

ESTIMATION OF A TARIFF ONLY LEVEL TO REPLACE THE CURRENT EUROPEAN PROTECTION SYSTEM FOR THE BANANA MARKET

EXECUTIVE SUMMARY

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History

1. The banana production for the Canary Islands and for Spain has an importance that goes beyond economic considerations into vital social matters. Banana production is 21% of the agricultural production of the Canary Islands and represents a basic element for social cohesion, environmental balance and territorial structure¹.
2. The current regime for the European banana market protection is dealing with a crucial change: before 2006 it must abandon the present tariff quota and licensing regime and adopt a “tariff only” system. The key question of the new regime lies in determining the tariff level that should be applied when the present quota system is abandoned. *This study tries to analytically determine which tariff level guarantees, after the system has been transformed, an equivalent protection to the current one, so, insofar as possible, while fulfilling the WTO requirements, it preserves the present equilibrium of interests in the European banana market.*
3. With the establishment of the Single Market, the EU was forced to unify the banana market that before 1993 was composed of an aggregation of national markets with different import regimes. Then a Common Market Organization (CMO) was established to satisfy simultaneously both the WTO principles and the interests of ACP country members and regions of preferential treatment. Since the banana CMO was first introduced, it has been a reason of discontent in third countries, particularly for the Latin American producers (Colombia, Costa Rica, Nicaragua, Venezuela, Ecuador, Honduras, Guatemala and Mexico) as well as for the USA as a trading nation. *This is how the EC’s banana import regime has turned into one of the most lasting conflicts inside the World Trade Organization (WTO).* This first original version of the CMO was challenged even by Union members such as Germany.

¹ See the Economía XXI study “El libro verde de la producción platanera canaria” done by ASPROCAN in January 2004, in which some essential aspects of the banana production in the Canary Islands are detailed. Given its novelty and technical quality, in our study we refer generically to this report for the descriptive aspects related to the reality of the Canary Islands.

4. Through consecutive dispute settlement cases in the WTO, a series of decisions were obtained from panels, the Appellate Body and Arbitrators that forced the EU to progressively dismantle the protective elements from the CMO that were in violation of the WTO rules. Finally, after the withdrawal of concessions from the USA to the value of 191.4 million dollars as a retaliatory measure, the Commission proposed a new modification, that reached its current dimension in 2001. At that time, in agreement with both the USA and Ecuador and through consecutive rules, the Council Regulation 404/93 was again modified. *These new Regulations establish the introduction of a tariff only import regime; the deadline being the 1st of January 2006.*

The current import regime and the transition to “tariff only”

5. From the 1st of January 2002, bananas are imported into the EU with import licences given according to the trade registered in the past. The current granting regime of import certificates is above all arranged according to historical references (83% of the quotas go to “traditional operators” in the case of quotas A and B and 89% for quota C). However, in order to guarantee the participation of non-traditional operators 17% of quotas A and B and 11% of quota C are reserved for them. The following tariff rate quotas apply:
 - quota A: 2 200 000 Tons with a 75 €/Ton tariff (0 for bananas from the ACP countries)
 - quota B: 453 000 Tons with a 75 €/Ton tariff (0 for bananas from the ACP countries)
 - quota C: 750 000 Tons with a 0 €/Ton tariff (reserved for bananas from the ACP countries)
 - banana imports that are made out-of-quota will be subject to customs duties of 680 €/Ton with a tariff preference of 300 €/Ton for the ACP.

6. In order to consider the demand of the 10 new members after the EU enlargement in May 2004, an extra import quota of 300 000 Tons with a 75 €/Ton was created for them as a temporary measure for the period between the 1st of May and the 31st of December 2004. Replacing this system and adopting a new “tariff only” diagram implies the disappearance of the quotas and the development of a tariff only system. Another regime in force, according to the EBA (Everything But Arms) initiative is the duty free access for the banana from the 1st of January 2006 from 48 Least Developed Countries, 38 of which are ACP Countries.

