were clearly the main beneficiaries of the CMOB over the 1993-2001 period. Fyffes benefited from the licensing system that was favourable to importers of EU and traditional ACP bananas. Dole took active participation in EU territories and ACP countries in order to acquire additional import licenses. By contrast, Chiquita was very adversely affected by the 1993-1998 version of the CMOB (its EU market share declined to less than 16 % in 1997). This company substantially increased its activity in Latin American countries in the pre-CMOB period in anticipation of an increased opening of the EU banana market. It was thus penalised by the first version of the import licensing system that reserved 30 % of the general quota to EU and traditional ACP operators. Chiquita can be considered as the main beneficiary of the 2001 CMOB reform thanks to changes in the import licensing system. Its EU market share now oscillates around 22 %, a percentage significantly lower than the 1992 figure but very close to the 1990 figure.

maintaining market access for MFN banana suppliers. The arbitration award issued on 1 August 2005 ruled against the EU (WTO, 2005a). On 12 September 2005, the EU presented its revised proposal consisting of a MFN tariff of €187 per tonne and a duty-free import quota of 750,000 tonnes for bananas originating from ACP countries. After three rounds of unsuccessful bilateral consultations with the interested parties, the EU requested a second WTO arbitration on its revised proposal. On 27 October 2005, the same arbitrators ruled again against the EU considering that the revised proposal did not rectify the matter (WTO, 2005b). In both cases, the arbitrators have acknowledged the use of the price-gap approach to determine the tariff to be applied on MFN bananas. But they have criticised several aspects of its application in the present case, notably the choice of reference prices for internal (first award) and external (second award) prices. In reaction, on 29 November 2005, the EU unilaterally decided to set the MFN tariff at €176 per tonne and to allow ACP bananas to enter duty free up to a maximum of 775,000 tonnes per year. Some Latin American countries have announced their intention to contest this decision by initiating a new WTO dispute.

The price-gap approach is codified in the Attachment to Annex 5 of the Uruguay Round Agreement on Agriculture (URAA). The price gap should be measured as the difference between an internal price and an external price. The internal price should be a representative wholesale price ruling in the domestic market or where adequate data are not available, an estimate of that price. External prices should ideally be CIF unit values in the importing country. Where such values are not available or appropriate, external prices can be evaluated either by CIF unit values in a near country or from FOB unit values in an appropriate exporting country adjusted by adding an estimate of insurance, freight and other relevant costs to the importing country. The tariff should be calculated using data from a three-year time period. WTO practice suggests to use the most recent three-year period for which data are available.

The arbitrators have considered that the EC had used the price-gap approach in an inappropriate way. More specifically, they have questioned the choice of reference prices for internal (first award) and external (second award) prices. The internal price of the initial EU proposal had been obtained using price data collected by the FAO and referred to “bananas, Central America, FOB Hamburg - EC duty paid” until June 2004, “bananas, Latin America, FOB Benelux/Hamburg - EC duty paid” after that date. In their award, the arbitrators have questioned the validity of these FAO data for internal prices considering that they did not reflect actual internal prices at which bananas were effectively sold on the EU market but only transfer prices. By contrast, neither the claimants nor the arbitrators have challenged the use of EUROSTAT CIF data for external prices (WTO, 2005a). In its rectification to the matter, the EC has turned to price data from Sopisco News, a weekly publication used in the shipping and reefer industry, for both internal and external prices. In their second award, the arbitrators have considered that the use of Sopisco News data for internal prices was appropriate. But they have found that there was not sufficient justification for not using EUROSTAT CIF unit values for external prices and even assuming that there were valid reasons to discard EUROSTAT data, the use by the EC of Sopisco News data as an alternative for external prices was not appropriate (WTO, 2005b).

The arbitrators have clearly stated that their mandate did not include a tariff proposal.[4] However, the immediate conclusion one can deduce from the simultaneous reading of the two arbitration awards is that the MFN tariff could (should) be calculated using Sopisco News data for internal prices (revised EU proposal) and EUROSTAT CIF unit values for external prices (original EU proposal). On this basis, one would obtain a MFN tariff varying between €53 and €88 depending on years. These figures are very close to the tariff of €75 applied to MFN banana exports within the general import quota.

[4] The arbitrators have interpreted their mandate as limited to determine whether the envisaged rebinding of the EU tariff would result in at least maintaining total market access for MFN banana suppliers. The arbitrators have thus considered that their mandate did not include an analysis on the effects of the envisaged rebinding of the EU tariff on exports from EU territories and ACP countries. At the request of certain ACP countries, the arbitrators have invited relevant ACP States to participate in the arbitration but only in a very limited manner. In passing, one will note that even a mandate limited to determine whether the tariff would result in at least maintaining total market access for MFN suppliers is not clearly defined. For example, how should market access be defined, in volume or in value?

