Agrosynergie
Groupement Européen d'Intérêt Economique

Framework contract no 30-CE-0035027/00-37
Evaluations fruit and vegetables

Evaluation of the system of entry prices and export refunds in the fruit and vegetables sector

Part 1 – Evaluation Questions

Final

April 2008

LE GEIE AGROSYNERGIE EST CONSTITUE PAR LES SOCIETES

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This study, financed by the European Commission, has been carried out by the GEIE AGROSYNERGIE. The conclusions, recommendations and opinions presented in this report reflect the opinion of the consultant and do not necessarily reflect the opinion of the Commission.

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GLOSSARY

ACP « Cotonou » Agreement:	Preferential trade agreement between the EU and seventy-one African, Caribbean and Pacific (ACP) States
ASEAN:	Association of South-East Asian Nations consisting of Brunei-Darussalam, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, Vietnam & Cambodia
AVE:	*Ad valorem* equivalent
CAP:	Common Agricultural Policy
CCC:	Community Custom Code
CCP	Common Commercial Policy
CCT:	Common Custom Tariff
CEEC:	Central and Eastern European Countries: *Albania, Armenia, Azerbaijan, Belarus, Bosnia & Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Russia, Serbia and Montenegro, Slovak Republic, Slovenia, Ukraine, Uzbekistan*
CES:	Constant Elasticity of Substitution describes the size of the change in input substitution given a change in the price of inputs
CMO:	Common Market Organization
DP	Development Policy
EBA:	"Everything But Arms"
EC:	European Commission
EMA:	Euro-Mediterranean Agreement
EP:	Entry price
EPS:	Entry price system
EPQ:	Entry Price Quota
ER:	Export refunds
ERS:	Export refunds system
EU:	European Union
F&V:	Fruit & Vegetables
GATT	General Agreement on Tariffs and Trade
GDP:	Gross Domestic Product
GSP:	Generalised System of Preferences
ICT	Information and Communication Technology
IPT:	Inward Processing Traffic regime
LDCs:	Least-Developed Countries

MFN:	Most Favourite Nation
MS:	Member State
MTE:	Maximum Tariff Equivalent
NGOs	Non-governmental Organizations
NMS:	New Member States
OECD:	Organisation for Economic Co-operation and Development
RHS:	"Right Hand Side"
SAARC:	South Asian Association for Regional Cooperation consisting of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan & Sri Lanka.
SEMC:	South-Eastern Mediterranean Countries
SIV:	Standard Import Value
SPS	Sanitary and phytosanitary measures
TARIC:	Integrated Tariff of the European Communities
TEP:	Trigger Entry Price
TOR:	Terms of Reference
TRQ:	Tariff Rate Quota
URAA:	Uruguay Round Agreement on Agriculture
VPM:	Value of the Preference Margin
WTO	World Trade Organization

1. INTRODUCTION OF THE EVALUATION

This evaluation is part of framework Contract No. 30-CE-0035027/00-37 concerning the evaluation of the fruits and vegetables sector, and covers the Entry Prices system for fresh fruits and vegetables and the Export Refunds scheme for fresh and processed fruits and vegetables sector.

The entry price system and export refunds for fruits and vegetables (F&V) are set in place to achieve specific objectives as: "to stabilize the Community market by preventing the price level in non-EU countries and fluctuations thereof from having repercussions on prices within the Community", the "achievement of a balance between supply and demand at fair prices to the producer" and finally to "protect Community participation in international trade", as indicated by Council Regulation No 1035/72 of 18 May 1972 on the common organization of the market in F&V.

The EU agreed with certain Non-EU countries to confer the status of "preferential origin" on some goods, granting preferential duty rates and TEPs. In some agreements the preferential rates for particular goods are only granted within the limits of tariff quotas or tariff ceilings. In particular, agreements with South-eastern Mediterranean Countries (SEMC) within the framework of the Euro-Med Partnership establish relevant preferential trade concessions for fresh F&V.

The study concerned an evaluation of the effectiveness, efficiency and coherence of EP and ER schemes.

The evaluation is structured according to the five evaluation themes under which the seven evaluation questions are placed. These are:

Theme 1: Stability of the EU market

Theme 2: Development of the EU trade

Theme 3: Competitiveness of the EU fruit and vegetable sector

Theme 4: Management, administration and efficiency of the entry price and export refunds schemes

Theme 5 : Coherence.

The analysis of Management, administration and efficiency of the entry price and export refunds schemes (theme 4) and Coherence (theme 5) is supported by information collected by the deep interviews in 7 Member States (France, Germany, Greece, Italy, Netherlands, Spain, UK).

Moreover, the evaluation is preceded and completed by a Preparatory Analysis on the EU trade in the world market of the fruit and vegetable sector, structured as follows:

1. The development of EU trade of F&V
2. The evolution of factors influencing the EU trade of F&V
3. Analysis on the implementation of EP and of their effectiveness
4. Development of the EU exports and evolution of export refunds
5. The price level on world markets.

The geographical coverage of the evaluation is EU-15 until 2004 and EU-25 after 2005.

The evaluation covers the period subsequent to Council Regulation No 3290/94 until 2006.

The list of products covered by the evaluation is the following:

Tab. 1 - List of products under the EP scheme

PART A

(as established by the Annex to the consolidated version of Commission Regulation No 3223/1994)

N.	CN codes	Description	Period of application
1	ex 0702 00 00	Tomatoes	From 1 January to 31December
2	ex 0707 00 05	Cucumbers (1)	From 1 January to 31December
3	ex 0709 10 00	Artichokes	From 1 November to 30 June
4	0709 90 70	Courgettes	From 1 January to 31 December
5	ex 0805 10 20	Sweet oranges, fresh	From 1 December to 31 May
6	ex 0805 20 10	Clementines	From 1 November to end of February
7	ex 0805 20 30 ex 0805 20 50 ex 0805 20 70 ex 0805 20 90	Mandarins (including tangerines and satsumas); wilking and similar citrus hybrids	From 1 November to end of February
8	ex 0805 50 10	Lemons *(Citrus limon, Citrus limonum)*	From 1 June to 31 May
9	ex 0806 10 10	Table grapes	From 21 July to 20 November
10	ex 0808 10 80	Apples	From 1 July to 30 June
11	ex 0808 20 50	Pears	From 1 July to 30 April
12	ex 0809 10 00	Apricots	From 1 June to 31 July
13	ex 0809 20 95	Cherries, other than sour cherries	From 21 May to 10 August
14	ex 0809 30 10 ex 0809 30 90	Peaches, including nectarines	From 11 June to 30 September
15	ex 0809 40 05	Plums	From 11 June to 30 September

(1) Other than cucumbers referred to in Part B of this Annex

PART B

N.	CN codes	Description	Period of application
16	ex 0707 00 05	Cucumbers intended for processing	From 1 May to 31 October
17	ex 0809 20 05	Sour cherries *(Prunus cerasus)*	From 21 May to 10 August

Tab. 2 - List of products under the ER scheme

FRESH F&V PRODUCTS

(Article 7, paragraph 2 of Commission Regulation No 1961/2001 lists the products granted by export subsidies)

N.	CN codes	Description
1	0702 00 00	tomatoes
2	0802 12 10 0802 12 90	shelled almonds
3	0802 21 00 0802 22 00	hazelnuts (*Corylus* ssp.)
4	0802 31 00	walnuts in shell
5	0805 10 20	oranges
6	0805 20 10	clementines
7	0805 20 30	monreales and satsumas
8	0805 20 50	mandarins and wilkings
9	0805 20 70	tangerines
10	0805 20 90	other similar citrus hybrids
11	0805 50 10	lemons (*Citrus limon* , *Citrus limonum*)
12	0805 50 90	limes (*Citrus aurantifolia*)
13	0806 10 10	table grapes
14	0808 10 10 0808 10 80	apples
15	0809 30 10 0809 30 90	peaches, including nectarines

PROCESSED F&V PRODUCTS

(Article 3 of Commission Regulation No 1429/95)

N.	CN codes	Description
1	0806 20	dried grapes
2	81210	cherries provisionally preserved
3	200210	tomatoes prepared or preserved otherwise than by vinegar or acetic acid
4	2006	fruit preserved
5	200819	nuts other than groundnuts
6	from 200911 to 200919	orange juice

The list of products covered by the counterfactual analysis is the following:

Tab. 3 - Products chosen for the counterfactual analysis

Vegetables products chosen for the counterfactual analysis on EP scheme:

Relevant products within the EP scheme:	*Relevant products not covered by the EP scheme:*
0702 Tomatoes, fresh or chilled	0792 00 00 Asparagus
0707 00 05 Cucumbers	07031019 Onions fresh or chilled excl sets
0709 90 70 Courgettes	0708 20 Beans (Vigna spp., Phaseolus spp.)
0709 90 80 Globe artichokes	0709 60 10 Sweet peppers

Fruits products chosen for the counterfactual analysis on EP scheme:

Relevant products within the EP scheme:	*Relevant products not covered by the EP scheme:*
0805 10 20 Sweet oranges, fresh	0805 40 Grapefruit, including pomelos
0806 10 10 Table grapes	0807 19 Other (Melons)
0808 10 80 Other (Apples)	0810 10 Strawberries
0808 20 50 Other (Pears)	0810 50 Kiwifruit

Vegetables products chosen for the counterfactual analysis on ER scheme:

Relevant products within the ER scheme:	*Relevant products not covered by the ER scheme:*
0702 Tomatoes, fresh or chilled	0707 00 05 Cucumbers
	07031019 Onions fresh or chilled excl sets
	0709 60 10 Sweet peppers
	0709 90 80 Globe artichokes

Fruits products chosen for the counterfactual analysis on ER scheme:

Relevant products within the ER scheme:	*Relevant products not covered by the ER scheme:*
0805 10 20 Sweet oranges, fresh	0807 19 Other (Melons)
0805 20 10 Clementines	0808 20 50 Other (Pears)
0806 10 10 Table grapes	0810 10 Strawberries
0808 10 80 Other (apples)	0810 50 Kiwifruit

2. DESCRIPTION OF THE ESTABLISHMENT AND FUNCTIONING OF THE ENTRY PRICE AND EXPORT REFUNDS SCHEMES

2.1 The EU import regime for fresh fruit and vegetables

Council Regulation No 1035/72 on the common organization of the fruit and vegetables (F&V) market codified for the first time basic provisions on the organization of the F&V market and contained a number of separate regulations, drawn up at different times and amended several times since their adoption.

Council Regulation (EEC) No 1035/72

The Regulation defined the production of F&V as a substantial factor in agricultural income and stated that an essential objective must be the achievement of a balance between supply and demand at fair prices to the producer, account being taken of trade with non-EU countries.

The establishment of a single Community F&V market required the introduction of a single trading system at the external frontiers of the Community. The application of Common Customs Tariff duties should suffice, as a rule, to stabilize the Community market by preventing the price level in non-EU countries and relative fluctuations from having repercussions on prices within the Community.

Furthermore, Council Regulation No 1035/72 stated that disturbances in the Community market arising from supplies at abnormal prices from non-EU countries must be avoided. To this end, provisions should be made for the fixing of reference prices and the levying of a countervailing charge in addition to customs duty for F&V when the entry price of imported products is below the reference price.

After the 1994 GATT Uruguay round of multilateral trade negotiations (URAA**)** the import regime for F&V was modified. The Agreement required the abolition of variable import levies and of other measures and import charges, provided for at the time, under the market organization. This meant the conversion of all measures restricting imports of agricultural products into customs duties ("tariffication") and the prohibition of such measures in the future.

Article 23 of Council Regulation (EEC) No 3290/1994

Uruguay Round of Multilateral Trade Negotiations (1986-1994) *OJ L 336 1994.*

However, for certain product groups such as cereals, rice, wine and F&V, the introduction of supplementary or other trade mechanisms [such as the entry price system (EPS) for F&V] not involving the collection of fixed customs duties required the adoption of rules providing for derogations to basic regulations (as stated in Council Regulation No 3290/1994).

The specific objective of "stabilizing the Community market by preventing the price level in non-EU countries and fluctuations thereof from having repercussions on prices within the Community", as defined by Council Regulation No 1035/72, has therefore not changed after the URAA in 1994.

2.1.1 Import measures

Within the current framework of the F&V Common Market Organization (CMO), EU import measures include:

a. entry price system (EPS) with the import licences system included;
b. special agricultural safeguard clause[1];
c. tariff rate quotas;
d. sanitary and phytosanitary measures

a) All products covered by the F&V CMO (as listed in Article 1(2) of Council Regulation No 2200/96) are subjected to the common customs tariff (CCT).
All customs duty rates and Community rules applicable to the Community's external trade are comprised within the TARIC (Integrated Tariff of the European Communities)[2]. Within the CCT for a certain group of products, in certain periods (listed in the annex of Commission Regulation No 3223/94 – see also Tab. 1, Chapter 1) a specific scheme (EPS) is applied (see para. 2.1.3). Imports may be subject to granting of an import licence (see para. 2.1.2).