7. *However the EU commitment to grant preferential access to the banana ACP must be observed.* Currently this preference is structured (EBA initiative aside) through a preferential tariff in quotas A and B (75€/Ton) and a reservation of quota C for the ACP, as well as preferences out-of-quota. Adopting a “tariff-only” system in which there are no quotas seems to be at odds with maintaining preferences for the ACP. For 2006 the setting off of a “tariff only” system could be compatible with a preferential quota by reason of an operative waiver² until the beginning of 2008. From then the waiver could be replaced by specific free trade agreements with the ACP Countries. *Consequently in this paper we shall consider a tariff only scenario but reserving a 750 000 quota with a 0 tariff to maintain the ACP preferences.*

The multilateral agricultural negotiations

8. The main result of the Agricultural Agreement of the Uruguay Round was the introduction of the Agriculture into the GATT-WTO system from which it had been previously excluded. The commitments agreed on refer basically to four fields: domestic support, tariffs, export subsidies and tariff quotas. The field that is most related to our goal is market access (tariffs and tariff quotas). To submit agricultural trade to GATT discipline all non-barrier tariffs were “tarifficated”; once the equivalent tariff was established, a calendar reduction would be applied, a yearly

² By “Waiver” we understand a special authorization given by the WTO to the requesting country, so that for a specific period of time it will be exempt of complying with some of the obligations from the WTO Agreements that include GATT 94.

6% in 6 years. The tariffication was carried out by applying a conversion formula for these barriers into tariff rates, but the resulting tariffs were too high.

9. To conceal this problem the contracting parties agreed on commitments concerning minimum market access in order to respect traditional flows. *One way to guarantee minimum access is to use tariff quotas, a much criticized instrument, but that is very popular in agriculture. It is also used to reduce the deterioration of preferences given to third countries which implies the reduction of the Most Favoured Nation (MFN) Tariff.* The GATT treatment of the tariff quotas is of relevance for our study, as the banana CMO contains these instruments. The GATT-WTO considers the tariff quotas as tariffs given their effect on trade, leaving out partially the quantitative restriction component. This is why they are permitted on the contrary to the quotas.

The tariff quotas

10. Although from a WTO point of view tariff quotas can be considered as tariffs because of their effect on trade, their final effect depends on the interaction between the quota level, the tariffs rates used and the import demand of the country that sets the measure. To this we add that the way the quota is administered is of extreme importance to estimate its consequences. In theory, the conventional study of tariff quotas is done through a partial equilibrium analysis of its effects. This is the effects at the product level, in this case the banana, without considering its repercussions on the economy as a whole. *The effects of introducing a tariff quota that acts like a quota (like in the banana case, since out-of-quota tariffs are prohibitive) compared to free trade are:*

- the prices rise;
- the quantities locally produced rise;
- the import quantities fall;
- the welfare of local producers and importers rise at the expense of consumers;

- unlike the tariff, that implies tariff collection and therefore a rise in the tax payer's welfare, the quota does not generate fiscal revenue but a quota income that the importers appropriate themselves with at the expense of the consumers and tax payers.
11. *If the quota considers specific allocations by countries of origin, inefficiencies rise for 2 reasons:* the most efficient producers are not necessarily those who export inside the quota and secondly, the inconvenient arises that some of the most inefficient ones underfill the quota. Also, the management of the quota can bring even bigger inefficiencies depending on the licence administration method, that in the case of the banana is done through a historical trend. These inefficiencies turn into a rise in the transaction costs and the irregular income given to traditional importers, the impossibility for new operators of entering the market and a lack a connection between the productive efficiency criteria.

Methodologies for the tariffication of a quota system

12. *Obtaining the tariff equivalent from the estimation of an import demand and supply model:* In this conceptual and theoretical way of thinking, the calculus of the tariff equivalent comes from estimating the import demand curve, the supply curve and the impact of tariff in- and out-of-quota that along with the quota, make the supply curve with the tariff quota. Once these curves have been econometrically estimated, obtaining the tariff equivalent implies calculating which tariff level must be used in order to maintain the current price.
13. *Obtaining the tariff equivalent from the price gap between markets:* This means trying to reach the tariff equivalent through the calculus of the price gap in the reference market between external prices (average CIF import prices) and internal prices (representative wholesale prices). Additionally it has been pointed out a third method that has not been emphasized in this document because it is considered analytically impossible: the calculus of the quota-rent through a direct inquiry to the operators on the price paid for the import certificates.

