

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

FINAL REPORT

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1. Council Regulation (EC) No 216/2001 of 29 January 2001 amending Regulation (EEC) No 404/93 on the common organization of the market in bananas.

- 2. Commission Regulation (EC) No 896/2001 of 7 May 2001 laying down detailed rules for applying Council Regulation (EEC) No 404/93 concerning the regime for importing bananas into the Community.**

- 3. Council Regulation (EC) No 2587/2001 of 19 December 2001 amending Regulation (EEC) No 404/93 on the common organization of the market in bananas.**

- 4. Commission of the European Communities Brussels, 2.6.2004 COM (2004) 399 final. Communication from the Commission on the modification of the European Community's import regime for bananas.**

PRESENTATION AND ANALYSIS STRUCTURE

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.

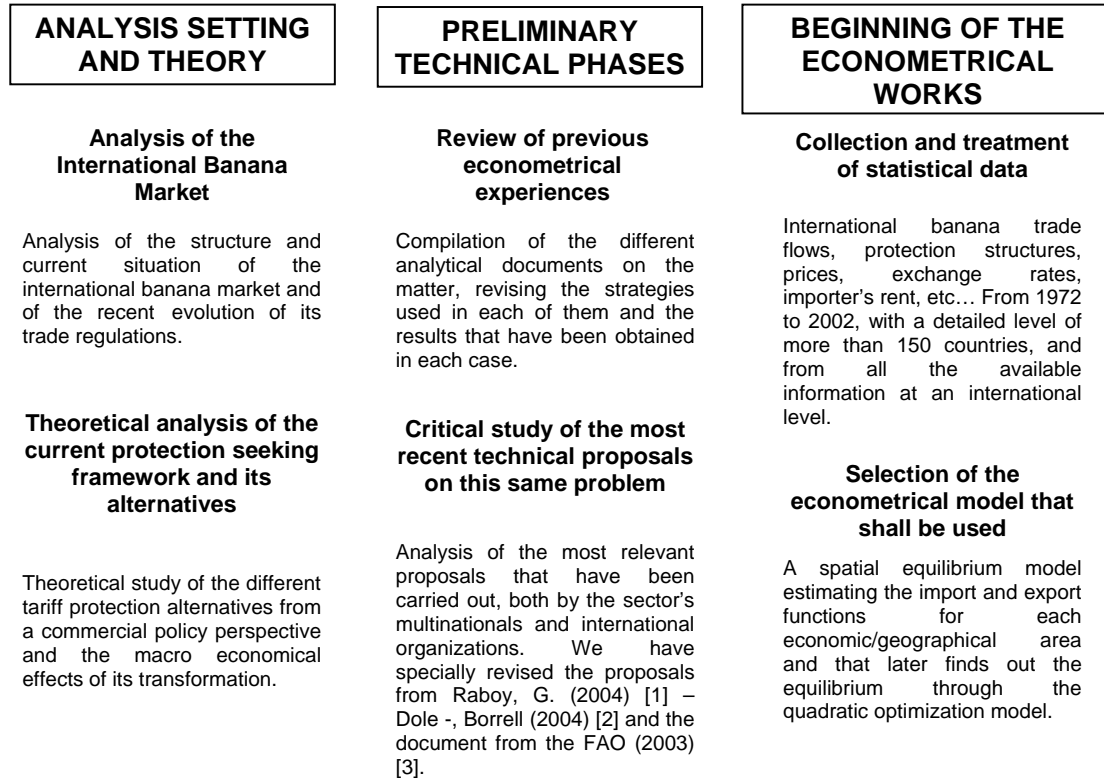
The current regime for the European banana market protection is dealing with a crucial and obligatory change: before 2006 it must abandon the present tariff quota and licensing regime and adopt a “tariff only” system. It is inevitable that transforming the current system, which is a combination of an elaborate system of quotas, tariff and licences, will modify the relation between EU market powers, thus generating profits and prejudices between the current participating agents and maybe even opening new tracks to the incorporation of other interests to trade.

Although the matters that must be kept in mind in this transformation process are many (licences, direct grants ...), one of them is of key importance: 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.

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.

Before initiating the appropriate econometrical works, the analysis team has taken contact with the reality that they will represent, which is: the international banana market structure, the technical characteristics and recent evolution of the current EU tariff protection system, the existing theories on the alternatives to change the trade protection structure of a geographical area and its derived effects, the critic study of technical analysis orientated towards this objective done by other authors, examining previous econometrical experiences in other markets and/or regions, and the collection of available statistical data for the analysis. All of this has allowed us to select with sufficient criteria a concrete analytical methodology whose details are presented in this document.

Illustration 1:
PREVIOUS ANALYTICAL PHASES



¹ Raboy, G. (2004): "Calculating the Tariff Equivalent to the Current EU Banana Regime". Patton Boggs LLP Attorneys at Law. January, 15th 2004.

² Borrell (2004): "EU banana drama: not over yet" Centre for International Economics, Canberra & Sydney. March, 2004

³ FAO. Committee on commodity problems Intergovernmental group on bananas and tropical fruits. Puerto de la Cruz, Spain, 22-26 March 2004.

SECTION I

ANALYSIS OF THE BANANA MARKET REGULATORY FRAMEWORK

I.- GENERAL FRAMEWORK: THE WTO AGREEMENT ON AGRICULTURE

The basic starting point that is like the framework of the problem and consequently the undertook study, is the WTO Agreement on Agriculture, initially negotiated in the Uruguay Round that took place between 1986 and 1994 and that was, in WTO terms “a significant first step towards a fairer competition and a less distorted (agricultural) sector”. In general terms, the agreement gathered the specific commitments made by the WTO contracting parties with the hope to improve market access and to reduce subsidies that have distortional effects on agriculture. The agreement is based on three obligatory basic principles for the EU:

Nonetheless

- a) Reducing 20% of the production and price supports in agriculture throughout a six-year period (1995, finishing in 2000).
- b) Eliminating non-tariff customs barriers and replacing them with flat tariffs with a reduction objective of 36% in the period previously mentioned (a safeguard measure shall, nonetheless, permit to rise the tariffs if the imported quantities were to be above certain levels).
- c) Reducing export supports.

Along with these principles and as the major contribution to the creation of the WTO, a system for dispute settlement in this organization was established as an essential element to make “the multilateral trading system more secure and predictable”. This mechanism to resolve eventual conflicts in the definition and

application of the agreements between members is already published in the “Understanding on rules and procedures governing the settlement of disputes” signed in the Marrakech Agreement that took effect the 1st of January 1995. The Agreement implies, generally, that the WTO Members commit not to act unilaterally, that they submit themselves to multilateral dispute settlement system and they respect its rules and decisions. How the system works and its structure have been through successive modifications, adapting itself to the complex reality of the conflicts that have taken place; maybe the longest and one of the most complex ones that has been dealt with is the one related to the international banana trade.

II.- THE COMMON MARKET ORGANIZATION IN THE WTO AGREEMENT ON AGRICULTURE FRAMEWORK

With the establishment of the Single Market, the EU was forced to unify the banana market; before 1993 the European market was composed of an aggregation of national markets with different import regimes:

- Free import with a free non bound quota (RFA) or with a bound duty of 20% in GATT (Belgium, Denmark, Luxembourg, and Netherlands);
- Preferential access for exports from ACP countries and/or ultra peripheral regions (France, Italy, and United Kingdom);
- Reservation of the internal market for internal production (Spain);
- High intervention regime to guarantee priority to its own production (Greece and Portugal).

In this context, it was necessary to prepare a viable Common Market Organization

(CMO) proposal that would satisfy simultaneously both the WTO principles and the interests of ACP country members and regions of preferential treatment. In its initial version of 1993 (Regulation No. 404/93), the banana CMO planned the free circulation of the banana inside the Single Market, a compensatory promotion system for the loss of income of the EC producers and a common regime for trade with third countries.

This common import regime, based on quotas, was articulated by 3 preference levels:

- a first level in which the traditional ACP Countries were given preferential access with zero duties for a maximum of 857,700 tons.
- a second level for imports from third countries and for non traditional ACP imports, which was a combination of a bound tariff quota of 2 million tons at a 100€/ton rate. These dispositions were modified by reason of the Framework Agreement signed with Colombia, Costa Rica, Nicaragua and Venezuela in which the quota was increased to 2,2 million tons and the tariff inside the quota was reduced to 75€/ton. Later on and in order to take into account the EU enlargement to Austria, Finland and Sweden, an autonomous quota of 353,000 with a 75€/ton tariff was established².
- a third level, which was mostly dissuasive, for out-of-quota imports with an over quota rate (OQR) of 850€/ton for bananas from third countries and of 750€/ton for non traditional ACP bananas.

Since it was ratified, the banana CMO has been object to the attacks of third countries, particularly from the Latin American producers (Columbia, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Nicaragua and Venezuela) as well as

from the USA as a trading nation inside the World Trade Organization (WTO).

The “accusers” considered that Regulation 404 was in contradiction with Articles I, II, III, X, XI, XIII from GATT, and incompatible with the Agreement on Import Licensing Procedures, with the Agreement on Agriculture and with the General Agreement on Trade in Services (GATS).

This first original version of the CMO was challenged, at an internal Community level, even by Union members such as Germany whose previous dominant position was altered (before its implementation, the German trade regime permitted them to be a re-exportation platform towards the rest of the European Countries). The attacks were mostly against the import certificates distribution system inside the tariff quota. This system, more commonly called “partnership” gave the operators that had traded EU bananas in the past and ACP 30% of the tariff quota; while operators that traded bananas from the dollar area were given 66,5%, leaving the other 3,5% for new operators.

During the multilateral trade negotiations of the Uruguay Round, in March 1994 the European Union held a Framework Agreement on banana trade with some Latin American Countries (Colombia, Costa Rica, Nicaragua and Venezuela). This Agreement that came into force the 1st of January 1995 planned that the imports from these 4 countries would have a preferential rate of 75 ecus/ton and an assigned quantity by origin. These countries, in return for signing the Agreement, committed to not create another dispute against the EC’s regime.

However, countries like Ecuador, Guatemala, Honduras, Panama, and even the USA continued to attack the EC’s banana import regime. This led to the intervention of the WTO DSB (Dispute Settlement Body) on the 22nd of May 1997 which was modified by ruling of the Appellate Body on the 9th of September 1997. This ruling forced the EU to eliminate certain aspects of the banana CMO such as

² This quota would be justified by the adhesion of Austria, Finland and Sweden to the Union

the partnership system and the quotas per country.

This is how the EU was forced to bring into conformity its custom's measures from the 1st of January of 1999: the Council Regulation 1637/98. This system also means eliminating the quotas per country of Latin American countries that had signed the Agreement, yet the global quota of 857,000 tons for the ACP Traditional imports was kept.

However, once more, the CMO that had been revised was subject to the attacks of the USA and Ecuador that considered insufficient the adaptations assumed by the EU. As a way to put pressure and without waiting for a WTO ruling, the USA took measures by imposing 100% customs bounds to certain EC products to the value of 520 million dollars. After various confrontations, the 7th of April 1999, a new WTO panel determined that the new EC banana import regime was still not consistent with GATT rules; it also sets the trade prejudice for the USA in 191,4 million dollars, which is the maximum amount for retaliatory measures.

Given this ruling, the Commission proposed a new modification of the banana import regime. This modification reached its current dimension in the year 2001³. The banana CMO was modified again by the Regulation No. 2587 from the 29th of January 2001 as a consequence of the new agreements signed in May 2001 both with the USA and Ecuador. This new regime confirms the introduction of an exclusively tariff import system with a due date the 1st of January 2006, and until then a temporary regime based on tariff quotas given according to a historical

³ Council Regulation (EC) No. 216/2001 of the 29 of January
Commission Regulation (EC) No. 816/2001 of 7 of May
Council Regulation (EC) No. 2587/2001 of 19 of December
See annexes.

method, but with an important modification in the definition of the operators that can access the import certificates in order to give a bigger share of the quotas to the american companies. These agreements established a reduction of 100,000 tons of the ACP exclusive quota benefiting the autonomous quota B.

III.- THE CURRENT IMPORT REGIME AND THE TRANSITION TO “TARIFF ONLY”⁴

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 new operators that do not have an appropriate historical reference (non traditional operators).

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)

Quotas A and B are open for bananas from any origin while quota C is limited to 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.

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

⁴ COM (2004) 399 Final, 2-6-2004. See annexes

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 rate independent from the product’s origin. However, related to this, the commitment undertaken in the Protocol 5 of the Lomé Convention must be observed (it forces the EU to give preferential access to the banana ACP). 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 this origin. A tariff with a preferential rate of 300€/ton is also applied out-of-quota to the ACP.

Therefore adopting a “tariff-only” system in which there are no quotas seems to be at odds with maintaining preferential access in the long term at the same level as they do now for the ACP. For 2006 the setting off of a “tariff only” system could be compatible with a preferential quota by reason of the “waivers”⁵ to Articles I and XIII from GATT until the beginning of 2008; from then the waiver could be replaced by specific free trade agreements with the ACP Countries (the EPA – Economic Partnership Agreements), given that the transformation of the Cotonou Agreement⁶ is already being negotiated. Finally we must show a reference on the EBA (Everything But Arms) initiative that will permit duty free access for the banana into the EU market when it is original from 48 Least Developed Countries, 38 of which are also ACP Countries.

⁵ 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 The following of the Lomé Agreement arranges the trade, political, economical and social relations between the EUROPEAN UNION and the ACP COUNTRIES.

In spite of the reserves we have previously mentioned, in this paper we shall consider a tariff only scenario but maintaining the ACP tariff preferences, this is, assigning a 750,000 ton quantity with a zero tariff.

SECTION II

THEORETICAL REVIEW OF THE ANALYSIS CONTEXT

I.- THE MULTILATERAL AGRICULTURAL NEGOTIATIONS

Before the Uruguay Round, agricultural trade was excluded from the multilateral trade negotiations in the GATT framework. Precisely one of the biggest conflicts when closing the Uruguay Round were the commitments concerning the openness of the agricultural markets. The application of these commitments later on has been problematic and has received many critics since some governments refuse to carry out the negotiations.

As is well known, the main results from the Agreement on Agriculture of the Uruguay Round refer basically to four fields: domestic support, tariffs, export subsidies and tariff quotas. Since the EC's banana production is hardly exported outside the EU, we shall ignore here all that refers to export subsidies.

In relation to domestic support, this is, subsidies to internal production, or "boxes" in WTO terms; they are classified according to the commitments reached in the multilateral negotiations. The boxes are named after the colors that represent, like traffic lights, if the support is permitted ("green box"), if it should be reduced ("yellow box") or if it is directly forbidden ("red box"). However, related to agriculture, the Agreement on Agriculture does not have any "red box", although all domestic support over the commitments agreed on for reductions in the "yellow box" are forbidden.

- The “yellow box” is basically composed of support measures that clearly distort the production and the international trade, like the price support, for which reduction calendars were set. Additionally, there exists a “blue box” for subsidies that are tied to programs that limit the production.
- The “green box” includes subsidies financed by the national budgets and not by consumers and basically comprises income supports that are completely separated from the production or price levels. Supposedly, measures from the “green box” do not distort agricultural trade since it does not influence these two variables.

The results from the Agreement on Agriculture in relation to domestic support have many edges, like the reference periods on which they should measure the reduction commitments, the transfer of measures from the “yellow box” to the “blue box” and the “green box” or even the existence of a “peace clause” applied to the CAP. However from the perspective of this study the multilateral agricultural negotiations related to domestic support do not immediately suggest any barriers to maintaining the current support regime to the banana CMO, although it could create problems in the future as the pressure to liberalize the agricultural trade progresses, and according to the results of the current negotiations of the Doha Round and of predictable future Rounds.

However, the market access framework has relevant implications for our study. Related to agriculture, the main objective of the Uruguay Round was to submit agricultural trade to GATT discipline. The main line to reach this objective was to “tariffy” all non-barrier tariffs, like the quantitative restrictions, the variable tariff systems, etc; once the tariff equivalent was established, a calendar reduction would be applied, a yearly 6% in 6 years.

The tariffication was carried out by applying a conversion formula for these barriers into tariff rates. This exercise revealed until where the agriculture was protected in the contracting parties of the GATT: tariffs resulting from the “tariffication” seemed extraordinarily high, to the point of reaching prohibitive levels in many cases. To conceal this problem the contracting parties agreed on commitments concerning minimum market access in order to respect traditional flows and that the tariffication would not cause a smaller access than the one existing under more restrictive regimes.

There are two approaches to this problem: maintaining the applied tariffs under the consolidated level and when this was not enough to guarantee the minimum market access, to apply tariff quotas. This is a trade politic instrument despised by specialists because of its wicked effects, but that has reached a high popularity in agriculture for guaranteeing minimum access and reducing the deterioration of the preferences given to third countries which implies the reduction of the most favoured nation (MFN) tariff.

The GATT treatment of the tariff quotas is also of relevance for our study, as the banana CMO contained these instruments before they were applied to other agricultural products as a result of the Uruguay Round. 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.

II.- ANALYSIS OF THE TARIFF QUOTAS

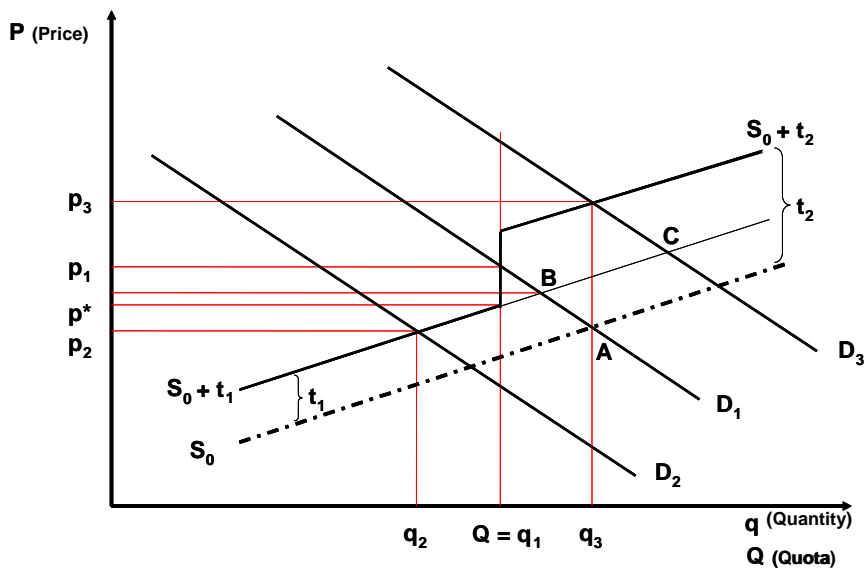
Although from a WTO point of view tariff quotas can be considered as tariffs because of their effect on trade, their final effect depends on the interaction between the quota level, the tariffs rates used and the import demand of the country that sets the measure. In addition to the classical theoretical analysis on

the effects of a tariff quota, the way the quota is administered is of extreme importance to estimate its consequences. In this part we shall briefly see both aspects as a starting point for the following analysis.

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 (general equilibrium). The partial equilibrium analysis of a tariff quota allows us to estimate its effects on prices, imported and locally produced quantities, trade and as a consequence of these effects, the impact in terms of producers', consumers' and importers' welfare (the producer and consumer surplus, and the quota income respectively).

Figure 1 shows the typical partial equilibrium analysis of a global tariff quota; this is, without any quotas assigned by origin.

Figure 1:
TRQ REGIME UNDER DIFFERENT DEMAND CONDITIONS



Source: Herrmann, M., Krumb, M, and Mönnich, C. (2001)

uncertainty and the associated costs to get the product to customs as soon as possible, that can be specially important in perishable products.

- Historical licences criticised for not showing efficiency criterias and giving irregular income to traditional importers, preventing the access to new operators.
- Licences on demand, which forces a proportional distribution of the demands and encourages the over-demand from the operators.
- State trade enterprises, insulted from experience and against the WTO rules.
- Auction, most efficient mechanism, so that if the auction is competitive, its effect in theoretical terms is similar to a tariff: the auction income equals the irregular income that the operators hope to obtain and only the most efficient can make competitive offers.

The main critics to the quota management mechanism through licences are based on that they provide a method to redistribute the quota income between the operators that they try to be favourable to. Additionally, another very restrictive part can come from the distribution of the quota by country of origin.

The transfer to a tariff only system eliminates all the distortions and difficulties that are described in this part. This in theory gets the tariff to be considered as a second optimum opposite to a tariff quota when it acts as a quota, which, regardless of its management system, is considered as an inferior position in terms of welfare (third optimum or inferior depending on the management system adopted). In theory free trade is, of course, the optimum.

III.- ALTERNATIVE METHODOLOGY AND RELEVANT THEORETICAL MATTERS FOR THE TARIFFICATION OF A QUOTA SYSTEM

There are basically two alternatives to calculate a tariff equivalent: (i) one is estimating a banana supply and import demand model; and (ii) deriving the tariff equivalent from the price differences observed between the EC market and the international price.

- **Obtaining the tariff equivalent from the estimation of a supply and import demand model:** Presently the banana CMO (market regulation) represented in figure 1 (quota q_1 with tariff t_1 and tariff t_2 for a bigger quantity) interacts with the EC demand (D_1) placing price at p_1 . In this conceptual and theoretical outline the calculus of the tariff equivalent consists of estimating the import demand curve (D_1), the supply curve (S_0) and the tariff impact inside the quota (t_1) and outside the quota (t_2) that, along with the quota (q_1), produce the tariff quota's supply curve. Once these curves have been econometrically estimated, obtaining the tariff equivalent means an exercise to calculate which only tariff 't' must be added to S_0 to keep the current price ' p_1 '.
- **Obtaining the tariff equivalent from the price gap observable between markets:** It is about reaching the tariff equivalent through the calculus of the price differences in the reference market (in this case the EU) between the external prices (average CIF import prices) and internal prices (representative wholesale prices).

Recent estimations have been made with the methodology suggested, to develop a banana trade model, while other studies have had recourse to the price gap methodology.

Chart 1:
METHODOLOGIES AND AUTHORS

Methodology	Author/ Institution
Offer and supply model	Guyomard / FAO-INRA (2002) Borrell / World Bank Florida, C. et al. (2002) / UPL Hatirli, S. (2003) / U. Turkey Spreen, T. (2002) /
Price Differential	Raboy, D. (2004) / Dole Borrell (2004) Herrmman, R. et al. (2001)

Clearly, all these studies reach their results depending on the initial hypothesis and the technical decisions in the model estimation process or, in the case of the price comparison methodology, the selection of the relevant prices used in the comparison. In the next section, the pros and the cons of the most representative studies from the previous chart shall be reviewed; however, before getting into details, it is important to make a series of relevant theoretical and market considerations to examine each of them more accurately.

- Perhaps the first generic consideration refers to the banana market structure, both at world level and in the EU. International trade theory points out that in the presence of imperfect competition a quota that limits the imported quantity in the same quantity that a tariff does not have identical effects on price. With imperfect competition, a quota maintains domestic prices over the level that would a tariff that limits the imported quantity in equal measure. Consequently, when replacing a quota by a tariff in the presence of imperfect competition, the tariff equivalent must take into

account the effect pointed out to take the market structure into consideration.

In principle, therefore, in imperfect competition the tariff equivalent (that maintains prices at the same level previous to the replacement) should be higher than the one achieved in perfect competition. Some data can make clear the rate of market power existent in the banana market. Globally, for example, Chiquita, Dole and Del Monte concentrate almost 70% of the supply. In Denmark, the CR3 (concentration ratio of the 3 first suppliers) is 94%; in Germany 84%; in France 59%; in the UK CR5 reaches 95%.

It seems therefore acceptable that the banana market structure in the EU provide a substantial market power, especially when the protection is carried throughout a tariff quota that really works basically like a quota (Mc Corrison, 2000). This factor must be taken in account when considering the result of the tariff equivalent calculus. Although no specific measurement for “market power“ shall be developed, generally speaking and for the reasons previously pointed out, it is recommended to consider the achieved result in this work as the minimum tariff level recommendable to keep the present equilibrium.

- Another additional aspect is the consideration of the restrictive impact of the licensing system. It is a very complicated aspect to evaluate, but it seems obvious that a tariff quota system organized throughout licenses tend to increase domestic prices beyond what a tariff that limits imported quantities in the same proportion would.

SECTION III

REVIEW AND CRITIC COMMENTARY OF PREVIOUS ANALYTICAL EXPERIENCES

As already mentioned in the previous section, there are two analytical alternatives to deal with the conversion problem of a quota system into a tariff system: the price gap method and the estimations of the demand and supply functions for the market. Additionally some opinions allude to 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.

The WTO law is inclined to the first method, regulating the determination of the price gap between external prices (average CIF prices for the importers) and internal prices (representative wholesale prices). If these were not available we could have recourse to FOB prices in one case and to equivalent prices in third countries. The first of the analysis that we shall review in this section uses this approximation that, as it shall be seen, can provide questionable results if it is not developed with a minimum of cautiousness and technical accuracy or if it is not complemented, in its basic design, with the necessary improvements.

I.- RABOY, G. (2004: "Calculating the Tariff Equivalent to the Current EU Banana Regime". Patton Boggs LLP Attorneys at Law. January, 15th 2004

As already mentioned, the chosen approach by this author to calculate the tariff equivalent is the denominated "Price Gap Method", the system that was recommended in the Uruguay Round (Agreement on Agriculture, Annex 5) asserting a specific recommendation from the text: the tariff equivalent to a specific non tariff barrier for a product must be calculated using the actual difference between internal and external prices where CIF unit value indexes were not

available or appropriate, it is possible to use appropriate averages of a near country or estimate from FOB unit value indexes of a representative exporting country adding to this value an estimate of insurance, freight and other relevant costs to the importing country.