Council Regulation (EEC) No 2658/87 of 23 July 1987 on the tariff and statistical nomenclature and on the Common Customs Tariff

b) According to the Special Agricultural Safeguard (SSG), a provision of the URAA, an *Additional* customs duty can be imposed on agricultural products if their import volume exceeds defined trigger levels or if prices fall below specified trigger levels (see para. 2.1.4).

Commission Regulation (EC) No 1555/96

c) Tariffs as well as trigger entry prices (see TEP para. 2.1.3) are modified within the framework of several agreements that the EU entered into with third countries or within the framework of autonomous preferential concessions. For some beneficiary countries, such preferences are limited to a predetermined quantity. This kind of preferences are called preferential tariff quotas (TQs) (see para. 2.1.5 and 2.1.6).

Consolidated Commission Regulation (EC) No 3223/94

d) Sanitary and phytosanitary measures (SPS) are designed to protect human, animal or plant life or health. Measures which fall into this category include, among others, standards on additives, disease-causing organisms and residues of pesticides in food and feedstuffs.

2.1.2 Import Licences

Imports into, or exports out of the Community, any of the products listed in Article 1 (2) of Council Regulation (EEC) No 1035/72 and in the same Article of the Council Regulation 2200/96 can be subject to the presentation of an import or export licence (AGRIM/AGREX).

Council Regulation (EEC) No 3290/1994 Article 22

Licences are issued by Member States to any applicant, irrespective of its place of establishment within the Community.

Commission Regulation No 1556/96 and

[1] The special agricultural safeguard clause is an alternative to the general safeguard provisions in the General Agreement on Tariffs and Trade (GATT), and is much easier to invoke because it does not require a test of injury.

[2] Member States develop their automated goods clearance system on the basis of TARIC. Every year the Commission adopts a Regulation reproducing a complete version of the Combined Nomenclature (CN) and Common Customs Tariff duty rates, taking Council and Commission amendments into account. The Regulation is published in the Official Journal by no later than 31 October, and applies as from 1 January of the following year. http://ec.europa.eu/taxation_customs/dds/en/tarhome.htm

Commission Regulation No 1556/96 introduced a system of import licences for certain F&V products imported from non-EU countries and set the list of products covered in the F&V sector, an import licence system was introduced to gain a better knowledge of trade flows from non-EU countries for certain sensitive products. In 1997 and 1998 Commission Regulation No 1556/96 was amended by gradually abolishing the licence requirement for products covered by the import licences system (over time the annex listing the products covered was replaced eight times). Finally the Regulation was repealed with Commission Regulation (EC) No 2623/98 and replaced by a direct system of surveillance managed by DG TAXUD. At present, within the fresh F&V licences are required only for garlic – NC 07032000 and "other (i.e. excluding onions, shallots and leeks) alliaceous vegetables – CN ex 0703 90 00". For apples – NC 08081080 according to Reg. EC 179/2006 licences are required only for statistical surveys.

subsequent amending Regulations.

Commission Regulation No 341/2007 opened and provided for the administration of tariff quotas and introduced a system of import licences and certificates of origin for garlic imported from non-EU countries. The Regulation laid down rules for issuing licences, for categories of importers (traditional and new) and licences (A and B), amount of securities, etc.

Commission Regulation (EC) No 341/2007

2.1.3 Functioning mechanism for the entry price system

With the purpose of understanding the mechanism of the EPS and differences compared with the situation before its implementation, it is helpful to briefly describe the "reference price system" which was applied until June 30th, 1995 according to Council Regulation No 1035/72.

In the previous scheme the EC fixed reference prices for the products concerned each year. Representative wholesale prices of imported produce in the EU were monitored by origin of the import concerned at the level of individual EU Member States and reported to the Commission.

The scheme based on the "reference price" worked in such a way that when the wholesale price of a product from any third country, less a marketing margin and the MFN tariff of the EU, fell significantly below the reference price for a period of two successive days or for two days out of five, a so-called countervailing charge was applied on all subsequent supplies of this product from the country concerned.

The countervailing charge was equal to the difference between the reference price and the arithmetic mean of the last two entry prices available for that exporting country (average entry price) minus all import charges and margins. It was removed only when the reference price had been respected for two market days.

Therefore the reference price system is administered on country–by-country level. This means that all shipments originating from the same country were subject to the countervailing charge once a certain quantity from that country had entered the EU market at a price which was too low if compared to the reference price[3].

When it came to the implementation of the results of the URAA, EU has converted the countervailing charges into tariffs by calculating, for each fruit and vegetable concerned, a price gap between the highest reference price (among the seasonally variable reference prices) and an EU internal price (to substitute for the missing c.i.f. unit value).

This price gap has been bound as a specific tariff which is also called "maximum tariff equivalent" (MTE). At the same time the EU has established, by adding footnotes for the products concerned to its GATT schedule, two tariff lines for each product where entry prices are applied.

[3] The countervailing charges were applied to all imports from a third country found to undercut the reference price, regardless of the price at which a given shipment was landed in the EU.

One applies to imports at or above a trigger entry price (TEP) level and the second to imports below this TEP. Only the "normal" ad valorem tariff (i.e. the tariff which already existed under the reference price regime) is charged on imports (entry price – EP) at or above TEP.
Ad valorem customs duty is fixed as a variable percentage of the value of the goods. The percentage can vary for periods during the year, but it remains fixed, with some exceptions, regardless of the value of import goods.

If the EP is 8% lower than the TEP, in addition to the *ad valorem* duty, a *specific* duty is levied (Euro/100 kg) and its amount is substantially the difference between the TEP and the EP. The system works for intermediary EP values in terms that if the EP of a specific consignment is 2, 4, 6, 8% the specific duty shall be 2, 4, 6, 8% of TEP.

If the EP is less than 92% of TEP the MTE duty plus the ad valorem tariff will be charged.

The EPS differs in some important aspects from its predecessor: first of all it is administered on a shipment-by-shipment level instead of a country-by-country level. Under the new system the additional specific tariff is charged per individual shipment. If the c.i.f. price of one shipment undercuts the entry price, this does not affect subsequent shipments from the same country. This aspect clearly reduces the protective effect of the new system.

The implementation of the new system has also involved important changes in procedures (Commission Regulation No 3223/94). Most F&V trade is on a consignment basis, and no agreed c.i.f. price exists at the time of importation. Consequently compliance with entry prices cannot really be monitored on the basis of c.i.f. prices. Therefore price formation is monitored on the domestic EU market, where wholesale prices are still monitored by origin. Based on these prices, the Commission calculates "standard import values" (SIVs) on a daily basis for each country that actually exports to the EU[4].

As established by Commission Regulation No 3223/94, importers can choose from three methods to declare the EP: invoice, deductive, entry price-standard import value (SIV) comparison.

With the **invoice** method (Art. 5 paragraph 1.a) importers choose the EP equal to the fob price plus the costs of insurance and freight up to the borders of the Community at the time the declaration of release of products for free circulation is made. The importer must lodge the security where the aforementioned prices are more than 8% greater than the SIV applicable to the product in question at the time the declaration of release for free circulation is made.

With the **deductive** method (Art. 5 paragraph 1.b) the customs value is calculated in accordance with art. 30 paragraph 2 (c) of Council Regulation No 2913/92. In that case the customs value is “the value based on the unit price at which the imported goods for identical or similar imported goods are sold within the Community in the greatest aggregate quantity to persons not related to the sellers”. According to art. 29 to 31 of Council Regulation No 2913/92, the deductive method should be used only in the absence of sale.

[4] Each working day the EC fixes for each product under the entry price scheme and for the periods set out in the Annex of the same regulation and for each origin a SIV equal to the weighted average of representative prices less a standard amount of ECU 5/100 kg and ad valorem customs duties. SIVs are published daily in the Official Journal. MS communicates (only for fresh F&V listed in part A of the Annex to Commission Regulation No 3223/1994) the average representative prices of products in “representative markets” (as listed in Art. 3 of Commission Regulation No 3223/1994) imported from non-EU countries sold in the representative import markets and total quantities relating to the prices referred. Representative prices are recorded for each product listed, for all available varieties and sizes, at the importer-wholesaler or wholesaler-retailer (if the former is not available) stage. In the latter case they are reduced by 9% to take account of the wholesaler's trade margin and by € 0.7245 per 100 kg to take account of the costs of handling and market taxes and charges. These prices are reduced by the marketing margin of 15% for the marketing centres of London, Milan and Rungis and 8% for other marketing centres, and the costs of transport and insurance within the customs territory.

The entry price-SIV comparison method (Art. 5 paragraph 1.c) is simply based on the Entry price-SIV comparison for all imports coming from a given country, with no investigation of the single consignment's price, as in the old "reference price" system. The third system in not applicable for F&V listed in part B of the Annex of implementing Commission Regulation No 3223/1994.

Another important difference compared with the former system is that imports from countries that enjoy a tariff preference can now sell at lower prices on the EU market than those from MFN suppliers[5].

With regard to the security**,** importers must lodge a security corresponding to the amount of the duty they would have paid if the classification of products had been made on the basis of SIV applicable to the lot. Importers can ask for a partial or total rebate of the sum by proving, through invoices or other customs documentation, that the actual sale price of their consignment was such that a lower duty was to be paid. The security lodged is released to the extent that proof of the conditions of disposal is provided to the satisfaction of the customs authorities. Otherwise the security is forfeited by way of payment of the import duties.

The European Commission explanatory note concerning Commission Regulation No 3223/94 [D(99) 01/10/1999] gives a technical definition for each case and combination when the *ad valorem* tariff, the specific tariff and the security have to be calculated.

2.1.4 Special Agricultural Safeguard Clause

This is designed to prevent disruption on domestic markets due to import surges or abnormally low import prices, and can apply only to imports that exceed tariff-quota volumes. No additional duty may be imposed on products which enjoy preferences in respect of the entry price, insofar as their tariff classification does not entail application of the highest specific duty (MTE).

The trigger periods and trigger level (tons) are fixed several times during each year with updates of Commission Regulation No 1555/96.

List of Regulations since December 1998 EC Regulation 2623/98 where trigger periods and level are fixed (49 Reg.).

Commission Regulation No 1242/2006 of 17 August 2006 (amending Regulation No1555/96 on rules of application for additional import duties on fruit and vegetables) introduced some changes, which appear to provide greater flexibility in the triggering mechanism of the safeguard. Specifically, in Article 3.1, the trigger condition has been modified. Under Commission Regulation No 1555/96, "If it is found that the quantity imported (…) exceeded (…) the trigger level (…), the Commission shall impose an additional duty." Under the new provisions of Commission Regulation No 1242/2006, "If it is found that, for one of the products (…) the quantity put into free circulation exceeds the corresponding triggering volume the Commission shall levy an additional duty unless the imports are unlikely to disturb the Community market, or the effects would be disproportionate to the intended objective." This amendment allows for the possibility of not implementing the safeguard measures even though a trigger volume has been exceeded.

Commission Regulation (EC) No 1242/2006

2.1.5 Tariff Rate Quotas

Within TRQs, a predetermined volume of goods originating in a specified country can benefit from imports into the EU having a more favourable rate of duty than the MFN duty mentioned in the combined nomenclature. Entitlement to benefit from preferential

Commission Regulation (EC) No 1831/96 of 23

[5] Under the old system wholesale prices minus the full MFN tariffs and a marketing margin were compared to the reference prices. As a result imports from all countries had to accept the same minimum wholesale prices, regardless of tariffs applied to the individual country.

tariff quotas is of course subject to presentation of the necessary evidence of origin. Commission Regulation No 1831/96 of 23 September 1996, opening and providing for the administration of Community tariff quotas bound under GATT for certain fresh and processed F&V products from 1996. In particular, the Regulation includes the following fresh products of F&V CMO: CN 07061000, ex 07096010, ex 0802 1190,08021290, 0805 10 20, 0805 20 90, 08055010, 0809 1000. September 1996

Importers wishing to benefit from tariff quotas must make a claim in accordance with Community and national requirements.