14. The banana market structure is another controversial aspect. Theory points out that with imperfect competition a quota maintains domestic prices over the level that would be reached by a tariff that limits the imported quantity in equal measure. Therefore in imperfect competition the tariff equivalent should be higher than the one achieved in perfect competition. This factor must be kept in mind when considering the result of the tariff equivalent calculus, although it creates some difficulties detailed in the final document. From what is said above *and even though there is no specific measure for “market power”, the result obtained in this study should be judged as the minimum recommendable tariff level to preserve the current equilibrium.*

Previous analytical experiences

15. *Raboy, G. (2004): “Calculating the Tariff Equivalent to the Current EU Banana Regime”. Patton Boggs LLP Attorneys at Law. January, 15th 2004:* The results of this study are biased towards countries arbitrarily chosen that do not, in any case, reflect the reality of European banana trade. An excessively simplistic development of the price-gap method causes an initial biased deviation in the price differential estimation due to the oligopolistic situation ruling in the world banana market.
16. Besides, to deal with the price differential analysis suggesting a “two to two” relationship between countries, leads to a new biased deviation in the results. This is because the system tends to reproduce only the concrete market strategy from that zone, which may not be transferable to others or to the whole world. Additionally it compares the banana dollar prices to those of the ACP banana. By doing this you do not obtain the tariff equivalent but the lowest preference level that should be granted to the ACP so they can compete with the banana dollar without any protection.
17. *Borrell (2004): “EU banana drama: not over yet” Centre for International Economics, Canberra & Sydney. March, 2004.* The author calculates the tariff

equivalent with the GATT “price-gap” method, resorting to the differential between CIF import prices (and not those from the origin markets plus transport costs or ‘comparable’ markets) and the internal prices of the ACP bananas and those of the Community production, which he obtains from his model’s data. This way he obtains a 64 € tariff equivalent, which is lower than the in-quota tariff currently applied (75€/Ton) that is why he defends the permanency of a 75 € tariff.

18. This methodology is criticized more in detail in section III of the final document, since what is obtained here is the minimum ACP tariff preference level and not the tariff equivalent level. Furthermore he then uses the *bananarama model* assuming in both hypothesis and results, a whole series of matters that are, at the least, very arguable, like the fact that ACP productivity reaches Latin American’s or that the EU producer support should be withdrawn. His final results for any tariff over 75 € implies a very hard fall of Latin American exports that in principle would not be consistent with GATT and would force the EU to compensate. The document also has various references to the WTO which are not always correct and that are also detailed in section III of the final document.
19. *FAO - Committee on commodity problems Intergovernmental group on bananas and tropical fruits, Puerto de la Cruz, Spain, 22-26 March 2004.* According to this report and against previous results, adopting a 75 € tariff would convey important global demand rises and a significant fall of international prices. In the V section of the study, some alternative scenarios are analyzed. In the first one (200 € tariff) there are still some alterations while the balanced is fixed at 300 €/Ton which would be the tariff equivalent. The most important inconvenient is that it does not reveal technical details about the methodology that is used, but limits itself to quote the results. However 2 political considerations stand out:
 - The current EU commitments with the ACP are incompatible with a low tariff.
 - A low tariff will force the EU to reconsider the direct supports to ultra-peripheral EU areas (i.e. the Canary Islands).

Technical specifications of the model to determine the tariff equivalent

20. The methodology used in our study can be considered as a technical way to find out the “tariff equivalent” with a wider point of view on the problem, though it respects the WTO proposal on the price-gap method, and on maintaining the EU import market access level for all the current suppliers. In this proposal we consider the changes that a new situation would make not only on prices but also on the banana trade flows between the different areas and therefore on the export and import revenue of the participating agents. The limitations from a too simplistic or a built upon a partial vision “price-gap” kind of analysis have been pointed out. In relation to studies that estimate a banana market model, we think that there is clearly a problem with the change of structure, and that they are not capable of reproducing the effects of eliminating tariff quotas, since this situation is not historically contemplated in their estimation.

21. Contrary to the problems that have been previously pointed out, *the model that we propose in this study:*

- Suggests a complete vision of the international trade scenario that avoids the bias in the partial selection of countries or interesting areas.
- By considering all the geographical areas, the price and elasticity estimation is not biased by possible business strategies.
- It corrects the arising problem from the structural change by complementing the temporal econometrical analysis with an optimization system which is capable of reproducing new scenarios.