They suggest that the protective effect of the general import quota would be very low, a finding the EC considers as unrealistic (WTO, 2005b, p. 20) The EC has thus attempted but unsuccessfully to convince the claimants and the arbitrators that EUROSTAT CIF unit values in the EU-15 were inappropriate ("abnormally high") for external prices, first by comparing these prices with CIF unit values in the ten Central and Eastern European Countries (CEECs) prior to their accession to the EU, second by reconstructing CIF unit values for the EU-15 from FOB prices in the MFN countries adding to the latter Sopisco News estimates of freight and insurance costs, third by analysing CIF import prices in the United States. According to the EC, these three alternatives lead to external price estimates that are much lower than figures based on official EUROSTAT CIF import values for the EU-15.

In their evaluation, the arbitrators have noticed that CIF import unit values in neighbouring countries other than the ten CEECs, for example Norway and Switzerland, were comparable, if not higher, to CIF unit values in the EU-15. This finding has led the arbitrators to not support the conclusion reached by the EC that EUROSTAT CIF prices in the EU-15 were abnormally high and inappropriate for use in a price-gap comparison (WTO, 2005b, p. 22). Quality differences may also explain, at least in part, why bananas exported to the EU-15 were higher priced relative to bananas exported to the ten CEECs, a finding some claimants attribute to the import quota policy in place in the EU-15 (WTO, 2005, p. 23). This last implication is not convincing however as Norway and Switzerland are also free markets, like the ten CEECs prior to their accession to the EU. Furthermore, and unfortunately, the arbitrators have remained silent on the two other puzzles raised by the EC, namely the fact that the use of reconstructed CIF prices from FOB unit values or the use of CIF prices in the United States also lead to external price estimates much lower than those based on reported EUROSTAT CIF data.

Price variability across assumed near countries (the ten CEECs, Norway, Switzerland and the United States) and across time demonstrates the difficulty in using near country data for external prices. This twofold variability supports the assumption of a segmented world banana market. In addition, the world banana market is dominated by a very few number of multinational companies (Taylor, 2003; see also footnote 3). In 2000, the three leading companies (Chiquita Brands International, Dole Food Company and Fresh Del Monte Produce) accounted for 56 % of world banana exports. In 1999, the same three companies accounted for 65 % of world banana imports and five companies (the three leaders plus Fyffes and Noboa) accounted for 84 % of world banana imports (FAO, 2003). Although these figures suggest an oligopolistic market structure, they do not necessarily imply that the EU banana market is not competitive. For example, Hermann and Sexton (2001) have shown that the German market could not be characterised by the exercise of market power despite the very low number of firms that compete in that market. In a general way, as noted by Annania (2006), empirical analyses (Doedhar and Sheldon, 1996; Hermann and Sexton, 1999; McCorriston, 2000) are not univocal in suggesting a less than competitive market structure.

Despite the limited number of players at the various stages of the EU banana chain, simulation model results reported in the next section assume perfect competition. This assumption is retained for three reasons. First because it is impossible from data available in the public domain to estimate potential market powers of exporters, importers, wholesalers and retailers. Clearly, there is an important need for further research in this area notably because the effects of a tariff-only policy are likely to be different in a regime of successive oligopolies relative to an assumed perfect competition benchmark (McCorriston, 2000). Second because all studies that have attempted to estimate the tariff equivalent to the tariff-rate quota policy assume perfect competition (FAO, 2004). Third because the arbitration awards do not address this issue of perfect versus imperfect competition. They also assume, at least implicitly, that the EU banana market is competitive so that it is theoretically possible to use "without adaptation" the price-gap approach for defining the MFN tariff that would maintain total market access for MFN banana suppliers.

4. Assessing the impacts of the tariff-only EU import policy

In this section, we first focus on the observed gap between FOB unit values of MFN banana exports to the EU-15 on the one hand and CIF unit values of EU-15 banana imports from MFN countries on the other hand. We show that this observed gap is substantially higher than insurance, freight and other relevant costs that should theoretically be added to FOB prices to transform them into CIF values. We therefore adopt two contrasting hypotheses as regards this unexplained gap: either it corresponds to quota rents linked to the general tariff-rate quota or it corresponds to an "unexplained" margin which has no link with this general tariff-rate quota. We then use an updated version of a partial equilibrium model of the world banana market to analyse the effects of different MFN tariff levels on the EU banana market and import structure under both hypotheses.