In accordance with Community provisions, the customs services register the date when they accept each customs declaration. Management of tariff quotas is on a first-come first-served basis. This means that, when more than one claim for the same tariff quota is being considered, priority is given to the claim which results from the customs declaration(s) accepted first. Claims which have the same priority are given equal treatment. This is *usually* done at the time of import when the Tariff Quota number is declared on the import declaration. Notification about the success of the claim is not immediately available because all the requests received throughout the EC are processed (collated and apportioned) by the European Commission and allocated two working days after receipt. According to art. 34 of Council Regulation No 2200/1996, Tariff quotas may be administered by applying one of the following methods or a combination thereof:

(a) a method based on the chronological order in which applications are lodged ('first come, first served' basis);

(b) a method of allocating quotas in proportion to quantities requested when applications are lodged (using the 'simultaneous examination' method);

(c) a method based on taking traditional trade flows into account (using the 'traditional importers/new arrivals' method).

Recently, in order to simplify and improve the effectiveness and usefulness of the administration and control mechanisms, the Commission Regulation No 1301/2006 introduced common conditions for the administration of import tariff quotas subject to an import licensing system. According to this Regulation two methods are foreseen: the 'simultaneous examination method' according to which licences are allocated in proportion to the overall quantities requested, or a method of import based on documents "to be issued by third countries". Where an import tariff quota is administered using a method based on a document issued by a third country, such document shall be presented to the competent issuing body of the Member State, together with the application for the import licence to which that document relates.

In many instances, instead of TRQs, ***reference quantities (RQs),*** or the right to impose RQs, are defined, so that the Commission has the option to submit a product to TRQ. RQs are imposed on many fresh fruit and vegetables, some dried or processed ones, nuts, and fresh and preserved tropical fruit. It implies that 100% exemption with no quotas can be agreed with a preferential agreement, but the imported quantities have to be checked periodically by the EC to make sure they do not affect local products in EU. In this case the EU sets out reference quantities for products, and if quantities rise above them, full or reduced duties payment for certain periods can be levied.

In the system of import licences RQs can also be fixed as the maximum quantities of a certain product imported per calendar year by a traditional importer during one of the last three calendar years.

2.1.6 Trade preferences system

Trade preferences are granted by the EU to many non-EU countries under various agreements. The comprehensive system of EU trade concessions[6] is the result of the Common Commercial Policy (CCP) and the Development Policy (DP) on behalf of the external relations common framework. These Community policies are also to be considered within the global framework of World Trade Organizations commitments.

Taking into account the complexity of the global framework of trade preferences, the system is hereby presented according to the custom concept of origin of a product[7] and the consequent categorization of international agreements.

Preferential origin confers certain benefits on goods traded between particular countries, namely entry at a reduced or zero rate of duty. In order to have preferential origin goods must meet the relevant conditions laid down in the origin protocol to the agreement of whichever country is concerned or in the origin rules of the autonomous concessions.

While the provisions of individual concessions may vary in certain details, most preferential origin arrangements have a number of common provisions.

Preferential treatments can be grouped in two clusters (some countries may benefit from more than one arrangement).

Preferential Agreements:

- EFTA countries;
- Western Balkan countries (the former Yugoslav Republic of Macedonia and Croatia);
- Mediterranean Countries;
- Other countries and territories (Africa, the Caribbean and the Pacific ACP) "Cotonou" countries, Agreement with South Africa, Mexico, Chile, Andorra, Faroe Islands/Denmark.

Autonomous preferential concessions:

- Overseas Countries and Territories (OCT);
- Generalised System of Preferences (GSP);
- Western Balkan countries (Albania , Bosnia and Herzegovina , Serbia and Montenegro);
- Ceuta and Melilla.

Preferential Agreements: Mediterranean Countries

Within the framework of the ***Euro-Med Partnership***, the Euro-Mediterranean Association Agreements (EMAA)[8] establish relevant preferential trade concessions for

[6] List of applicable arrangements for each non-EU countries: http://ec.europa.eu/taxation_customs/customs/customs_duties/rules_origin/introduction/article_403_en.htm

[7] Origin is the "economic" nationality of goods in international trade. There are two kinds, non-preferential and preferential. The act of conferring the "economic" nationality of goods is used for determining the origin of products subject to all kinds of commercial policy measures (such as anti-dumping measures, quantitative restrictions) or tariff quotas.

[8] The EuroMed Partnership includes, besides EU members, nine countries (Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestinian Authority, Syria and Tunisia). With the other Mediterranean partner Turkey, the EU signed first generation association agreements in the 1960s. As a result of this a customs union with the EU came into force on 1 January 1996.

fresh F&V. The provisions governing bilateral relations vary from one Mediterranean Partner to another. Agreements normally regard Tariff concessions (zero tariff import quotas and TRQs) and Non-Tariff concessions (preferential TEPs - and entry prices quotas – EPQs) for products defined for each country. The following table gives an example of trade concessions to Morocco for some fresh F&V:

EU trade concessions to Morocco for some fresh F&V product (reference years 1995/1996 and 1999/2000)

Product	% tariff reduction					
	Preferential entry price (euro/tons) (i)			Entry Price Quota (EPQ)		
		1995/1996	1999/2000	tons	calendar	Import (ii)/ EPQ (%)
Tomatoes	100	560	461	150.676	01/10-31/03	107,4
Oranges	100	275(iii)	264	300.000	01/12-31/05	45,7

Note: (i) Preferential entry price according to the Agreement (in the form of an exchange of letters between the EU and the Kingdom of Morocco on the regime for imports of tomatoes into the EC) in force in that current year;(ii) flow over the period defined by the related calendar;(iii) equivalent to a 25% reduction vis-à-vis the MFN entry price.

With the conclusion of negotiations with Syria (October 2004), the grid of Association Agreements with Mediterranean Partners has been completed. Association Agreements are in force between the EU and Tunisia (since 1998), Israel (2000), Morocco (2000), Jordan (2002), Egypt (2004), Algeria (2005) and on an interim basis with the Palestinian Authority (1997). The Agreement was signed with Lebanon in January 2002.

List of agreements: http://ec.europa.eu/external_relations/euromed/med_ass_agreemnts.htm

In Turkey the Customs Union, effective from 1 January, 1996, enables goods which are in free circulation in the EU to be regarded as being in free circulation, and vice versa. For agricultural products the EC-Turkey trade agreement results from Decision No 1/98 of the Association Council of 25.02.1998 and came into force on 25.02.1998. The preferential regime envisages widespread extensions of *ad valorem* duties and preferential measures on specific duties for certain products, which roughly cover 93% of traditional exports to the EU. For many fresh and processed fruit and vegetables tariff exemptions or reductions are to be bound by TRQs and import calendars. The EU enjoys preferential treatment on 33% of its exports to Turkey, with lower to zero TRQs for several products.

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Preferential Agreements: ACP « Cotonou » Agreement

The ***« Cotonou » Agreement*** is a preferential trade agreement between the EU and seventy-one African, Caribbean and Pacific (ACP) States.

Preferential trade provisions are based on the principle of free access to the EU market for products originating in ACP States, with special provisions for agricultural products. Under the ACP Agreement, certain products may be admitted into the EU at preferential (either reduced or zero) duty rates. For particular goods, preferential rates are granted only within the limits of tariff quotas or ceilings.

Autonomous preferential concessions: generalized system of preferences (GSP)

COUNCIL REGULATION (EC) No 980/2005 applying a scheme of generalised tariff preferences

The Community's common commercial policy is to be consistent with and consolidate the objectives of development policy, in particular the eradication of poverty and the promotion of sustainable development and good governance in developing countries. It is to comply with WTO requirements, and in particular with the GATT Enabling clause of 1979.

Since 1971, the Community has granted trade preferences to developing countries, within the framework of its scheme of generalised tariff preferences (generalised system of preferences GSP).

The EU's GSP grants products imported from GSP beneficiary countries either duty-free access or a tariff reduction, depending on which of the GSP arrangements a country enjoys. The EU's GSP is implemented following cycles of ten years, for which general guidelines are drawn up. The main features of the early schemes were quotas and ceilings for individual countries and products. Since 1995, the EU's GSP has done away with any quantitative limitations. Instead, it provides for tariff preferences which vary according to the sensitivity of products on the EU market.

Guidelines for the period 2006-2015 were adopted in 2004. In practice, the GSP is implemented by means of Council regulations during the ten-year cycle. Based on the guidelines of 2004, a new GSP scheme was adopted on 27 June 2005, through Council Regulation No 980/2005. This regulation will apply from 1.1.2006 to 31.12.2008, but the provisions concerning the special incentive scheme for sustainable development and good governance (the "GSP-plus" or "GSP+" incentive) had already been in place since 1.7.2005. Special concessions to combat drug production and trafficking provided for by Regulation No 2501/2001 are repealed from that same date.

The GSP sets out preferential arrangements for duties on Community imports of goods originating in the beneficiary countries. The GSP therefore applies to the countries and territories listed in Annex I (174 developing countries) to Council Regulation No 980/2005. The products affected by the GSP are set out in Annex II. The concessions for originating products conform to the rules set out in Commission Regulation No 2454/93. This Regulation, implementing provisions for the CCC, sets out the conditions under which goods may acquire an origin that makes them eligible for preferential tariff measures. These preferential tariff measures are adopted unilaterally by the Community for developing countries, via the GSP.

Products are divided into two categories: sensitive products and non-sensitive products. Sensitivity is determined in relation to the effect that imports into the Community could have on Community products. Common Customs Tariff specific and ad valorem duties are fixed for such products. They are, however, suspended where the rate of an ad valorem duty reduced in accordance with the provisions of the GSP is 1% or less and the rate of a specific duty is EUR 2 or less. For the period 01.01.2006-31.12.2008, there are three types of arrangements in place for beneficiary countries, under the EU's GSP in Council Regulation No 980/2005:

- all beneficiary countries enjoy the benefit of the general arrangement;
- the special incentive concession for sustainable development and good governance (the "GSP+") provides additional benefits for countries implementing certain international standards in human and labour rights, environmental protection, the fight against drugs and good governance (see Commission Decision 2005/924/EC for the list of GSP+ beneficiary countries);

- "EBA Regulation" (Council Regulation No 416/2001), granting duty-free access to imports of all products from LDCs without any quantitative restrictions, except for arms and munitions. At present, 49 developing countries belong to the category of LDCs. The provisions of the EBA Regulation have been incorporated into the GSP Regulation. Only imports of fresh bananas, rice and sugar are not fully liberalised immediately. Duties on those products will be gradually reduced until duty free access is granted for sugar in July 2009 and for rice in September 2009. For bananas it came into force in January 2006. In the meantime, there will be duty free tariff quotas for rice and sugar (see the latest commission regulations for sugar quotas No 1381/2002 and rice quotas No 1401/2002).

Under certain circumstances various beneficiary countries have been grouped together for the purposes of cumulation of origin under GSP. Cumulation is a term used to indicate the basis upon which a product may enjoy originating status, even though the normal origin rules would not confer origin on the basis of work performed in the country of last processing.

Regional cumulation applies to three separate groups of beneficiary countries that benefit from GSP:

- the Association of South-East Asian Nations (ASEAN) consisting of Brunei-Darussalam, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, Vietnam & Cambodia.
- the Andean Community – Central American Common Market and Panama Permanent Joint Committee on Origin, consisting of Bolivia, Columbia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Peru, Venezuela.
- the South Asian Association for Regional Co-operation (SAARC) consisting of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan & Sri Lanka.of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan & Sri Lanka.

2.2 The EU Export refunds scheme for fresh F&V

Council Regulation No 1035/72, in order to protect Community participation in international trade in F&V, laid down provisions for the possibility of granting a refund on exports (difference between domestic EU and the "world market price" level) of some F&V products to non-EU countries.

Art. 30 Council Regulation (EEC) No 1035/72

EAAGF expenditure for export subsidies to F&V was almost stable during most of the 1980s, hovering around 50-60 million ECU per year. By 1990 the extension of the export subsidies regime to Spain had the effect of increasing EAAGF expenditure to a maximum of 203.5 million ECU (in 1995), although unit subsidies had remained unchanged since 1984.

The **1994 URAA** was also concerned with the **commitment to reduce export subsidies**. The obligation related to both budgetary expenditure and eligible volumes that had to be reduced by 21% for each product in terms of volume and by 36% in budgetary terms. In the case of F&V the commitment was rather binding because export subsidies increased significantly after the base period.

Article 35 Council Regulation No 2200/96
Articles 16, 17, 18 Council Regulation No 2201/96

Council Regulation No 3290/1994 on adjustments and transitional arrangements required in the agriculture sector to implement agreements reached during the Uruguay Round declared that by virtue of the Agreement the granting of export subsidies would be

limited henceforth to certain groups of agricultural products defined therein. In addition, it would be subject to limits in terms of quantity and value. To reduce export subsidies the EU introduced the rationing of quantities eligible for subsidies. Commission Regulation No 2190/96, repealed by Commission Regulation No 1961/2001, details rules for implementing Council Regulations No 2200/96 and No 2201/96 on fresh and processed F&V.