Starting from this premise, Raboy considers that CIF prices are not appropriate because they do not include implicit costs in some markets (these costs are due to existent import licenses, that, with strong “market power”, are able to fix final prices and to influence export prices). So then, the author resorts to the aforementioned analytical proposition and considers, as a starting point, prices from “near countries”

In his interpretation of the “near countries” to carry out the study, he considers as candidates Norway, Switzerland and East European Countries. Depending on these countries’ price correlation with the situation in Germany previous to the banana “CMO” implementation in 1992, he decides that the best candidate for the comparison is Norway. The East European Countries, currently outside of the EU quota system, are excluded as a possible comparison since the author believes that they are residual markets for banana exporters, who sell there at prices below cost, just to make more advantageous the transport cost and to reduce the inefficiency of chartering half empty boats from South America. Alternatively, Raboy considers the U.S. as a reference for the FOB export prices on top of which he shall progressively add all trade costs.

In our opinion Raboy’s analysis must be criticized in the following aspects:

- Firstly, he makes a comparison between the banana dollar prices and the ACP banana prices. This way you cannot 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.

- When choosing a near country, the author uses the German market as an EU reference. This choice may not seem very justified for several reasons. On one hand choosing only one country as a measurement for group of 15 is risky, even more so when, before the “CMO” development, Europe was a heterogeneous space in which very different trade regimes persisted (see the section about the law evolution in this same report).
- Besides, it is well-known that Germany had a re-exporter status before the “CMO” that, even made this country recur the EC market regulation, and that would unlikely make them worthy of representing the European pre-CMO complex reality.
- In any case and once taken the decision of selecting Germany as the Union’s representative country, it is not reasonable to use the statistical correlation as a similarity guarantee: the correlation does not imply that the price levels of the two series are similar, only that co-variation exists, that is, similarity between the rates of these series.
- The analysis of the results in the Norwegian case, as the closest European example, is invalidated “*de facto*” by the unlikely assumption that the 2002 tariffs were 0, impossible resort to solve the bad quality of the provided data.
- Furthermore, it seems difficult to assume as an average referent for the EC, a market such as the Norwegian one that does not even represent 0,5% of European trade.
- By selecting the U.S. market as a “distant reference” to which must be added marketing costs, the estimations of the depreciation costs, freight and insurance, travel running costs, nitrogen needs, are not very transparent and do not include the above-mentioned market distortion by the existent

import licenses that, in the author's opinion has been the main reason to originally invalidate using the CIF data.

In short, this study's results are biased towards countries arbitrarily chosen that do not in any case reflect the reality of European banana trade.

The problem, understandably, does not come from using the "price gap" method but from its wrong application. An excessively simplistic development of the idea, as the one done by Raboy, causes an initial biased deviation in the price differential estimation due to the oligopolistic situation ruling in the world banana market. The oligopolistic enterprise is capable of achieving global strategies in the world product trade accepting regional differences for sales price when searching for a positive consolidated final profit. The existence of markets where people sell even below costs is confirmed (East Europe and some Latin American countries), as a strategy of global profit maximization (recovery of part of the costs before losing the whole stock).

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.

The most responsible literature on the subject is inclined to the price differential analysis from temporary or transversal models that contribute to an overall vision of the trade implicated areas, just as profit maximisation strategy is considered by the big multinationals. To that effect, usually the models used are Borrel and Yang (1990), Borrel and Cutberson (1990), Matews (1992), Guyomard (1996), etc. A

noteworthy group of empirical studies submit this thesis and estimate “Market Power” in this market, confirming the previous considerations⁷.

II.- BORREL (2004): “EU banana drama: not over yet” Centre for International Economics, Cranberra & 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. By choosing CIF prices the author avoids the problems of imperfect competition and “market power” exposed previously in this report and also pointed out by Raboy. But by making a price comparison with the ACP bananas – he does not take account for the Community production – he makes the same mistake as Raboy himself. What he obtains as a result is not the tariff equivalent as he claims, but the preferential margin so that the ACP banana can compete with the banana dollar without any protection.

Besides these considerations, one of the first technical matters that attract one’s attention is the assumption that the ACP and EU banana CIF price in 2000 was 624€, a figure apparently obtained from the ‘model data’. Why doesn’t he use the real data for the ACP and EU banana CIF price? The CIF price of the Latin American bananas is, according to Borrel, 560€, by mere subtractions he obtains a 64€ tariff equivalent. This tariff is lower than the In-Quota Rate currently applied (75€/Ton) that is why he defends the permanency of a 75€ tariff making an explicit mention to the GATT recommendations, and textually quoting them: “Where a tariff equivalent resulting from these guidelines is negative or lower than the current bound rate, the initial tariff equivalent may be established at the current bound rate”

⁷ Florido rt slt (2002), Hatirili et alt. (2003) or Selten (1997).

but significantly forgetting the last sentence of the original text “or on the basis of national offers for that product”.

Next he 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 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 author’s insistence is surprising; he successively reasons that ACP countries do not need preferences, that these preferences are inefficient, that there are more efficient alternatives to help their development etc. Despite that, as it is well-known, the EU’s commitment with the ACP area is clear and should be part of any future scenario and besides, it is based on broadly accepted objective foundations to help economic development. In any case, the ACP’s preferential treatment matter is not the only one up for debate in this context, but also the tariff fixing in order not to damage European production competitiveness, a matter that is not even contemplated in Borrel’s document (in fact, he simulates disappearing the internal supports).

The document also contains mixed and systematic references, to the WTO, that we shall enumerate and comment to obtain a certain evaluation of that approach:

- He states that with preferences over 75€ ACP banana exports shall take Latin American’s place and that if the “tariff only” were 300 € they will be reduced by \$0.5 billion per year. This reduction is not compatible with WTO as it contravenes the waiver condition established in Doha for the ACP-EU Cotonou Agreement, which submits the waiver to the maintenance of total access for the MFN origin banana market.

- However we must describe first what total access to the market in the Doha decision context means. This decision maintains in its introduction continuous references to development and to preference levels that should be granted to the ACP countries. The exact sentence, in which this concept can be found, other than the introduction, is in the Annex, incorporated to the substantive legal part of the decision through Article 3 bis and in the qualifications that define the arbitral function and mandate. This sentence goes as follows: “whether the envisaged rebinding of the EC tariff on bananas would result in at least maintaining total market access for MFN banana suppliers taking into account the above mentioned EC commitments”.
- It also indicates that in the de-consolidation negotiations under Article XXVIII of GATT, the EC must pay compensations to the affected Latin American countries. And he points out that given the long EU history in discriminatory quantitative restrictions in the banana matter, the compensation should be based on comparing the probable annual trade values with a high tariff and those that would have been obtained if it would have been a free market (that is, without tariff nor quota discrimination). Furthermore he considers that on previous basis and according to his model, the compensation figure is over one billion dollars.
- It seems however, that a new concept has been set down on how compensations for de-consolidation negotiations (based on Article XXVIII of GATT) should be calculated, basing this concept on the discriminatory nature of the banana regulations. Actually, the de-consolidation negotiations are carried out between WTO Members and are developed by very capable negotiators. There isn't any regulation that suggests how these negotiations should be carried out, but practice and common sense shows that what

should be compared is the actual situation – in our case, the current regime (Council Regulation (EC) n° 216 – 2001 of 29 of January 2001 and additional arrangements) – with the future situation, depending on the “tariff only” level that they have the intention to establish. As for the compensation figure, it is clear that if we do not accept the original method suggested for this negotiation in relation to the magnitude that should be compared and neither does the model whose results have been given without any characteristic explanation seem reliable, it is more practical to leave this figure as the result of a realistic and serious negotiation, as is usually done by WTO expert Members.

- Likewise, he feels that a preferential increase would encourage African production. He is worried, particularly, about the Economic Partnership Agreement that the EU is negotiating with various ACP country groups to replace the Cotonou Agreement in 2008. He esteems that these agreements and the ACP country preferences are a controversial matter as far as their compatibility with WTO is concerned. However, all regional trade agreements contain the concession of mutual preferential advantages between the parts. They cannot be considered illegal when they comply with the regulation established in Article XXIV of GATT. Up to now and in spite of the exhaustive exams by the Committee, created for this purpose in the WTO, it has not declared any of the notified agreements to be illegal from a WTO point of view. Neither of those agreements have been even challenged under WTO. Consequently to put into doubt the legality of the Economic Partnership Agreement while in negotiation and on the basis of mutual preference concessions would be absolutely unfounded and useless.
- The methodology used for the tariffication in the WTO is very simple and is stated in an attachment to Annex 5. It is based on the difference between external prices (CIF unit values or FOB unit values with an insurance and

transport cost estimate) and the internal ones, these prices being representative wholesale prices. The same type of import product has to be considered in two positions and different phases that mark throughout the price difference the level of the tariff protection. This is not the system applied by Borrell who finds more convenient comparing unloaded ACP banana prices with the Latin American ones at CIF.

- Finally, he considers that “the consolidated EU level for bananas is currently 75 €/Ton” (chart 3.7). In fact, what is consolidated for the banana is a whole import regime that has previously been explained and a series of complementary measures that regulate the development of the EU banana import, properly registered in WTO, which make up the consolidated system. Therefore to speak of a partial aspect of these measures like in this case, choosing a tariff level of 75 €/Ton is clearly a mistake.

III.- FAO Committee on commodity problems Intergovernmental group on bananas and tropical fruits. Puerto de la Cruz, Spain, 22-26 March 2004

The specific treated interest is the fifth section of the aforementioned report. The effects on international banana trade from adopting a 75€ tariff in 2006 are dealt with before this section. According to previous observations, adopting a tariff like that would convey important global demand increases through an increase of the EU demand [and this without taking into account a EU(25) and only a EU(15)] and an important reduction of international prices (the effects vary enormously depending on the EU supply area but what is important is the global effect).

It seems therefore evident that this 75€ tariff is not a tariff equivalent to the current situation. The previous result was expected: adopting as basis scenario a 75€ tariff under esteems the global protection level.

One of the first inconveniences of this text is that it does not reveal technical details about the methodology used, but limits itself to quote results; this causes confusion. That way, for example, the reader questions permanently if the increase rates or flow in price decrease that are shown are surtaxes. That is extra increase/decrease on a natural movement marked previously by the market and the scenario until 2010.

In the V section of the study, some scenarios other than the 75 € one are commented. 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.

Finally, the three political considerations are very important, evident from the beginning. They are indicated in the last section:

- The current EU commitments with the ACP are incompatible with a low tariff.
- Similarly the EU must be conscient that a low tariff will oblige to reconsider the direct grants to peripheral EU areas (i.e. Canary Islands).
- The incorporation of ten countries to the EU expansion generates already a problem (the level determination and quota licence distribution) and shall create another, in any case, from 2006. The tariff level that should be commonly fixed with these new countries shall leave big consumer sectors outside of the market (the income differences are so evident that, once the tariff is applied, the product shall be above the current purchasing power).

SECTION IV

TECHNICAL MODEL SPECIFICATIONS TO DETERMINE THE TARIFF EQUIVALENT

I.- OBJECTIVES

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. It also 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 income of the participating agents.

The limitations from a too simplistic or a “price-gap” analysis built upon a partial vision have been previously pointed out. To this we add that we should also notice that in some of the previously analyzed models, we think that there is clearly a problem with the change of structure given the exclusively temporal profile of the chosen modelling strategy: the models that have been previously set out for each area to reproduce the results of a combined quota and tariff structure are useful to do simulations on possible relative changes in them; but they are not capable of reproducing the effects of eliminating tariff quotas, since this situation is not historically contemplated in their estimation.

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, with all the geographical areas at stake, that avoids the bias in the partial selection of countries or areas of interest.

- By considering more or less all the geographical areas, the price and elasticity estimation is not biased by possible specific business strategies in a concrete area.
- On the other hand, it corrects the arising problem from the structural change by complementing the time series econometrical analysis with an optimization system which is capable of reproducing new scenarios.

II.- GENERAL TECHNICAL DESCRIPTION OF THE USED METHODOLOGY

Although later on we offer in this report more technical details on each of the relevant matters of the model, we can advance here, in broad outlines, the characteristics of the chosen methodological option we have used to develop the study.

- The model analyzes the structure of international trade between the main export/import areas.
- Consequently this is a pure international trade model, exclusively focussed on the analysis of the flows and terms of trade.
- This model only contemplates explicitly the variables that are directly related to the international market and therefore it does not explicitly consider those local market elements that are not directly related to foreign trade like for example, characteristics of the production functions in each country/area, internal market organization, etc... So, for example, a country like India, one of the most important banana producers of the world, is not taken into consideration in the analysis as it hardly exports the product.

- The applied methodological approximation establishes a sketch of international trade in a spatial equilibrium in line with the classical propositions of Takayama and Judge (1971), from Samuelson's theoretical model, applied among others by Spreen (2002) or Kersten (1995).
- These kinds of methods contain specific information of the analyzed market (basically flows and prices) and of the setting (protection structures, transport costs, import/export revenue, exchange rates...) and, analytically, reproduce the equilibrium of the international trade at a specific moment.
- Once this equilibrium is reproduced, we can use the analytical structure to observe which changes occur in the market when some of the setting conditions are altered.
- Along with a series of preliminary analysis stages that shall be detailed later on, the method is composed of two specially important phases that are clearly differentiated both from a conceptual and a technical point of view: the first of them has the objective of estimating the import and export functions for each economical/geographical area and the second analytically determines the trade equilibrium.
- The first stage (this is, estimating the import and export functions for each area) tries to analytically make more explicit which variables determine the export and import flows between the areas that take part in the market.
- As a fundamental objective, the import and export functions should be useful to quantify the existing relation between exported/imported quantities and export/import prices.

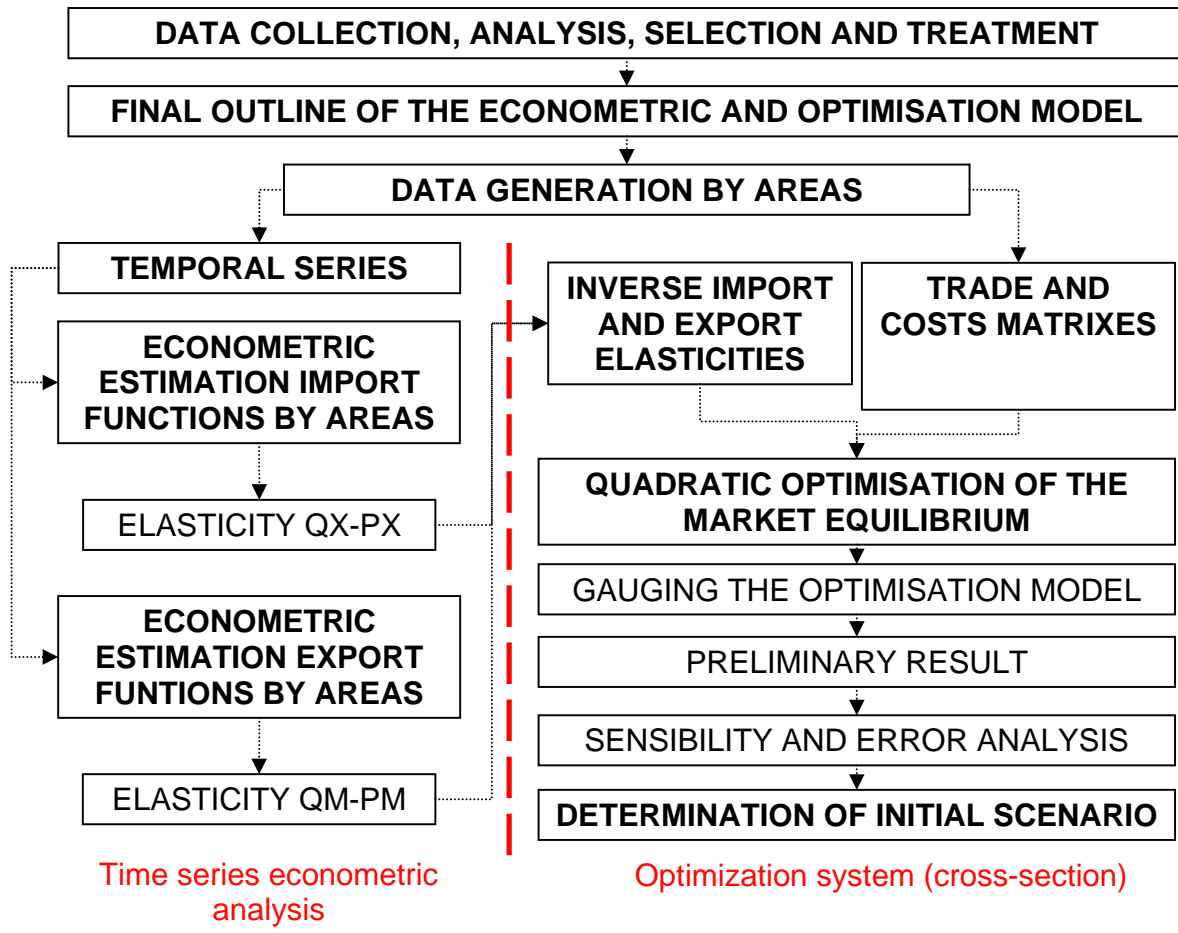
- From a technical point of view, determining the import functions shall be done by estimating the time series econometrical functions, one for each of the considered areas.
- This is, consequently and in this part of the analysis, an exclusively time series approximation for which, it was necessary to collect temporal data (annual) series for a significant statistical period that is conceptually representative of the reality that is about to be analyzed.
- The second stage (determining the market equilibrium) is done once the econometrical estimation phase of the export and import functions is finished with. By using the information obtained from the previous stage and adding now other basic variables observed in the setting (trade protection structure in each area, transport costs, export and import prices, trade matrixes...) we program a mathematical mechanism of quadratic optimization that is capable of reproducing the market led by the equilibrium objective between the exporters and the importers “revenue”.
- From a technical point of view, this second stage does not require any econometrical estimation and therefore we do not require long series of temporal data.
- So, the second stage can be considered as “timeless” or “transverse”, to the effect that, what is important about it, is not to watch the temporal evolution of the price, quantities, revenues....etc variables but to capture a “fixed photo” of the market reality in which the data are able to reflect the characteristics from each geographical area in relative terms related to the other areas. For example, when characterising for this phase the import prices of an area related to another, what is important is not the exact value of the prices used for these two areas (which shall be the average of a

series of recent years), but the percentage difference existing between the prices of both areas (relative difference which can be more accurately observed when using the average data of a series from recent years).

- In this same direction and for this reason, we must understand that the results from this approach will always be results in relative terms: we can say that a trade price between two certain areas shall change, for example, by 10% over the current situation.
- Once the relative market equilibrium is determined, the simulation strategy is as follows: we alter one or various variables from the settings, and let the optimization model find a new market equilibrium. This new equilibrium may be compared to the original (current) equilibrium, so the major changes that have happened in trade flows and trading prices may be observed.

In order to summarize what has been previously seen, and still in general terms, we present a sketch of the methodology used in the following table.

Illustration 2
TECHNICAL ANALYSIS PHASES



Once we have described the general methodological diagram, we shall detail in the following parts, the relevant technical matters in each one of the stages of the analysis.

III.- DATA COLLECTION, ANALYSIS, SELECTION AND TREATMENT

III.A.- General matters

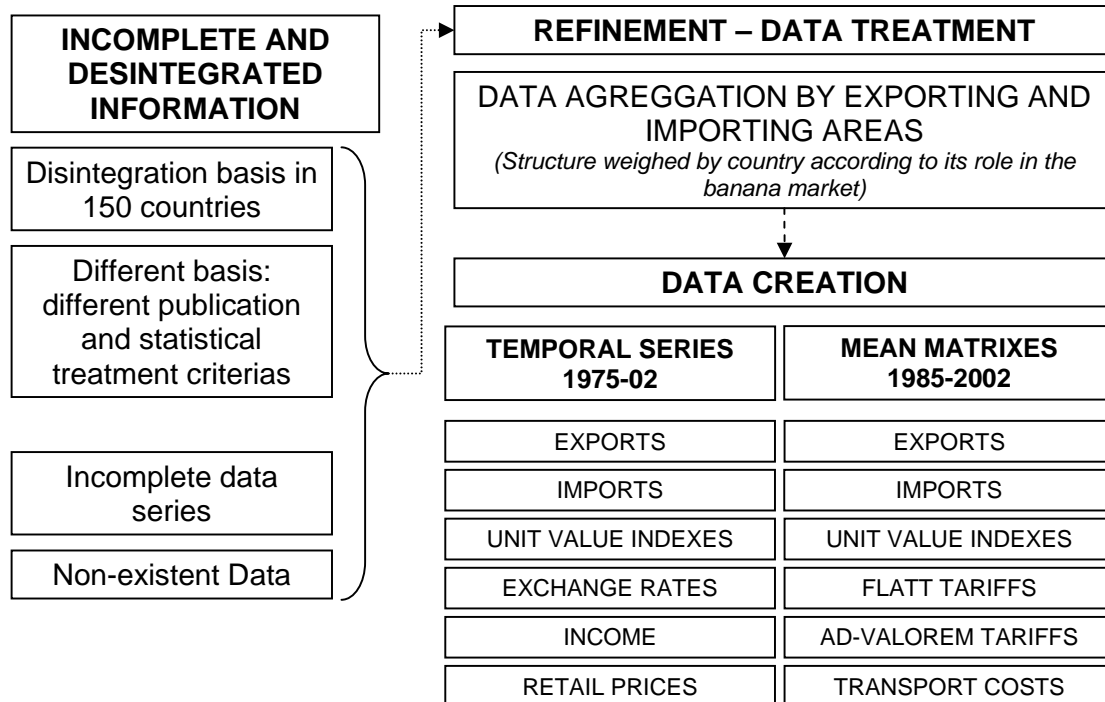
As we have previously explained, the technical analysis that we have chosen combines a time series econometric estimation with the development of an optimization system of the relative equilibrium. Therefore in the preliminary search and information preparation stage it was necessary to build up two data bases of different nature:

- On one side and for the econometrical section, it was necessary to collect time data series that were long enough to estimate with statistical guarantees the export and import functions by areas.
- Secondly and in order to develop the optimization system it was essential to obtain “timeless”⁸ data matrixes that contained the trade flows between each one of the areas (exports, imports and unit value indexes) as well as the conditions in which trade is done (existence of ad-quantum tariffs, ad-valorem tariffs, approximation of the transport costs between each exporter and importer, approximation of other trade costs).

The following sketch sums up generically the data necessities depending on the section of the study. As we can observe, the first task inside the process of obtaining information is always the data refining. In any time series econometric analysis problems in determining the data series always come up, problems that derive from matters that are hardly preventable, specially:

⁸ Average values weighed by periods, more or less extense, which represent the market structure avoiding to take in the exclusively conjunctural variations.

Illustration 3:
DATA: NECESSITIES AND TREATMENT



- An excessively high disintegration level for the original information, that forces us to take on the task of aggregating the data at the level considered for our analysis. In our case most of the information appears disintegrated by country (detailed to 150 - 170 countries); using areas instead of countries forces us to aggregate the data, which is not always an easy task when using long time series.
- The treatment and/or statistical publication criteria of the local/international statistical organizations alter: the data relative to a country can change the units or measure basis on indexes... etc.

- The series occasionally have important discontinuities that must be treated with link methods: countries change name and, sometimes, just appear (Czech Republic, Slovakia...) or disappear... (URSS); or simply, in some countries, the data is not published for one or two years because of unknown national matters.

III.B.- Information sources

In relation to the information sources, the data used in the modeling in order to estimate the export and import econometrical functions as well as to form the optimization system comes from the following data bases:

- Banana export and import time series in value and volume, and therefore, unit value indexes that are disintegrated by country in order to estimate the econometrical functions: FAOSTAT⁹ basis.
- Recent banana export and import data in value and volume, disintegrated by country in order to determine the trade structure between countries / areas: COMTRADE¹⁰ basis. Using the COMTRADE basis for the optimization section, instead of turning again to the FAOSTAT basis, is specially justified because the first one allows us to consult the data on trade between countries while FAOSTAT only offers, for each country, export and import series, without any disintegration by destinations nor origins. However, the COMTRADE basis is less indicated for consulting time series: the homogenization level is smaller than in the FAO basis and, above all, it does not contain information on some exporters / importers that

⁹ <http://apps.fao.org>

¹⁰ <http://unstats.un.org/unsd/comtrade>

can, nonetheless, be relevant in the trade panorama of the analyzed product.

- Several time series of the importer's revenue disintegrated by country as the main explanatory variable for the econometrical estimation of the import / export functions: the basis is the International Yearbook of Statistics, electronic version, of the International Monetary Fund.
- Time series of nominal, bilateral exchange rates against the dollar, disintegrated by country as the explanatory variable in order to econometrically estimate the import / export functions: the basis is the International Yearbook of Statistics, electronic version, from the International Monetary Fund and the Pacific Exchange Rate Service (British Columbia University)¹¹.
- Time data series on the retail and wholesale banana prices in different countries in order to estimate the export functions: FAOSTAT basis, previously mentioned, and Spanish trade delegations in different countries around the world.
- Updated data of the trade protection structure for the banana, which is disintegrated by countries: Market Access Data Base¹² of the European Union.

Related to the import and export data in value and volume and unit value indexes all used for the econometrical estimation of the export and import functions, we have elaborated an annual data base by country from 1974 to 2002 in Metric Tons and Current Dollars with the original information disintegrated to more than 150

¹¹ <http://fx.sauder.ubc.ca>

¹² <http://mkaccdb.eu.int>

countries¹³. The changes that happened in the politic and geographical structure between 1974 and now have forced us to undertake an intense task in order to homogenize the data.

III.C.- Aggregation of trade flows and price data by areas

Once the information itemized by country was homogenized and in order to estimate the econometrical export and import functions by big areas, each nation was assigned to a generic geographical area of interest for the analysis according to the following distribution¹⁴:

Table 2:

IMPORTING AREAS CONSIDERED

AREA	Number of countries
Asia	18 countries
Africa and Middle East	49 countries
North America	5 countries
Central America	23 countries
South – America	10 countries
European Union 15 (EU15)	15 countries
10 new members of the EU (EU+10)	10 countries
East Europe (rest)	9 countries
Other Europe	5 countries
Oceania	11 countries

¹³ See parts that describes the data base in CD-Rom

¹⁴ Some of these initially considered areas are less important of course than the market that we are working with. In fact, some of them have not been used in subsequent phases of the analysis or have been treated in a clearly residual way.