22. Although we offer in the report more technical details of the model, we can sum up here its characteristics as follows:

- It is a pure international trade model, exclusively focussed on the analysis of the flows and terms of trade.

- This model contemplates only the variables that are directly related to the international market.
- The applied approximation establishes a sketch of international trade in a spatial equilibrium that gathers specific information on the analyzed market and the setting, and it reproduces the trade equilibrium.
- The method is composed of two phases that are clearly differentiated: estimating the import and export functions for each area and determining the trade equilibrium.
- The second stage (determining the equilibrium) can be considered as “timeless”, since the importance lies in capturing a “static photo” of the market reality which is able to show the characteristics from each geographical area related to other areas.
- Once the relative market equilibrium is determined, the simulation strategy consists in altering one or various variables from the settings, and to let the optimization model find new market equilibrium. This new equilibrium may be compared to the original equilibrium, so the changes in trade flows and trading prices may be observed.

23. To develop the two previously described phases, it was necessary to build two data bases of different nature, that are attached in a CD as an additional result to this study and whose sources are detailed in the final document. We can emphasize the following statistic data collection tasks:

- For the econometrical section it was necessary to collect temporal data series that were long enough to estimate with statistical guarantees the export and import functions by areas.

- To develop the optimization system it was essential to obtain “timeless” data matrixes that contained the trade between each one of the areas, as well as the conditions in which that trade is done.
24. Once the information itemized by country was homogenized and in order to estimate the econometrical export and import functions by areas, each nation was assigned to a geographical area, generating a group of importing and exporting areas. Whereas the export data from all the available countries has been added to generate the respective areas, this has not been the case for the import series. The lack of data and its smaller consistence for some countries recommends that the import series be generated considering only, for each area, the main importing countries. By this we achieve that the import data series have a less volatile evolution. Selecting the considered countries in each area is done according to the relative importance of each country in the global aggregate between 1992 and 2002.
25. To estimate the export and import equations by areas we have used, as well as the trade flows and price series, other data series on income and exchange rates. In order to elaborate, in area terms, each one of the income and interest rate series we did not add the more than 150 originally considered countries, but only a selection of them. For this it was necessary to identify a trade matrix itemized by countries in order to establish the corresponding origin-destination. This matrix is essential in the subsequent optimization process. Some of the areas and/or countries are considered for their conceptual interest and not for their quantitative importance, like the ACP countries. By using the same selection and addition system we have also generated the matrixes for international trade prices, transport costs and tariff protection levels which are detailed in the final document.
26. *With regard to the selection of the areas that were considered in the end, we have estimated 16 econometrical functions: 6 export functions and 10 import functions.* The modifications that have happened during the last decade in the international banana market could have produced structural changes that would have dissuaded us from using samples from 1985. For this reason change analysis has

been made and the cases, for which we have detected statistical evidence of change points with important alterations in the significant parameters (elasticities), have been technically resolved by using fictitious variables.

27. For most of the areas it has been possible to estimate the export and import functions. However in the case of the ACP-Non traditional exporting area and of 3 other import areas: South America, Central America and Africa-Middle East, the econometrical exercise did not gather statistical guarantees, and consequently the estimation has not been taken into account. This problem does not have special relevance given the residual character of these areas. Generally, the econometric adjustments have been satisfactory for all the studied areas: the chosen explanatory variables in each equation have turned out to be statistically significant, the variability percentage explained by the model has turned out to be sufficiently high in all cases and no relevant problems of failure to comply with the basic hypothesis have been detected.
28. Once the export and import functions have been defined and the significant parameters have been obtained, we propose an optimization system to reproduce the market equilibrium. This system is in reality the “price-gap” system but applied to a general context of global trade. *The advantages of this method over the simple “price-gap” are clear: for one thing it does not consider only one reference price, but the general international scene. For another it does not only consider prices but also quantities and what is more important, how the prices and quantities vary when some condition from the rest of the economic surrounding is modified (through the export and import functions).*
29. In a first stage, once the matrixes of trade flows, prices, tariffs and transaction costs have been elaborated, the optimization diagram has to be gauged; this is, the model must “learn” to recognize the initial situation as the equilibrium situation. Once the system is gauged, we make the changes that we want to simulate. In our case, this change consists in a modification of the ad-quantum tariffs matrix and the disappearance of quotas. After these changes the objective function looks for a

new market equilibrium by varying trade flows between areas. Consequently it is possible to simulate the effect on trade of these changes.