Main provisions of the Uruguay Round Agreement on Agriculture

Article 7, paragraph 2 of Commission Regulation No 1961/2001 lists the products granted by export subsidies:

- tomatoes covered by CN code 0702 00 00,
- shelled almonds covered by CN codes 0802 12 10 and 0802 12 90,
- hazelnuts (*Corylus* ssp.) covered by CN codes 0802 21 00 and0802 22 00,
- walnuts in shell covered by CN code 0802 31 00,
- oranges covered by CN code 0805 10 20, as amended by Commission Regulation (EC) No 386/2005
- clementines covered by CN code 0805 20 10,
- monreales and satsumas covered by CN code 0805 20 30,
- mandarins and wilkings covered by CN code 0805 20 50,
- tangerines covered by CN code 0805 20 70,
- other similar citrus hybrids covered by CN code 0805 20 90,
- lemons (*Citrus limon*, *Citrus limonum*) covered by CN code 0805 50 10, as amended by Commission Regulation (EC) No 386/2005
- limes (*Citrus aurantifolia*) covered by CN code 0805 50 90,
- table grapes covered by CN code 0806 10 10, as amended by Commission Regulation (EC) No 386/2005
- apples covered by CN codes 0808 10 10 and 0808 10 80,
- peaches, including nectarines, covered by CN codes 0809 30 10 and 0809 30 90.

The scheme works through the:

- issuing of export licenses AGREX (only in order to obtain export refunds)
- fixing system of the refund value.

2.2.1 Export Licences

Article 1 Commission Regulation No 1961/01 paragraph 1 states “Licences are not transferable.”

Obligations deriving from licences or certificates cannot be transferred. Rights deriving from licences or certificates can be transferred by their titular holder during the period of their validity. Such transfer may be made in favour of a single transferee only for each licence or certificate or extract thereof. It can relate to quantities not yet attributed to the licence or certificate or extract.

Article 9 Commission Regulation (EC) No 1291/00 paragraph 1

The common detailed rules for the application of the system of import and export licences are laid down in Council regulation No 1291/2000.

Licences are issued by Member States to any applicant, irrespective of his place of

establishment in the Community.

According to the definition of "Exporter" in Commission Regulation No 800/1999, an export licence with advance fixing of the refund may be used by the holder or, where appropriate, by the transferee of the licence entitled to the rights of refund.	Article 2 Commission Regulation No 800/1999 paragraph 1, point i)
In the event of a request for transfer by the titular holder or transfer back to the titular holder by the transferee, the issuing body or the agency or agencies designated by each Member State have to note on the extract the references of the transferee.	Article 9 Commission Regulation (EC) No 1291/00 paragraph 3
Applications for a licence or certificate have to be forwarded to or lodged with the competent body on forms printed and/or made out.	Article 13 Commission Regulation (EC) No 1291/00 paragraph 3
The licence or certificate is accepted unless an adequate security has been lodged with the competent body by no later than 1 p.m. on the day the application is lodged.	Article 15 Commission Regulation (EC) No 1291/00 paragraph 3

2.2.2 Functioning mechanism for the Export refunds

Commission Regulation No 2190/96, repealed by Commission Regulation No 1961/2001, details rules for implementing F&V CMO as regards export refunds, and lists the following products within this scheme (for some specific CN codes): tomatoes, shelled almonds, hazelnuts, walnuts in shell, oranges, clementines, monreales and satsumas, mandarins and wilkings, tangerines, other similar citrus hybrids, lemons, limes, table grapes, apples, peaches, including nectarines.
A variety of systems to grant export refunds were set up in order to maintain flexibility for the scheme and take into account the perishable nature of fresh F&V.

At present the following systems are set: system A (A1, A2, A3) with advance fixing of the refunds; system

B without advance fixing of the refunds.

With A1 Member States (MS) authorities receiving applications must communicate to the EC twice a week the quantities of refunds requested. Refunds are fixed, by the EC, on a "first come first served" basis. The EC determines which percentage of quantities licences are issued for or rejects applications when budgetary expenditure ceilings are reached.

With A2 exporters can apply to the competent bodies of MS for a licence during the application periods with a view to obtaining a definitive refund rate and a specific quantity of products, valid on the actual date of application. Not later than the second working day following the licence application period, MS shall inform the Commission of the quantities covered by licence applications. The EC fixes the definitive rate. Applications that seek a higher rate are considered void.

With A3 (tender): the EC takes decisions on issuing invitations to tender on indicative rates and quantities, the deadlines for submission of tenders and the terms of validity of licences. Exporters submit a written tender showing the quantity and requested export refund rate. Awards are made to all tenders that offered an export refund rate equal to or lower than the maximum rate fixed by the EC, and for the total quantities requested in the tender.

With system B the procedure is open to exporters that have already completed the shipment. It is also based on competitive criteria. Exporters apply to the competent bodies of MS for a licence by no later than the second working day following the date of acceptance of the export declaration for the products with a view to obtaining a refund at the valid rate for the export period in question.

2.2.3 Fixing system of the refund value

The rates of refund for systems A1 and A2 are set in advance by the Commission in accordance with the procedure laid down in Article 46 of Council Regulation No 2200/96 (Management Committee for Fresh Fruit and Vegetables) together with quantities for the licences that are issued and the terms of validity of those licences. However, the rates and quantities set in the case of system A2 are purely indicative. The rates and quantities are set for each licence application period.

Article 1 Commission Regulation No 1961/01 paragraph 2

In the A2 System licence applicants cannot apply for a minimum rate higher than the indicative rate plus 50%. By no later than midday (Brussels time) on the second working day following the licence application period, Member States shall inform the Commission of the quantities covered by licence applications. The Commission fixes the definitive rate and applications that seek a higher rate are considered void. Export licences are issued by Member States on the third working day after the actual date of application.

The A3 System was introduced in 2001 by Commission Regulation No 1961/01. This Regulation justified introduction of the new system mentioning Article 35(4) of Council Regulation No 2200/96 which provides, inter alia, for refunds to be fixed in accordance with the economic aspects of proposed exports. To this end, provision has to be made for a system whereby refunds are granted by invitation to tender.

Article 1 Commission Regulation No 1961/01 paragraph 3

Tenders are opened by the competent body of the Member State in a meeting not open to the public. Admissible tenders are forwarded to the Commission without the tenders being mentioned by name by no later than midday (Brussels time) of the first working day following the final date for submission of tenders.

In light of tenders submitted and the foreseeable market situation for the products concerned, the Commission fixes the maximum rate of the export refund for each category of products to be exported and each destination or group of destinations. Awards are made to tenderers whose tenders quote a refund rate equal to or less than the maximum export refund rate, for the quantity and rate quoted in the tender. However, where tenders quote exactly the maximum rate of the refund, the Commission may fix a percentage to reduce the quantity awarded. The Commission may also reject all tenders by fixing a zero maximum rate.

Exporters can apply for quantities no larger than one half of total quantities eligible for export licences. Applications must be accompanied by the lodging of a security corresponding to half the amount of the refunds requested.

Article 5 Commission Regulation No 1961/01 paragraph 4

In the B system applications for refunds can be made after the export has been carried out in order to maintain the flexibility which is characteristic of exports of perishable products such as fruit and vegetables. Licence applications are considered to have been submitted on the date of acceptance of the export declaration for the products.

Article 6 Commission Regulation No 1961/01

Member States inform the Commission of the quantities covered by licence applications, broken down by date of submission, any quantities for which licence applications have been withdrawn during the current export period and quantities not used during the current export period..

Article 6 Commission Regulation No 1961/01 paragraph 5

If the quantities of a product applied for in respect of a destination or group of destinations exceed or threaten to exceed the indicative quantity set for the current export period, the Commission may set a date from which licence applications will be rejected if

Article 6 Commission Regulation No 1961/01 paragraph 6

the relevant export declaration has been accepted after that date during the current export period.

After each export period, the Commission checks, on the basis of the information available to it, for each product and each destination or group of destinations, whether the quantities applied for exceed the indicative quantities set, and fixes the definitive refund rates for all licences applied for before the set date. If they do exceed the indicative quantities, the Commission may reduce the rate of refund for those transactions.

Article 6 Commission Regulation No 1961/01 paragraph 7

Furthermore, in order to comply with annual limits arising under agreements between the Community and one or more States or international organisations reached following the institutional procedures laid down in Article 300 of the Treaty, the Commission may determine for what percentage of requested quantities licences may be issued.

The Commission has to be able to reject licence applications relating to an export date later than a given date in order to prevent significant overruns of indicative quantities.

Export licences are issued on the 14th working day after the end of the export period for that period.

Article 6 Commission Regulation No 1961/01 paragraph 7

2.3 The EU Export refunds scheme for products processed from F&V

2.3.1 Scheme functioning

The system applied for export refunds for products processed from F&V is based on the advance fixing of rates, periods and quantities. Exporters apply for licences to the competent authorities of MS in order to obtain a refund at the rate in force on the date of submission of the application. The EC, when issuing licences, checks daily MS communications regarding the filing of applications, whether the total quantities applied and each product category exceed the fixed ceiling less the quantities for which licences with advance fixing of the refund have been issued or are in the process of being issued during the current issuing period.

Art.16 Council Regulation 2201/96 and Article 13 Annex XIV Council Regulation (3290/94)

According to Council Regulation No 2201/1996, in order to enable the export of:
1) products without added sugar referred to in Article 1 paragraph 2;

2) and for:

2.1 white and raw sugar (CN code 1701) beet and cane syrups (CN code ex 1702 90 99);
2.2 isoglucose (CN codes 1702 30 10, 1702 40 10,1702 60 10 and 1702 90 30);
2.3 glucose and glucose syrup (CN codes 1702 30 51,1702 30 59, 1702 30 91, 1702 30 99 and 1702 40 90);

used in products listed in Article 1 paragraph 2 Letter (b), on the basis of prices for those products in international trade and within the limits in accordance with the WTO commitments, the difference between those prices and prices applied in the Community may be covered by export refunds.

Commission Regulation No 1429/95 fixes the rules for export refunds on products processed from F&V other than those granted for added sugars. Refunds granted for added sugars used are related to implementing Regulations as mentioned in art. 18 of

Commission Regulation (EC) No 1429/95

Council Regulation No 2201/96 for the three categories of sugars listed above (2.1; 2.2; 2.3.)
Article 3 of Commission Regulation No 1429/95 lists products for which export refunds are granted:

- dried grapes falling within CN code 0806 20;
- cherries provisionally preserved falling within CN code 0812 10;
- tomatoes prepared or preserved otherwise than by vinegar or acetic acid falling within CN code 2002 10;
- fruit preserved by sugar falling within CN code 2006;
- nuts other than groundnuts, prepared, falling within CN code 2008 19;
- orange juice CN codes 2009 11 and 2009 19, with a sugar content of 10° Brix or more, but less than 22° Brix;
- orange juice CN codes 2009 11 and 2009 19, with a sugar content of 22° Brix or more, but less than 33° Brix;
- orange juice CN codes 2009 11 and 2009 19, with a sugar content of 33° Brix or more, but less than 44° Brix;
- orange juice CN codes 2009 11 and 2009 19, with a sugar content of 44° Brix or more, but less than 55° Brix;
- orange juice CN codes 2009 11 and 2009 19, with a sugar content of 55° Brix or more.

2.3.2 Licences

The system applied to export refunds for products processed from F&V is that of the advance fixing of rates, periods and quantities. The Commission fixes the export refunds via a Commission Regulation and publishes it in the O.J.

Art. 3 Commission Regulation (EC) No 1429/95

Where the international trade situation or specific requirements of certain markets make this necessary, the refund for a given product may vary according to the destination of the product.

Exporters apply for licences with advance fixing of the refund to the competent authorities of Member States with a view to being granted a refund at the rate in force on the date of submission of the application.

The Commission checks, for each application lodgement day in turn, whether the total quantities applied and each product category exceed the fixed quantities less the quantities for which licences with advance fixing of the refund have been issued or are in the process of being issued during the current issuing period.

Art. 4 Commission Regulation (EC) No 1429/95

Licence applications shall be accompanied by:

- the lodging of a security of EUR 20 per tonne net weight, up to the limit of the refund rate,
- a declaration that the products to be exported have been obtained from fruit or vegetables harvested in the Community.

Refunds are granted only on application and on presentation of the relevant export licence.

Art.16 Council Reg. 2201/96

Refunds are the same for the whole Community.

Refunds are fixed in accordance with the procedure laid down in Article 29

(Management Committee for Processed Fruit and Vegetables). Refunds are fixed at regular intervals.

The refund applicable shall be that applicable on the day of application for the licence and, in the case of a differentiated refund, that applicable on the same day.