Table 3:
EXPORTING AREAS CONSIDERED

AREA	Number of countries
Asia	17 countries
Africa and Middle East	46 countries
North America	3 countries
Central America	18 countries
South - America	9 countries
European Union 15 (EU15)	15 countries
10 new members of the EU (EU+10)	10 countries
East Europe (rest)	11 countries
Other Europe	4 countries
Oceania	8 countries
ACP – Traditional	12 countries
ACP- Non Traditional	2 countries

As we can observe, not all the exporting and importing areas come together with their designation; we understand that from an export point of view, it is relevant to consider territories, country groups, which have a special importance in the banana trade (ACP Central America, South America...). However, from an import point of view, the buying areas are defined in a simpler way by resorting to a conventional geographical grouping.

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. Indeed the lack of data and its smaller consistence for some countries in one or more years, recommended that the import series and its respective Unit Value

Indexes be generated considering only, for each area, its main importing countries. By this we achieve that the import data series for the areas have a less volatile evolution since we then avoid that in the aggregate, different countries be included depending on the considered time moment.

Selecting the considered countries in each area is done according to the simple criterion of the relative importance of each country in the global aggregate. This importance is measured from the average banana import volume between the years 1992 and 2002. So, for example and just like it is illustrated in the following sketch for the aggregate “Asia as an importer”, we have only considered three of the eighteen countries from which we have information in the data basis, which are those that represent a relative importance of at least 1% approximately of the world import of this product:

Table 4:
FINAL COUNTRY SELECTION BY AREAS
Example for Importing ASIA

Country¹⁵	%Imports/ World Imports	Final Country Selection
Japan	7,00%	✓
China	2,57%	✓
Korea, Republic of	1,15%	✓
China, Hong Kong SAR	0,37%	
Singapore	0,30%	
China, Macao SAR	0,01%	
Nepal	0,00%	
Mongolia	0,00%	
Malaysia	0,00%	
Indonesia	0,00%	
Pakistan	0,00%	
Yemen	0,00%	
Bangladesh	0,00%	
Philippines	0,00%	
Sri Lanka	0,00%	
India	0,00%	
Laos	0,00%	
Thailand	0,00%	

The detail of the relative importance of each one of the hundreds of countries that were initially considered can be found in the CD with the data base delivered as an Annex to this document¹⁶. In the excel files that correspond to the country selection by areas, we have elaborated dynamic tables that show the relative importance of each country and area in the world banana export and/or import.

The selection criteria for the representative countries for each area has slightly changed depending on the area in order to meet more precisely with the analytical objective; so, for example, the European continent has been considered almost

¹⁵ Listed according to their relative importance order in the banana import at a global level.

¹⁶ It is possible to find out more details about the use (references on the file name, sheets, contents... in the part of the report on the Data Base).

entirely , without excluding any country in the area formation, even if it did not have an excessive relative importance in trade.

The average 1992-2002 used to evaluate the relative importance has been compared with the average from 1974-2002 to detect possible important changes in the relative importance of each country; this is the reason why both averages appear in the dynamic tables from the data base files.

As a summary we present below the final double entry chart between considered countries/areas in order to elaborate the final series to be used to estimate the banana import and exports functions.

Table 5:

FINAL SELECTION OF IMPORTING COUNTRIES BY AREAS

(% Total gathered of the world imports after the country selection in each area: 95.36%)

AREA / COUNTRIES	% Gathered¹⁷	AREA / COUNTRIES	% Gathered
UE15	35,6%	EAST EUROPE (Non-EU 10)	4,1%
Austria		Russia	
Belgium		OTHER EUROPE	1,8%
Denmark		Norway	
Finland		Switzerland	
France		Turkey	
Germany		NORTH AMERICA	32,3%
Greece		Canada	
Ireland		United States	
Italy		SOUTH AMERICA	3,0%
Luxembourg		Argentina	
Netherlands		Chile	
Portugal		Colombia	
Spain		Uruguay	
Sweden		AFRICA - MIDDLE EAST	3,1%
United Kingdom		Iran, Islamic Republic of	
EU+10	4,2%	Saudi Arabia	
Czech Republic		United Arab Emirates	
Estonia		ASIA	10,7%
Hungary		China	
Latvia		Japan	
Lithuania		Korea	
Poland		OCEANIA	0,6%
Slovak Republic		New Zealand	
Slovenia		Australia	
Malta			
Cyprus			

¹⁷ Percentage of the world imports considered in the selection of countries that are included in each area.

Table 6:
EXPORTING COUNTRIES BY AREAS

AREA / COUNTRIES	% Gathered¹⁸	AREA / COUNTRIES	% Gathered
EU15	9,9%	NORTH AMERICA	3,0%
Austria		Canada	
Belgium		Greenland	
Denmark		USA	
Finland		SOUTH AMERICA	38,6%
France		Argentina	
Germany		Bolivia	
Greece		Brazil	
Ireland		Chile	
Italy		Colombia	
Luxembourg		Ecuador	
Netherlands		Paraguay	
Portugal		Uruguay	
Spain		Venezuela	
Sweden		CENTRAL AMERICA	30,9%
United Kingdom		Bahamas	
EU+10	0,2%	Barbados	
Cyprus		British Virgin Isl.	
Estonia		Costa Rica	
Hungary		El Salvador	
Latvia		Equatorial Guinea	
Lithuania		Guadeloupe	
Malta		Guatemala	
Poland		Haiti	
Slovakia		Honduras	
Slovenia		Martinique	
Cyprus		Mexico	
EAST EUROPE (Non-EU 10)		Montserrat	
Belarus		Nicaragua	
Bulgaria		Panama	
Croatia		Reunion	
Georgia		Saint Kitts & Nevis	
Kazakhstan		Trinidad & Tobago	
Moldova, Rep.		ACP-NON TRADITIONAL	0,6%
Romania		Dominican Republic	
Russian Fed.		Ghana	
Serb. & Mont.			
Ukraine			
Yugoslavia SFR			
OTHER EUROPE	0,0%		
Iceland			
Norway			
Switzerland			
Turkey			

¹⁸ Percentage of the world exports considered in the selection of countries that are included in each area.

Table 7:
EXPORTING COUNTRIES BY AREAS (Continuation)

AREA / COUNTRIES	% Gathered	AREA / COUNTRIES	% Gathered
AFRICA - MIDDLE EAST	0,4%	ACP- TRADITIONAL	5,2%
Algeria		Belice	
Bahrain		Cameroon	
Benin		Cape Verde	
Botswana		Côte d'Ivoire	
Brunei Darussalam		Dominica	
Burkina Faso		Grenada	
Burundi		Jamaica	
Congo, Dem Republic of		Madagascar	
Congo, Republic of		Saint Lucia	
Egypt		Saint Vincent/Grenadines	
Ethiopia		Somalia	
Guinea		Suriname	
Guyana		ASIA	11,1%
Iran, Islamic Rep of		Angola	
Israel		Bangladesh	
Jordan		China	
Kenya		China, Hong Kong SAR	
Kuwait		China, Macao SAR	
Lebanon		India	
Libyan Arab Jamahiriya		Indonesia	
Mali		Japan	
Mauritania		Korea, Republic of	
Mauritius		Malaysia	
Morocco		Pakistan	
Mozambique		Philippines	
Namibia		Singapore	
Niger		Sri Lanka	
Oman		Thailand	
Palestine, Occupied Tr.		Viet Nam	
Qatar		Yemen	
Rwanda		OCEANIA	0,0%
Sao Tome and Principe		Australia	
Saudi Arabia		Cook Islands	
Senegal		Fiji Islands	
Seychelles		French Polynesia	
South Africa		New Zealand	
Sudan		Niue	
Swaziland		Samoa	
Syrian Arab Republic		Tonga	
Tanzania, United Rep of			
Togo			
Tunisia			
Uganda			
United Arab Emirates			
Zambia			

Just as we have seen in the previous tables, some of the areas that were initially considered really are not an interesting reference in the international banana trade: see, for example, the case of Africa and the Middle East as an exporting area, which even if they group data from more than 35 countries, do not even reach 1% of the world banana exports. For this reason, and as we shall see later on, in following phases of the study we have only considered some of the areas created in this phase. However, despite the little entity of some of them, we considered that it could be an interesting collateral result, to elaborate series for all the areas of the world and that they should be gathered in the database that is given with the written document.

Once the weight of each country in the world banana trade (export and import) was identified and the trade flows between areas were generated by aggregation, we then calculated by areas the series for the Unit Value Indexes for the exports and imports that derive from the value and the volume data.

To elaborate the prices by areas we must understand that the simple average of the prices from the countries that are integrated in the areas, is obviously not a valid criterion; therefore, to elaborate these series in each area, before using the average of the prices from the rest of the countries that are included in each area, we weighted each of them according to their relative importance in the world¹⁹ exports and imports; this way, the series of Value Indexes between 1974 and 2002 (for the imports) and 1985-2002 (for the exports) are a weighted average of the registered prices in each one of the countries for each area.

¹⁹ This has been measured from the volume data of the exports and/or imports.

III.D.- Data treatment of the support variables for the estimation

As we had previously advanced, in order 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.

The initial selection of the “support” variables was done, so that, when estimating, we would have alternative explanatory variables to attain, in each area, the best possible econometrical adjustment. The variables that were initially chosen for each country were:

- GDP based on PPP²⁰, measured as a % of the World total
- GDP based on PPP measured in US\$
- GDP per capita in national currency (constant terms)
- GDP per capita in national currency (current terms)
- GDP per capita in US\$ (current terms)

- % of GDP change in national currency (constant terms)
- % of GDP change in national currency (current terms)
- % of GDP change in US\$ (current terms)

- Index of the bilateral exchange rate National Currency/US \$

Similarly to what has been described for the export, imports and value indexes series, 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.

²⁰ Purchasing Power Parity

In relation to the import equations, we generated the following series:

- **Aggregates for each importing area of the eight income measurements that have been previously pointed out as alternative measurements of the disposable income for imports.** For each one of the ten areas that have been initially considered, we generated an aggregate from the data of each one of the weighted countries according to their relative importance as an importing country in the world banana market.
- **A measurement of the exchange rate area / dollar for each one of the ten importing areas that have been considered.** Each one of them has been, again, generated from the data of each country weighted according to their relative importance as an importing country in the world banana market.

In relation to the export equations, we generated the following series:

- **Again, eight importing income measurements from each of the six exporting areas that are considered.** This is, the income measurements that is considered of interest in order to specificate an exporting equation for an area “A”, is the aggregated income of the buyers (importers) of this area “A”, and not the income of the “exporting” countries included in that area. Consequently, for each exporting area we have established an “income from their importers” weighting, each one of the income measurements for each one of the countries, according to the importance as an “importer” of that country in the area.
- A measurement of the exchange rate related to the dollar for each one of the six considered exporting areas. Each one of them has been generated from the original data of the “importing – destination” countries for each

exporting area, this is, similarly to what has been indicated in the case of the income measurements.

When generating the series, which we have previously commented on, in order to estimate the export equations, we have specified that, for each exporting area, we have considered their destination countries (importers) to generate both the import income variables and the exchange rates of the importers from this area. For this, it was necessary to identify the destinations of the exports for each considered area; this is, it was necessary to identify a trade matrix itemized by countries in order to establish the corresponding origin-destination, as usefully as possible in order to generate the support variables for the estimation. On the other hand, this matrix is essential in the subsequent optimization process to the time series econometric estimation so that its elaboration was, at this point of the analysis, an obligatory task. In the next part we shall refer more specifically to this process, given its importance.

III.E.- Generating a trade matrix by countries

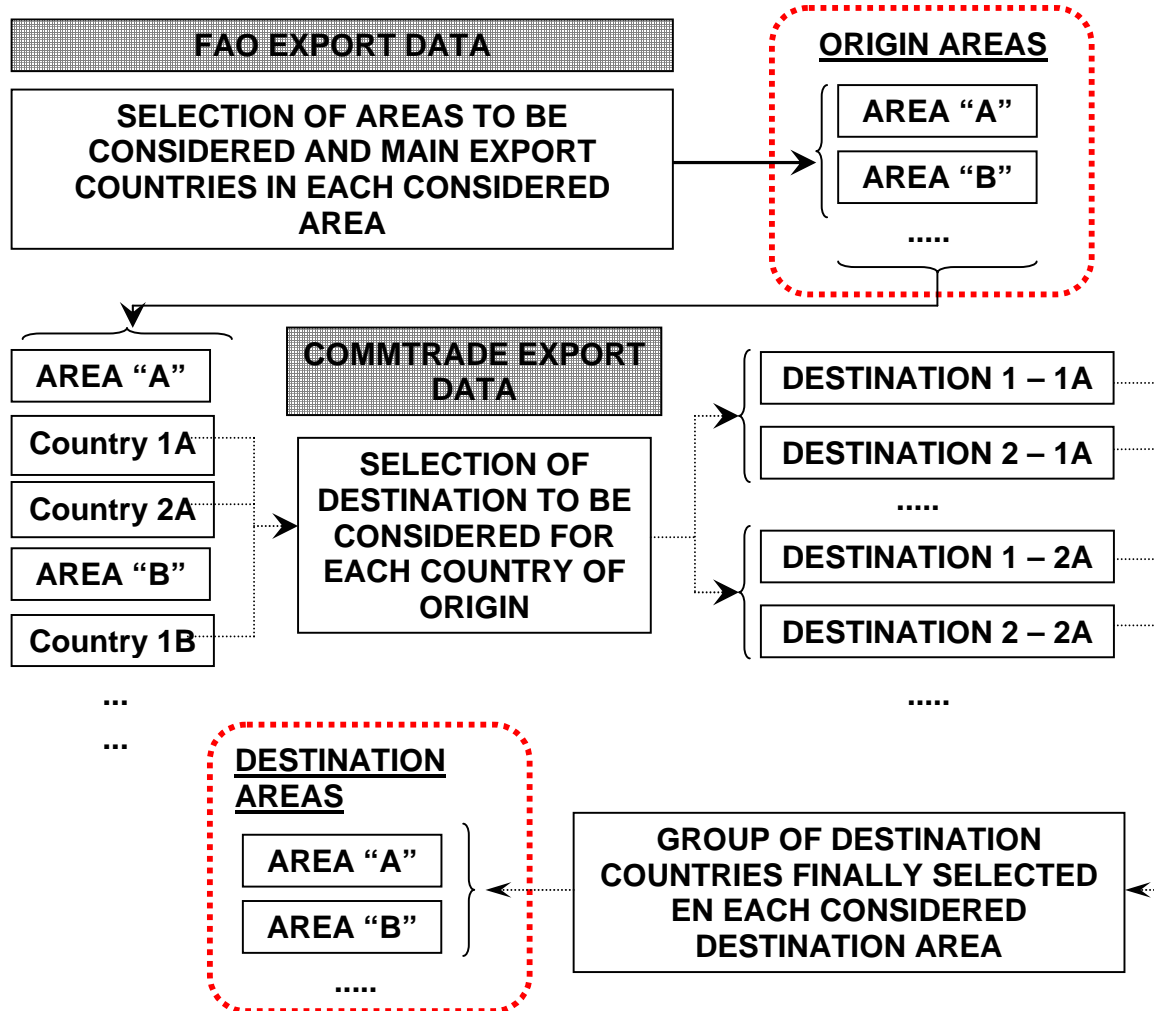
Just as we have indicated at the end of the previous part, estimating the export functions implied determining a matrix of the trade flows by areas/countries; this way we could generate the variables for the import income and for the importers exchange rate for each one of the considered exporting areas.

This trade table is used later on as a structural basis in order to build up the data framework necessary to develop the optimization process. Its construction was done as simple as possible according to the following basic criteria:

- The trade table must represent the relative trade structure between the exporting and importing areas that are relevant for the analysis.

- Although the table refers to these areas, it is built from the information relative to countries, which forces us to identify in a precise way which countries must be considered in each exporting and / or importing area.
- Identifying the relevant countries for each area must tend to be as reduced as possible given that, for the optimization process, we must find the data for each one of them (flows, prices, transport costs, tariff protection...).
- However, the final selection of countries included in each area must be wide enough so that the highest percentage of possible world banana trade is gathered.
- The data relative to the countries that were finally selected to build the trade matrix cannot refer to a single moment in time, but to a group of years, for various reasons:
 - Because the parameters that derive from the import and export functions refer to the period 1985 – 2002 and these results shall be combined with the data gathered in the matrix.
 - Because if we only use a calculus for one or two years, it might be affected by outliers.
 - Because the interest of the data from the table is not that of consulting the detail, of the specific data, but of “relatively” showing the trade terms between the different areas that trade the banana at an international level.
 - Once it has been described, the process undertook to build this trade table was the one shown in illustration 4 below.

**Illustration 4:
GENERATING THE BASIC ORIGIN – DESTINATION MATRIX
BY AREAS**



Firstly and starting from the 12 exporting areas mentioned in previous parts, we selected the countries that, in each one of them, had the smallest importance as banana exporters over the world total. This selection was done considering the average export volume between the years 1996 and 2002. We understand that this period is both wide enough so as to reflect the minimum stable trade structure and small enough so as to mostly capture the most recent structure of this trade. In any case, we have checked that the choice of a more recent period in order to

determine the trade areas and the flow matrix, for example for the period 1998 – 2002, is not more relevant than the sample that we have used.

Indeed, although the market structure may be closer to the current one, we must take into account that the lesser data we include in the average, the higher the technical risk is that the average does not represent the reality. An estimation 98-02 is a technically riskier measurement (5 data), since it can be strongly biased by the conjunctural incidence of a specific year that, in such a small sample range, would have a determinant weight. In any case, the trade structure does not significantly change; for example, the percentage of world exports from Central America for the period 92-02 changes only 3% in average from the 98-2002 period. For the South American case the figures change 1, 1 % from 38, 6% to 39, 7% and for the ACP- Africa case, a 0, 2%.

These kinds of changes in the relative weight do not, in any case, alter the results of the model as a whole related to the objective of determining the equilibrium tariff. Finally we must remember that the calculus from this section must be combined with those obtained in the econometrical estimation phase of the export and import functions and that these have been done with annual series of at least 15 data.

The final selection of areas and exporting countries was the one that is shown in the table in the following page:

Table 8:
AREAS, SELECTED COUNTRIES AND EXPORT PERCENTAGE
GATHERED IN THE SELECTION

AREA / COUNTRIES	% REAL EXPORTS 96-2002²¹	% EXPORTS SELECTION²²
AFRICA - MIDDLE EAST	0,4%	0,0%
<i>46 Countries (all) not selected</i>	0,4%	-
ASIA	11,1%	9,8%
Philippines	9,8%	9,8%
<i>16 Countries not selected</i>	1,3%	-
CENTRAL AMÉRICA	30,9%	27,4%
Costa Rica	14,7%	14,7%
Guatemala	4,9%	4,9%
Panama	4,3%	4,3%
Honduras	3,5%	3,5%
<i>14 Countries not selected</i>	3,5%	-
EU+10	0,2%	0,0%
<i>10 Countries (all)not selected</i>	0,2%	-
EU15	9,9%	5,4%
Belgium	5,4%	5,4%
<i>14 Countries not selected</i>	4,5%	-
EAST EUROPE (NON EU+10)	0,1%	0,0%
<i>1 Countries (all)not selected</i>	0,1%	-
OTHER EUROPE	0,0%	0,0%
<i>4 Countries (all not selected</i>	0,0%	-
NORTH AMERICA	3,0%	0,0%
<i>3 Countries (all)not selected</i>	3,0%	-
SOUTH AMERICA	38,6%	37,7%
Ecuador	26,6%	26,6%
Colombia	11,1%	11,1%
<i>7 Countries not selected</i>	0,9%	-
ACP – TRADICIONAL	5,2%	2,8%
Ivory Coast	1,5%	1,5%
Cameroon	1,3%	1,3%
<i>10 Countries not selected</i>	2,4%	-
ACP – NON TRADITIONAL	0,6%	0,6%
Dominican Republic	0,6%	0,6%
<i>1 Countries not selected</i>	0,0%	-
OCEANÍA	0,0%	0,0%
<i>8 Countries not selected</i>	0,0%	-
TOTAL	100%	83,7%

²¹ Ratio of the exports on the whole of the area including all the countries (included the EU reexportation in the UE).

²² Ratio of world trade exports, in the study, that the selected countries for the analysis represent.

From the previous table we can observe that some of the areas and / or countries are considered for their conceptual interest and not for their quantitative importance, like the ACP countries. Indeed, the ACP would not have been considered as relevant if we had not deliberately decided this, given that the exports from them hardly reach a 5, 2% (ACP Traditional or ACP – Africa) and a 0, 63% (ACP Non traditional or ACP- Caribbean) over the world banana trade (measured with average quantities for the period 1996 – 2002): In any case and in spite of that quantitatively speaking the ACP distinction did not seem essential , we thought that it was relevant to deliberately consider these areas given that the European tariff system treats them in a very specific way.

Once this decision has been taken, the selection of the “representing” countries of these areas was done with strictly quantitative criterias: in relative terms, Cameroon and Ivory Coast are the two “most important” countries (1, 5% and 1, 3% respectively over the world total for the period 96-2002 or if preferred 25% and 19% over the ACP – Africa group); Something similar happens with the Dominican Republic for ACP- Caribbean. We must insist on that, even though they have quantitative importance, these three countries can not qualitatively represent the trade evolution (flows and prices) of other countries from the ACP area (Africa or Caribbean); for example the case of the Dominican Republic diverges in many ways from Jamaica or Windward Island. However the inevitable selection process implies reducing the number of countries and it seems inevitable that this selection be done with a strictly quantitative criteria.

Once the previous selection of the eleven exporting countries is done, we obtained the export data of each one of these countries with a detailed destination (COMTRADE data from the United Nations) in order to do, similarly to what has been previously described, a selection of the destination countries.

The final destination selection was the following for each one of the eleven origins that were identified as relevant²³:

Table 9:
DESTINATION COUNTRIES SELECTED FOR EACH
RELEVANT EXPORTOR

AREA / COUNTRY OF ORIGIN	DESTINATION	% EXPORTS²⁴
ASIA		
Philippines	Japan	59,2%
	China	14,1%
	Korea	8,1%
	United Arabs	8,0%
	Other Asia nes	7,4%
	Saudi Arabia	1,3%
CENTRAL AMÉRICA		
Costa Rica	USA	44%
	Belgium	12%
	Germany	11%
	Nicaragua	7%
	Italy	7%
	Sweden	6%
	UK	5%
Guatemala	USA	82,4%
	El Salvador	10,8%
	Germany	2,0%
	Honduras	1,7%
	UK	1,4%
	Belgium	1,1%
Panama	Sweden	28,1%
	Belgium	24,6%
	Germany	17,5%
	Portugal	9,8%
	Italy	9,5%
	USA	7,8%
Honduras	USA	84,3%
	UK	8,2%
	Belgium	4,2%

²³ We represent in the table only those destination countries that mean more that 1% of the trade of each exporter although, in reality, the final area table was elaborated by adding all the destinations over 0, 5% for each origin.

²⁴ Ratio that each destination means on the exports of each country of origin in volume, in average for 1996 – 2002.

AREA / COUNTRY OF ORIGIN	DESTINATION	% EXPORTS²⁴
EU15		
Belgium	Germany	44,3%
	Netherlands	19,6%
	UK	8,6%
	France	8,1%
	Italy	6,4%
	Austria	4,2%
	Denmark	3,8%
	Sweden	3,1%
SOUTH AMERICA		
Ecuador	USA	28%
	Italy	15%
	Russia	13%
	Germany	10%
	Belgium	7%
	Argentina	5%
	Japan	5%
	Chile	4%
	China	3%
	Poland	2%
	Saudi Arabia	2%
	Colombia	2%
	New Zealand	2%
Colombia	USA	37,9%
	Belgium	34,8%
	Germany	7,3%
	Italy	7,2%
	Russia	4,8%
	Portugal	1,6%
	Spain	1,6%
	Sweden	1,2%
China	1,1%	
ACP – TRADITIONAL		
Ivory Coast	France	73,4%
	Belgium	10,3%
	Other African Countries	8,0%
	UK	7,2%
Cameroon	France	80,3%
	UK	10,2%
	Belgium	8,3%
ACP – NON TRADITIONAL		
Dominican Republic	UK	38,2%
	Haiti	19,5%
	Belgium	19,3%
	USA	7,4%
	Italy	6,5%
	Germany	4,8%
	Netherlands	1,8%
Japan	1,3%	

The third and last step to determine the trade matrix is to group the destination countries by destination area according to the import area selection that has been considered from the beginning of the analysis.

Once the destinations have been grouped by areas, the final trade matrix by areas is summed up in the following page. As you can see, the results achieved in the trade matrix (which is shown on the next page) are only shown in percentage terms since, as we have previously said, the interest of this matrix is to capture the relative structure of trade which will be used as a base for the optimization procedure, and not for absolute trade values in any case. Similarly, you can understand that the following simulations will produce changes on this basic scenario in percentage terms, and it will not be possible to give any value to the resulting specific numerical figures.

III.F.- Generating a price, transport costs and tariff matrix

By using the same selection and addition system we have also generated the matrixes for international trade prices, transport costs and tariff protection levels.