30. In the new equilibrium we shall find new CIF-FOB price interchange matrixes that will be compared to the initial ones to measure the rises or falls of trade by areas as well as that of prices. However the reestablishment of the initial equilibrium will be achieved, by compensating the initial disturbance (variation of the ad-quantum tariffs) with another variation that offsets its effect; *precisely, in this study we propose a new structure for the ad-quantum tariffs without quotas, maintaining the tariff preference for the ACP countries.*

Results

31. Like all simulation exercises that use econometric and optimization tools, the model's results are conditioned by 4 elements, in all of which this study has been especially careful, as detailed in the final report. The four elements are the following:

- Selecting the techniques to be used and its properties;
- The quality and relevancy of the data;
- The results obtained in the different phases of the technical adjustment;
- The initial hypothesis.

The following results must therefore be interpreted while taking these four elements into account. The simulation stages that have been done and that are more detailed in the final document are the following:

Stage I of the Simulation: defining a new equilibrium after the disappearance of the current quota and tariff system

32. Starting from the initially gauged equilibrium, and from the hypothesis detailed in the V section of the final document, the first stage of the process consists in supposing the disappearance of the ad-quantum tariffs and the quota restrictions. This change in the protection level would generate a new market equilibrium, that would be characterized by the following changes with regard to the initial equilibrium situation:

- *The openness to free trade with the EU, after the removal of the tariff quotas and also the elimination of the tariffs, would generate an 18.2% increase of the EU imports in relation to the equilibrium level.*
- *The new international price equilibrium discourages trade (at least during the initial adjustment phase) from some of these areas with their traditional destination.*
- *These modifications go hand in hand with important alterations in the CIF import prices in the EU, that would cause significant disparities in the capacity to compete of the rest of competitors (banana from the Canary Islands, for example, in the EU case).*
- *A higher import demand in the EU would generate significant rises in the FOB export prices, especially pronounced in the dollar area case.*

Stage II of the Simulation: Calculus of the ad-quantum tariff equivalent

33. In order to maintain the current equilibrium level, both in import flows as well as in prices, we propose to establish an *ad-quantum* tariff on the banana imports. *The tariff only that will replace the current quota and tariff system would be imposed on imports coming from South America and Central America.* Bananas coming from

the ACP areas (Traditional and Non-Traditional) would be exempted from any tariff or quota in the current terms; this is, keeping for them the reserved quota of 750.000 Tons. The tariff equivalent must be the one that discourages the new re-equilibrium situation described in the previous paragraph.

34. We assume the following basic hypothesis to calculate and interpret it:

- The tariff must be set in order to maintain the relative trade structure currently observed and the competitiveness of the different productive areas.
- We assume that, given that a clear market power exists, the tariff resulting from the calculus must be interpreted as the “minimum tariff floor”.
- Given that the calculi are done in dollars, it is necessary to assume a hypothesis on the Euro/Dollar exchange rate. We have decided to contemplate the hypothesis of 0.97 euros/dollar since it is the average exchange rate between 1996-2002, which is the calculus basis for the rest of the series that we have used.

35. With what has been previously said, **our simulation model suggests a tariff equivalent of 259.8 Euros per ton.** With a tariff of this level, the system converges again to the equilibrium initially observed, maintaining the current trade and price structures.

Alternative scenario: 75 euro Tariff (Borrell and Raboy’s Proposal)

36. From the results of our model, *establishing a **tariff of about 75 euros per ton** for imports from the dollar area would not re-establish the current market equilibrium and **cannot be considered a tariff equivalent:***

- In presence of a tariff at that level, the EU imports from the dollar area would rise around 7%.
- The CIF price fall from the dollar area imports would be about 8.5% in relation to the current scenario levels.

Effects of setting a tariff over the equilibrium calculus

37. Any tariff over the equilibrium level (259.8 €/Ton) implies a direct rise in the EU import price of the banana coming from each producer / exporter and consequently a reduction of imports. By using the European Union 15 import elasticity value, we could directly calculate the import falls derived from higher tariffs than the equilibrium one, as seen in the following table and under the limitations detailed in the final document:

	Tariff €/Ton	
	275	300
Rises in Implicit Prices	+6%	+15%
Falls in EU15 Imports	-3%	-8%