2.3.3 Allocation of quantities

The method to be adopted for the allocation of quantities exported with a refund has to be the method which: Art.16 Council Reg. 2201/96

- is most suited to the nature of the product and the situation in the market in question, allowing the most efficient possible use of the resources available, and takes due account of the efficiency and structure of Community exports, without, however, creating discrimination between large and small operators;
- is least cumbersome administratively for operators, administration requirements being taken into account;
- avoids any discrimination between the operators concerned.

2.3.4 Refunds

Refunds for products without added sugar are fixed taking into account:
(a) the existing situation and future trends with regard to: Art.17 Council Reg. 2201/96

- prices and availability in the Community market of products processed from fruit and vegetables,
- prices ruling in international trade;

(b) minimum marketing and transport costs from Community markets to ports or other points of export in the Community, as well as costs of shipment to the countries of destination;
(c) the economic aspect of the proposed exports;
(d) limits resulting from agreements reached in accordance with Article 300 of the Treaty.

Prices in international trade are determined taking into account:

- prices ruling in non-EU country markets;
- the most favourable prices in non-EU countries of destination for imports from non-EU countries;
- producer prices recorded in exporting non-EU countries;
- offer prices at the Community frontier.

The refund shall be paid upon proof that:

- the products have been exported from the Community,
- the products are of Community origin, and

in the case of a differentiated refund the products have reached the destination indicated on the licence or another destination for which the refund was fixed.

The amount of refunds for:

- raw sugar, white sugar and beet and cane syrup, for such products in the unprocessed state, is fixed in accordance with Article 17 of Council Regulation No 1785/ 81 on the CMO in the sugar sector, and its implementing provisions,
- isoglucose, for that product in its unprocessed state, is fixed in accordance with Article 17 of Regulation No 1785/81 on the CMO in the sugar sector and its implementing provisions,

- glucose and glucose syrup, for such products in their unprocessed state, is fixed for each of those products in accordance with Article 13 of Council Regulation No 1766/92 on the CMO in cereals, and its implementing provisions.

In order to benefit from the refund, processed products must be accompanied, upon export, by a declaration from the applicant stating the quantities of raw and white sugar and beet and cane syrups, isoglucose, glucose and glucose syrup used in manufacture.

2.4 Model of the intervention logic

We schematize hereafter, with three intervention logic diagrams, separately on the EP scheme, ER scheme for Fresh F&V and ER scheme for processed F&V, the relations existing between the measures (and instruments) foreseen by the intervention arrangements and the specific objectives, as well as between the specific objectives and the global objectives.

Fig. 1- Intervention Logic Diagram - Entry prices for Fruit and Vegetables

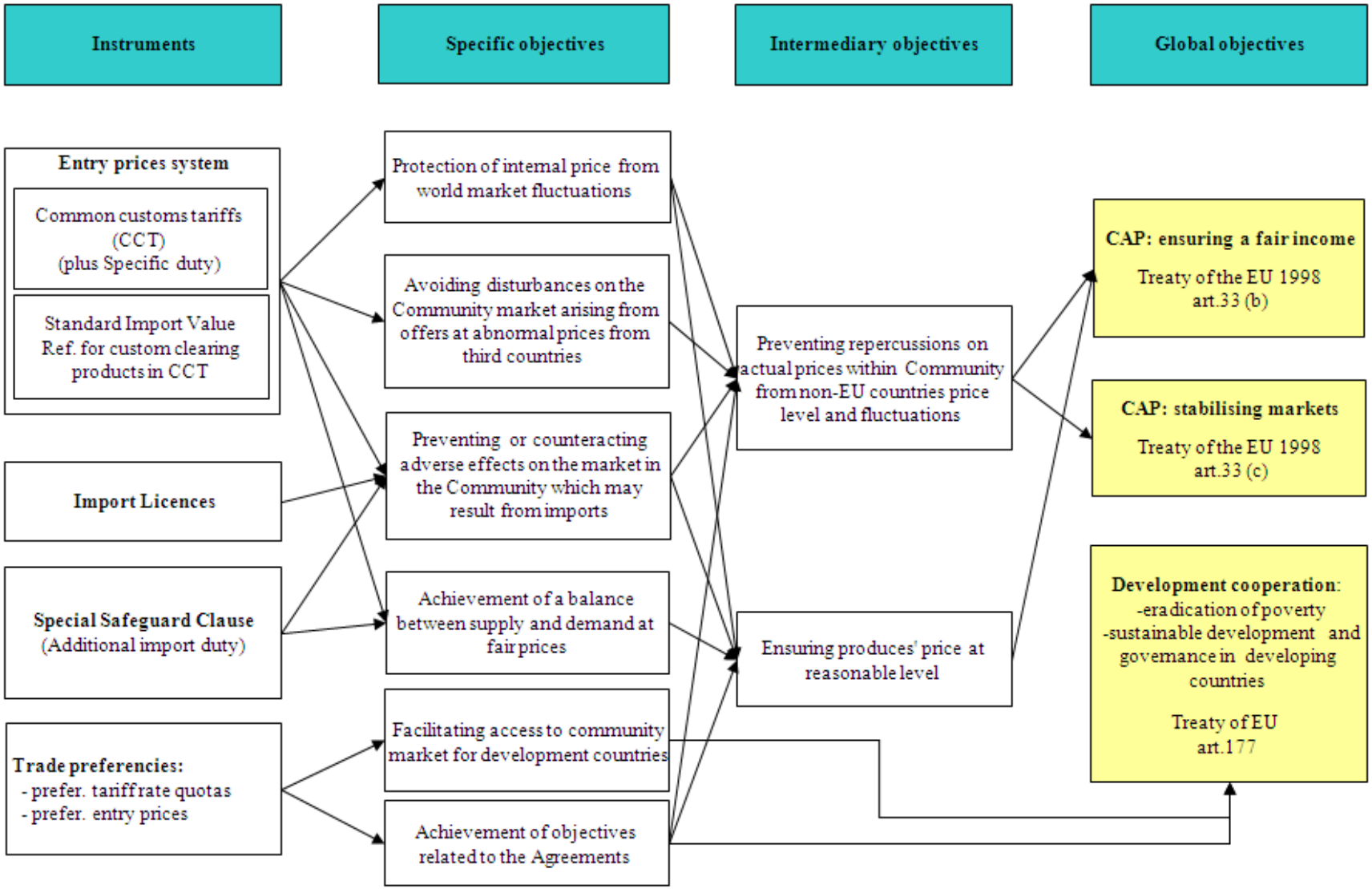


Fig. 2- Intervention Logic Diagram - Export refunds for fresh Fruit and Vegetables

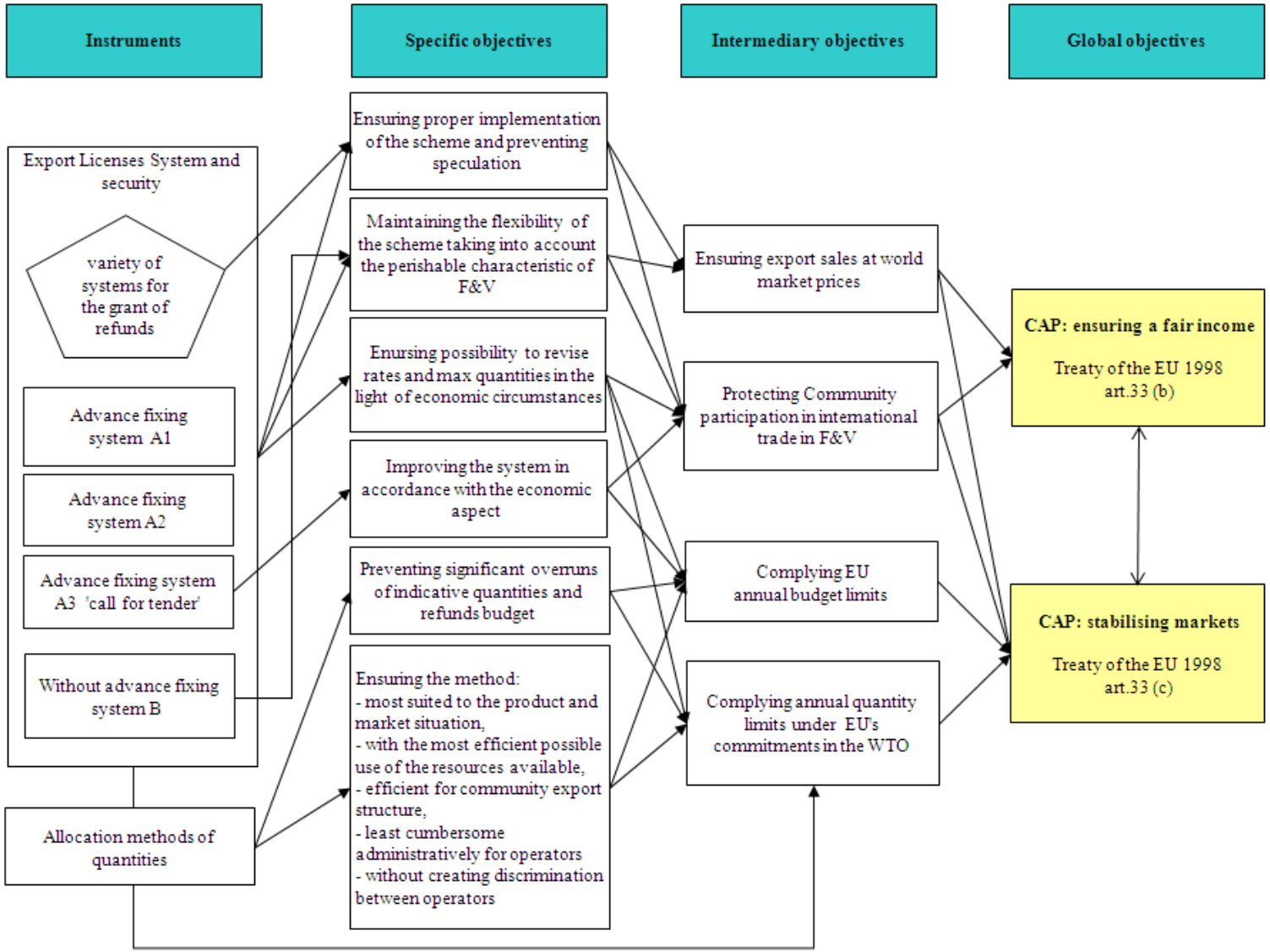
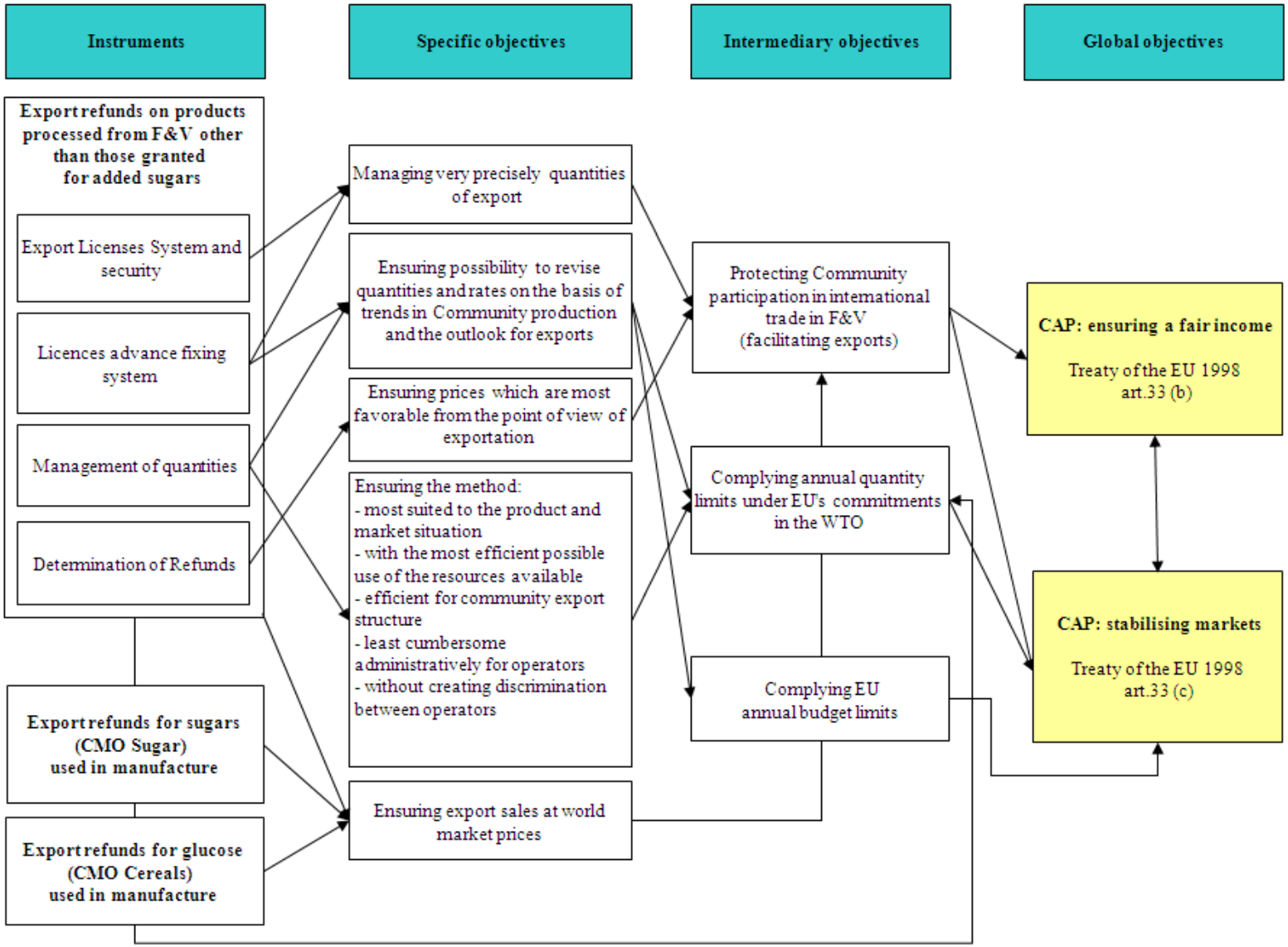


Fig. 3- Intervention Logic Diagram - Export refunds for processed Fruit and Vegetables



3. METHODOLOGY AND LIMITS OF THE EVALUATION

This paragraph discusses the general methodological approach of the evaluation. Specific methodological approaches adopted for each evaluation question are reported in the correlated sections.