The key to the elaboration is still working with data from the countries that, only in the last stage, are grouped by areas to generate the final matrixes. In the case of the prices, transport costs and tariffs matrixes, we chose a weighted data aggregation method from the countries to the areas. We shall illustrate this method with an example: to generate the ad-valorem tariff applied, for example, by South America, to the imports from that same area, we proceeded in the following way:

1.- We gathered data from the tariffs applied to each one of the importing countries from South America (Argentina, Chile and Colombia) to the exports from this same area (Ecuador and Colombia). The tariffs are, respectively:

	Argentina	Chile	Colombia
Ecuador	11,5%	0% (TLC)	0%
Colombia	11,5%	6%	-

Table 10: ORIGEN – DESTINATION OF EXPORTS BY ÁREA

		EU15	OTHER EUROPE	EU+10	EAST EUROPE	STH AMERICA	CNT. AMERICA	ASIA	NORTH AMERICA	AFR. MIDD.EAST	OCEANIA	Marginal Line
ASIA	% over/Line	-	-	-	0,4%	-	-	88,8%	-	9,3%	0,6%	8,1%
	% over/Column	-	-	-	0,5%	-	-	69,8%	-	44,8%	7,8%	
	% over/Total	-	-	-	0,0%	-	-	7,2%	-	0,8%	0,1%	
CNTR. AMERICA	% over/Line	37,1%	0,5%	-	0,9%	-	7,2%	0,2%	52,4%	0,1%	0,0%	30,7%
	% over/Column	27,9%	33,1%	-	5,1%	-	98,3%	0,7%	49,9%	0,9%	0,6%	
	% over/Total	11,6%	0,1%	-	0,3%	-	2,2%	0,1%	16,3%	0,0%	0,0%	
EU15	% over/Line	99,0%	-	0,0%	-	-	-	-	-	-	-	6,0%
	% over/Column	14,4%	-	0,1%	-	-	-	-	-	-	-	
	% over/Total	6,0%	-	0,0%	-	-	-	-	-	-	-	
SOUTH AMERICA	% over/Line	39,5%	0,6%	1,6%	10,1%	7,2%	-	5,7%	30,8%	1,4%	1,1%	52,1%
	% over/Column	50,7%	66,5%	99,9%	94,4%	100,0%	-	29,5%	50,0%	44,6%	91,6%	
	% over/Total	21,0%	0,3%	0,8%	5,4%	3,8%	-	3,1%	16,4%	0,8%	0,6%	
ACP-TRAD	% over/Line	93,5%	-	-	-	-	-	-	-	5,6%	-	2,9%
	% over/Column	6,6%	-	-	-	-	-	-	-	9,7%	-	
	% over/Total	2,7%	-	-	-	-	-	-	-	0,2%	-	
ACP-NO TRAD	% over/Line	70,5%	1,0%	-	-	-	19,5%	1,3%	7,4%	-	-	0,2%
	% over/Column	0,3%	0,5%	-	-	-	1,7%	0,0%	0,0%	-	-	
	% over/Total	0,1%	0,0%	-	-	-	0,0%	0,0%	0,0%	-	-	
Marginal Column		41,4%	0,4%	0,8%	5,7%	3,8%	2,3%	10,4%	32,8%	1,7%	0,7%	100,0%

2.- To generate the average tariff we consider the percentage that each one of these three importers means over the exports from Ecuador and Colombia (in reality these three countries only import from Ecuador):

	Argentina	Chile	Colombia
Ecuador	5%	4%	2%
Colombia	0%	0%	-

3.- The resulting average weighted tariff is therefore the result of weighting each tariff with the relative importance of each country on the rest:

$$Tariff = \frac{11.5\% * 5\% + 0\% * 4\% + 0 * 2\%}{5\% + 4\% + 2\%} = 5,2\%$$

As we have already pointed out in the part about the data basis that is being used, the main information source to consult the applied tariffs was the Market Access Database of the European Union²⁵. In order to elaborate the protection by areas table, we have considered both the information on the ad-valorem tariffs applied by each country for imports (distinguishing countries of origin), the imposition of import taxes, and other duties and charges that are directly related with foreign trade operations; in the following pages we present the table of tariffs by area in its final design.

In order to determine the trade prices matrix, we used again the same aggregation system and weighting method according to the trade volume. For this occasion we considered of interest to have of different FOB export prices or CIF import prices for every interchange rather than using the same FOB price for each exporter or CIF for each importer. For this, we consulted the data of CIF and FOB prices in the

²⁵ However, some data has been directly provided or completed by the Commercial Delegations in the considered countries.

COMTRADE basis from United Nations for every trade between the previously considered and related countries of origin and destination. The enquiry permitted us to generate a new trade data base which is included in the submitted CD as an attachment.

We must point out that the prices that we use really are value indexes obtained from the available information on exports and imports in volume (Kg) and in value (\$) for the 1996-2002 period. This kind of calculus for value indexes can generate some problems if it is done only for one or two years; the indexes' stability when they are calculated this way, is smaller than the one for the import or export real price. For this reason an intense review process of the available data was necessary in order to find atypical values that may affect on the average calculi. In the following pages we offer more detail on the prices that were finally considered for the trade between each area.

We must refer again to the suitability of the chosen period for the price calculus:

- Firstly we must repeat that the price table is useful because it reflects, in relative terms, the differences that exist between the different areas that are being considered more than the computation of a specific value for each one of the trades; we believe that these differences are truly reflected in spite of, in general terms, the international prices having registered steep rises and falls in this or other periods.
- Secondly, by using this same period in order to make the flow table helps us to maintain a minimum level of coherence.
- Finally and in any case, changes are not significant if we chose a period closer to the current one: for example, in the case of the exports of Central America to the EU15, the export price changes only 0, 01 dollars per kilo if we calculate it with the average 98-2002 instead of with the 96-2002

average; for the case of the South American exports we do not notice any changes in the average of the area.

To finish, the building of the aggregated matrixes finish with the approximation of the transport or, more generically, trade costs. These costs have been calculated in a simple way considering exclusively the difference between the CIF - FOB prices matrixes respectively²⁶. The analysis team is fully conscious of the limitations of this approximation but, again, this calculation was considered to be informative enough: we mean to show a relative idea of the cost differences and not a precise calculation of these for each case. The costs table is also referred to, along with the tariffs and prices table, in the following pages.

²⁶ However, as can be checked, these calculi have been analyzed to detect inconsistencies that once founded have been properly treated.

Table 11:
BANANA IMPORT TARIFFS BY AREA

	EU15	OTHER EUROPE	EU+10	EAST EUROPE	STH AMERICA	CNT. AMERICA	ASIA	NORTH AMERICA	AFR. MIDD.EAST	OCEANIA
ASIA	-	-	-	23%	-	-	24%	-	0%	0%
CNTR. AMERICA	0%	152%	-	23%	-	11%	22%	0%	0%	13%
EU15	0%	-	20%	-	-	-	-	-	-	-
SOUTH. AMERICA	0%	144%	22%	23%	22%	-	22%	0%	0%	13%
ACP-TRAD	0%	-	-	-	-	-	-	-	0%	-
ACP-NON TRAD	0%	7%	-	-	-	0%	20%	0%	-	-

Table 12:
FOB EXPORT PRICES BY ÁREA (\$/Kg)

	EU15	OTHER EUROPE	EU+10	EAST EUROPE	STH AMERICA	CNT. AMERICA	ASIA	NORTH AMERICA	AFR. MIDD.EAST	OCEANIA
ASIA	-	0,19	-	0,20	-	-	0,17	-	0,18	0,19
CNTR. AMERICA	0,33	0,24	-	0,27	-	0,10	0,28	0,29	0,24	0,21
EU15	0,72	-	0,14	-	-	-	-	-	-	-
SOUTH. AMERICA	0,27	0,33	0,25	0,25	0,17	-	0,25	0,26	0,25	0,24
ACP-TRAD	0,25	-	-	-	-	-	-	-	0,15	-
ACP-NON TRAD	0,28	0,38	-	-	-	0,09	0,36	0,21	-	-

Table 13:
CIF IMPORT PRICES BY ÁREA (\$/Kg)

	EU15	OTHER EUROPE	EU+10	EAST EUROPE	STH AMERICA	CNT. AMERICA	ASIA	NORTH AMERICA	AFR. MIDD.EAST	OCEANIA
ASIA	-	0,40	-	0,36	-	-	0,44	-	0,33	0,48
CNTR. AMERICA	0,65	0,40	-	0,31	-	0,14	0,37	0,34	0,34	0,47
EU15	0,85	-	0,18	-	-	-	-	-	-	-
SOUTH. AMERICA	0,59	0,43	0,44	0,31	0,25	-	0,43	0,36	0,35	0,45
ACP-TRAD	0,60	-	-	-	-	-	-	-	0,16	-
ACP-NON TRAD	0,56	1,05	-	-	-	0,14	0,93	0,54	-	-

Table 14:
(CIF-FOB) APROXIMATION TO TRADE COSTS BY ÁREA (\$/Kg)

	EU15	OTHER EUROPE	EU+10	EAST EUROPE	STH AMERICA	CNT. AMERICA	ASIA	NORTH AMERICA	AFR. MIDD.EAST	OCEANIA
ASIA	-	0,20	-	0,16	-	-	0,28	-	0,15	0,29
CNTR. AMERICA	0,32	0,17	-	0,04	-	0,05	0,09	0,05	0,11	0,26
EU15	0,53	-	0,04	-	-	-	-	-	-	-
SOUTH. AMERICA	0,32	0,10	0,19	0,07	0,07	-	0,19	0,10	0,11	0,21
ACP-TRAD	0,35	-	-	-	-	-	-	-	0,01	-
ACP-NON TRAD	0,28	0,67	-	-	-	0,05	0,57	0,32	-	-

IV.- DESCRIPTION OF THE DATA BASE

Beyond the final results of the analysis, the work that we have developed has permitted us to build a wide data base that is attached in Excel on a CD-Rom. Along with the previously offered detail on the data and the used bases, we now attach a simple list of the included data in the base so it can be correctly used.

- **File:** DatosFAO.xls
- **Contents:** 975 temporal export, import and value indexes series detailed by country

Sheet	Description	Notes
FAO-Imports Q (Mt)	FAO Import Volume Data	Detail: 169 countries. Data: Annual Units Tons Period: 1974 - 2002
FAO-Imports V (\$)	FAO Import Value Data	Detail: 169 countries. Data Annual Units: thousands of current \$ Period: 1974 - 2002
Derived from FAO-UVI's Imports	FAO Import Unit Value Indexes Data	Detail: 169 countries. Data: Annual Units: \$ / Kg Period 1974 - 2002
FAO-Exports Q (Mt)	FAO Export Volume Data	Detail: 155 countries. Data: Annual Units: Tons Period: 1974 - 2002
FAO-Exports V (\$)	FAO Export Value Data	Detail: 155 countries Data: Annual Units: Thousands of current \$ Period: 1974 - 2002
Derived from FAO-UVI's Exports	FAO Export Unit Value Indexes Data	Detail: 155 countries Data: Annual Units: \$ / Kg Period: 1974 - 2002

- **File:** SeleccionAreas.xls
- **Contents:** 2 Dynamic tables with a detail of relative importance concerning each country in the world banana exports / imports.

Sheet	Description	Notes
EXP - Dynamic	Table that has the relative percentage of the exports of each country and each area on the world total.	Percentages calculated from the averages 1974-2002 and 1992-2002 on volume exports.
IMP - Dynamic	Table that has the relative percentage of the imports of each country and each area on the world total.	Percentages calculated from the averages 1974-2002 and 1992-2002 on volume imports.

- **File:** DatosFAOAreas.xls
- **Contents:** 63 temporal export, import and value indexes series detailed by country.

Sheet	Description	Notes
Area FAO-Exports Q (Mt)	FAO Export Volume Data aggregated by areas	Detail: 12 areas. Data: Annual Units: Tons Period: 1985 - 2002
Area FAO-Exports V (1000 \$)	FAO Export Value Data aggregated by areas	Detail: 12 areas. Data: Annual Units: Thousands of current \$ Period: 1985 - 2002
Area Weighted UVI's Exports	FAO WEIGHTED Export Unit Value Indexes Data aggregated by areas	Detail: 12 areas. Data: Annual Units: \$ / Kg Period: 1985 - 2002
Area FAO-Imports Q (Mt)	FAO Import Volume Data aggregated by areas	Detail 9 areas. Data: Annual Units: Tons Period: 1974 - 2002

Sheet	Description	Notes
Area FAO-Imports V (1000 \$)	FAO Import Value Data aggregated by areas	Detail: 9 areas. Data: Annual Units: Thousands of current \$ Period: 1974 - 2002
Area Weighted UVI's Imports	FAO WEIGHTED Import Unit Value Indexes aggregated by areas	Detail: 9 areas. Data: Annual Units: \$ / Kg Period: 1974 - 2002

- **File:** ExogenasAreas.xls
- **Contents:** 126 temporal series that contain measurements of export, import revenue and value indexes detailed by country.

Sheet	Description	Notes
AREAS - SERIES Summary	Designations used to identify the contents of each series and the geographical areas corresponding to each one of them.	
Export Series	FAO Export Value Data aggregated by areas	Detail: 6 areas. Data: Annual Units: Indexes base 1985=100 Period: 1985 - 2002
Import Series	FAO WEIGHTED Import Unit Value Indexes aggregated by areas	Detail: 6 areas. Data: Annual Units: Indexes base 1985=100 Period: 1985 - 2002

- **File:** SelecExportImport.xls
- **Contents:** Export COMTRADE data that details the country of Origin (11 countries) – Destination (124 destinations) and also temporal details 1996 – 2002. Additional dynamic table for data consulting.

Sheet	Description	Notes
UN Data - Export-Import	1996 – 2002 data base on banana exports with details on the country of origin and destination in Value and in Volume	Detail: 11 exporting countries and 124 destinations. Data: Annual Units: Volume in Kilos and Value in \$ Period: 1996 - 2002
Dynamic Table Exp-Imp	Dynamic table elaborated to consult the most important destinations for each one of the 11 selected exporting countries.	The data from the interior cells of the table reflect the % of EXPORTS in volume of each origin to each destination.

- **File:** PreciosCIF-FOB.xls
- **Contents:** Export - Import COMTRADE Data with details on the country of Origin (11 countries) – Destination (31 destinations) and temporal detail 1996-2002. Two additional dynamic tables for data consulting.

Sheet	Description	Notes
Data - Exporter as Reporter	1996 – 2002 Data Base on banana exports with details on the country of origin and destination in Value and in Volume and calculus of the unit value indexes.	Detail: 11 exporting countries and 31 destinations. Data: Annual Units: Volume in Kilos, Value in \$ and prices in \$/Kg Period: 1996 - 2002
Dynamic EXP=Reporter	Dynamic table elaborated in order to consult the value indexes for each one of the 11 selected exporting countries and the 32 selected importing countries.	The data from the interior cells of the table reflect the average unit value index for the period, the maximum and minimum, for each trade between the exporting and importing country,
Data - Importer as Reporter	1996 – 2002 Data Base on banana imports with details on the country of origin and destination in Value and in Volume and calculus of the unit value indexes	Detail: 31 importing countries and 11 origins. Data: Annual Units: Volume in Kilos, Value in \$ and prices in \$/Kg Period: 1996 – 2002

Sheet	Description	Notes
Dynamic IMP=Reporter	Dynamic table elaborated in order to consult the value indexes for each one of the 11 selected exporting countries and the 32 selected importing countries.	The data from the interior cells of the table reflect the average unit value index for the period, the maximum and minimum, for each trade between the exporting and importing country,

V.- FINAL DESIGN OF THE ECONOMETRIC MODEL AND OF THE OPTIMIZATION SYSTEM

V.A.- General diagram

As we have pointed out before, the selected analytical model tries to reproduce the international banana trade market equilibrium and to observe its changes when the trade conditions alter.

For this and firstly, we collected the trade data that represent this hypothetical equilibrium situation thus generating a matrix structure of relative flows (in value and quantity) between the different geographical areas that participate in the banana trade. This equilibrium structure does not mean to exactly reflect the trade terms of the current situation but, in average terms, the relative importance of each area in flow terms and the protection and cost conditions that, relatively, favor or limit trade between each one of them.

Before developing the optimization system we econometrically modeled the import and export functions of each one of the mentioned areas.

These functions will be used to connect the movements in prices and traded quantities between each area with the double aim to:

- Technically reproduce the situation of theoretical equilibrium of exporters and importers revenue that most seems like the situation represented by the flow matrixes elaborated with the available data.
- Technically determine which changes are produced in this initial equilibrium when the trade conditions are altered (new tariff structure in the EU) and which relative flow and price values would restore a new situation of technical equilibrium.

V.B.- Analytical detail of the estimation of the export and import econometrical functions

- **Theoretical model**

Following the Takayama and Judge (1971) formulation, we generically represent the banana demand function in the region “j” with the general expression:

$$(1) \quad Q_j = f_j(P_j, Y_j),$$

Where Q_j is the demanded quantity in the region “j” at the price P_j and Y_j is a vector of relevant variables that accompanies the price in order to determine the demanded quantity.

Similarly the export supply function from the exporting area “I” could be defined as:

$$(2) \quad Z_i = g_i (R_i, W_i),$$

Where Z_i would be the quantity of exported banana, R_i is the export price and W_i a vector of explanatory support variables.

Following Takayama and Judge, we can consider that both functions can be inverted so

$$(3) \quad P_j = h_j (Q_j, Y_j)$$

and

$$(4) \quad R_i = u_i (Z_i, W_i)$$

Are the inverse of the demand and supply functions.

As we have already said, the function estimation and its respective inverted “images” are basic in the first stage of the technical procedure; the export and import elasticities by area can be used as a basis for determination of the equilibrium scenario, and above all, for the technical simulation of the adjustments on the flows and conditions when the trade conditions vary.

Even though, as we have previously pointed out, we have generated temporal series with data between 1972 and 2002, in order to estimate these functions we have exclusively used a sample between 1985 and 2002: the scarce quality and excessive heterogeneity of some of the oldest available data made it advisable to reduce the sample.

The estimation has been done with logarithms in order to consider the obtained parameters as direct approximations to the elasticities.

For the import equations, the used endogenous variable has therefore been the logarithm of the imported quantity. It depends on the logarithm of the import price (taken as the weighted unit value index of the imports)²⁷, on the logarithm of the weighted exchange rate index related to the dollar, on the import revenue (measurement, that depending on the case may have some of the previously mentioned variants) and eventually on some isolated fictitious that tries to gather the impact of the occurred regulatory changes and order changes in the international banana market.

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. Before observing the results that we have obtained in each one of them, we must point out some relevant aspects that affect some or all of them:

- We believe that the analytical objective justifies the use of annual series (opposite to estimations of data with a higher frequency): estimating an average parameter that defines the relation between the imported/exported quantities and prices, beyond seasonal changes that, in any case, will not disappear in the future.
- The equation specification has been similar in all the cases: Export or Import according to prices and one or some additional exogenous variables. In the case of the export equations the only interesting variant is that, in the cases for which it has been possible²⁸, the export price applied is based on the

²⁷ According to the elaboration which has been commented in the respective part.

²⁸ The task of searching retail or wholesale data by countries and during a long enough period has turned out to be complicated, somewhat slow and in some cases just fruitless.

Available information on sales prices in the destination areas and not on the export unit value indexes, like in the case of the (import) demand functions.

- The maximum estimation period that was initially considered has always been 1985 – 2002 although, in some cases, the period that we have used, was finally shorter for data availability reasons or simply for exclusive technical reasons.²⁹
- The important changes occurred in the international banana market in the last decade, for example the passing of the CMO regulation in February 1993 or its reform later on, could be argued as structural changes that would dissuade us from using samples from 1985. For this reason structural change analysis has been made on the series used 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 (details on each one of the equations that shall be commented on later on are offered).
- However, we must point out that the dummy³⁰ variables are not used in every case where a change happens in the institutional context (for example a regulatory change in the market) but only when this change affects the

²⁹ Occasionally the use samples that are too long causes estimation errors that are too high; these can be minimized by partially reducing the sample.

³⁰ We must understand the naming of dummy variable in its econometrical sense: dichotomous or trend variables that permit us to discriminate sub periods inside the whole sample so that the estimated parameters be flexible and that they collect, with a minimum global error, specific circumstances differentiated by moments or specific periods.

results in each model (this has been technically observed with parametrical tests on structural change, recursive tests on residuals, and recursive tests on the parameters...) Therefore, the combined observation of “changes + results of the model” recommends to occasionally take some correcting measure.

- In spite of the other fundamental moments in the life of the banana CMO (R-404, quota changes, etc...), the estimation of the parameters did not demand the introduction of fictitious variables in all the cases, since these did not affect the stability of the parameters. This has been checked with the normal statistical tests (Chow, CUSUM, recursive residuals, etc...).
- For most of the initially considered export and import areas it has been possible to estimate the export and import functions but we must point out that, in some cases, the econometrical exercise did not gather the minimum statistical guarantees so we have not taken the estimations into account. This has been the case of the ACP-Non traditional area and of 3 other import areas: South America, Central America and Africa-Middle East. This problem does not have special relevance related to the final results given the residual character of these areas for which we have not obtained a reliable estimation: related to the ACP- Non Traditional (Caribbean), they mean a 0, 6% of the international sales; as far as the 3 previously mentioned importing areas are concerned, they represent around 8% of the global buys in the last decade.
- 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.

- **Asia: Export Function**

Dependent Variable: @LOG(ASQ)
 Method: Least Squares
 Sample: 1990 2002
 Included observations: 13

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.146931	2.920668	0.735082	0.4810
@LOG(RETJAP)	0.818984	0.390668	2.096367	0.0655
@LOG(ASR7)	1.329688	0.205141	6.481839	0.0001
F01	0.405998	0.104219	3.895614	0.0036
R-squared	0.887436	Mean dependent var	14.14297	
Adjusted R-squared	0.849915	S.D. dependent var	0.254568	
S.E. of regression	0.098622	Akaike info criterion	-1.547390	
Sum squared resid	0.087536	Schwarz criterion	-1.373560	
Log likelihood	14.05804	F-statistic	23.65162	
Durbin-Watson stat	1.973330	Prob(F-statistic)	0.000133	

Final estimation period: 1990 - 2002

Endogenous variable: Logarithm of banana exports in volume

Price variable: Logarithm Retail – Japan retail price index (see note in the commentaries)

Other exogenous variables:

- Weighted GDP of the importers measured in current US dollars.
- Specific dichotomous dummy variable (Year 2001=1, Rest Years=0) (see note on the adjustment characteristics)

Adjustment characteristics:

- Adequate results in terms of the individual significance of the parameters: the elasticity is significant with an 89% confidence.
- High level of joint significance: $R^2 = 91\%$.

- Lack of signs for simple, partial or composed multicollinearity.
- Lack of signs for residual autocorrelation: DW=1, 97.
- Lack of signs for heteroskedasticity: White Test-F=0,133 (prob=0.98%)
- Outlier detected in year 2001 (residual value over 2, 6 times the residual standard deviation). A dichotomous dummy variable has been introduced for the year 2001.

Commentaries:

- Although we have the unit value index generated for the Asian exports, we chose to specify the equation by using the Japanese Retail price as a reference price. Japan takes in 60% of Philippines exports (only Asian country to be considered as an exporter).
- By considering a wider measure of the price (and not only the one referred to Japan), the estimations suggest a value around 20 to 25% higher than the price elasticity obtained in this equation.

• Central America: Export Function

Dependent Variable: @LOG(CAQ)
 Method: Least Squares
 Sample: 1990 2002
 Included observations: 13

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	15.71158	0.231449	67.88360	0.0000
@LOG(CAP)	0.623105	0.278841	2.234627	0.0559
@LOG(CATC1)	-0.454215	0.146947	-3.091001	0.0149
@LOG(CAR3)	0.463539	0.155438	2.982148	0.0175
F91	-0.053692	0.034244	-1.567895	0.1555
R-squared	0.711989	Mean dependent var	15.20605	
Adjusted R-squared	0.567984	S.D. dependent var	0.046887	
S.E. of regression	0.030818	Akaike info criterion	-3.837711	
Sum squared resid	0.007598	Schwarz criterion	-3.620423	
Log likelihood	29.94512	F-statistic	4.944185	
Durbin-Watson stat	1.582539	Prob(F-statistic)	0.026477	

Final estimation period: 1990 – 2002

Endogenous variable: Logarithm of banana exports in volume

Price variable: Weighted unit value index for exports by relative importance of each destination

Other exogenous variables:

- Weighted import exchange rate
- Weighted per capita GDP of the importers measured in national currency, in current terms.
- Specific dichotomous dummy variable (Year 2001=1, Rest Years=0) (see note on the adjustment characteristics)

Adjustment characteristics:

- Adequate results in terms of individual significance of the parameters : The elasticity is significant with a 94% confidence
- Adequate level of joint significance: $R^2 = 71\%$.
- Signs of simple multicollinearity. An analysis of the stability for the elasticity parameter was done rejecting instability and suggesting its slowly growing trend towards 0.7 levels at the end of the period.
- Moderate signs of residual autocorrelation: DW=1, 58 in a doubtful area for positive correlation. Later on the correlogram rejects autoregressive process in the residuals.
- Signs of heteroskedasticity: White Test-F=7, 17 (probability=0.03%)
- Outlier detected in year 1991 (residual value over 1, 8 times the residual standard deviation). A dichotomous dummy variable has been introduced for the year 1991.

Commentaries:

- The results from the technical analysis show moderate signs of failure to comply with the hypothesis relative to the minor random disturbance that

does not significantly affect the technical reliability of the obtained results.

- **European Union (15): Export Function**

Dependent Variable: @LOG(EUQ)

Method: Least Squares

Sample: 1985 2002

Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.634505	8.268367	-0.802396	0.4357
@LOG(EUP)	1.630909	0.866264	1.882693	0.0807
@LOG(EUR2)	4.027999	1.765759	2.281171	0.0387
F93E	2.099067	0.274619	7.643556	0.0000
R-squared	0.942714	Mean dependent var		12.95962
Adjusted R-squared	0.930439	S.D. dependent var		1.462360
S.E. of regression	0.385690	Akaike info criterion		1.125563
Sum squared resid	2.082591	Schwarz criterion		1.323423
Log likelihood	-6.130064	F-statistic		76.79626
Durbin-Watson stat	1.327136	Prob(F-statistic)		0.000000

Final estimation period: 1985 – 2002

Endogenous variable: Logarithm of banana exports in volume

Price variable: Weighted unit value index for exports by relative importance of each destination

Other exogenous variables:

- Weighted GDP of the Importers measured in PPA dollars.
- Specific dummy variable (Years between 1985 and 1990 =0, 1993 and following years =1) (see note on the adjustment characteristics)

Adjustment characteristics:

- Adequate results on terms of the individual significance of the parameters: The elasticity is significant with a 92% confidence.
- High level of joint significance: $R^2 = 94\%$.