Secondly, we concentrate on the situation of Western African ACP country exports as regard the specific quota that was reserved to ACP States under the tariff-rate quota system. Once again, we adopt two contrasting hypotheses: either Western African countries were constrained within the specific ACP quota or they were unconstrained. Simulations of the effects of different MFN tariff levels under both alternatives are performed.

Finally, we analyse the consequences of an "augmented" tariff-only import regime including a MFN tariff and an duty-free import quota for ACP bananas, considering above described alternative hypotheses as well.

Comparing MFN FOB export prices and EU CIF import prices: an "unexplained" gap

Table 1 reports CIF unit values of EU-15 banana imports from MFN countries and FOB unit values of MFN banana exports to the EU-15 over the four-year period 2000 to 2003. These unit values have been calculated using value and volume trade flow data between MFN countries and the EU-15 extracted from the COMTRADE database. COMTRADE data have been retained for two main reasons. First, because COMTRADE data allow us to calculate export volumes and values between each origin and each destination while FAO data allow us only to calculate FOB unit values of total exports of each exporting country. As a result, COMTRADE data allow us to calculate CIF import unit values in the EU-15 from MFN suppliers and FOB export unit values from MFN suppliers to the EU-15. Second, because the debate between the EC and the WTO arbitrators relied on FAO and EUROSTAT data, we believe that it is interesting to depart from these controversial data.

Table 1. Comparing CIF import prices in the EU-15 from MFN suppliers and FOB export prices of MNF suppliers to the EU-15 (source: COMTRADE)

	2000	2001	2002	2003
CIF unit values (tariff of €75 per tonne included) of EU-15 imports from MFN countries (€ per tonne)	578	613	660	630
FOB unit values of MFN countries exports to the EU-15 (€ per tonne)	304	319	286	229
Calculated price gap	274	294	374	401
"unexplained" price gap*	134 / 194	150 / 214	234 / 294	261 / 321

* "unexplained" price gap = CIF price - FOB price - €75 per tonne (tariff) - €80 to €140 (estimated insurance, freight and other relevant costs).

The calculated price gap varies from €274 per tonne in 2000 to €401 per tonne in 2003. Theoretically, i.e., by definition of FOB and CIF prices, this gap should cover the general import quota tariff of €75 per tonne plus insurance, freight and other relevant costs that should be added to transform FOB prices

into CIF values. According to various sources and despite the fact that public information on the subject is sparse, insurance, freight and other relevant costs between the MFN exporting countries and the EU-15 likely range between €80 per tonne and €140 per tonne. As a result, even accounting for the tariff of €75 per tonne and estimated insurance, freight and other relevant costs, there remains an "unexplained" gap ranging from €134 to €321 per tonne, depending on years.

This puzzle can be solved by assuming that at least part of the general quota rent is reflected in reported CIF import prices in the EU-15 from MFN suppliers. However, we cannot definitively assert that this explanation is the only way to solve the puzzle. Therefore, because there is no consensus among existing studies dealing with this issue[5] as well as between the EC and the WTO arbitrators, we also consider an alternative hypothesis where the "unexplained" price gap would correspond to an "unexplained" commercial margin without link to the general import quota in place before 2006.[6]

If one assumes that the FOB to CIF price gap puzzle can be explained by the general quota rent argument, the "unexplained" price gap reported in Table 1 will vanish as soon as the tariff-rate quota system is replaced by the tariff-only regime. In this first case, the MFN tariff equivalent should include at least part of the general quota rent. Inversely, if the FOB to CIF price gap puzzle corresponds to an "unexplained" commercial margin without link to the general tariff-rate quota, there will remain an "unexplained" price gap after the removal of the general import quota. In this second case, the MNF tariff equivalent should not include the "unexplained" commercial margin. The latter does not directly depend on the general quota rent and will remain even after the general quota removal.

Base period data used for model initialisation and calibration correspond to the 2000-2002 year average. On this basis, we estimate that the (static) MFN tariff equivalent would be €227 per tonne under assumption S1, i.e., when one assumes that the "unexplained" gap between FOB and CIF prices corresponds to the general import quota rent. In the same way, the (static) MFN tariff equivalent would be €75 per tonne (the in-quota tariff applied to EU imports from MFN countries in the tariff-rate quota regime in place before 2006) under assumption S2, i.e., when one assumes that the "unexplained" gap between FOB and CIF prices corresponds to an "unexplained" commercial margin.