In deciding how to evaluate the two schemes, we have had to face the problem of choosing between two alternative methodological approaches. The most direct analytical approach for the assessment of the impact of the EP and ER schemes would have been that of contrasting the historically observed data on price and traded quantities for the products that have been involved in the schemes with those that would have prevailed if the two schemes were not in place.

Given the previous existence of trade policies regulating the EU F&V market, it was not possible to refer the conditions existing before 1995 as reference. One alternative could have been to form estimates of prices and quantities that might have prevail in absence of the two schemes to be evaluated, based on the explicit set-up of a theoretical model capable of taking into account all the various domestic and international factors that determine the equilibrium values of imports and exports, but we considered this an impossible task to be adopted for all the issues to deal with, confining it to the development of trade models, that will be discussed in the following pages.

These considerations led us to opt for an *indirect counterfactual approach*, according to which the impact of the two schemes has been assessed by comparison of the data on traded quantities and prices of the products subject to the schemes, with those of similar products that, over the same period, have not been subject to the two schemes. The rationale for such an analytical method is that any systematic difference that would be found between the group of products subject to one scheme, as a whole, and a group of similar products not subject to the same scheme, might be reasonably imputed to the latter.

Of course, the analysis must be carried out carefully, taking into account that possible diversion could be also due to factors specific to the product or to the origin/destination country.

In addition to the counterfactual approach applied to descriptive statistics of the main market variables relevant to the analysis of the trade measures, the evaluation also made use of other analytical tools, such as:

- econometric gravity model allowing statistical assessment of the factors behind the bilateral trade flows of the different products, expressly taking into consideration the impact caused by relevant trade measures;
- price elasticities of demand used to evaluate the stabilising effects of the ER scheme by simulating the effects of a diversion of products benefiting from ER subsidies on the EU internal market;
- trade models based on a static partial equilibrium approach, founded on assumptions on the behaviour of the main players and on relevant elasticities. The trade model has been used to simulate the effects of phasing out of the two schemes
- deep interviews, used to analyse the administrative procedures and management mechanisms of the two schemes, matched across the actors involved, at the EU Commission and National level. These interviews also served to give qualitative information to the other evaluation themes.

A Preparatory Analysis on trends of the most relevant variables involved in the present evaluation was also conducted.

The main sources used for data quantitative collection are listed below separately for the evaluation questions and for the Preparatory Analysis.

3.1 Main data sources for Preparatory analysis

Point 1 and 4 of counterfactual analysis:

The analysis on the development of EU trade in F&V sector are mainly based on:

- COMTRADE and COMEXT tables on a monthly basis since 1995;
- partial information on export refunds for specific commodities, even if obtained only for some years;
- COMEXT tables for 1993 and 1994 for yearly periods;
- SIV for commodities and countries from TARIC.

Point 2 of counterfactual analysis:

The analysis on production and consumption has been performed using data from the Faostat database on agricultural and food products. The analysis of domestic prices has been performed using prices collected through Agriview. These data were given to us at the beginning of the Evaluation.

Data on prices of imported F&V in EU markets were gathered through the database of representative prices collected in Member Countries to calculate SIVs. These data come from the SIVs archive given to us at the beginning of the evaluation.

Point 3 of counterfactual analysis:

The analysis has been performed using the SIVs database. It includes both the daily SIVs for products and origin partner country and the data from the TARIC database on MFN EP and preferential EP.

Point 5 of counterfactual analysis:

The analysis has been performed using Comtrade data on trade.

3.2 Main data sources for evaluation questions

The main statistical sources used during the evaluation exercise were as follows:

- Time series provided by DG Agriculture:
  - EU imports by product and by country of origin;
  - EU exports by product and by country of destination;
  - Export refunds volumes;
  - Daily SIVs by product and by country of origin;
  - MFN EP, preferential EP, TRQ, by product and country of origin and date;
  - Representative prices of imports by product and by country of origin;
  - Prices of domestic production on EU markets (Agriview);
  - Unit of ER paid to exports towards the Third Countries.
- TARIC, COMEXT and Agricultural Protocols sources for the following data series:
  - Tariffs, MTEs and their calendar for each major MFN and preferential suppliers for each product;
  - Monthly exports from preferential suppliers to the EU;
  - Tariff-rate Quotas.
- COMEXT, OECD, UN foreign trade database, COMTRADE:
  - EU imports of F&V with and without EP;
  - Quantity timeseries of world production and of production of the countries that traditionally export to the EU for each product;
  - Exports to third countries of F&V with and without ER;
  - Exports to new member countries of F&V with and without ER;
  - EU Export volumes subjected to refunds to the non-EU country;
  - Import volumes of the non-EU country;
  - Prices of F&V imported/exported by/to the EU and third countries of products with and without EP and ER.
- EC statistics FAOSTAT and EUROSTAT :

- EU Market prices by products;
- EU domestic supply of F&V and EU F&V consumption;
- Production, Imports and Exports of the non-EU country.

- Deep interviews.

The methodology applied in this report emphasizes qualitative information gathered from 55 deep interviews to the main stakeholders involved in the functioning of the EPS and the ERS in 7 different MS.

Deep interviews to operators and officials at EU and national administrations, conducted at individual level, have been performed to the 7 most relevant member States in terms of actual application of the EP and ER schemes: France, Germany, Greece, Italy, Netherlands, Spain and United Kingdom.

The deep interviews served to inform the analysis of the management, administration and efficiency of the entry price and export refunds schemes (theme 4), although they also provided a host of useful complementary information for other themes of the evaluation.

The main interviewed categories were the stakeholders involved in the functioning of entry prices and export refunds schemes (countries' government officials and representatives of respective national administrations, customs, professional circles, importers and exporters etc.), considering the following activity:

- National Body managing import licenses,
- National Body managing entry prices data flow,
- National Body managing export licenses,
- National Body managing operators applications for export refunds,
- National Body managing customs duties data, and imports procedures,
- National Body managing TARIC data flow,
- Most relevant Professional circles related to F&V production, imports and exports,
- Most representative operators.

The choice of importers, exporters and producers to interview was made on the basis of:

- specific indications gathered from national authorities managing data collection in the representative markets in each MS;
- their relevance to the national and EU trade of the specific product;
- their relevance to the actual adoption of the export refunds scheme;
- specific indications gathered from the list of members of Freshfel - European Fresh Produce Association.

3.2.1 Limits of the analysis of Export refunds for processed products

The present evaluation is concerned with three instruments: the entry price system, export refunds granted to fresh F&V and export refunds for processed F&V as laid down by Council Regulation No 2201/1996 and by Council Regulation No 426/86, as replaced by Council Regulation No 3290/94. Since the first two policy instruments to which the evaluation refers are applied to fresh F&V, some evaluation themes are more oriented towards the development of an understanding of the effects of these two instruments on issues typically concerning the fresh F&V sector.

In particular within theme 1, looking at the effects of EPS and ERS on the stability of the market, the problems relating to the processed F&V industry are completely different from those affecting the fresh F&V sector. In general, processed F&V products are storable, and therefore the variability of their prices, is much lower than that of fresh produce, which are typically perishable products. Moreover, within the EU the quantities of processed products consigned by farmers to the industry are normally defined at the beginning of the season before planting, as part of contracting procedures defined by the CMO of the processed F&V. Finally it must be considered that the effects of ER granted to processed F&V products are difficult to separate from the effects generated by producer aid, while data on export refunds granted within the sugar CMO do not distinguish between the many products benefiting from the subsidy.

Analyses carried out on the theme "Management and administration of the schemes" have also been developed by focusing on the EPS and on ER granted to fresh F&V, the administration of which is far more complex and demanding than that concerning ER for processed F&V.

Therefore we evaluated the effects of ER for processed products only in theme 2 "Development of EU trade", theme 3 "Competitiveness of the EU fruit and vegetable sector" and theme 5 as far as external coherence within the overall context of Common Agricultural Policy, Common Commercial Policy and the Development Policy is concerned.

3.2.2 Overall evolution of the fresh F&V sector, to be considered in assessing the effects of EPS and ERS

In the present section we summarize the most relevant changes in the EU and world F&V sector, in order to provide basic knowledge useful for a better comprehension of the quantitative analysis we carried out, since the effects of the EPS and the ERS should be isolated from or related to the effects of other phenomena.

This evaluation exercise is concerned with the assessment of the effects produced by two instruments used to regulate EU imports and exports of F&V: the EPS and the ERS. The EPS is a border measure that is applied to fresh temperate F&V imported in the EU, while the ERS was employed to support exports of both fresh and processed F&V, although, before the implementation of the URAA, most of ER subsides were granted to fresh F&V. Given the overwhelming importance of the two instruments for fresh F&V in sketching the evolution of the sector, we have devoted most of our attention to these products.

During the period with which this evaluation is concerned, spanning from the years immediately before the conclusion of Uruguay round negotiations to today, the World fresh F&V industry has undergone radical changes. In this period World production, consumption and trade of fresh F&V has posted unprecedented rates of growth. Taking the three years 1990-1992, with average World production equal to 100, fruit production rose to 143.8 in 2006, while vegetable production reached 191.8. The growth in the quantities of fresh fruit traded in the world has been even greater than that observed for production, while in the case of vegetables the quantities traded grew by a little less than production.

Several factors have been behind the trends in the world fresh F&V industry. They can be classified in three broad categories:

- changes in consumption patterns worldwide;
- the condition of market access to imports of fresh F&V;
- changes in the organisation of the supply chain.

These factors determined the growth of the main variables of the fresh F&V industry and also reshaped relationships among economic agents involved at different levels of the industry.

Growth in consumption

The consumption of fresh F&V has increased significantly over the last fifteen years. The increase has been pushed by a growing awareness that a diet with a larger share of these products improves the wellbeing of consumers, reducing the risk of several disorders related to eating styles. This awareness has resulted in a greater consumption of fresh F&V thanks to a wider availability of products and to increases in per-capita income.

However, fresh F&V are still mainly consumed at home. In this respect, the increasing importance of meals consumed outside the home is a factor that might negatively affect further growth in consumption.

The rise in world consumption of fresh F&V is mostly the result of an increase in consumption in fast growing countries such as China, India, etc. The soaring per-capita income in these countries is stimulating changes in diets, whereby healthier and more diversified food items gradually substitute poorer consumption habits. In Asia, while the per capita consumption of rice in the last twenty years has remained constant, that

of F&V has doubled. Projections of consumption trends point to a reduction in the consumption of rice and increase in other foods, reacting to increases in per-capita incomes (Pingali, 2006[9]).

Since the growth of income in developing countries goes in tandem with the increasing urbanisation of the population, it also affects the organisation of marketing channels, as will be discussed later, and creates incentives for a fresh F&V industry more oriented towards domestic consumption, unlike in the past, when the growth of the sector was driven by export demand.