- Lack of simple, partial or composed multicollinearity.
- Moderate signs of residual autocorrelation: DW=1, 32 in doubtful area for positive autocorrelation. Later on the correlogram points out an autoregressive process of order one in the residual. Once the residual process is introduced as an exogenous variable, we can observe a decrease in the value of the price elasticity that could oscillate between 20-25% under the previously reflected value.
- To finish up the previous analysis, we additionally examine the stability of the elasticity parameter with a recursive estimation tests confirming the previous observations.
- Lack of heteroskedasticity: White Test-F=1, 32 (probability=0.34%)
- Structural change detected in 1993. Cow Breakpoint Test – F=26.51 (probability=0.000014). A non progressive step dummy variable has been introduced then achieving a reduction of the quadratic error by an 80%.

Commentaries:

- The results from the theoretical analysis show a minor instability of the interest coefficient (price elasticity). Later on we checked, with an ad-hoc test on the optimization system, that even when taken to their limit, these variations were not important enough so as to alter the global results of the analysis.
- In order to study in depth the reasons of this instability, we created an alternative model for the EU exports using a Panel Data approximation instead of a unique temporal model. As it was foreseeable the estimations with the panel data confirmed the heterogeneity of the EU15 aggregate (aggregate of countries that were net importers, exporters, producers, reexporters...) and therefore, the difficulty to obtain a unique parameter.

- **South America: Export Function**

Dependent Variable: @LOG(SAQ)
 Method: Least Squares
 Sample: 1985 2002
 Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.10753	0.572635	19.39724	0.0000
@LOG(SAP)	0.778622	0.154601	5.036332	0.0002
@LOG(SAR1)	1.031861	0.077837	13.25669	0.0000
F89	-0.136465	0.062895	-2.169720	0.0492
F01	-0.208891	0.067303	-3.103724	0.0084
R-squared	0.979710	Mean dependent var		15.21886
Adjusted R-squared	0.973467	S.D. dependent var		0.366242
S.E. of regression	0.059657	Akaike info criterion		-2.570288
Sum squared resid	0.046266	Schwarz criterion		-2.322962
Log likelihood	28.13259	F-statistic		156.9291
Durbin-Watson stat	1.734968	Prob(F-statistic)		0.000000

Final estimation period: 1985 – 2002

Endogenous variable: Logarithm of banana exports in volume

Price variable: Weighted unit value index for exports by relative importance of each destination

Other exogenous variables:

- Weighted GDP of the Importers measured in PPA dollars.
- Specific step dummy variables (Years 1989 and 2001 =1, rest of years =0) (see note on the adjustment characteristics)

Adjustment Characteristics:

- Adequate results in terms of individual significance of the parameter: The elasticity is significant with a 99% confidence.
- High level of joint significance: $R^2 = 98\%$.
- Lack of simple, partial or composed multicollinearity of conceptual interest.
- Lack of sign of residual autocorrelation: DW=1, 73 in area of lack of

autocorrelation.

- Lack of heteroskedasticity: White Test-F=1, 05 (probability=0.46%)
- Outlier detected in years 1989 and 2001 (residual values over 1, 7 y 2, 1 times the residual standard deviation). Dichotomous dummy variables have been introduced for both years.

Commentaries:

- No additional technical particularity to write about.
- **ACP – Traditional: Export Function**

Dependent Variable: @LOG(ATQ)
Method: Least Squares
Sample: 1985 2002
Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.187156	0.878591	7.042133	0.0000
@LOG(ATP)	0.417504	0.136397	3.060951	0.0085
@LOG(ATR5)	1.576861	0.187875	8.393119	0.0000
F98	-0.181087	0.084795	-2.135581	0.0509
R-squared	0.836818	Mean dependent var	13.34997	
Adjusted R-squared	0.801850	S.D. dependent var	0.180568	
S.E. of regression	0.080378	Akaike info criterion	-2.011018	
Sum squared resid	0.090449	Schwarz criterion	-1.813158	
Log likelihood	22.09916	F-statistic	23.93119	
Durbin-Watson stat	1.786978	Prob(F-statistic)	0.000009	

Final estimation period: 1985 – 2002

Endogenous variable: Logarithm of banana exports in volume

Price variable: Weighted unit value index for exports by relative importance of each destination

Other exogenous variables:

- GDP growth rates in national currency, in constant terms.
- Specific step dummy variable (Year 1998 =1, rest of years =0) (see note

on the adjustment characteristics)

Adjustment characteristics:

- Adequate results in terms of individual significance of the parameters: The elasticity is significant with a 99% confidence.
- Adequate level of joint significance: $R^2 = 83\%$.
- Lack of simple, partial or composed multicollinearity.
- Lack of signs of residual autocorrelation: DW=1, 78 in area of lack of autocorrelation.
- Lack of heteroskedasticity: White Test-F=0, 69 (probability=0.66%)
- Outlier detected in year 1998 (residual value over 2, 0 times the residual standard deviation). A dichotomous dummy variable has been introduced in that year.

Commentaries:

- No additional technical particularity to write about.
- **EU (15): Import Function**

Dependent Variable: @LOG(QEU15)
 Method: Least Squares
 Sample(adjusted): 1980 2002
 Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.564138	0.408950	20.94176	0.0000
@LOG(PEU15)	-0.535822	0.153454	-3.491752	0.0026
@LOG(P1EU15)	1.087484	0.054164	20.07776	0.0000
@LOG(TCEU15)	-0.669901	0.099160	-6.755766	0.0000
F9498	0.069648	0.013199	5.276632	0.0001
R-squared	0.985366	Mean dependent var	15.02823	
Adjusted R-squared	0.982114	S.D. dependent var	0.355100	
S.E. of regression	0.047491	Akaike info criterion	-3.066889	
Sum squared resid	0.040597	Schwarz criterion	-2.820042	
Log likelihood	40.26922	F-statistic	302.9958	
Durbin-Watson stat	1.311553	Prob(F-statistic)	0.000000	

Final estimation period: 1980 – 2002

Endogenous variable: Logarithm of banana imports in volume.

Price variable: Weighted unit value index for imports by relative importance of each importer

Other exogenous variables:

- Weighted GDP of the Importers measured in PPA dollars.
- Weighted import exchange rate (eliminating most volatile points)
- Trend dummy variable 93 – 98 inverted in “v” (1993=1, 1994=2; 1995=3, 1996=3, 1997=2, 1998=1, rest of years =0) (see note on adjustment characteristics)

Adjustment characteristics:

- Adequate results in term of individual significance of the parameters: The elasticity is significant with a 99% confidence.
- Adequate level of joint significance: $R^2 = 98\%$.
- Signs of simple multicollinearity between the price variable and the GDP variable (see note on commentaries)
- Small evidences of residual autocorrelation: DW=1, 31 in doubtful area of positive autocorrelation presence. Later on the analysis of the residuals correlogram does not point out the presence of any autoregressive process in the residuals.
- Lack of heteroskedasticity: White Test-F=0, 77 (probability=0.68%)
- Structural change detected in the period 1993 – 1998 through the application of the CUSUM Test (see note on commentaries).Once the structure of the change was explored a dummy variable was selected as an inverted “v”; a reduction of the quadratic error by 60% was achieved.

Commentaries:

- The presence of multicollinearity can affect the unbiasedness of the estimated parameters even though stability tests with recursive estimations on the parameters show stability in the elasticity parameter.

- The use of a dummy variable for a long period of time is explained by the appearance and maintenance of a stability change in the estimation due to a factor of the surrounding that affects the relation between variables during a period of various years (for example 1993 – 1998). The form of the inverted “v” is justified by the fact that this change (that could perfectly be in our case the setting of the 404 regulation) affects the regression increasingly during 3 years and afterwards decreasingly for a similar period of time.

- **Other Europe: Import Function**

Dependent Variable: @LOG(QOE)
 Method: Least Squares
 Sample: 1986 2002
 Included observations: 17

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.599997	1.409646	1.135035	0.2785
@LOG(POE)	-0.871389	0.192023	-4.537936	0.0007
@LOG(P1OE)	1.784468	0.278678	6.403341	0.0000
@LOG(TCOE)	-0.202441	0.058261	-3.474705	0.0046
F01	-0.236973	0.089807	-2.638676	0.0216
R-squared	0.956907	Mean dependent var	12.18817	
Adjusted R-squared	0.942543	S.D. dependent var	0.316503	
S.E. of regression	0.075867	Akaike info criterion	-2.079753	
Sum squared resid	0.069069	Schwarz criterion	-1.834690	
Log likelihood	22.67790	F-statistic	66.61710	
Durbin-Watson stat	1.773990	Prob(F-statistic)	0.000000	

Final estimation period: 1986 – 2002

Endogenous variable: Logarithm of banana imports in volume

Price variable: Weighted unit value index for imports by relative importance of each importer

Other exogenous variables:

- Weighted GDP of the Importers measured in PPA dollars.

- Weighted import exchange rate (eliminating most volatile points)
- Specific dichotomous dummy variable (Year 2001=1, Rest of years=0)
(see note on adjustment characteristics)

Adjustment characteristics:

- Adequate results in terms of the individual significance of the parameters: The elasticity is significant with a 99% confidence.
- Adequate level of joint significance: $R^2 = 95\%$.
- Signs of simple multicollinearity between the exchange rate variable and the GDP variable (see note on commentaries).
- Lack of residual autocorrelation: DW=1, 77 in lack of autocorrelation area.
- Lack of heteroskedasticity: White Test-F=1, 77 (probability=0.24%)
- Outlier detected in 2001(residual value over 2, 0 times the residual standard deviation). A dichotomous dummy variable was introduced for that year.

Commentaries:

- The presence of simple multicollinearity does not affect on the quality of the elasticity parameter (main interest reference in the estimation) reason for which we have not considered it necessary to change anything.

- **EU (+10): Import function**

Dependent Variable: @LOG(QEU10)

Method: Least Squares

Sample(adjusted): 1980 2002

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9.195583	1.877553	-4.897643	0.0001
@LOG(PEU10)	-2.055173	0.521363	-3.941926	0.0009
@LOG(P1EU10)	3.069251	0.284224	10.79870	0.0000
F9198	0.332560	0.055864	5.953041	0.0000
R-squared	0.910711	Mean dependent var		12.21944
Adjusted R-squared	0.896613	S.D. dependent var		1.112773
S.E. of regression	0.357799	Akaike info criterion		0.939082
Sum squared resid	2.432387	Schwarz criterion		1.136559
Log likelihood	-6.799441	F-statistic		64.59764
Durbin-Watson stat	1.391741	Prob(F-statistic)		0.000000

Final estimation period: 1980 – 2002

Endogenous variable: Logarithm of banana imports in volume

Price variable: Weighted unit value index for imports by relative importance of each importer

Other exogenous variables:

- Weighted GDP of the Importers measured in PPA dollars.
- Weighted import exchange rate and corrected from outliers (eliminating most volatile points)
- Trend dummy variable 91 – 98 inverted in “v” (see note on this same phenomenon in the equation for EU15)

Adjustment characteristics:

- Adequate results in terms of the individual significance of the parameter: the elasticity is significant with a 99% confidence.
- Adequate level of joint significance: $R^2 = 91\%$.

- Lack of simple, partial or complete multicollinearity.
- Signs of residual autocorrelation: DW=1, 39 in doubtful positive autocorrelation area. Later analysis of the residuals correlogram excludes relevant autoregressive process in the residuals.
- Lack of heteroskedasticity: White Test-F=1, 85 (probability=0.15%)

Commentaries:

- The heterogeneity of the group of countries that are included in this aggregate and the special circumstances they have lived in the last decades have obstructed the estimation of this equation.
- The results of the equation show the reality that the data describe between 1980 and 2002 and they will unlikely be transferred to the new reality of these 10 countries after their incorporation in May to the European Union.

- **East Europe: Import Function**

Dependent Variable: @LOG(QEE)

Method: Least Squares

Sample(adjusted): 1980 2002

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.281063	2.392882	-2.624895	0.0177
@LOG(PEE)	-1.990709	0.544062	-3.658977	0.0019
@LOG(P4EE)	2.013170	0.242810	8.291139	0.0000
F90	-1.149381	0.649105	-1.770717	0.0945
F92	-2.018422	0.668290	-3.020277	0.0077
F94	1.816783	0.740398	2.453792	0.0252
R-squared	0.846926	Mean dependent var		11.48170
Adjusted R-squared	0.801905	S.D. dependent var		1.409954
S.E. of regression	0.627541	Akaike info criterion		2.125443
Sum squared resid	6.694730	Schwarz criterion		2.421658
Log likelihood	-18.44259	F-statistic		18.81152
Durbin-Watson stat	1.896914	Prob(F-statistic)		0.000002

Final estimation period: 1980 – 2002

Endogenous variable: Logarithm of banana imports in volume

Price variable: Weighted unit value index for imports by relative importance of each importer

Other exogenous variables:

- Weighted GDP of the Importers measured in PPA dollars.
- Specific dichotomous dummy variables (Years 90,92 and 94 =1, Rest of years=0) (see note on adjustment characteristics)

Adjustment characteristics:

- Adequate results in terms of the individual significance of the parameters: The elasticity is significant with a 99% confidence.
- Good level of joint significance: $R^2 = 85\%$.
- Lack of simple, partial or complete multicollinearity
- Lack of residual autocorrelation: DW=1, 89 in lack of autocorrelation area.
- Lack of heteroskedasticity: White Test-F=1, 62 (probability=0.20%)
- Outliers detected in the years 1990, 1992 y 1994 (residual values over 1.3, 2.6 y 2.1 times the residual standard deviation). Dichotomous dummy variables have been introduced in those years.

Commentaries:

- We must keep in mind that in reality in this area there is only Russia as an importing country that is quantitatively relevant. This evidently implies that the results obtained only represent the reality from this country so it would be risky to infer them to the surrounding countries.

- **Asia: Import Function**

Dependent Variable: @LOG(QAS)
 Method: Least Squares
 Sample: 1985 2002
 Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.815027	0.416028	18.78488	0.0000
@LOG(PAS)	-0.515641	0.156729	-3.290015	0.0059
@LOG(P1AS)	0.666759	0.052317	12.74467	0.0000
F0102J	-0.036929	0.015570	-2.371705	0.0338
F91	0.219905	0.080790	2.721952	0.0174
R-squared	0.957938	Mean dependent var	13.93836	
Adjusted R-squared	0.944996	S.D. dependent var	0.307100	
S.E. of regression	0.072024	Akaike info criterion	-2.193503	
Sum squared resid	0.067437	Schwarz criterion	-1.946178	
Log likelihood	24.74153	F-statistic	74.01723	
Durbin-Watson stat	1.614732	Prob(F-statistic)	0.000000	

Final estimation period: 1985 – 2002

Endogenous variable: Logarithm of banana imports in volume

Price variable: Weighted unit value index for imports by relative importance of each importer

Other exogenous variables:

- Weighted GDP of the Importers measured in PPA dollars.
- Specific dichotomous dummy variable (Year 91 =1, Rest of years=0) (see note on adjustment characteristics)
- Growing trend dummy variable 2000-2001-2002 (see note on adjustment characteristics)

Adjustment characteristics:

- Adequate results in terms of the individual significance of the parameters: The elasticity is significant with a 99% confidence.
- High level of joint significance: $R^2 = 96\%$.

- Lack of simple, partial or complete multicollinearity.
- Lack of residual autocorrelation: DW=1, 61 in lack of autocorrelation area.
- Lack of heteroskedasticity: White Test-F=1, 01 (probability=0.49%)
- Structural change analysis made in 2001 with a reduced version of Chow Test F=3, 25 (probability=0, 03). The recursive estimation analysis advises to introduce a trend dummy variable (arithmetic level of range 2) that reduces the residual quadratic error by 43%.
- Outlier detected in 1991 (residual value over 1.4 times the residual standard deviation). A dichotomous dummy variable was introduced for that year.

Commentaries:

- No additional technical particularity to write about.

- **North America: Import Function**

Dependent Variable: @LOG(QNA)

Method: Least Squares

Sample(adjusted): 1980 2002

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.498163	0.448943	18.92926	0.0000
@LOG(PNA)	-0.182864	0.065327	-2.799203	0.0119
@LOG(P4NA)	0.639169	0.039058	16.36460	0.0000
F0102	-0.074457	0.020671	-3.601947	0.0020
F88+F89	-0.085558	0.026504	-3.228165	0.0047
R-squared	0.969742	Mean dependent var	15.08919	
Adjusted R-squared	0.963019	S.D. dependent var	0.178284	
S.E. of regression	0.034285	Akaike info criterion	-3.718557	
Sum squared resid	0.021158	Schwarz criterion	-3.471710	
Log likelihood	47.76340	F-statistic	144.2234	
Durbin-Watson stat	1.929687	Prob(F-statistic)	0.000000	

Final estimation period: 1980 – 2002

Endogenous variable: Logarithm of banana imports in volume

Price variable: Weighted unit value index for imports by relative importance of each importer

Other exogenous variables:

- Weighted GDP of the Importers measured in PPA dollars.
- Specific step dummy variable (Years 88 and 89 =1, Rest of years=0) (see note on adjustment characteristics)
- Growing trend dummy variable 2001-2002 (see note on adjustment characteristics)

Adjustment characteristics:

- Adequate results in term of the individual significance of the parameters: The elasticity is significant with a 98% confidence.
- High level of joint significance: $R^2 = 97\%$.
- Lack of relevant theoretical simple, partial or complete multicollinearity.
- Lack of residual autocorrelation: DW=1, 93 in lack of autocorrelation area.
- Lack of heteroskedasticity: White Test-F=1, 14 (probability=0.40%)
- Structural change analysis was done in 2001 with a reduced version of the Chow Test F=3, 14 (probability=0, 02). Recursive estimation analysis advises to introduce a trend dummy variable (arithmetic level of range 1) that reduces by 42% the residual quadratic error.
- Structural change analysis was done in 1988 with Log Likelihood Ratio = 7.63 (probability=0.05). The recursive estimation analysis advises to introduce a step dummy variable (value one for 1988 y 1989) that reduces by 29% the quadratic residual error.

Commentaries:

- No additional technical particularity to write about.

- **Oceania: Import function**

Dependent Variable: @LOG(QOC)
 Method: Least Squares
 Date: 04/11/04 Time: 18:03
 Sample(adjusted): 1980 2002
 Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.393303	0.515704	12.39724	0.0000
@LOG(POC)	-0.379314	0.175935	-2.155982	0.0441
@LOG(P1OC)	0.715755	0.073759	9.703901	0.0000
F96	0.486231	0.128370	3.787731	0.0012
R-squared	0.874565	Mean dependent var	10.91070	
Adjusted R-squared	0.854760	S.D. dependent var	0.324454	
S.E. of regression	0.123651	Akaike info criterion	-1.185938	
Sum squared resid	0.290501	Schwarz criterion	-0.988461	
Log likelihood	17.63829	F-statistic	44.15771	
Durbin-Watson stat	2.172790	Prob(F-statistic)	0.000000	

Final estimation period: 1980– 2002

Endogenous variable: Logarithm of banana imports in volume

Price variable: Weighted unit value index for imports by relative importance of each importer

Other exogenous variables:

- Weighted GDP of the Importers measured in PPA dollars.
- Specific dichotomous dummy variable (Year 96 =1, Rest of years=0) (see note on adjustment characteristics)

Adjustment characteristics:

- Adequate results in terms of the individual significance of the parameters: The elasticity is significant with a 95% confidence.
- Adequate level of joint significance: $R^2 = 87\%$.
- Lack of relevant theoretical simple, partial or complete multicollinearity.
- Lack of residual autocorrelation: DW=2, 17 in lack of autocorrelation area.

- Lack of heteroskedasticity: White Test-F=0, 18 (probability=0.98%)
- Outlier detected in 1996 (residual value over 3.0 times the residual standard deviation).A dichotomous dummy variable was introduced for that year.

Commentaries:

- No additional technical particularity to write about.

V.C.- Analytical detail of the equilibrium optimization system

- **Analytical diagram**

Once the export and import functions have been defined and the parameters of interest (elasticities imported – exported quantity / price) have been obtained, we can now consider the export and import revenue functions in continuous like:

$$(6) \quad \sum_{j=1}^J \int h_j(Q_j, Y_j) dQ_j$$

$$(7) \quad \sum_{i=1}^I \int u_i(Z_i, W_i) dZ_j$$

where $h_j(Q_j, Y_j)$ and $u_i(Z_i, W_i)$ are respectively the inverse functions (prices depending on the quantity) of imports and exports previously defined. (equations (1) and (2) respectively).

The analytical optimization system that we propose to reproduce the market equilibrium is then generically defined making equal the inverse functions of the import and export revenue (6) and (7).

$$(8) \quad \sum_{j=1}^J \int h_j(Q_j, Y_j) dQ_j = \sum_{i=1}^I \int u_i(Z_i, W_i) dZ_i$$

However this equality does not reproduce the equilibrium unless we consider the vector of trade costs, this is, the existence of transport costs and tariff impositions.

If we name X_{ij} the quantity of banana sent from the region "i" to "j", we can generically consider the vector of trade costs in the following way:

- On one side, we consider applying the Non- Ad Valorem (Tarij) customs tariffs and the existence of some transport costs t_{ij} , all of this measured in costs per unit (tons or kilos). We shall name T_{ij} the sum of both concepts:

$$(9) \quad T_{ij} = t_{ij} + \text{Tar}_{ij}$$

- Secondly we consider the possibility that a quota regime exists; in this case and by naming OQTAR_{ij} the over quota tariff imposed in specific trades, we must define a new costs vector for the traded quantities over the quota (XX_{ij}), vector that we shall name TT_{ij}:

$$(10) \quad \text{TT}_{ij} = t_{ij} + \text{OQTAR}_{ij}$$

- Thirdly, we must take into consideration the existence of Ad-Valorem tariffs. To include them in the analysis, we will consider that, in this case, the import price that the importers are dealing with would be

$$(11) \quad P_j = \tilde{P}_j (1 + AD_j)$$

so the import price without tariffs would be:

$$(12) \quad \frac{P_j}{(1 + AD_j)} = \tilde{P}_j$$

Considering everything that has been previously said, we can finally define the equality that we will optimize in the following way:

$$(13) \quad \begin{aligned} & \text{MAX} \sum_{j=1}^J \frac{1}{1 + AD_j} \int h_j(Q_j, Y_j) dQ_j \\ & - \sum_{i=1}^I \int u_i(Z_i, W_i) dZ_i - \sum_{j=1}^J \sum_{i=1}^I T_{ij} X_{ij} - \sum_{j=1}^J \sum_{i=1}^I TT_{ij} XX_{ij} \end{aligned}$$

subject to the following restrictions:

$$\begin{aligned} & \sum_{j=1}^J (X_{ij} + XX_{ij}) \leq Z_i \quad \forall i = 1, \dots, I \\ & \sum_{i=1}^I (X_{ij} + XX_{ij}) \geq Z_i \quad \forall j = 1, \dots, J \\ & X_{ij} \leq Quota_{ij} \\ & Z_i, Q_j, X_{ij}, XX_{ij} \geq 0 \end{aligned}$$

- System implementation

The optimization system that has been previously described in a theoretical way can be implemented with real data by using the results of the previous econometrical estimation (quantity / price elasticities) and the data matrixes described in the respective section. Related to this task, we must point out a series of relevant specific matters that will help us understand how the system works and its usefulness.

- The system has been implemented with the Excel Solver module. The capacity of a Microsoft optimization module is enough for the estimation of linear optimization models like in our case and this platform was considered to be more compatible with the data bases that we were handling with (stored and treated in the same platform), more flexible to gather the frequent changes that have been programmed in the diagram, in the short available time for the analysis, and more “portable”.
- The whole optimization diagram was built on the base of the double entry Export – Import matrixes with aggregated data by areas. The trade flows, price, transaction costs and tariff matrixes have already been described in the respective part of this same report.

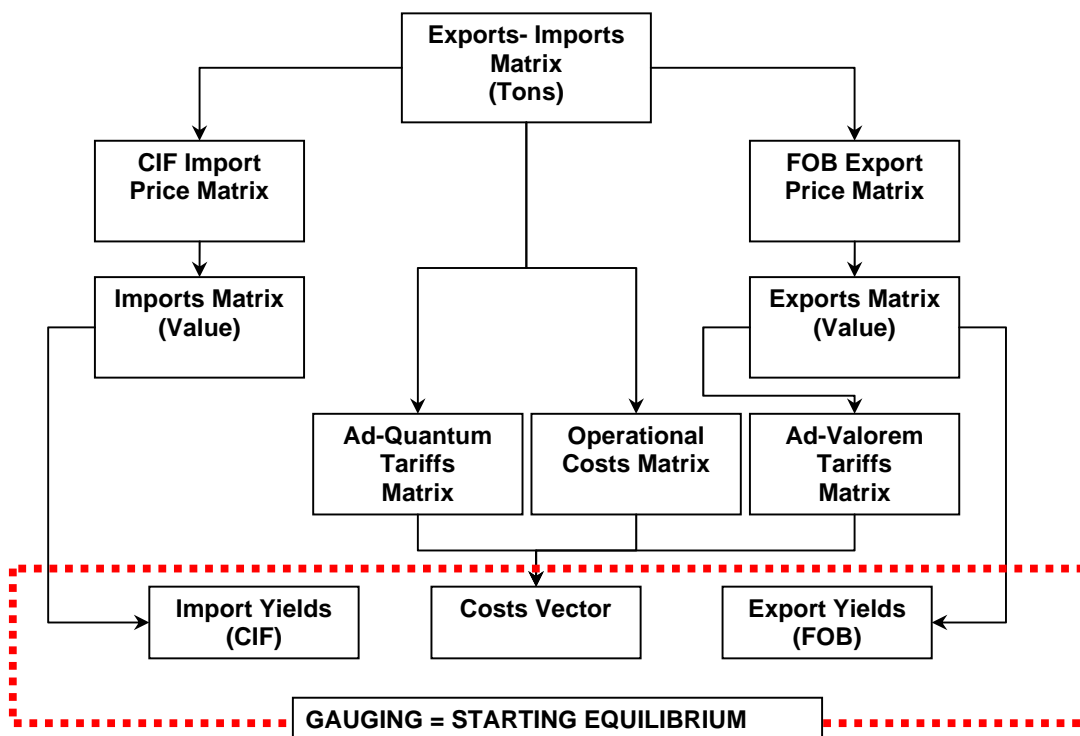
In order to understand the optimization diagram in more detail, we shall study slightly more in depth how it generally works with the aid of some illustrations.