Impacts of various MFN tariff levels on the EU banana market under alternative assumptions S1 and S2

In order to analyse the effects on the EU banana market and import structure of various MFN tariff levels under alternative assumptions S1 and S2, we use an updated version of a single-commodity, multi-country partial equilibrium model of the world banana market initially developed to analyse the effects of the successive versions of the CMOB tariff-rate quota trade regime (Guyomard et al., 1999a, 1999b; Guyomard and Le Mouël, 2003). The model assumes perfect competition. It includes eight importing zones within the EU, including the ten new Member States, and the Rest of the World (ROW). On the export side, it distinguishes between the EU regional suppliers, i.e., the French overseas territories on the one hand, the Canary Islands, Crete and Madeira on the other hand, the ACP exporters, i.e., the two West African countries (Cameroon and Ivory Coast), Jamaica, the Windward Islands and the other ACP countries, as well as the non-ACP (or MFN) countries, i.e., Costa Rica, Columbia, Ecuador, Guatemala, Honduras, Panama and the other non-ACP countries. Import functions are constant-elasticity functions of CIF prices. Export functions are also constant-elasticity functions defined from FOB prices. Transportation costs and constant-margin equations link CIF import prices in importing zones and FOB export prices in exporting zones. The market-clearing equation ensures the supply-demand equilibrium on the world banana market. Value and volume of

[5] In a general way, price-gap calculations based on CIF price comparison conclude that the tariff equivalent to the tariff-rate quota system in place before 2006 should be rather low, at the extreme €64 per tonne for Borrell and Mauer (2004), while price-gap studies that employ FOB prices conclude that the tariff equivalent should be much higher, around €260 per tonne for NERA and OPM (2004) for example. For more details on this issue, see FAO (2004).

[6] In that case, we implicitly assume that the general quota rent is accounted for "elsewhere" in the MFN to EU banana chain.

bilateral trade flows are based on United Nations (COMTRADE) and EUROSTAT (COMEXT) data. FOB and CIF unit values are derived from these value and volume data.

Before going through the details of the various experiments, the following remarks are in order. All scenarios assume that deficiency payments to EU producers adjust so that effective prices taken into account by EU producers are constant. As a result, bananas supplied in the EU territories are constant and the same in all scenarios. The first set of experiments assumes that Western African countries are not constrained under the specific quota reserved to ACP states. Under these assumptions, there exists a single MFN tariff allowing to reproduce the EU import structure that prevailed in the base period 2000-2002. Clearly, this (static) tariff equivalent will be different according to the hypothesis adopted for explaining the "unexplained" gap between CIF and FOB prices (cf. supra). However, whatever the considered situation, S1 or S2, a duty lower than the tariff equivalent would lead to greater EU imports, lower EU import prices, greater EU imports from the MFN countries and lower EU imports from the ACP states relative to 2000-2002 base period data. Conversely, a higher duty would lead to lower EU imports, higher EU import prices, lower EU imports from the MFN countries and greater EU imports from the ACP states. This pattern is clearly illustrated by simulation results reported in Table 2.

Table 2. Simulated effects of various MFN tariff levels under alternative situations S1 and S2

	Situation S1 (« unexplained » price gap is quota rent)			*Situation S2 (« unexplained » price gap is constant commercial margin)*		
MFN tariff level	75 €/t	176 €/t	*227 €/t*	*75 €/t*	176 €/t	227 €/t
EU CIF price (€ / tonne)	463	556	*603*	*603*	698	746
EU consumption (tonnes)	5 472 711	4 862 911	*4 615 259*	*4 615 259*	4 209 257	4 037 403
MFN exports to the EU (tonnes)	4 267 378	3 474 181	*3 132 844*	*3 132 844*	2 539 778	2 272 860
ACP exports to the EU (tonnes)	425 310	608 708	*702 393*	*702 393*	889 458	984 521

Table 2 reports the effects of three MFN tariff levels, specifically €75 per tonne (the static tariff equivalent under situation S2), €227 per tonne (the static tariff equivalent under situation S1) and €176 per tonne (the tariff level applied by the EU since 1 January 2006), under assumptions S1 (the "unexplained" gap between FOB and CIF prices corresponds to the general quota rent) and S2 (the "unexplained" gap between FOB and CIF prices corresponds to a constant commercial margin), respectively.

Under assumption S1, the static tariff equivalent is €227 per tonne. The two other tariffs considered in Table 2 are thus lower than this tariff equivalent. As a result, they both lead to a decrease in EU import prices and an increase in EU consumption (relative to the initial situation which is reproduced by setting the tariff at €227 per tonne). They are favourable to MFN suppliers which increase their banana exports to the EU. They penalise ACP countries which experience a decrease in their exports to the EU.

Under assumption S2, the static tariff equivalent is €75 per tonne. The two other tariffs considered in Table 2 are thus higher than this tariff equivalent. They lead to an increase in EU import prices and a decrease in EU consumption relative to the initial situation. MFN country exports to the EU decrease while ACP country exports to the EU increase.