A further change happened within the structure of fresh fruit consumption in developed countries, where the thorough changes in the supply chain, that will be discussed in the following paragraphs, had the effect to modify seasonality in consumption pattern. As a matter of fact, the increased availability of fruits for consumption out of the traditional seasons is having in northern hemisphere developed countries the same effects that the availability of out of season green house vegetables had on seasonal pattern of consumption of these products at the end of the last century.

The condition of market access to imports

The opening of world markets has also been an important factor driving the growth of the fresh F&V industry. This phenomenon was triggered by the implementation of the URAA, which has lowered tariffs and reduced the restrictions created by non-tariff barriers, improving market access conditions to imports from WTO member countries. In addition to this, the large number of countries joining the WTO after its establishment in 1995 contributed to creating a wider economic area in which Gatt rules apply, creating the conditions for further incentives to trade.

An additional push towards better market access conditions was also given by the many regional free trade area agreements signed around the world. Their number has increased considerably in recent years, contributing to further improvements in market access conditions. As will be shown in the pages below, preferential trade agreements also contributed to the increase in trade of fresh F&V.

In the 1990s, and at the very beginning of the new decade, a contribution to the increase in trade was made by the lowering of transportation costs and by the wider adoption of information and communication technologies for the management of logistics operations. Although the increase in energy prices in the last three years has reduced the impact of this phenomenon, the overall effect has been a considerable contribution to the development of trade for many products.

Changes in the organisation of the supply chain

Radical changes to the organisation of the fresh F&V sector were also brought by the worldwide spread of large retailer chains, which by now in many countries have become the main form of retail trade for fresh food produce. Although the changes were rather slow at the beginning in developed Western countries, they have recently been very fast in developing countries, generating an organisation of the supply chain in these countries that is increasingly similar to that adopted in the West.

Supermarkets began to slowly spread in North America and in Europe at the beginning of the last century. However, the increasing involvement of supermarkets in the retailing of fresh food produce started only in the second half of the last century. It was based on the growing use of refrigerators in households, the improvement of private means of transport and the increasing urbanisation of the population. These three factors, together with the growing number of women working outside the home, spurred the development and spread of a form of retailing that was much more suited to the changes in lifestyle in the developed countries of North America and Western Europe. Although the buying of F&V was concentrated on transformed products, later fresh produce was increasingly sold through large retail stores instead of the traditional specialised stores or local street markets. Nowadays the sale of fresh F&V is believed to be of great interest to the large retail industry, because the areas in which these products are sold provide high profit margins.

[9] Pingali P. (2006). "Westernization of Asian diets and the transformation of food systems: Implications for research and policy". Food Policy. 32: 281–298.

The growth of the large retailing industry has brought with it increasing concentration. Currently, a few large firms control large shares of the industry, particularly in the EU (Duponcel, 2006[10]).

The radical changes in the retailing of fresh F&V, associated with the growth and concentration of large retailers, has also had relevant consequences on the organisation of the whole sector. This includes the effects of procurement strategies adopted by large retailers, driven on the one hand by the need to guarantee a large and continuous amount of products to supply stores and, on the other, the need to reduce procurement costs.

As a consequence of these two requirements, large retail firms concentrated procurement activities in a few distribution centres able to continuously feed their stores located in a geographical area. The concentration of procurement and distribution was made possible through new vertical relationships within the fresh F&V industry based on contracting with a few large suppliers in order to reduce the number of transactions. Contracting was the tool to overcome the many uncertainties related to traditional procurement through spot markets and price signalling, improving vertical relationships within the supply chain. The new organisation enforced by large retail firms reduced the length of the supply chain, permitting the adoption of integrated models of logistics management and the achievement of scale economies. It gradually substituted the former traditional organisation of the fresh F&V markets, even though the transformation has not been uniform in EU member States (Duponcel, 2006). As a consequence, the coordination of the fresh F&V sector is increasingly based on contracting, while coordination through price signalling is gradually losing its relevance.

Within this framework, the growing concern of the large retail industry about food safety as well as the quality properties of fresh food produce sold on their shelves has given rise to the birth of new private standards. The creation in Europe of the Eurep/Gap private standard in 1999 should be viewed in this broader context. Moreover, a wider adoption of certification rules can be considered as a response to the rise of large retail firms and the requirements they impose on suppliers (Henson S., Reardon T. 2005[11]).

The spread of supermarkets has not been confined to rich western countries, but has become a global phenomenon, as economic development is affecting geographical areas around the world where per-capita income and the social and economic organisation had lagged behind for a long time. The share of large retailing over national food retailing reached, in 2001, 75% in Brazil and 57% in Argentina, not far from US levels. (Reardon, Timmer, 2004[12]). Large retail chains have also spread quickly in East and South East Asia (69% of food retailing in Taiwan, 65% in Korea, 57% in Philippine and 48% in the urban part of China). Also in some African countries supermarkets are growing rapidly (Reardon, et al 2005[13]).

The fast growth of supermarkets' share of the food retailing industry in East and Central European Countries, Latin America, Asia and Africa has been driven not only by factors linked to demand, such as the growth in per-capita food consumption, urbanisation, improvement of transportation and household storage facilities. It has also been driven by factors linked to the supply side of large retailing. Particularly important in determining the spread of modern food retailing in these countries has been the role of investments undertaken by large Western European and North American firms in the retailing industry. The investments made by these firms were stimulated by lower profit margins in the domestic market, increasing competition and high margins achievable in activities in developing countries. As a consequence the presence of foreign firms in these countries grew considerably both directly and by means of joint ventures with local firms.

The multinationalization of the retailing industry in developing countries has also brought about the spread of the same type of organisation as that of fresh produce chains adopted in developed countries. This means that in order to secure procurements, large retailers are adopting contractual relationships with a growing

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[10] Duponcel M. (2006). "Role and importance of producer organisations in the fruit and vegetable sector of the EU", Calmed Consortium, Washington, 2006.

[11] Henson S., Reardon T. (2005). "Private agri-food standards: Implications for food policy and the agri-food system". Food Policy. 30: 241–253.

[12] Reardon T., Timmer P., Berdegue J. (2004). "The Rapid Rise of Supermarkets in Developing Countries: Induced Organizational, Institutional, and Technological Change in Agrifood Systems". Journal of Agricultural and Development Economics. 1 (2): 168-183.

[13] Reardon T., Timmer P., Berdegue J. (2005). "Supermarket Expansion in Latin America and Asia Implications for Food Marketing Systems". in New Directions in Global Food Markets / AIB-794 Economic Research Service/USDA.

number of suppliers in these countries too. Moreover, the logistics function of the industry is organised in a similar manner to that in Western countries (Reardon et al, 2004).

An important change for the fresh F&V supply chain was the introduction of private standards by the suppliers of large retail chains in developing countries too. Although the adoption of standards such as Eurep/Gap was more difficult in developed countries, it has been growing rapidly. In general, these standards act as instruments to coordinate supply chains by standardising product requirements for suppliers, which may cover many regions or countries, lowering transaction costs while increasing efficiency (Henson and Reardon, 2005) .

In many cases the integration of foreign suppliers in the industry was stimulated by the direct investments of traders in the agricultural production of developing countries. In this sense, of particular interest are the investments made in Kenya by traders of vegetables that are strictly linked to EU retail chains (Dolan C., Humphrey J., 2004[14]) as well as the repositioning of producers to meet the food safety standards of large retailers (Jaffe S., Masakure O., 2005[15]).

As a consequence of all the above changes, producers of fresh F&V in developing countries are increasingly integrated in a global supply chain managed by multinationals of the retailing industry, which is reshaping the availability of fresh F&V to consumers all over the world. In this sense, the fresh F&V market is increasingly a global market in which the products are losing their traditional seasonal production-consumption characteristics, becoming commodities offered according to their availability in the global orchard.

Within this framework, the organisation of the supply chain is increasingly oriented to adopting forms of coordination aimed at reducing transaction costs and increasing overall efficiency. This means that the competitiveness of production systems is not only based on prices but is also dependent on the ability to react and adapt to the procurement strategies adopted by the retailing industry.

[14] Dolan C., Humphrey J. (2004). "Changing Governance Patterns in the Trade in Fresh Vegetables between Africa and the UK". *Environment and Planning,* 36 (3): 491-509.

[15] Jaffe S., Masakure O. (2005). "Strategic use of private standards to enhance international competitiveness: Vegetable exports from Kenya and elsewhere. *Food Policy.* 30: 316–333.

4. REPLIES TO EVALUATION QUESTIONS

4.1 Theme 1: Stability of the EU market

The first theme: "Stability of the EU market" relates to the effectiveness of the entry prices system and of the export refunds scheme in achieving the goal of *stabilising the EU market* for fruit and vegetables.

In this evaluation, we interpret instability as variation of prices and/or marketed quantities, both within a marketing year and across the years.

The presumable stabilisation effect of the systems is due to the influence on imports at excessively low prices, caused by the mechanisms included in the Entry Price system (EPS) and to the incentive created towards additional exports by the possibility of receiving the payments foreseen by the Export Refunds Scheme (ERS).

As usual, when one needs to evaluate the impact of specific policy measures, the problem arises as to how to isolate the effect of the measure under scrutiny from those of other occurring phenomena.

In principle, the effects of the EPS and of the ERS could be assessed with reference to different alternative situations, such as:

- free trade and no other market stabilization policy in place;
- free trade in the presence of other internal stabilization tools, such as withdrawals;
- trade regulated by other measures, such as fixed or ad valorem import duties.

One issue to be considered when trying to define the alternative situation with which the policy under scrutiny must be compared is that the introduction of a system such as the ones we are evaluating may have created incentives that have affected both domestic and international producers and consumers' behavior. Available historic data reflect the conditions of systems that have been in place for quite a while, and to which all the involved parties (producers and traders) have had time to adjust.

If one needs to determine what would have happened during the same period of time if neither the EPS nor the ERS had been present, a decision needs to be made on whether or not to model producers' and traders' responses. One option is to naively assume that, in the absence of the specific policy, producers and traders would have made the same production and trade decisions they actually made, which would allow the analyst to rely on existing historic data on production and trade. Such a modelling decision has some merits, in that it would generate results which could be useful, for example, to assess the likely short term effects of an unanticipated removal of the system, as might be the case in the first few years following a possible dismantling of the system, before adjustment to the new conditions were complete.

Another option would be to explicitly model the possible response of producers and traders to the policy change, which would be more suitable for the case where the evaluation is aimed at assessing the long-term effects of a system such as the one we are analyzing. The problem arises, then, of how to model such a response, something that is made particularly difficult here by the complexity of the system of producers, traders and consumers to be modelled and that necessarily would require assumptions that, to a considerable extent, might be considered arbitrary.[16]

The choice of which option to prefer has consequences on the possibility of using some of the available historical data to form the required inference. The first case (i.e., neglecting producers and traders responses) would certainly prove easier, because one would be able to use actual data on recorded production and trade as the benchmarks on which to base the predictions of how prices would have changed if the current system of entry price and export refunds had been absent or replaced by other policies. The second

[16] Within the answer to EQ 3, an example of such a trade model, designed through the definition of aggregate supply and demand will be used to provide some hints of possible future scenarios in terms of EU F&V trade, both with and without continuation of the EP system and of the ER scheme, for a selected number of products.

case would require modelling the possible response of producers and traders in order to modify the data on actual production and trade flows in a way that would be consistent with the incentives created by the policy environment in place.

The question is not trivial, given that the mechanism through which the system has been implemented might indeed have modified the flows and composition of trade to and from the EU. As one example, the fact that the Maximum Tariff Equivalent (MTE) is set at a relatively high level vis-à-vis the entry price, might have induced - for some products - a selection of the quality of products directed towards the EU. In other words, it is possible that F&V products imported from third countries during the periods when the entry price system has been in place, were of a higher quality, and sold at a higher price, than what might have happened if the system had not been there. However, the fact that imported products are of higher quality than comparable products available from domestic production can also be due to the incidence of transportation costs, which would make preferable, other things being equal, to ship higher value products over longer distances. Effects of these sort of trade response are objectively very difficult to identify given the available data.

Below we will attempt to limit the number of hypotheses inevitably required to extract from the available statistical data the needed information, even if this might mean being unable to provide a precise quantitative answer to some of the questions. Moreover, we shall take particular care in presenting the results of our analysis when their validity depends on hypotheses that cannot be fully tested given the available data and will try, as far as possible, to supplement and validate them with qualitative information, gathered through interviews or available from other studies.