1. The system “proposes”, as we have already commented on, the market equilibrium between the export and the import revenue.
2. This system is in reality the “price-gap” system but applied to a general context of global trade. Instead of comparing 2 reference prices, we obtain information from all the CIF and FOB prices and with this, the export and import revenue. This is when we measure the gap between both revenues considering, logically, the transport costs and the tariffs applied at the destination.
3. The advantages of this method over the simple “price-gap” are, as we have previously stated, evident: 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).

4. 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. This is the stage that is illustrated in the following sketch:

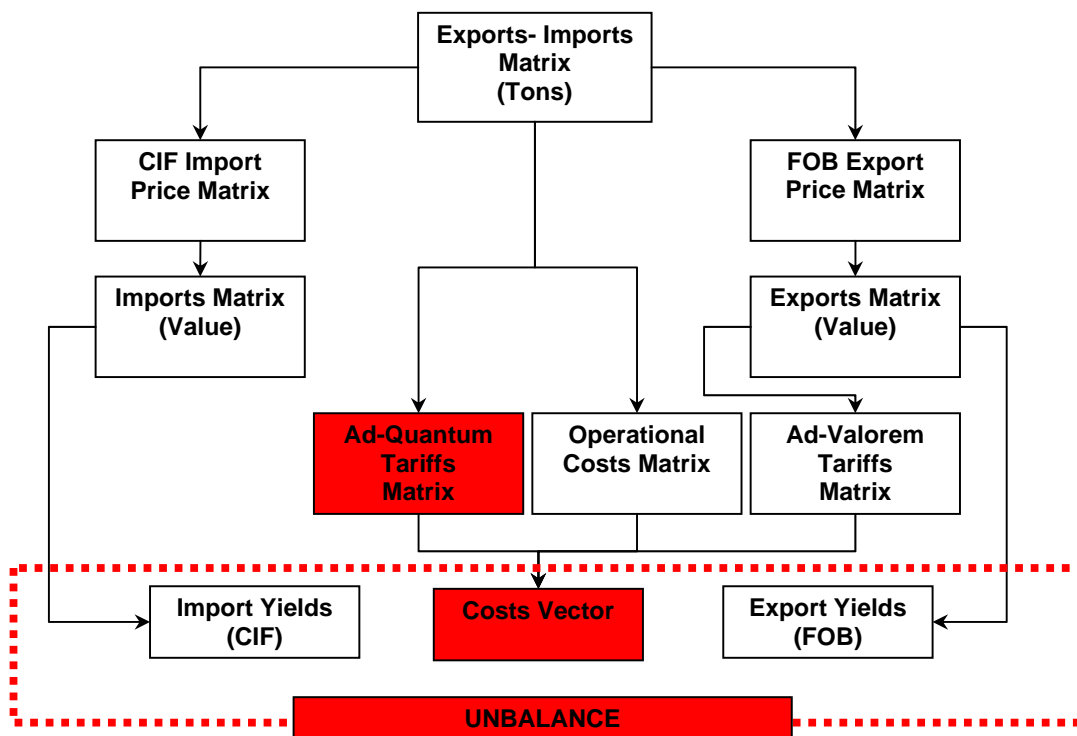
Illustration 5:
GENERAL OPTIMIZATION DIAGRAM AND GAUGING STAGE



5. 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

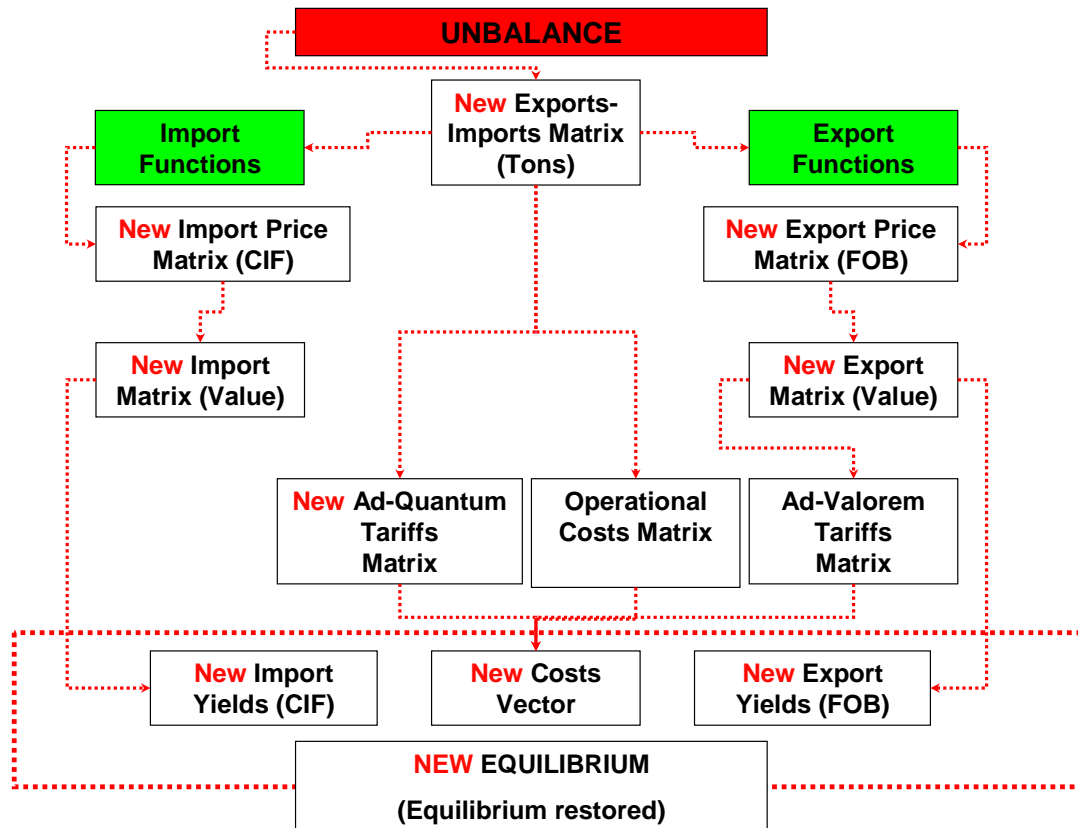
matrix and the disappearance of quotas that logically unbalance the objective function.

Illustration 6:
UNBALANCED SYSTEM



6. Faced with changes in the trade conditions (absence of quotas and of ad-quantum tariffs), the objective function looks for a new market equilibrium by varying trade flows between areas.
7. The variations in the exported and / or imported quantities for each area lead to changes in the export and import prices; these changes are calculated using the inverse functions of the Quantity / Price elasticities that have been econometrically estimated.

Illustration 7:
SEARCHING FOR A RE-EQUILIBRIUM



8. In the new equilibrium we shall find:

- A new trade matrix that can be compared to the initial one to measure the rises or falls in percentage of trade by areas;
- New CIF-FOB price matrixes that can also be compared to the initial ones to measure the relative rises or falls.

9. 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.

SECTION V

RESULTS

I.- INTRODUCTION AND PRELIMINARY COMMENTARIES

Like all simulation exercises that use econometric and optimization tools, the model's results are conditioned to a different extent by 4 kinds of elements that have been defined in advance:

1. Selecting the techniques to be used and its properties (temporal econometric estimation versus the transversal or panel one, quadratic optimization algorithm versus linear one, central derivatives versus progressive ones...)³¹
2. The quality and relevancy of the used data (trade flows, prices, tariffs...).
3. The results obtained in the different phases of the technical adjustment (for example, the elasticities of the import and export functions...).
4. The initial hypothesis assumed to outline the simulation scenario.

We shall detail in this section the most relevant aspects of the three last points that have been mentioned before and their eventual impact on the final results; we shall conclude this report with a short summary of the results obtained in the simulations.

³¹ The suitability of these techniques and its relative advantages related to other alternative approximations have already been described and commented on in both of the progress documents that were mentioned in the previous note.

II.- TECHNICAL ASPECTS AND RELEVANT INTERMEDIATE RESULTS FOR THE SIMULATION

II.A.- Quality and relevance of the used data and incidence on the results

Firstly and related to the **data quality**, we must point out that:

- The quality is guaranteed by the source used for each case, given that we have always turned to organizations at the highest level (FAO, UN, and Eurostat);
- The processing of the original data later on has been, as we have previously detailed, highly thorough;
- We have tried to generally maintain a homogeneity level of 100% in the data selection (we have not mixed in a same analytical phase results from different data bases).

Related to the **temporal data selection** used in each analytical phase, we must again point out that:

- The choice of the temporal econometrical adjustment periods always guarantee minimum sample wideness (minimum liberty degrees) and enough quality for the series that are used;
- The selection of the temporal period 1996 – 2002 for the elaboration of the data matrixes used in this optimization section has been reasoned enough. We insist on again that the usefulness of these matrixes is to reflect the **RELATIVE STRUCTURE OF THE TRADE FLOWS, PRICES AND TARIFF PROTECTION**. To that effect, the use of different data only varies the results insofar that this relative structure is significantly altered; a more

recent data or correcting a decimal error in scarce percentage points of the tariff protection of a country does not significantly alter the output of the model;

- The previous property must be seen as an advantage: the model, and consequently its results, is technically robust, this is, it is not easily altered by changes, although it is still flexible enough in some points so as to make the scenario simulation exercise interesting.

II.B.- Some interesting intermediate technical results for the simulation: the import and export elasticities case

As we have already mentioned, some technical results or analytical shape decisions that we have been taking, can be relevant in order to qualify the results obtained in the simulations.

To this effect, we can specially highlight **the result from the export and/or import elasticities** and its potential impact on the results of the model. Related to this, we must point out that:

- The results obtained in the elasticities have been econometrically evaluated and possess enough statistical significance levels for all the cases;
- In most of our estimated equations, the elasticities obtained are stable when faced to changes in the specification of the equation (used period, additional exogenous variables...), which must be understood as a quality guarantee of the result;
- In the same way, most of the elasticities obtained are close to the reference values of similar studies done by other authors;

- However we must keep in mind that the obtained results in a temporal econometrical function are only central reference values that, starting from a determined statistical confidence level, can vary inside a determined interval: so the possibility of altering the elasticity values exists, maintaining the analytical rigor inside some variable although relatively small limits inside each equation;
- The variations in the elasticities could appreciably modify the output of the model reason for which we have done a first assessment of the sensibility of the results to these adjustments. Generally and in a first approximation³², we can say that a 10% variation in the elasticity of an exporting area of interest³³ can generate a variation in the result of the tariff in the order of 2-3%. In the same way, although in a more noticeable quantity, the variation of 10% in the import elasticity of the European Union could generate variations in the resulting tariff between 5% and 8%.

³² The sensibility analysis can reflect different results if only one of the surrounding conditions assumed in the simulation of the study (rest of elasticities, prices or initial conditions, basic hypothesis...) is altered. The sensibility results that are mentioned here are only an approximation, a reference magnitude order that must be understood in a conservative way.

³³ Of interest for the tariff analysis, this is, an exporting area to the EU such as South or Central America.

Illustration 8:
RESULT SENSIBILITY TO THE ELASTICITY VALUE
(Example I: elasticity of the export function from
Central America)

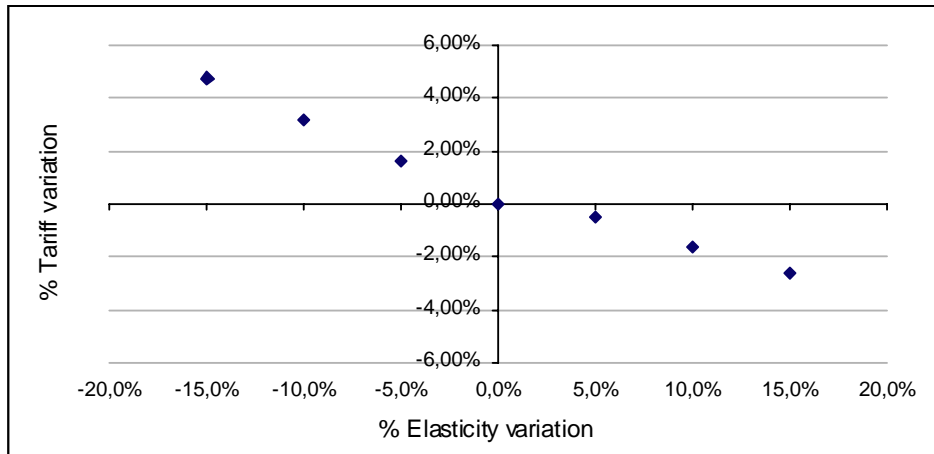
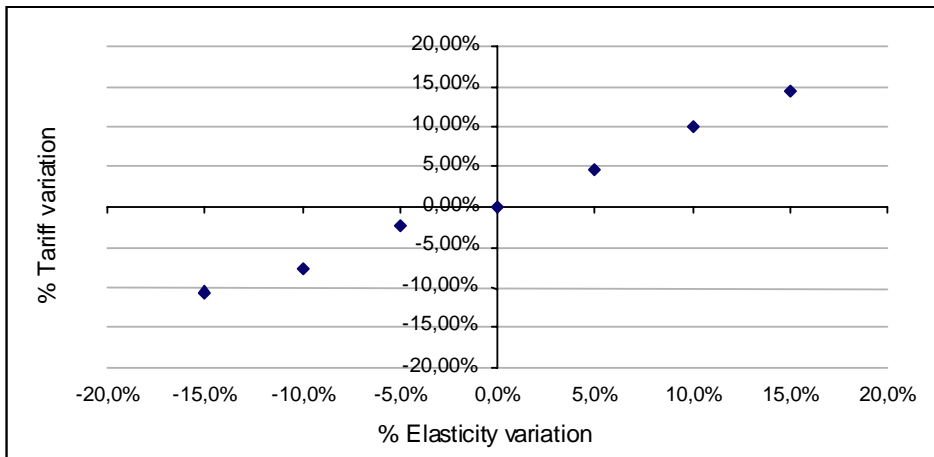


Illustration 9:
RESULT SENSIBILITY TO THE ELASTICITY VALUE
(Example II: elasticity of the import function from the
European Union)



- So, given the variation possibility of the elasticity values and its effects on the results, we must specify the criteria used in order to select the values of these parameters that have been finally used; the selection criteria has been to always use the central value of the elasticity estimation, or in an case, the values that guaranteed a more exact gauging of the initial equilibrium in the optimization system.

III.- SIMULATION: DEFINITION, BASIC HIPOTHESIS AND RESULTS

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

Starting from the initially gauged equilibrium and just how it was commented on in the previous part on the workings of the optimization system, the first stage of the process consists in supposing the disappearance of the ad-quantum tariffs and the quota restrictions that define the current protection system from the European Union.

This change in the protection level would generate a new market equilibrium in which there would at least be 4 relevant movements that would combine themselves, in different measures, thus generating a new equilibrium state characterized by:

1. A new costs and profits diagram for the seller (exporter). Favoured by the reduction of the costs associated to the tariff protection, which has now been eliminated, the exporter now has a new operating margin and could rise the (FOB) export prices without it meaning a rise in the final consumer price and therefore, without any need to fear a fall of the consumption.

2. A fall in the buyer's price (CIF import) of the dollar³⁴ and ACP area banana.
3. A potential increase of the banana export flows from some areas (dollar and ACP).

III.B.- Basic initial hypothesis for Stage I

The previously described scenario must be explained with the formulation of a series of additional hypothesis that set a framework for the simulation proposition inside some realistic and analytically viable limits.

1. The only alteration that we propose to draw the new equilibrium if the disappearance of the quotas and tariff rates in the EU. We do not propose any other additional change in any other area.
2. In the lack of a tariff equivalent, the alteration of the current tariff protection of the EU market could generate a rise in the import flows in the continent, not only a geographical rearrangement of the current import flows.
3. A possibly bigger imported volume by the EU will be supplied both from the ACP suppliers and the "dollar area" suppliers depending on their relative competitive advantages. A rise in the banana imports from any area that has not been a traditional supplier to the EU is not foreseeable; the Asian trade with the EU-15 or with the 10 new members (EU+10) is considered null.
4. We assume that the exporting competitiveness of the ACP maintains itself in relation to the competitors from the dollar area. In order to quantitatively

³⁴ This situation is compatible with the previous one insofar that the reduction of a cost in the market (the tariff barrier) could be partially absorbed by the buying part (with a reduction in the paid price) and by the selling part (with a rise of their received price).

approximate this relative exporting capacity, we shall use the differences between CIF prices from the different suppliers for the European Union.

5. We assume that the transaction costs (CIF – FOB prices) derived from the new equilibrium must be relatively coherent with the costs matrix observed for the sample period.

III.C.- Disequilibrium Characteristics

The disequilibrium (or new equilibrium), defined and limited just as we have described in previous parts, would be characterized by the following changes with regard to the initial equilibrium situation:

1. 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 increase of the EU imports in relation to the equilibrium level of the following magnitude:

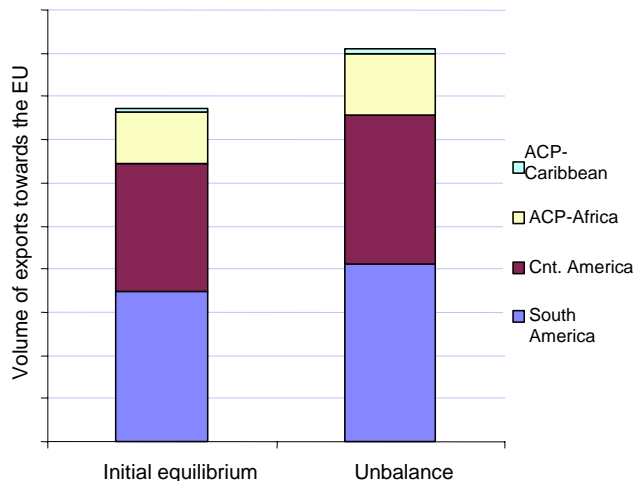
Table 15:

VARIATION OF THE EU IMPORTS BY ORIGINS
IN TOTAL ABSENCE OF TARIFFS AND QUOTAS

Exporting Area	Increase of Exports to the EU
Central America	19,00%
South America	18,66%
ACP – Africa	15,04%
ACP – Caribbean	19,12%

2. We must take into account that the magnitude orders of the exports from the different areas are not comparable; so, for example, although the increase from the ACP – Caribbean seems very important, in fact it means a very little volume increase. The following graph helps to center the magnitude orders of the flow variations:

Illustration 10:
VARIATION OF EU IMPORTS BY DESTINATIONS
IN THE ABSENCE OF TARIFFS AND QUOTAS



3. Considering therefore the weight of each one of the exporters, the total increase of the EU imports from the exterior is 18, 2%.
4. The system also advises on an increase of the reexports inside the European Union in the order of 4, 0%.
5. The trade increases with the EU of each one of the previously mentioned areas, are generated from the “creation of a new trade”, this is, from increasing the production, as from “trade deviation” from other areas. In

other words, the new international price equilibrium discourages trade (at least during the initial adjustment phase) from some of these areas with their traditional destination.

Table 16:
NEW TRADE CREATION BY AREA OF ORIGIN
IN TOTAL ABSENCE OF TARIFFS AND QUOTAS

Exporting Area	New Trade
Central America	3,0%
South America	3,2%
ACP – Africa	16,0%
ACP – Caribbean	5,0%

6. In the case of the South and Central American exporters, the trade deviation towards the European Union happens significantly from their traditional destinations, especially with the main one, the United States.

Table 17:
TRADE DEVIATION OF THE DOLLAR BANANA
WITH THE UNITED STATES

Exporting Area	Trade Variation
Central America	-8,24%
South America	-15,08%
ACP – Caribbean	-25,27%

7. The previous changes 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). The following table sums up the main price movements.

Table 18:

**(CIF) IMPORT PRICE VARIATION IN THE TRADES WITH THE EU BY ORIGIN
IN TOTAL ABSENCE OF TARIFFS**

Exporting Area	CIF Price Variation
Central America	-22,7%
South America	-22,3%
ACP – Africa	-18,0%
ACP – Caribbean	-22,9%

8. Also, a higher import demand in the EU would generate significant rises in the FOB export prices, especially pronounced in the dollar area case.

Table 19:

**(FOB) EXPORT PRICE VARIATION IN THE TRADE WITH THE EU BY ORIGIN
IN THE ABSENCE OF TARIFFS**

Exporting Area	FOB Price Variation
Central America	45,2%
South America	46,6%
ACP – Africa	35,8%
ACP – Caribbean	45,5%

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

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

- It seems clear that the tariff must be set in order to maintain the relative trade structure currently observed and the competitiveness of the dollar and ACP banana related to the interior banana from the EU.
- We assume that, given that a clear market power exists (production and commercialization belong to the same enterprises), the resulting tariff from the calculus must be interpreted as the “minimum tariff floor”, understanding that producers and dealers of the most competitive areas could temporarily adjust downward the margins in a “strategy to conquer the market”.
- Given that the calculi are done in dollars, it is necessary to assume a hypothesis on the Euro/Dollar exchange rate for the final conversion to euros of the tariffs that has been calculated in dollars. The most aseptic and quantitatively reasonable hypothesis consists in assuming the average exchange rate registered during the period 1996 – 2002 given that the used

data in the programming of the optimization system (flows, prices...) refer to this same period. The average euro/dollar from the monthly data between January 1996 and December 2002 is 0.97 €/\$.

- 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.

III.E.- Alternative scenario: 75 Euros (Borrell and Raboy's Proposal)

Establishing a tariff of about 75 euros per ton for imports from the dollar area would not re-establish the current market equilibrium.

- 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.

III.F.- Effects of setting a tariff over the equilibrium calculus

The methodology used in this study is not specially indicated to simulate effects of a tariff on the calculus of the equilibrium; the optimization diagram resolves itself adequately and without an excessive analytic intervention until the limit of the calculus set as the equilibrium. Over this limit the decisions of the model creator star to dangerously compromise the results.

However, by simply using the obtained elasticities in the import and export equations we can make the following supposition:

- 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.
- By using the European Union 15 import elasticity value, we could directly calculate the import falls derived from higher tariffs than the equilibrium one.

Table 20:
IMPORT REDUCTIONS IN THE EU WITH TARIFFS
OVER THE EQUILIBRIUM TARIFF

	Tariff €/Ton	
	275	300
Rises in Implicit Prices	+6%	+15%
Import Reductions in the EU15	-3%	-8%

- Supposing that this import distributes itself according to the percentage structure of each origin in the purchases of the European Union, which is a hypothesis that is difficult to believe in, the fall of the exports of each one of the exporters would be, related to the equilibrium volume, the exact same as the one reflected in the previous table.
- Considering the inverse export elasticities of each one of these areas, this demand fall would force a cut in the export prices in the origin of the following order:

Table 21:
FOB EXPORT PRICE CUT WITH TARIFFS
OVER THE EQUILIBRIUM TARIFF

Price cuts from ...	Tariff €/Ton	
	275	300
South America	4,8%	12,7%
Central America	5,1%	13,5%
ACP – Africa	7,5%	19,9%

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ANNEXES

1. Council Regulation (EC) No 216/2001 of 29 January 2001 amending Regulation (EEC) No 404/93 on the common organisation of the market in bananas.
2. Commission Regulation (EC) No 896/2001 of 7 May 2001 laying down detailed rules for applying Council Regulation (EEC) No 404/93 as regards the arrangements for importing bananas into the Community.
3. Council Regulation (EC) No 2587/2001 of 19 December 2001 amending Regulation (EEC) No 404/93 on the common organisation of the market in bananas.
4. Communication from the Commission COM (2004) 399 Final Brussels, 2.6.2004 On the modification of the European Community's import regime for bananas.

COUNCIL REGULATION (EC) No 216/2001**of 29 January 2001****amending Regulation (EEC) No 404/93 on the common organisation of the market in bananas**

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 37 thereof,

Having regard to the proposal from the Commission ⁽¹⁾,

Having regard to the opinion of the European Parliament ⁽²⁾,

Having regard to the opinion of the Economic and Social Committee ⁽³⁾,

Whereas:

- (1) There have been numerous close contacts with supplier countries and other interested parties to settle the disputes arising from the import regime established by Regulation (EEC) No 404/93 ⁽⁴⁾ and to take account of the conclusions of the special group set up under the dispute settlement system of the World Trade Organisation (WTO).
- (2) Analysis of all the options presented by the Commission suggests that establishment in the medium term of an import system founded on the application of a customs duty at an appropriate rate and application of a preferential tariff to imports from ACP countries provides the best guarantees, firstly of achieving the objectives of the common organisation of the market as regards Community production and consumer demand, secondly of complying with the rules on international trade, and thirdly of preventing further disputes.
- (3) However, such a system must be introduced upon completion of negotiations with the Community's partners in accordance with WTO procedures, in particular Article XXVIII of the General Agreement on Tariffs and Trade (GATT). The result of these negotiations must be submitted for approval to the Council which must also, in accordance with the provisions of the Treaty, establish the applicable level of the Common Customs Tariffs.
- (4) Until the entry into force of that regime, the Community should be supplied under several tariff quotas open to imports from all origins and managed in line with the

recommendations made by the dispute settlement body. The first tariff quota of 2 200 000 tonnes at a rate of EUR 75 should be bound in the WTO. A second, additional tariff quota of 353 000 tonnes should be opened to cater for the increase in consumption resulting from enlargement of the Community in 1995, with the same rate applying. To ensure satisfactory supply to the Community, a third, autonomous tariff quota of 850 000 tonnes should be opened, also for all origins. Under this latter tariff quota, provision should be made for the possibility, in accordance with an appropriate procedure, of a reduction in the applicable customs duty in order to allow the effective importation of bananas originating in third countries which do not benefit from the tariff preferences granted in respect of bananas originating in ACP countries.