If one accepts, as we do in situation S1, that the "unexplained" gap between FOB and CIF prices corresponds to the general import quota rent, then a MFN tariff of €176 per tonne, i.e., the tariff applied by the EU since 1 January 2006, likely underestimates the tariff equivalent. In situation S1 with a tariff set at €176 per tonne, MFN country exports to the EU increase by 11 % while ACP

country exports to the EU decrease by 13 %. But if one admits, as we do in situation S2, that the "unexplained" gap between FOB and CIF prices corresponds to a "unexplained" commercial margin, then a MFN tariff of €176 per tonne overestimates the tariff equivalent. In situation S2 with a tariff set at €176 per tonne, MFN country export to the EU decrease by 19 % while ACP country exports to the EU increase by 23 %.

Taking into account the fact that Western African country exports to the EU were perhaps (likely) constrained in the last years of the tariff-rate quota regime

Over the period 1993-2001, ACP country exports to the EU always remained below the specific ACP quota limit of 857,700 tonnes. From 1 January 2002, 100,000 tonnes have been transferred from the specific to the general quota. From 1 January 2002 to 1 January 2006, the size of the specific quota reserved to ACP suppliers was thus 750,000 tonnes. As 2002 to 2004 figures suggest (Table 3), such a ACP quota level appears constraining.

Table 3. ACP exports to the EU, 1999-2004 (1000 tonnes)

	1999	2000	2001	2002	2003	2004
Specific ACP import quota	858	858	850	750	750	750
ACP exports to the EU	672	756	730	726	787	771
Difference	182	102	120	24	-37	-21

Sources: NERA and OMP (2004) for the years 1999-2002, FruiTrop for the years 2003 and 2004.

The EU market share of the ACP countries' group is stable since 1993 oscillating around 18.5 %. But while EU imports from the Caribbean countries, except the Dominican Republic, have dramatically decreased, EU imports from Cameroon and Ivory Coast have substantially increased (Figure 3). FOB export unit values of Caribbean ACP states and West African ACP countries also exhibit contrasted patterns. Despite export contraction, FOB unit values of the Caribbean countries have not decreased over the last decade. By contrast and despite export expansion, FOB unit values of Cameroon and Ivory Coast have significantly decreased, particularly from 1999. Thank to significant cost reductions over the last decade, West African suppliers now operate in a cost range similar to that of the Latin American suppliers. Production costs in the Caribbean ACP states are much higher (FAO, 2003; NERA and OPM, 2004).

This suggests that it is not unlikely to assume that the two West African country export supplies were constrained under the tariff-rate quota regime, at least in the last years of this trade regime. This assumption is supported by industry sources reporting that both Cameroon and Ivory Coast were constrained due to the non-availability of import licences under the specific ACP quota (NERA and OMP, 2004). As a result, the second set of experiments considered in this subsection assumes that the two West African country export supplies were constrained in the base period. Under this additional assumption, both Cameroon and Ivory Coast should benefit from the removal of the tariff-rate quota policy since the constraint they faced vanishes (but remember that the trade regime effectively implemented by the EU since 1 January 2006 is not a single tariff regime since it also includes a duty-free ACP import quota of 775,000 tonnes). However, the gain can be compensated by the loss Cameroon and Ivory-Coast could potentially experience if the MFN tariff is set at a low level.

Table 4 reports the effects of the three MFN tariff levels we considered in Table 2, that is €75, €176 and €227 per tonne. Situation S3 (respectively S4) corresponds to situation S1 (respectively S2) except that we assume in addition that Western African country exports to the EU were constrained prior to 2006.

Table 4. Simulated effects of various MFN tariff levels under alternative situations S3 and S4

	Situation S3 (« unexplained » price gap is quota rent and WA countries initially constrained)			*Situation S4 (« unexplained » price gap is constant margin and WA countries initially constrained)*		
MFN tariff level	75 €/t	176 €/t	*227 €/t*	*75 €/t*	176 €/t	227 €/t
EU CIF price (€ / tonne)	461	553	*600*	*601*	695	743
EU consumption (tonnes)	5 489 211	4 875 510	*4 626 413*	*4 626 413*	4 218 228	4 045 523
MFN exports to the EU (tonnes)	4 063 902	3 267 015	*2 924 324*	*2 924 324*	2 329 232	2 061 533
ACP exports to the EU (tonnes)	645 288	828 473	*922 068*	*922 068*	1 108 975	1 203 967
Cameroon	238 167	304 331	*338 136*	*338 136*	405 644	439 954
Ivory coast	215 660	275 572	*306182*	*306182*	367 310	398 378
Caribbean ACP States	136 288	176 828	*197 541*	*197 541*	238 904	259 927

By comparing Tables 2 and 4, one first notes that assuming that Western African country exports to the EU were (Table 4) or were not (Table 2) constrained in the tariff-rate quota regime prior to 2006 has only a very small impact on EU import prices and EU total consumption, for a given MFN tariff and a given assumption as regards the way the gap between FOB and CIF prices is "explained". Whatever the considered situation, the tariff equivalents of Table 2, €227 per tonne in S1 and €75 per tonne in S2, now appear unfavourable to MFN suppliers and favourable to ACP suppliers. More specifically, MFN country exports to the EU decrease by 7 % and ACP country exports to the EU increase by 31 % in situation S3 (respectively S4) relative to S1 (S2) with a tariff of €227 (€75) per tonne. Under assumption S3, it appears that a MFN tariff of €176 per tonne is too high to maintain MFN country exports to the EU at base period levels. By contrast, under this assumption S3, a MFN tariff of €75 per tonne is too low to maintain ACP country exports to the EU at base period levels. This occurs only because exports from the Caribbean ACP states decrease, from 199,400 to 136,300 tonnes according to simulation results, since exports from the two Western African countries increase, from 426,000 to 453,000 tonnes according to simulation results.

From a more general point of view, simulation results reported in Table 4 illustrate a very well-known theoretical result. Even in a static competitive world, there is no single tariff (here on MFN exports to the EU) equivalent to the tariff-rate quota regime that would maintain the status quo for the MFN suppliers, the West African ACP exporting countries and the Caribbean ACP states as soon as both the general and specific quotas are assumed constraining. This non equivalence between the tariff-rate quota system and the tariff-only regime is likely to be aggravated in a dynamic framework because of differences in productivity rates between the various exporting zones. On this point, Guyomard et al. (2005) have shown that in a tariff-only regime and whatever the MFN tariff level, MFN and Western African country exports to the EU should increase over time while Caribbean state exports to the EU should decrease (relative to static simulation results). This non equivalence is also likely to be exacerbated in an imperfect competition world.

Globally, simulation results reported in Table 4 suggest that if the situation observed prior to 2006 can be modelled as in experiments S3 (in which the "unexplained" gap between FOB export prices from MFN suppliers to the EU and CIF import prices in the EU from the same MFN suppliers can be attributed to the general quota rent, and Western African country export supplies were in practice constrained by the specific ACP quota in the tariff-rate quota regime), then setting the MFN tariff at €176 per tonne would allow the EU to maintain market access for both the group of MFN suppliers and the group of ACP states. But it would not maintain access for the group of Caribbean ACP states. Within the group of ACP countries, the clear winners would be Cameroon and Ivory Coast. In that perspective, one easily understands that the EU trade policy in place since 1 January 2006 would very likely favour the MFN suppliers to the detriment of the two Western African ACP countries which would be constrained by the ACP import quota of 775,000 tonnes. Even if Cameroon and Ivory Coast are not constrained in the short run, they are likely to be constrained in the medium to long run. But if

the situation observed prior to 2006 corresponds to assumptions embedded in experiments S4 (which, in practice, assume that there was no protective effect associated with the general quota rent in the tariff-rate quota policy in place between 1993 and 2006), then setting the MFN tariff at €176 per tonne would favour ACP countries, including the Caribbean states, to the detriment of MFN countries. In that case, the trade regime applied since 1 January 2006, more specifically the ACP import quota of 775,000 tonnes, can be viewed as a way to control export expansion from the ACP countries, more specifically from Cameroon and Ivory Coast.

5. Concluding comments

The EU was bound by WTO agreements of 2001 to move to a tariff-only import regime for bananas no later than 1 January 2006. After two WTO arbitrations that ruled against the initial EU tariff proposals, the latter unilaterally decided to set the MFN tariff at €176 per tonne and to maintain a duty-free import quota of 775,000 tonnes for ACP bananas. The EU trade policy in place since 1 January 2006 is thus not a tariff-only import regime and hence does not fulfil EU commitments contained in WTO agreements of 2001. The future of the international banana war is still very uncertain.

This uncertainty is for a large part due to the fact that it is impossible, even in a competitive world, to replace a trade policy including two binding tariff-rate import quotas by a tariff-only regime. The general tariff-rate quota in place between 1993 and 2006 was constraining for MFN suppliers. The specific ACP import quota was very likely constraining for the most efficient ACP suppliers, notably Cameroon and Ivory Coast, in the recent years, specifically from 2002. In that perspective, one can interpret the EU decision of using a mixed trade policy, i.e., a MFN tariff and a duty-free ACP import quota, as a way to solve the puzzle it faced. The MFN tariff is used to mimic the price and output effects of the general tariff-rate quota for MFN suppliers while the duty-free ACP import quota is used to prevent expansion of ACP country exports. But setting the MFN tariff at right level, i.e., a level that would result in at least maintaining market access for MFN suppliers, appears like an impossible mission given statistical information in the public domain. In that perspective, this paper shows the WTO arbitrations of 2005 are incomplete notably because they are silent on two puzzles raised by the EC during the arbitration process, i.e., the fact that the use of reconstructed CIF prices in the EU from FOB unit values in MFN countries or the use of CIF prices in a “near” country, the United States, lead to external price estimates in the EU much lower that those based on reported EUROSTAT CIF data.