- (5) In view of the contractual obligations towards the ACP countries and the need to guarantee them proper conditions of competition, application to imports of bananas originating in those countries of a tariff preference of EUR 300 per tonne would allow the trade flows in question to be maintained. This will entail in particular the application to such imports of zero duty under the three tariff quotas.
- (6) The Commission should be authorised to open negotiations with supplier countries having a substantial interest in supplying the Community market to endeavour to achieve a negotiated allocation of the first two tariff quotas. The Commission should also be granted authority to lay down rules for the management of the tariff quotas established by this Regulation.
- (7) Provision should be made for the additional tariff quota of 353 000 tonnes to be modified to take account of any increased Community demand found when a supply balance is drawn up. Provision should also be made for suitable specific action to be taken in response to exceptional circumstances liable to affect supply of the Community market.
- (8) Accordingly, Regulation (EEC) No 404/93 should be amended,

⁽¹⁾ OJ C 177 E, 27.6.2000, p. 28.

⁽²⁾ Opinion delivered on 13.12.2000 (not yet published in the Official Journal).

⁽³⁾ OJ C 140, 18.5.2000, p. 6.

⁽⁴⁾ OJ L 47, 25.2.1993, p. 1. Regulation as last amended by Regulation (EC) No 1257/1999 (OJ L 160, 26.6.1999, p. 80).

HAS ADOPTED THIS REGULATION:

Article 1

Regulation (EEC) No 404/93 is hereby amended as follows:

1. Articles 16 to 20 shall be replaced by the following:

Article 16

1. This Article and Articles 17 to 20 shall apply to imports of fresh products falling within CN code ex 0803 00 19 up to the entry into force of the rate of the common customs tariff for those products, no later than 1 January 2006, established under the procedure provided for in Article XXVIII of the General Agreement on Tariffs and Trade.

2. Until the entry into force of the rate referred to in paragraph 1, imports of the fresh products referred to in the said paragraph shall be under the tariff quotas opened by Article 18.

Article 17

To the extent necessary, importation of bananas into the Community shall be subject to submission of an import licence, to be issued by Member States to any interested parties irrespective of their place of establishment in the Community and without prejudice to specific provisions adopted for the application of Articles 18 and 19.

Such import licences shall be valid throughout the Community. Except where derogations are adopted under the procedure laid down in Article 27, the issue of licences shall be subject to lodging of a security against a commitment to import on the terms of this Regulation during the period of the licence's validity. Except in cases of *force majeure* the security shall be wholly or partly forfeit if the operation is not or is only partly carried out within the time allowed.

Article 18

1. Each year from 1 January the following tariff quotas shall be opened:

- (a) a tariff quota of 2 200 000 tonnes net weight, called "quota A";
- (b) an additional tariff quota of 353 000 tonnes net weight, called "quota B";
- (c) an autonomous tariff quota of 850 000 tonnes net weight, called "quota C".

These tariff quotas shall be open for imports of products originating in all third countries.

The Commission may, on the basis of an agreement with World Trade Organisation contracting parties with a

substantial interest in the supply of bananas, allocate tariff quotas "A" and "B" among supplier countries.

2. Imports under tariff quotas "A" and "B" shall be subject to customs duty of EUR 75 per tonne.

3. Imports under tariff quota "C" shall be subject to a customs duty of EUR 300 per tonne.

The customs duty set out in the first subparagraph may be reduced during the year by the Commission in so far as this is necessary to ensure the possibility of effective importation of bananas originating in third countries which do not benefit from the tariff preference of paragraph 4 of this Article.

The detailed arrangements for the application of this paragraph shall be adopted in accordance with the procedure laid down in Article 27.

4. A tariff preference of EUR 300 per tonne shall apply to imports originating in ACP countries both under and outside the tariff quotas.

5. The duty rates set in this Article shall be converted into national currency at the rates applicable for the products in question for the purposes of the common customs tariff.

6. The additional tariff quota provided for in paragraph 1(b) may be increased if demand in the Community increases as indicated by a balance sheet of production, consumption, imports and exports.

The balance sheet shall be adopted and the tariff quota increased under the procedure set out in Article 27.

7. Where supply of the Community market is subject to exceptional circumstances affecting production or importation, the Commission shall adopt the specific measures necessary under the procedure set out in Article 27.

In such cases the additional tariff quota "B" may be adjusted on the basis of the balance sheet referred to in paragraph 6. The specific measures may derogate from the rules adopted under Article 19(1). They must not discriminate between third countries.

8. Bananas re-exported from the Community shall not be counted against the corresponding tariff quotas.

Article 19

1. The tariff quotas may be managed in accordance with the method based on taking account of traditional trade flows ("traditional/newcomers") and/or other methods.

2. The method adopted shall take account as appropriate of the need to maintain the equilibrium of supply to the Community market.

Article 20

The Commission shall adopt provisions to implement this Title under the procedure set out in Article 27. Their scope shall include:

- (a) rules on the management of the tariff quotas referred to in Article 18;
 - (b) where required, guarantee of the nature and origin of the products;
 - (c) measures needed to ensure respect for obligations stemming from agreements concluded by the Community under Article 300 of the Treaty.'
2. The seventh indent of Article 29 shall be replaced by the following:

'— quantities of Community and ACP bananas and bananas from third countries other than ACP countries marketed in their territory.'

3. The Annex shall be deleted.

Article 2

This Regulation shall enter into force on the third day following that of its publication in the *Official Journal of the European Communities*.

It shall apply from 1 April 2001. However, the Commission may, according to the procedure laid down in Article 27, delay the date until 1 July 2001 at the latest, if this proves necessary for the implementation of the modifications in the management of the tariff quotas.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 29 January 2001.

For the Council
The President
M. WINBERG

COMMISSION REGULATION (EC) No 896/2001**of 7 May 2001****laying down detailed rules for applying Council Regulation (EEC) No 404/93 as regards the arrangements for importing bananas into the Community**

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation (EEC) No 404/93 of 13 February 1993 on the common organisation of the market in bananas ⁽¹⁾, as last amended by Regulation (EC) No 216/2001 ⁽²⁾, and in particular Article 20 thereof,

Whereas:

- (1) By Regulation (EC) No 216/2001 the Council amended the rules for importing bananas introduced by Title IV of Regulation (EEC) No 404/93. In particular, that Regulation opened an autonomous C tariff quota of 850 000 tonnes at EUR 300/tonne customs duty in addition to the 2 200 000 tonnes secured under the world Trade Organisation (WTO) and the additional quota of 353 000 tonnes. All the provisions necessary to implement those rules should be adopted, including such transitional measures as are justified by the entry into force of this Regulation on 1 July 2001, as well as provisions concerning imports at the Common Customs Tariff rate.
- (2) Under the last subparagraph of Article 18(1) of Regulation (EEC) No 404/93, where there is no agreement with World Trade Organisation contracting parties with a substantial interest in the supply of bananas, the tariff quotas 'A' and 'B' need not be allocated among supplier countries.
- (3) Article 19 of Regulation (EEC) No 404/93 provides that the tariff quotas may be managed in accordance with the method based on taking account of traditional trade flows ('traditional/newcomers') and/or other methods. To implement the new arrangements from the second half of 2001, it is advisable to grant access to the tariff quotas to traditional operators who have undertaken on their own account the purchase of fresh products from producers in third countries, or their production, as well as their dispatch to and unloading in the customs territory of the Community, during a reference period. For the purposes of this Regulation, these activities are called 'primary imports'.
- (4) A single definition of traditional operators should be adopted for all tariff quotas, and their reference quantities should be determined according to the same rules,

but separately depending on whether these operators have supplied the Community market with bananas originating in non-ACP third countries and non-traditional imports from ACP States or with traditional ACP bananas during the reference period, within the meaning of the definitions in Article 16 of Regulation (EEC) No 404/93 applicable before the amendment introduced by Regulation (EC) No 216/2001.

- (5) The reference period to be used for defining categories of operators and determining the reference quantities of traditional operators should be the three-year period 1994 to 1996. The three-year period 1994 to 1996 is the most recent for which the Commission has sufficiently reliable data on primary imports. Using that period can also resolve a dispute which has been going on for a number of years with certain of the Community's trading partners. In the light of the available data established for the purpose of administering the quotas opened in 1998, traditional operators need not be registered.
- (6) A share of the tariff quotas must be reserved for non-traditional operators. That share must allow operators who did not carry out any primary imports during the reference period to continue trading and to adapt to the new rules and to allow new operators to enter this import trade, thereby encouraging healthy competition.
- (7) Experience from several years of applying the Community banana import arrangements indicates the need to tighten the criteria for non-traditional operators and the eligibility criteria for new operators so as to avoid the registration of purely fictitious agents and the grant of allocations in response to artificial or speculative applications. In particular, it is justifiable to demand a minimum of experience in importing fresh bananas. Also, to avoid applications for annual allocations which bear little relation to operators' actual capacities and which will not lead to applications for import licences for the corresponding quantities, submission of an application for import licences for the corresponding quantities, submission of an application for an annual allocation should be subject to the requirement that a security in lieu of the import licence security be lodged. That security should be released without delay in stages as operators actually use up their annual allocations and furnish proof that they have dispatched the goods and unloaded them in the Community and had them

⁽¹⁾ OJ L 47, 25.2.1993, p. 1.

⁽²⁾ OJ L 31, 2.2.2001, p. 2.

released for free circulation on their own account. For the same purpose, the grant of an annual allocation in subsequent years should be made subject to a minimum rate of use of the previous annual allocation.

- (8) Operators should be reminded that they may form mergers or groupings on terms and conditions defined in national legislation in order to meet their obligations and exercise the rights arising under this Regulation.
- (9) Rules should be adopted for registering non-traditional operators and determining their annual allocations and the verifications and checks to be carried out by the competent national authorities should be specified, as should the action to be taken in the event that certain obligations are not fulfilled, in particular as regards registration and declarations made for the purpose of obtaining allocations under the import arrangements.
- (10) For the purposes of implementing the tariff quota arrangements on 1 July 2001, it is appropriate to maintain the administrative rules based on periods as created by Commission Regulation (EC) No 2362/98 of 28 October 1998 laying down detailed rules for the implementation of Council Regulation (EEC) No 404/93 regarding imports of bananas into the Community ⁽¹⁾, as last amended by Regulation (EC) No 1632/2000 ⁽²⁾, with adjustments where necessary. Those rules relate in particular to fixing the indicative quantities for the first three quarters, the ceilings for individual applications, the frequency for the submission of licence applications and for the issue of licences, and the issue of licences for the re-use of unused quantities. However, the fact that tariff quotas A and B on the one hand and C on the other are managed separately as regards the share allocated to traditional operators means that those operators may submit licence applications only under the tariff quota for which they have been granted and notified of a reference quantity.
- (11) For the purposes of Article 18(6) and (7) of Regulation (EEC) No 404/93, there is a need to define the items making up the balance sheet of production, consumption, imports and exports which has to be established before an increase in the autonomous quota can be made in the event of an increase in demand or of exceptional circumstances affecting supplies to the Community market.
- (12) Except where derogations are explicitly provided for, Commission Regulation (EC) No 1291/2000 of 9 June 2000 laying down common detailed rules for the application of the system of import and export licences

and advance-fixing certificates for agricultural products ⁽³⁾, as last amended by Regulation (EC) No 369/2001 ⁽⁴⁾, should apply. Pursuant to Article 9 of that Regulation, rights resulting from licences may be transferred by the holder only once per licence or per extract from a licence during the term of validity thereof.

- (13) The rules for transferring licences should be specified in the light of the definition of operator categories established by this Regulation. Transfer restricted to a single transferee per licence or extract therefrom will allow trade relations to develop between the various registered operators. However, artificial trade, speculation or disturbance of normal trade should not be encouraged by permitting transfer from non-traditional operators to traditional operators.
- (14) All the necessary communications between operators, Member States and the Commission in pursuance of this Regulation should be specified, in particular for the purpose of establishing operators' reference quantities and allocations, administering tariff quotas by period and market monitoring.
- (15) Under the transitional measures necessitated by the application of the new arrangements on 1 July 2001, derogations should be provided for from administrative rules on the timetable for registering non-traditional operators and on the transmission to the competent national authorities of the documentary evidence relating to their registration.
- (16) Further, the quantities which can be imported for the third quarter of 2001 under the tariff quotas should be determined and the ceiling for individual licence applications from operators and a strict timetable for the submission of those applications should be fixed.
- (17) The changes made by this Regulation to the arrangements for importing bananas into the Community to define non-traditional operators call for verifications and checks by the competent national authorities, acting in cooperation with the Commission. Such operations can, if need be, lead to corrections of operators' allocations. It follows, *inter alia*, that those allocations may not be regarded as vested rights, nor be pleaded by operators as legitimate expectations.
- (18) Regulation (EC) No 2362/98 should be repealed.

⁽¹⁾ OJ L 293, 31.10.1998, p. 32.

⁽²⁾ OJ L 187, 26.7.2000, p. 6.

⁽³⁾ OJ L 152, 24.6.2000, p. 1.

⁽⁴⁾ OJ L 55, 24.2.2001, p. 41.

- (19) Pursuant to Article 1 of Commission Regulation (EC) No 395/2001⁽¹⁾, Regulation (EC) No 216/2001 applies from 1 July 2001. In order to enable operators to benefit under that Regulation from that date onwards, transitional measures should be enacted to allow the Member States and the Commission to assemble all the requisite information for ensuring that licences are used from 1 July 2001 onwards.
- (20) The Management Committee for Bananas has not delivered an opinion within the time limit set by its Chairman,

HAS ADOPTED THIS REGULATION:

TITLE I

INTRODUCTORY PROVISIONS

Article 1

This Regulation lays down detailed rules for applying the arrangements for importing bananas under the tariff quotas provided for in Article 18(1) of Regulation (EEC) No 404/93 and also outside those quotas.

Article 2

The tariff quotas referred to in Article 1 shall be made available as follows:

- (a) 83 % to 'traditional operators' as defined in Article 3(1);
- (b) 17 % to 'non-traditional operators' as defined in Article 6.

TITLE II

MANAGEMENT OF TARIFF QUOTAS

Chapter 1

Definition of operators

Section I: 'Traditional operators'

Article 3

For the purposes of this Regulation:

1. 'traditional operators' means economic agents, whether natural persons or entities having legal personality, individual agents or groups, established in the Community during the period for determining their reference quantities, who have, for their own account, purchased a minimum quantity of bananas originating in third countries from the producers or, where applicable, produced, consigned and sold such products in the Community.

Operations as defined in the previous subparagraph shall hereinafter be called 'primary imports'.

The minimum quantity referred to in the first subparagraph shall be 250 tonnes imported in any one year of the reference period. This minimum quantity shall be 20 tonnes where marketing or import concerns only bananas with a length of 10 centimetres or less;

2. 'traditional operators A/B' means traditional operators who have carried out the minimum quantity of primary imports of 'third-country bananas' and/or 'non-traditional ACP' bananas in accordance with the definitions in Article 16 of Regulation (EEC) No 404/93, as amended by Regulation (EC) No 1637/98⁽²⁾;
3. 'traditional operators C' means traditional operators who have carried out the minimum quantity of primary imports of 'traditional ACP bananas' in accordance with the definitions in the abovementioned Article 16, as amended by Regulation (EC) No 1637/98.

Article 4

1. The reference quantity for each traditional operator A/B who submits a written application no later than 11 May 2001 shall be established on the basis of the average of primary imports of third-country bananas and/or non-traditional ACP bananas during 1994, 1995 and 1996 taken into account for 1998 for the purposes of administering the tariff quota for imports of third-country bananas and non-traditional ACP bananas, in accordance with the provisions of Article 19(2) of Regulation (EEC) No 404/93 applicable in 1998 to the category of operators referred to in paragraph 1(a) of that Article.

2. The reference quantity for each traditional importer C who submits a written application no later than 11 May 2001 shall be established on the basis of the average of primary imports of traditional ACP bananas during 1994, 1995 and 1996 carried out for 1998 as traditional quantities of ACP bananas.

3. Operators resulting from a merger of other traditional operators, each with their own rights under this Regulation, shall enjoy the same rights as those former operators.

Article 5

1. The Member States shall notify the Commission of the sum of the reference quantities referred to in Article 4(1) and (2) no later than 15 May 2001.

2. Using the information received under paragraph 1, and in light of the total quantities available under tariff quotas A/B and C, the Commission shall, where appropriate, set a single adjustment coefficient to be applied to each operator's reference quantity.

3. Where paragraph 2 applies, the competent authorities shall notify each operator of their reference quantity as adjusted by the adjustment coefficient not later than 7 June 2001.

⁽¹⁾ OJ L 58, 27.2.2001, p. 11.

⁽²⁾ OJ L 210, 28.7.1998, p. 28.

4. The competent authorities in each Member State shall be as listed in the Annex. That list shall be amended by the Commission at the request of the Member States concerned.

Section II: 'Non-traditional operators'

Article 6

For the purposes of this Regulation, 'non-traditional operators' means economic agents established in the Community at the time of their registration who:

- (a) have been engaged independently and on their own account in the commercial activity of importing into the Community fresh bananas falling within CN code 0803 00 19 in the two years immediately preceding the year in respect of which registration is sought;
- (b) by virtue of this activity, have imported produce to a declared customs value of EUR 1 200 000 or more during the period referred to in point (a); and
- (c) do not have a reference quantity as a traditional operator under the tariff quota for which they are applying for registration under Article 7 and who are not a natural person or entity having legal personality related, within the meaning of Article 143 of Commission Regulation (EEC) No 2454/93⁽¹⁾, to a traditional operator.

Article 7

1. Operators may be registered, in a single Member State of their choice, as a non-traditional operator under tariff quota A/B and/or tariff quota C.

Traditional operators under a tariff quota may be registered as non-traditional operators under the tariff quota for which they do not have a reference quantity.

However, traditional operators C may be registered as non-traditional operators under tariff quota A/B only if they can supply proof that they have imported third-country bananas and/or non-traditional ACP bananas to the declared customs value specified in point (b) of Article 6 during the period indicated.

2. For the purposes of registration, operators shall send to the competent authority as listed in the Annex the following supporting documents:

- (a) proof of entry in a commercial register of the Member State or other alternative proof acceptable to the said authorities; and
- (b) evidence of having imported bananas, by presenting the import licences used or, in cases where such a licence was not compulsory, the relevant customs documents; together with
- (c) a copy of an attestation from an independent, professionally registered chartered accountant certifying imports to the value required in point (b) of Article 6, or a copy of the

corresponding customs declarations stamped by the customs authorities.

3. Applications for registration shall be submitted by 1 October each year.

4. In order to have their registration renewed, operators shall provide the competent authorities with proof that they have actually imported on their own account at least 50 % of the quantity allocated to them for the current year. For the purposes of renewing registration for 2002, that percentage shall be 30 %.

Applications for renewal shall be submitted by 1 October each year and be accompanied by copies of import licences used, proof of payment of the customs duties due on the date of the completion of customs import formalities, and a copy of the import licence(s) issued for the current quarter.

5. By 10 October each year, the Member States shall notify the Commission of the list of operators who have submitted requests for registration and for renewal of registration, and in the case of renewals the serial numbers of licences or any licence extracts, used and issued.

As and when required, the Commission shall forward those lists to the other Member States with a view to facilitating the detection or prevention of false claims by operators.

The Commission may publish some of the details contained in the notifications from Member States.

Article 8

1. At the same time as the operators concerned apply for registration or renewal of their registration, they shall also request their annual quota allocation.

To be accepted, such requests:

- (a) may not cover a quantity greater than 12,5 % of the total quantity allocated annually to non-traditional operators; and
- (b) shall be accompanied by proof that a security of EUR 150 per tonne requested has been lodged in accordance with Title III of Commission Regulation (EEC) No 2220/85⁽²⁾.

2. The security referred to in paragraph 1(b) shall be released in stages, in proportion to the quantities actually imported, where operators furnish proof of dispatch and unloading in the customs territory of the Community on their own account. In cases of *force majeure*, the security shall not be forfeited.

Proof of dispatch shall be furnished by producing copies of the bill of lading and the ship's manifest or, where applicable, the road or air transport document, drawn up in the name of the operator, for the quantities actually imported.

⁽¹⁾ OJ L 253, 11.10.1993, p. 1.

⁽²⁾ OJ L 205, 3.8.1985, p. 5.

Evidence of actual import shall be furnished by producing a copy of the import licences used and proof of payment of the customs duties value.

Article 9

1. By 10 October at the latest each year, the competent authorities shall send the Commission a list of the non-traditional operators registered, indicating for each one the annual allocation requested.

2. If the total quantity of allocations applied for under a given tariff quota A/B or C exceeds the quantity available to non-traditional operators, the Commission shall immediately determine the percentage reduction to be applied to each application for an allocation.

If the procedure described in the first subparagraph results in an operator's receiving an annual allocation smaller than the amount requested, the security provided for in Article 8(1)(b) shall be released in proportion to the reduction arrived at.

3. By 15 November at the latest each year, the competent authorities in the Member States shall determine and notify to each non-traditional operator the quantity allocated to them for the following year.

Article 10

1. The Member States shall be responsible for ensuring compliance with this section.

In particular, they shall check that the operators concerned are commercially active for their own account as importers in the Community in the sector referred to in Article 6 and as independent economic units in terms of management, staffing and operations. Where there are grounds for suspecting that these conditions are not met, applications for registration and requests for annual allocation shall be accepted only subject to the operator's providing evidence of compliance which is considered satisfactory by the competent national authorities.

2. The Member States and the Commission shall exchange all information relevant to the application of this Article.

Article 11

1. The competent national authorities shall register as non-traditional operators all economic agents who submit an appropriate application, whether physical persons or legal entities, and whether individual agents or groups thereof, provided that they are legally constituted under the national legislation governing the exercise of the commercial activities in question and that they satisfy the provisions of this Regulation.

A group of agents may be registered as a non-traditional operator if its members jointly meet the requirements of this

Regulation. The group shall stand for each of its members in exercising their rights and fulfilling their obligations.

2. Operators resulting from a merger of other non-traditional operators, each with their own rights under this Regulation, shall enjoy the same rights as those former operators.

Article 12

1. Failure by non-traditional operators to comply with the obligation to register in only one Member State shall lead to the rejection of all applications for registration that have been submitted and the cancellation of any annual allocation already granted. In addition, such failure shall result in a prohibition on the submission of any further applications in the year following detection of the irregularity.

2. Where fraudulent manipulations are undertaken or fraudulent documentation is supplied with a view to obtaining an unwarranted registration or annual allocation, such registration or allocation shall be cancelled, without prejudice to the application of any relevant national laws. In such cases, the security referred to in Article 8(1)(b) shall be forfeit in full.

In addition, in such cases the operator shall be prohibited from applying for a new registration in any Member State during the two years following the year in which the irregularity is detected.

Chapter 2

Rules for issuing import licences

Article 13

1. For the purposes of administration, the quantities of tariff quotas A and B provided for in Article 18(1)(a) and (b) of Regulation (EEC) No 404/93 shall be added together. Applications under quotas A and B shall be dealt with together.

Tariff quota C, provided for in Article 18(1)(c) of the above Regulation, shall be administered separately.

2. Traditional operators A/B may submit licence applications only under tariff quota A/B.

Traditional operators C may submit licence applications only under tariff quota C.

Traditional operators as referred to in the first two subparagraphs may submit licence applications under the other tariff quota if they are registered as non-traditional operators for that quota.

3. Non-traditional operators may submit import licence applications under tariff quotas A/B or C, or under both if they are registered for quotas A/B and C.

Article 14

1. For the first three quarters of the year, an indicative quantity expressed as the same percentage of available quantities from each of the tariff quotas may be fixed for the purposes of issuing import licences.
2. For the first three quarters of the year, it may be decided that applications for licences submitted by a given operator may not in total exceed a set percentage of the reference quantity fixed under Article 5 of the annual allocation fixed under Article 9(3).

Article 15

1. For each quarter, applications for import licences shall be submitted to the competent authorities of the Member State listed in the Annex to this Regulation during the first seven days of the month preceding the quarter for the licences are being issued.

Applications for import licences shall be submitted to the competent authorities of the Member State which established the reference quantity, in the case of traditional operators, and of the Member in which the operators are registered, in the case of non-traditional operators.

2. Licence applications submitted:
 - (a) by traditional operators A/B shall bear the wording 'Licence application traditional operator A/B — Regulation (EC) No 896/2001';
 - (b) by traditional operators C shall bear the wording 'Licence application traditional operator C — Regulation (EC) No 896/2001';
 - (c) by non-traditional operators shall bear the wording 'Licence application non-traditional operator A/B — Regulation (EC) No 896/2001', or 'Licence application non-traditional operator C — Regulation (EC) No 896/2001', as the case may be.
3. Licence applications submitted by an operator shall only be accepted where:
 - (a) they bear the wording shown in paragraph 2;
 - (b) they cover a quantity no greater than that available for the tariff quota indicated in the application, such quantity being published periodically before the start of the application period;
 - (c) they cover a total quantity no greater than the quantity resulting from applying Article 14(2) for the quarter concerned, or than the remaining balance of that operator's reference quantity or annual allocation, as the case may be.
4. The words referred to in paragraph 2 shall be entered in box 20 of the licence.

Article 16

The competent authorities shall notify the Commission of the quantities covered by licence applications within two working days of the end of the application period.

This notification shall present the quantities requested, broken down for both tariff quota A/B and tariff quota C as between traditional and non-traditional operators.

Article 17

Where, for a given quarter, the quantities applied for appreciably exceed any indicative quantity fixed under Article 14, or exceed the quantities available, a percentage reduction to be applied to the amounts requested shall be fixed.

Article 18

1. The competent authorities shall issue import licences not later than the 23rd day of the month in which the application is made. Where that day is not a working day, the licences shall be issued on the first following working day at the latest.
2. Notwithstanding Article 23(1) of Regulation (EC) No 1291/2000, the term of validity of import licences shall run from the date on which they are actually issued and shall expire on the seventh day of the fourth month in which they are issued. The date of actual issue shall be included in the term of validity of a licence.

Article 19

1. Unused quantities covered by a given licence shall be reallocated to the same operator — whether holder or transferee — upon application, for use in a subsequent quarter but still within the year of issue of the original licence. This reallocation shall be made for an importation of bananas under the quota for which the original, fully or partially unused licence was issued.

The security for the initial licence shall be retained in proportion to the quantities not used up.