References

Agra Europe London, various issues.

Anania G. (2006) The 2005 Episodes of the “Banana War” Serial. An Empirical Assessment of the Introduction by the European Union of a Tariff-Only Import Regime for Bananas. Working Paper, Department of Economics and Statistics, University of Calabria, Italy.

Borrell B. and Mauer M. (2004) EU Banana Drama: Not Over Yet; New Distortions from a High Tariff-Only Policy. Centre for International Economics, Canberra and Sydney, Australia.

Deodhar S.Y. and Sheldon I.M. (1996) Estimation of Imperfect Competition in Food Marketing: A Dynamic Analysis of the German Banana Market. *Journal of Food Distribution Research*, October, 1-10.

FAO (2003) The World Banana Economy, 1985-2002. FAO, Commodities and Trade Division; Raw Materials, Tropical and Horticulture Products Service; FAO Commodities Studies 1.

FAO (2004) Is there a Tariff-Only Equivalent to the EU Tariff-Rate Quota Regime? Insights from Economic Analysis. FAO Trade Policy Technical Notes on Issues related to the WTO Negotiations on Agriculture n°3.

Guyomard H., Laroche C. and Le Mouël C. (1999a) Impacts of the Common Market Organisation for Bananas on European Markets, International Trade and Welfare. *Journal of Policy Modelling* 21(5), 619-631.

Guyomard H., Laroche C. and Le Mouël C. (1999b), An Economic Assessment of the Common Market Organisation for Bananas in the European Union. *Agricultural Economics* 20, 105-120.

Guyomard H. and Le Mouël C. (2003) The New Banana Import Regime in the European Union: A Quantitative Assessment. *The Estey Centre Journal of International Law and Trade Policy* 4(2), 143-161.

Guyomard H., Le Mouël C., Levert F. and Lombana J. (2005) The Tariff-Only Import Regime for Bananas in the European Union: Impacts on ACP and non-ACP Suppliers. *EuroChoices*

Josling T.E. (2003) Bananas and the WTO: Testing the New Dispute Settlement Process. In Josling T.E. and Taylor T.G. (ed.), *Banana Wars: The Anatomy of a Trade Dispute*, Wallingford, CABI Publishing, 169-194.

Helpman E. and Krugman P.R. (1989) *Trade Policy and Market Structure*. The MIT Press, Massachusetts Institute of Technology, Cambridge, Massachusetts, United States.

Hermann R. and Sexton R. (1999) Re-Distributive Implications of a Tariff-Rate Quota Policy: How Market Structure and Conduct Matter. University of Giessen, Discussion Papers in Agricultural Economics, 52.

McCorriston S. (2000) Market Structure Issues and the Evaluation of the Reform of the EU Banana Regime. *World Economy* 23, 923-937.

NERA Economic Consulting and OPM Oxford Policy Management (2004) Addressing the Impact of Preference Erosion in Bananas on Caribbean Countries. Report for the United Kingdom Department for International Development (DFID), London and Oxford, United Kingdom.

Read R. (2001) The Anatomy of the EU-US WTO Banana Trade Dispute. *The Estey Centre Journal of International Law and Trade Policy* 2(2), 257-282.

Swinbank A. (1996) Capping the CAP? Implementation of the Uruguay Round Agreement by the European Union. *Food Policy* 21, 393-408.

Taylor T.G. (2003) Evolution of the Banana Multinationals. In Josling T.E. and Taylor T.G. (ed.), *Banana Wars: The Anatomy of a Trade Dispute*, Wallingford, CABI Publishing, 67-95.

WTO (2005a) European Communities - The ACP-EC Partnership Agreement - Recourse to Arbitration Pursuant to the Decision of 14 November 2001: Award of the Arbitrator. WT/L/615 (1 August 2005).

WTO (2005b) European Communities – The ACP-EC Partnership Agreement - Second Recourse to Arbitration Pursuant to the Decision of 14 November 2001: Award of the Arbitrator. WT/L/635 (27 October 2005).

Figure 1. Structure of the EU banana market

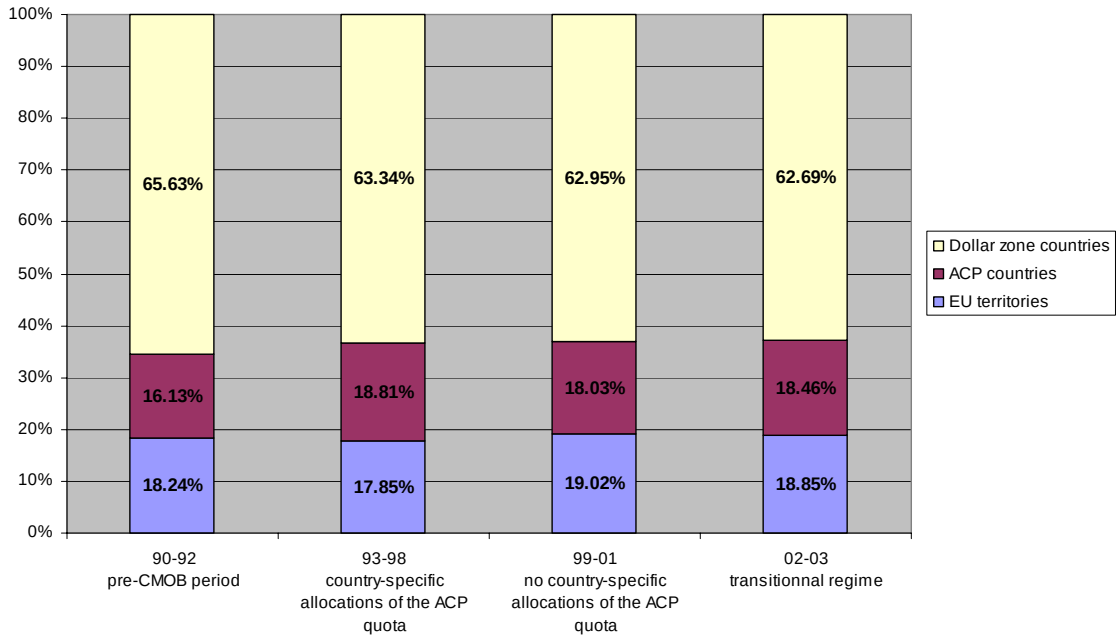

Figure 2. Banana supply in the EU

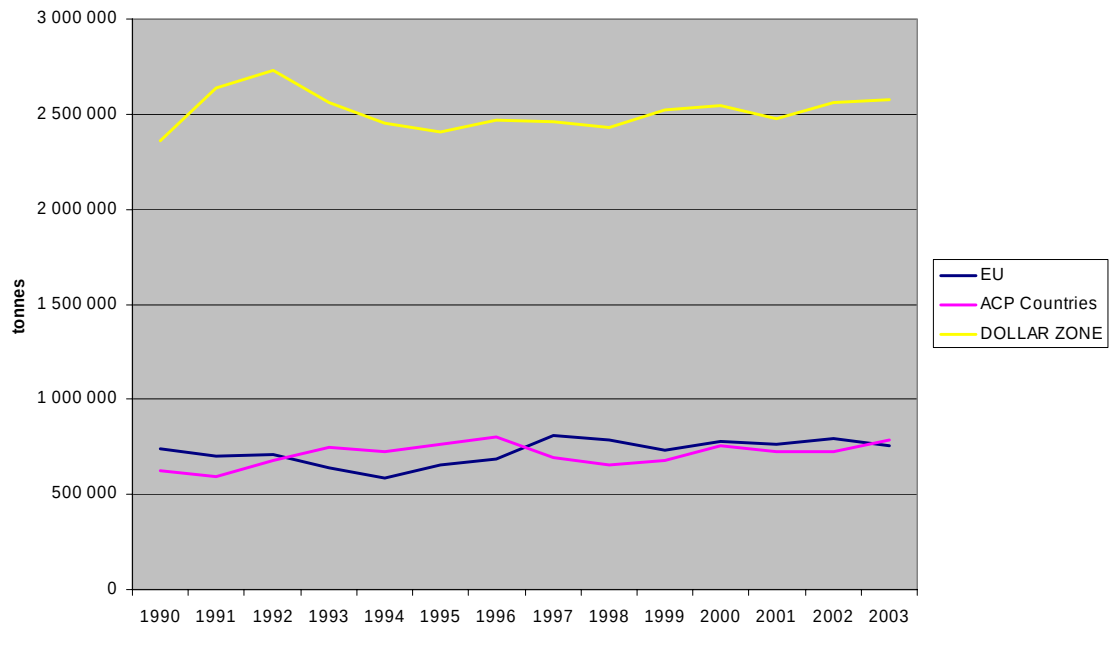

Figure 3. ACP banana exports to the EU