2. Applications for reallocation shall be submitted within the time limit laid down in Article 15(1) and accompanied by the original or a certified copy of the unused or partly used licence(s), as well as proof as the security referred to in Article 24 has been lodged.

Applications for reallocation and the reallocation licences themselves shall bear the following wording in Box 20: 'Reallocation licence — Article 19 of Regulation (EC) No 896/2001' and one of the four following entries, as the case may be: 'traditional operator A/B', 'traditional operator C', 'non-traditional operator A/B' or 'non-traditional operator C'.

3. Applications for reallocation shall not be subject to any reduction percentage that may be set under Article 17.

4. The competent authorities shall notify the Commission of the quantities covered by any applications for reallocation licences received, within the time limit laid down in Article 16.

Article 20

1. Rights arising under licences issued in accordance with this Chapter shall be transferable to a single transferee operator on the terms and conditions laid down in Article 9 of Regulation (EC) No 1291/2000, without prejudice to paragraph 2 of this Article.

2. Rights may be transferred only:

- (a) between traditional operators, under a single tariff quota, either A/B or C, as the case may be;
- (b) from traditional operators to non-traditional operators registered under Article 7, under a single tariff quota, either A/B or C, as the case may be.
- (c) between non-traditional operators registered under a single tariff quota, either A/B or C, as the case may be.

Article 21

1. Operators shall declare without delay to the competent authorities, before the term of validity of the import licences concerned expires, all quantities of bananas which have been released for free circulation and then re-exported out of the Community. They shall return to the same authorities the originals of the import licences involved.

2. Within a month of the end of each quarter, the competent authorities shall notify the Commission of all quantities re-exported, specifying in each case the category of operators (traditional or non-traditional) to whom the import licences were issued and quoting the serial numbers of the relevant import licences or licence extracts.

3. One or more import licences shall be issued, up to the amount of the quantities re-exported, either to the holder or to the transferee of the original licence, during a subsequent quarter but still within the year in which the original licence(s) was, or were, issued.

4. The competent authorities shall check that the quantities declared under paragraph 1 have actually been re-exported from the Community.

5. The quantities of bananas re-exported shall not be taken into account in calculating the reference quantities of traditional operators and the allocations of non-traditional operators.

The first subparagraph shall also cover re-exports carried out in 1994 from Member States to Austria, Finland or Sweden, and re-exports from the latter countries to third countries, including the Community as constituted on 31 December 1994.

TITLE III

RULES FOR IMPORTING BANANAS OUTSIDE THE TARIFF QUOTAS

Article 22

1. Import licence applications may be submitted in any Member States.

2. Licence applications and the licences themselves shall bear the following wording in Box 20: 'Non-quota imports — Article 22 of Regulation (EC) No 896/2001'.

3. Licences shall be issued immediately, in accordance with Article 23(1) of Regulation (EC) No 1291/2000. The term of validity of licences shall be three months.

4. Within a month of the end of each quarter, Member States shall notify the Commission of the quantities covered by licences issued under this Article.

TITLE IV

GENERAL PROVISIONS

Article 23

For the purposes of Article 18(6) and (7) of Regulation (EEC) No 404/93, the balance sheet showing Community production, consumption, imports and exports shall be based on:

- (a) available data on the quantities of bananas marketed in the Community during the preceding year, broken down by origin;
- (b) forecast production and sales of Community bananas;
- (c) forecast imports of bananas from all origins;
- (d) forecast consumption on the basis, in particular, of recent consumption trends and movements in market prices.

Article 24

1. Import licence applications shall be accompanied by proof that a security has been lodged under Title III of Regulation (EEC) No 2220/85. This security shall amount to EUR 50 per tonne. However, this requirement shall not apply to licence applications submitted by non-traditional operators under the import arrangements provided for in Title II.

2. Where licences are issued for quantities lower than those applied for, the security shall be released forthwith in respect of the quantity not allocated.

Article 25

Regulation (EC) No 1291/2000 shall apply, with the exception of the fourth indent of Article 5(1) and Article 8(4) and (5) thereof, account being taken of the derogations contained in this Regulation.

Notwithstanding Article 35(4) of Regulation (EC) No 1291/2000, proof of acceptance of an import declaration for the quantity concerned shall be furnished within 30 days of expiry of the validity of an import licence, except in cases of *force majeure*.

Article 26

1. The customs offices at which the import declarations are lodged with a view to the release into free circulation of third-country bananas under the tariff quota arrangements shall:

- (a) keep a copy of each import licence and extract therefrom endorsed on acceptance of a declaration of release into free circulation; and
- (b) forward at the end of each fortnight a second copy of each import licence or extract endorsed to the Member State authorities listed in the Annex to this Regulation responsible for issuing the licences. Those authorities shall at the end of each fortnight forward a copy of the licences and extracts received to the competent authorities of the Member States listed in the abovementioned Annex which issued those documents.

2. Where there is doubt as to the authenticity of the licence, the extract, or any information in or signatures on the documents presented, or as to the status of the operators completing the formalities for release into free circulation or for the account of whom those formalities are completed, and where irregularities are suspected, the customs offices at which those documents were presented shall immediately inform the competent authorities of their Member State, as referred to in paragraph 1, thereof by telecommunication. The latter shall immediately forward that information by telecommunication to the competent authorities which issued the documents and to the Commission, for the purpose of a thorough check.

The Commission shall forward to the Member States' customs authorities the list of traditional and non-traditional operators operating under the import arrangements concerned who may be holders or transferees of an import licence or extract therefrom.

3. On the basis of the information received under paragraphs 1 and 2, the Member States' competent authorities listed in the Annex shall carry out the additional checks needed to ensure the correct application of the tariff quota arrangements, in particular verification of the quantities imported under those arrangements, by means of a precise comparison

of the licences and extracts issued with the licences and extracts used. To that end, they shall verify in particular the authenticity and conformity of the documents used and that the documents have been used by operators registered under Title II.

Article 27

The Member States shall forward to the Commission the following statistical and economic data:

- (a) every Wednesday: wholesale prices for yellow bananas, broken down by country of origin, as recorded the previous week on the representative markets listed in Article 3 of Commission Regulation (EC) No 3223/94 ⁽¹⁾;
- (b) details, broken down by origin, of the quantities of bananas falling within CN code 0803 00 19 released for free circulation in accordance with Article 308d of Regulation (EEC) No 2454/93 for the purposes of the surveillance of imports under the tariff quotas and otherwise;
- (c) on the 10th day of the month following expiry of the validity of import licences for each quarter: the quantities covered by import licences issued, the quantities covered by licences used and returned to the issuing body, and the quantities covered by unused licences;
- (d) on request: forecasts of production and sales.

TITLE V

TRANSITIONAL ARRANGEMENTS

Article 28

1. For the second half of 2001, the quantities available shall be:

- for tariff quotas A/B: 1 137 159 tonnes,
- for tariff quota C: 509 359 tonnes.

2. For the second half of 2001, the reference quantity for each traditional operator established in accordance with Article 4 and after the application of Article 5(2) shall be multiplied by the coefficient 0,4454 in the case of traditional operators A/B and by the coefficient 0,5992 in the case of traditional operators C.

Notwithstanding Article 5(3), the competent authorities shall notify each operator of their reference quantity as adjusted by the adjustment coefficient not later than 7 June 2001.

Article 29

1. Notwithstanding Article 7, non-traditional operators shall submit their applications for registration for the second half of 2001 in the Member State of their choice by 18 May 2001 at the latest.

2. For the second half of 2001, the Member States shall notify the information on non-traditional operators required under Article 7(5) by 29 May 2001 at the latest.

⁽¹⁾ OJ L 337, 24.12.1994, p. 66.

3. Using the information received under paragraph 2, the Commission shall determine the quantities for which the allocations for non-traditional operators are granted for the second half of 2001.

4. The competent authorities shall notify each non-traditional operator of their allocation for the second half of 2001 by 7 June at the latest.

Article 30

1. Notwithstanding Article 15, operators shall submit applications for import licences for the third quarter of 2001 between 11 and 14 June 2001.

To be accepted, applications for licences submitted by a single operator must not exceed a total quantity greater than:

- (a) 54 % of the reference quantity in the case of traditional operators;
- (b) 54 % of the allocation in the case of non-traditional operators.

2. The competent national authorities shall issue import licences by 30 June 2001 at the latest.

Import licences shall be issued with a view to release for free circulation as from 1 July 2001.

Licence applications and the licences themselves shall bear the following wording in Box 24: 'Issued with a view to release for free circulation as from 1 July 2001'.

TITLE VI

FINAL PROVISIONS

Article 31

Regulation (EC) No 2362/98 is repealed from 1 July 2001.

It shall, however, continue to apply to import licences issued for 2001.

Article 32

This Regulation shall enter into force on the day following its publication in the *Official Journal of the European Communities*.

It shall apply from 1 July 2001.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 7 May 2001.

For the Commission
Franz FISCHLER
Member of the Commission

ANNEX

The authorities of the Member States competent for compiling the lists of operators and of quantities marketed are as follows:

Belgium

Bureau d'intervention et de restitution belge/Belgisch Interventie- en Restitutiebureau
Rue de Trèves, 82/Trierstraat 82
B-1040 Bruxelles/Brussel

Denmark

Ministeriet for Fødevarer, Landbrug og Fiskeri
Direktoratet for Fødevarerhverv; Eksportstøttekontoret
Kampmannsgade 3
DK-1780 København V

Germany

Bundesanstalt für Landwirtschaft und Ernährung
Referat 322
Adickesallee, 40
D-60322 Frankfurt am Main

Greece

Ministry of Agriculture
GEDIDAGEP
Directorate Fruits and Vegetables, Wine and Industrial Products
241, Acharnon Street
GR-10446

Spain

Ministerio de Economía
Secretaría General de Comercio Exterior
Paseo de la Castellana, 162
E-28046 Madrid

France

Office de développement de l'économie agricole des départements d'outre-mer (ODEADOM)
31, Quai de Grenelle
F-75738 Paris Cedex 15

Irland

Department of Agriculture and Rural Development
Horticulture Division
Agriculture House (7W)
Kildare Street
Dublin 2
Ireland

Italy

Ministero del Commercio con l'estero
DG Politica commerciale e gestione regime scambi — Div. II
Viale Boston, 25
I-00144 Roma

Luxembourg

Ministère de l'agriculture/Administration des services techniques de l'agriculture
Service de l'horticulture
16, Route d'Esch
Boîte postale 1904
L-1014 Luxembourg

Netherlands

Produktschap Tuinbouw
Louis Pasteurlaan 6
Postbus 280
2700 AG Zoetermeer
Nederland

Austria

Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft
Abteilung III 5 — Handelspolitik und Außenhandel
Stubenring 1
A-1012 Wien

Portugal

Ministério da Economia
Direcção-Geral das Relações Económicas Internacionais
Direcção de Serviços de Licenciamento do Comércio Externo
Avenida da República, 79
P-1069-059 Lisboa

Finland

Registration of operators
Maa- ja Metsätalousministeriö
Hallituskatu 3a, Valtioneuvosto
PL 30
FIN-00023 Helsinki

Licences issued by:
Tullihallitus
Erottajankatu 2
PL 512
FIN-00101 Helsinki

Sweden

Jordbruksverket
Vallgatan 8-10
S-551 82 Jönköping

United Kingdom

Intervention Board
External Trade Division
Lancaster House
Hampshire Court
Newcastle Upon Tyne
NE99 1AW
United Kingdom

**COUNCIL REGULATION (EC) No 2587/2001
of 19 December 2001**

amending Regulation (EEC) No 404/93 on the common organisation of the market in bananas

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 37 thereof,

Having regard to the proposal from the Commission ⁽¹⁾,

Having regard to the opinion of the European Parliament ⁽²⁾,

Having regard to the opinion of the Economic and Social Committee ⁽³⁾,

Whereas:

- (1) Following amendments to the tariff and statistical nomenclature and the common customs tariff, the CN codes for products covered by the common organisation of the market in bananas should be updated and the CN codes for products to which Articles 17 to 20 of Regulation (EEC) No 404/93 ⁽⁴⁾ apply should be corrected.
- (2) Provision should be made for the possibility for Member States not to grant, during a limited period, compensatory aid for produce obtained from new banana plantations in order to continue the sustainable development of the production areas; this possibility must also be subject to authorisation by the Commission.
- (3) There have been numerous close contacts with supplier countries and other interested parties to settle the disputes arising from the import regime established by Regulation (EEC) No 404/93 and to take account of the conclusions of the panel set up under the dispute settlement system of the World Trade Organisation (WTO).
- (4) Article 18 of Regulation (EEC) No 404/93 opened an autonomous tariff quota C of 850 000 tonnes for all origins, subject to a customs duty of EUR 300 per tonne with a tariff preference of EUR 300 per tonne for imports originating in ACP countries, in addition to the 2 200 000 tonnes bound under the World Trade Organisation and the additional B quota of 353 000 tonnes. The quantities relating to the different quotas should be

amended to widen access for bananas originating in third countries and at the same time to ensure access for a specific quantity of bananas originating in ACP countries.

- (5) In view of amendments made to agricultural legislation and in line with the part-financing of aid to producer organisations provided for in Article 14(2) of Council Regulation (EC) No 2200/96 of 28 October 1996 on the common organisation of the market in fruit and vegetables ⁽⁵⁾, it should be laid down that the Community aid to producer organisations provided for in Article 6 of Regulation (EEC) No 404/93 will be financed from the EAGGF Guarantee Section, for all producer organisations that are to be established until 31 December 2006. Since the regions concerned are covered by Objective 1, the same rate of Community contribution should be fixed for this aid as for the aid provided for in Article 14(2) of Regulation (EC) No 2200/96 for Objective 1 regions.
- (6) The provisions of Regulation (EEC) No 404/93 relating to the committee procedure should be amended. The measures necessary for the implementation of Regulation (EEC) No 404/93 should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission ⁽⁶⁾,

HAS ADOPTED THIS REGULATION:

Article 1

Regulation (EEC) No 404/93 is hereby amended as follows:

1. Article 1 shall be replaced by the following:

'Article 1

1. A common organisation of the market in bananas is hereby established.

⁽¹⁾ OJ C 304 E, 30.10.2001, p. 331.

⁽²⁾ Opinion delivered on 12 December 2001 (not yet published in the Official Journal).

⁽³⁾ Opinion delivered on 28 November 2001 (not yet published in the Official Journal).

⁽⁴⁾ OJ L 47, 25.2.1993, p. 1. Regulation as last amended by Regulation (EC) No 216/2001 (OJ L 31, 2.2.2001, p. 2).

⁽⁵⁾ OJ L 297, 21.11.1996, p. 1. Regulation as last amended by Regulation (EC) No 911/2001 (OJ L 129, 11.5.2001, p. 3).

⁽⁶⁾ OJ L 184, 17.7.1999, p. 23.

2. The organisation shall cover the following products:

CN codes	Description
0803 00 19	Fresh bananas, excluding plantains
ex 0803 00 90	Dried bananas, excluding plantains
ex 0812 95 90	Bananas provisionally preserved
ex 0813 50 99	Mixtures containing dried bananas
1106 30 10	Flour, meal and powder of bananas
ex 2006 00 99	Bananas preserved in sugar
ex 2007 10 99	Homogenised preparations of bananas
ex 2007 99 39 ex 2007 99 58 ex 2007 99 98	Jams, jellies, marmalades, purées and pastes of bananas
ex 2008 92 59 ex 2008 92 78 ex 2008 92 93 ex 2008 92 98	Mixtures containing bananas otherwise prepared or preserved
ex 2008 99 49 ex 2008 99 68 ex 2008 99 99	Bananas otherwise prepared or preserved
ex 2009 80 35 ex 2009 80 38 ex 2009 80 79 ex 2009 80 86 ex 2009 80 89 ex 2009 80 99	Banana juice

3. The marketing year shall run from 1 January to 31 December.'

2. In Article 12, the following paragraph shall be added:

'9. A Member State may be authorised to introduce a temporary measure whereby no compensatory aid is paid for marketed produce of new banana plantations planted on or after 1 June 2002, when, in the Member State's view, there is a risk to the sustainable development of the production areas, with particular reference to conservation of the environment, and protection of the soil and the characteristic features of the countryside.

At the request of the Member State concerned, the Commission shall grant the authorisation provided for in the preceding paragraph in accordance with the procedure laid down in Article 27.'

3. In Article 16, paragraph 1 shall be replaced by the following:

'1. This Article and Articles 17 to 20 shall apply to imports of fresh products falling within CN code 0803 00 19 until the entry into force, no later than 1 January 2006, of the rate of the common customs tariff for those products established under the procedure provided for in Article XXVIII of the General Agreement on Tariffs and Trade (GATT).'

4. Article 18 shall be replaced by the following:

'Article 18

1. Each year from 1 January the following tariff quotas shall be opened:

- (a) a tariff quota of 2 200 000 tonnes net weight, called "quota A";
- (b) an additional tariff quota of 453 000 tonnes net weight, called "quota B";
- (c) an autonomous tariff quota of 750 000 tonnes net weight, called "quota C".

Quotas A and B shall be open for imports of products originating in all third countries.

Quota C shall be open for imports of products originating in ACP countries.

The Commission may, on the basis of an agreement with World Trade Organisation members with a substantial interest in the supply of bananas, allocate quotas A and B among supplier countries.

2. Imports under quotas A and B and imports of bananas from third countries other than the ACP countries shall be subject to customs duty of EUR 75 per tonne. Imports of products originating in the ACP countries shall be subject to a zero duty.

3. Imports under the C quota shall be subject to a zero duty.

4. A tariff preference of EUR 300 per tonne shall apply to imports originating in ACP countries.

5. The customs duty rates set in this Article shall be converted into national currency at the rates applicable for the products in question for the purposes of the common customs tariff.

6. Quota B may be increased if demand in the Community increases as indicated by a balance sheet of production, consumption, imports and exports.

The balance sheet shall be adopted and the tariff quota increased under the procedure set out in Article 27.

7. Where supply of the Community market is subject to exceptional circumstances affecting production or importation, the Commission shall adopt the specific measures necessary under the procedure set out in Article 27.

In such cases quota B may be adjusted on the basis of the balance sheet referred to in paragraph 6. The specific measures may derogate from the rules adopted under Article 19(1). They must not discriminate between third countries.

8. Bananas re-exported from the Community shall not be counted against the corresponding tariff quotas.'

5. Article 25 shall be replaced by the following:

'Article 25

1. The measures laid down in Articles 12 and 13 shall constitute intervention intended to stabilise the agricultural markets within the meaning of Article 1(2)(b) of Council Regulation (EC) No 1258/1999 of 17 May 1999 on the financing of the common agricultural policy. (*)

2. Expenditure relating to the aid granted by the Member States in accordance with Article 6 shall be deemed to be intervention to stabilise agricultural markets within the meaning of Article 1(2)(b) of Regulation (EC) No 1258/1999.

This expenditure shall be eligible in the case of all producer organisations established until 31 December 2006.

It shall be the subject of a Community contribution of 75 % of eligible public expenditure.

3. The measures provided for in Article 10 shall be part-financed by the Guidance Section of the EAGGF.

4. Detailed rules for the application of this Article, and in particular a definition of the conditions to be met before the Community financial contribution can be paid, shall be adopted in accordance with the procedure laid down in Article 27.

(*) OJ L 160, 26.6.1999, p. 103.'

6. Article 26 shall be deleted.

7. Article 27 shall be replaced by the following:

'Article 27

1. The Commission shall be assisted by a Management Committee for Bananas (hereinafter referred to as "the Committee").

2. Where reference is made to this Article, Articles 4 and 7 of Decision 1999/468/EC shall apply.

The period laid down in Article 4(3) of Decision 1999/468/EC shall be set at one month.

3. The Committee shall adopt its rules of procedure.'

Article 2

This Regulation shall enter into force on the third day following that of its publication in the *Official Journal of the European Communities*.

Point 4 of Article 1 shall apply from 1 January 2002.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 19 December 2001.

For the Council

The President

A. NEYTS-UYTTEBROECK



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 2.6.2004
COM(2004) 399 final

COMMUNICATION FROM THE COMMISSION

on the modification of the European Community's import regime for bananas

The current import regime for bananas

The Understandings reached with respectively the United States and Ecuador in April 2001, after a challenge to the EC's banana regime in the WTO dispute settlement system, provided for a number of modifications to the EC's banana regime. Council Regulation (EEC) No 404/93 on the common organisation of the market for bananas was modified accordingly, and the relevant Commission regulations repealed and replaced.

The Understandings provide for the introduction of a tariff-only import regime no later than 1 January 2006 and until then for an interim regime in two phases.

Since 1 January 2002 the import of bananas into the Community takes place through import licenses distributed on the basis of past trade. The current import licence arrangements are largely managed on the basis of historical references (83% of the quantities of the quotas go to "traditional operators" within the A/B quota and 89% within the C quota). However, to ensure that non-traditional operators can pursue trade in bananas, 17% of A/B quota and 11% of the C quota are reserved for operators who do not have a suitable historic reference (non-traditional operators).

The following three tariff quotas apply:

- Quota A 2 200 000 tonnes at a tariff of € 75/t (0 for ACP bananas),
- Quota B 453 000 tonnes at a tariff of € 75/t (0 for ACP bananas),
- Quota C 750 000 tonnes at a tariff of € 0/t (reserved to ACP bananas)

Quotas A and B are open to bananas from any origin, the C quota is reserved for ACP countries.

Banana imports outside the quotas are subject to a customs duty of € 680/t.

ACP countries benefit from a tariff preference of € 300/t.

Adapting the present regime to enlargement

In view of the accession of the ten new Member States on 1 May 2004, appropriate arrangements have been made to ensure sufficient supply of bananas to consumers in the enlarged Community.

To this end, Commission Regulation (EC) No 838/2004 of 28 April 2004 has increased the current import volumes of bananas by an additional quantity of 300 000 tonnes for the period 1 May–31 December 2004. This quantity was determined so as to ensure market supply, in particular in the new Member States. Regulation (EC) No 838/2004 together with Commission Regulation (EC) No 414/2004 of 5 March 2004 and Regulation (EC) No 839/2004 of 28 April 2004 define the detailed transitional measures necessary to manage the new additional quantity respecting the current licensing mechanisms.

These transitional measures are without prejudice to the decision taken by the Council to move to a tariff-only import system no later than 1 January 2006 and to the outcome of negotiations to compensate relevant WTO members for the enlargement of the Community and the move to a tariff-only system.

Negotiating Article XXIV.6 GATT compensation for enlargement

The Community intends to negotiate, according to WTO rules (Article XXIV.6 GATT), with relevant third countries possible trade compensations for the increase in the import duties for bananas resulting from the application of the Community 15 tariff to the new Member States.

On 19 January 2004, the EC notified to the WTO the withdrawal of the EC schedule, the withdrawal of the schedules of the ten new Member States and the temporary application of the EC schedule for the EC-25 pending the finalisation of negotiations concerning compensatory adjustment as well as the EC's readiness to enter into negotiations to address compensatory adjustments under Article XXIV.6 of the GATT.

On 22 March 2004, the Council authorised the Commission to conduct Article XXIV.6 negotiations with the Community's trading partners.

A number of countries consider they have negotiating rights on bananas under Article XXIV.6¹ with the EC and have submitted claims of interest accordingly, notably Colombia, Costa Rica, Ecuador and Panama. The Commission is currently evaluating the various claims submitted and will negotiate with relevant third countries as a matter of priority.

Move to tariff-only under Article XXVIII GATT

As mentioned, in the Understandings on bananas the EC undertook to introduce a tariff-only regime for the imports of bananas no later than 1 January 2006. The Understandings also provide that GATT Art. XXVIII negotiations shall be initiated in good time to that effect. Article XXVIII of the GATT sets out rules and procedures to be followed when a WTO member intends to modify its schedule of commitments.

The decisions of the WTO Doha Ministerial Conference in 2001 as regards the ACP-EC Partnership Agreement, which waive certain WTO obligations in respect of the Partnership Agreement², also contain a number of provisions concerning bananas. In particular the waiver from Article I GATT provides for the possibility of an arbitration procedure to determine whether the envisaged rebinding of the EC tariff would result in at least maintaining total MFN access for MFN bananas suppliers, which may be requested after the EC has provided information to interested parties on the methodology used for such rebinding.

In view of the above, the Commission has requested negotiating directives to the Council in order to modify the bindings on bananas in the Community GATT tariff schedule for agricultural products. Once the negotiating mandate is adopted by the Council, the Commission will proceed with the appropriate notification to the WTO under Article XXVIII of the GATT.

As the Article XXIV.6 negotiations for enlargement and the Article XXVIII negotiations to move to tariff-only will be running in parallel, it is possible that the latter be concluded earlier than the former, in which case the consequences of enlargement will be taken into account.

¹ i.e. initial negotiating rights, principal or substantial supplier status in one or more of the new Member States.

² Waivers from Articles I and XIII of the GATT 1994.

Safeguarding Community producers and ACP's interests

In the course of the negotiations to move to the tariff-only regime, the Commission will pay particular attention to the impacts of the proposals on Community production and on the situation of Community producers of bananas. The Commission intends to safeguard the interests of the Community banana producers and ACP's interests. As to the Community producers, the Commission will seek to maintain a level of protection equivalent to that currently existing in order to ensure that Community production is maintained and that these producers are not put in a less favourable situation as before the entering into force of the import quota regime in 1993.

Commission Regulation (EC) No 914/2004 fixed the compensatory aid for bananas produced and marketed in the Community in 2003 and the advances for 2004.

Compensatory aid is granted as the difference between the so called "flat rate reference income" and the "average production income" as communicated by Member States.

The mechanism of the current CMO leads to higher compensation in the event that average EU banana prices fall.

As far as the ACP banana suppliers are concerned, the Commission is committed to respect its obligations stemming from the Cotonou Agreement and accordingly intends to pay particular attention to the implications of the change in its import regime for the ACP banana producers, to examine appropriate ways to address their specific situation, including preferential access for ACP products, and seek to maintain a level of preference to the ACP countries equivalent to that afforded by the enlarged Community of 25.

The EC, in order to address the problems of competitiveness of ACP banana producers, has put in place in 1999 the Special Framework of Assistance for traditional banana suppliers.