4.1.1 To what extent has the implementation of the entry price and export refund schemes contributed to stabilise quantities and prices of fruit and vegetable products on the EU market? – EQ.1

4.1.1.1 Interpretation of the question and methodological approach

The first Evaluation Question (EQ) focuses on the stabilisation effect that can be attributed to the implementation of the EPS and of the ERS. To frame our discussion, we start by considering that, in the conditions of an open economy such as the EU, instability can derive from supply shocks, demand shocks or both, and that shocks may originate both within the EU or outside. The fundamental idea behind stabilisation policies related to trade regulation is that, appropriately designed trade policies may:

- contribute to sheltering the domestic market from the instability induced by shocks in the *external* (world) supply and/or demand;
- help reduce the instability induced by *internal* supply and/or demand shocks supporting exports of part of it to the world market.

At least on a theoretical ground, the EPS may be given the objective to shelter the EU domestic market from possible instability due to abrupt increases in the net supply of foreign countries[17]. Such an excess supply, in fact, might be reflected in an increase of exports towards the EU which might, in turn, cause price drops in the EU market.

On the other hand, the ERS can be seen as a tool to deal with excessive EU internal production, in that it creates incentives to export some of the surplus production, thus helping to prevent further domestic price drops.

Notice that both systems cannot prevent abrupt price *increases*, and therefore cannot be considered *pure stabilization* tools. One consequence is that, by possibly contributing to cutting only the lower tail of the price distributions, they will always imply an increase in the average price that would prevail, *ceteris paribus*, in their absence.

[17] By net supply, we mean the difference between total production and total demand of non-EU countries, assuming that domestic markets always represent the preferential destination of increased domestic production. This may not be correct if a Country has internal price stabilization policies, in which case most instability due to domestic production surplus might be transferred on the World market.

The main empirical challenge in the required evaluation comes from the fact that, in order to assess the quantitative relevance of both the EPS and ERS stabilization effect, we would need to identify *the source* and *the magnitude* of the supply shocks, either internal or external.

This poses some easily imaginable problems, related to the availability of sufficiently detailed information. While the periods in which the systems have been actually "working" (that is, for example, when the Standard Import Values (SIV) have been below the "trigger" entry prices, or when refunds have actually been granted to exporters) and while the quantity receiving export refunds can be deduced from the official data, the *amounts of additional imports* that would have entered the EU market in the absence of the EPS, and the *amount of EU product that would have not been exported* in the absence of the ERS can only be guessed or, at best, indirectly inferred starting from available data on actual production and by implicitly or explicitly modelling producers' and traders' behaviour.

Furthermore, even if one could be able to come up with a reliable estimate of such additional supply, the measure of its impact on domestic prices calls for knowledge of the price elasticity of the *relevant internal demand* at the times the mechanisms have been in effect.

Not only: to the extent that the functioning of systems such as the EPS and the ERS is anticipated by producers and traders, the observed data on production, prices and traded quantities are the result also of expectations and strategies which might have been different in the absence of the two EU policies. To properly identify and isolate the effects of the two policies would therefore require being able to model both the mechanism of expectation formation and the marketing behaviour of EU producers (for the ERS) and of EU trade partners (for the EPS) something that proves very difficult if not virtually impossible. As noted by Goetz and Grethe (2007), citing García Álvarez-Coque (2002), for example, the EPS offers many opportunities to legally and illegally circumvent paying specific tariffs, although the produce is finally sold at prices below the TEP. Goetz and Grethe report that, according to information they gathered from importers, illegal circumvention is more prevalent in small-scale trading, particularly between related trading partners. Legal circumvention involves storing produce in the EU: stored products can be imported at any time and declared for customs clearance when the SIV is above the TEP. Once cleared at a favourable SIV, the product can be sold in EU markets at any price. Without reliable information on the actual amount stored, however, detecting and modelling such strategies becomes very problematic.

All these difficulties make it clear that the objective of obtaining a definite answer to the evaluation questions would require a sizeable deal of subjective judgement on the reliability of qualitative information and of ad-hoc hypotheses needed to integrate the quantitative analysis based on purely statistical information.

Given these preliminary remarks, we present here the results of analyses that, when not otherwise indicated, have been conducted for the period 1995-2005, and for the products chosen for the counterfactual analysis as listed in Tab.3 (Chapter 1).

4.1.1.2 Judgment criteria and indicators

Entry price scheme:

As concerning the EPS, the answer to EQ1 has been formed based on the following judgment criteria:

How often have the Standard Import Values fallen below the trigger Entry Price?

The rationale behind this criterion is that one needs to ascertain the overall historic relevance of the instrument, to be able to quantify its possible market stabilizing effect. The existence of a system such as the EPS, does not necessarily imply that it has an actual effect on import flows.

Given the way in which it is regulated, to have increased tariffs the EPS only requires the price of imports to fall below the TEP, while if it falls below 92% of the relevant trigger entry price the specific duty is applied.

For all the products chosen for the counterfactual analysis and for each combination of product/country of origin, basing our analysis on EU recorded data on SIVs, we have identified the occurrences of SIVs being lower than the "trigger" entry price, in order to characterize the periods, within a year and for different years, when the EPS has likely been of greater relevance. We have then contrasted the distribution of imports

with these identified periods to ascertain whether the signs of an impact of the additional duties raised by the EPS functioning can be detected, on the flows of imports.

What has been the likely effect of the EPS on the quantity of imports that have reached EU markets?

The evaluation question explicitly calls for an assessment of the stabilizing effect of the EP on *quantities* of F&V traded on the EU internal market. As explained in the previous section, this is the most challenging part of the analysis. Variations of the quantity of a product available on the domestic EU market, both over the years and within any given year, depend on many factors. Changes in domestic and foreign supply and demand, changing flows of exports from countries of origin to other third countries because of specific trade agreements, and a host of other factors might have played a role in this sense.

In order to isolate any effect that could be reasonably attributed to the EP only, we need to form an estimate of the amounts of potential imports that have been kept out of the EU market whenever the conditions for the EP system to be effective existed.

Apart from the crossing of imports flows with periods of SIVs below the trigger EP, we have analyzed the data on production and trade of a number of products and for the major EU trade partners, over the period 1995-2005.

The evolution of indicators such as the share of exports towards the EU on total production, the share of exports towards the EU on total exports, and the values of the elasticity of exports towards the EU in relation to total production, i.e., the relationship existing between changes in production and changes in the shares of exports towards the EU, and the comparison of such indicators for products that have been subject to the EP and products that have not, are used to verify whether a differential effect could be linked to the EP and, if possible, a rough indication of the quantitative relevance of additional exports that could have been directed to the EU if the entry price system had not been in effect.

What impact would the additional imports had on domestic prices?

If the EP proves effective in influencing excess imports into the EU domestic market, it will clearly have an effect on stabilising internal prices, by preventing potential price falls.

To form a precise estimate of such impact on prices attributable to the EPS, we originally intended to apply the known elasticity of demand of each of the interested products to the quantities of potential additional imports that had been "blocked" by the EP system. Unfortunately, given that no reliable *quantitative* estimate of such potential imports can be obtained, this method cannot be fruitfully applied.

We are thus forced to revert to an indirect method to obtain a rough estimate of the impact of the EPS on prices, based on an assessment of the relative importance of the imports of each product involved in the EPS on EU total consumption, and by guessing the share of such imports that the EP might have been capable of blocking. As can be easily understood, this may be highly different for different products from various origins and in the various periods of the year and will by necessity be based on qualitative information gathered through interviews and other anecdotal evidence.

Effect of the EP on prices in terms of price variability

Obviously, if no reliable estimate can be formed of the precise impact on the price level at any given moment in time, a *quantitative measure* of the effect of the EPS on the *variability* of prices also cannot be produced. An indicator of the EP impact on price variability must therefore be also obtained in an indirect way. The analytical road we have taken is based on a comparison of the historically determined variability of the prices of products that have been subject to the EP and of those that have not.

We are well aware that any difference such a comparison might reveal could be the results of factors other than the EP, especially the presence and functioning of other stabilization schemes such as the withdrawal system. To check the effect of withdrawals, we have conducted the analysis separately for the products that

have been selected for the counterfactual analysis, distinguishing between those that have been subject to withdrawals and those that have not.

Such analysis of historic prices has been carried out using the available time series data on prices at the EU level, obtained from EC statistics, and has concerned the average domestic EU price and the FOB price of products imported by the EU (relevant to assess the impact of EP).

Export refunds scheme:

The judgement criteria selected for analysis of the impact of the ERS are the following.

How often have export refunds been actually granted?

The first criterion concerns the overall relevance of the phenomenon. We assess this by noting the products, years, and periods within the years when export refunds have actually been granted. This is relatively easy to achieve through analysis of the detailed EU budget data on export refunds.

What has been the likely effect of the ERS on the quantity of products available on EU markets?

As for the EP, so also for the ER the evaluation question calls for an assessment of the impact on quantities reaching the EU domestic market. To this end, the first relatively simple indicator consists of the quantities of exports of each product receiving refunds. However, to assume that if the ER had not been in place, the only consequence would have been that those products that have been exported and received a refund would not have been exported, but rather either withdrawn from the market or sold, would be too simplistic. It would neglect the possible impact of the presence of the ER on the *expectations* of producers and traders.

With the aim of highlighting a possible incentive effect of the ER on EU *production* of F&V, through qualitative analysis we explored the relationships between the levels and variations of F&V production and the granting of ER. The needed indicators have been obtained through analysis of the data on series of EU productions and of products receiving ER.

In particular, we have analyzed:

- the correlation between variation of EU internal production and variations of quantity of products benefiting from ER;
- the variation over time of the quantities of products that have benefited from ER and of the relative share in terms of total refunds paid;
- the variability of EU internal production and EU internal supply (production minus net exports) for products chosen for counterfactual analysis.

What would the impact on domestic prices have been if the ERS had not been in place?

The impact of the ERS on prices is assessed by calculating the prices that would have formed had the ERS not been in place. We call these 'projected' prices, and calculate them under the simplified assumption that the quantity that has been exported and granted export refunds would have been sold in the domestic market. Obviously, the impact on prices of a given additional quantity sold would depend on the magnitude of the relevant price elasticity of demand, and we conducted a sensitivity analysis based on various levels of price elasticity of demand.

This method presents some limitations which must be taken into due consideration. Measuring the precise impact on prices, in fact, would require knowledge of (a) the actual market where the exported quantity would have been sold, and (b) the timing of the sale. Lacking precise indications on these two aspects, the most reasonable working assumptions is to refer to the average effect that would prevail on the European market, by using the available series of EU level prices, and not any specific market prices, and to the annual average price.

For the products for which withdrawals are allowed, moreover, this would neglect the possibility that the exported product could have been withdrawn instead, rather than being sold. Whether or not export refunds

and withdrawals have complemented each other to stabilise markets will be assessed by comparing the data on the timing of export refunds and on withdrawals.

Effect of ERS on price variability of F&V

Once the potential impact on the *level* of price associated with the domestic sale of subsidized exports was determined, the impact on the variability of prices could be quantified by comparing the variability of the series of actual prices with that of "projected prices", calculated as explained above.

Once again, such a simplistic method would neglect the possible incentive that the presence of export refunds might have created in raising the level of prices expected by producers. However, we see no easy method to reliably quantify such an incentive effect, and therefore do not attempt to consider it. In so doing, we are aware that the impact of the ERS on the variability of prices we measure is likely to be overestimated to the extent that the incentive created by the expectation of receiving export refunds is relevant.

An alternative, indirect way of understanding the impact of export refunds on price variability is to compare price variation of exported products which are subject to ER and those which are not.

We focused on the price variability of products chosen for the ER counterfactual analysis (Tab 3, Chapter 1), based on time series data on market prices at the farm gate or at the wholesale market level available from the Agriview database.

These data have been used to build the following indicators:

- price variability of products chosen for ER counterfactual analysis at different market level.
- FOB prices variability of products exported by the EU for products/countries chosen for counterfactual analysis.

The judgement criteria and indicators used for answering the EQ 1 are synthesised in the following table:

A: Entry price scheme

Judgement criteria		Indicators		Data sources
A1	How often have Standard Import Values fallen below the trigger Entry Price?	A1.1	Distribution of SIV below the trigger EP for products/countries identified for the counterfactual analysis	EC statistics Comext
		A1.2	Monthly distribution of imports. Analysis of correlation between the two indexes.	
A2	What has been the likely effect of the EPS on the quantity of imports that have reached EU markets?	A2.1	Share of export to EU on total supply for products/countries identified for counter factual analysis.	EC statistics FAOSTAT UN COMTRADE Comext
		A2.2	Share of exports variation to EU on total export variation for products/ countries identified for counter factual analysis.	
		A2.3	Variability of EU imports of products chosen for counterfactual analysis.	
		A2.4	EU internal production and EU internal supply (production plus net imports) variability for products chosen for counterfactual analysis.	
A3	What impact would the additional imports have had on domestic prices?	A3.1	Impact analysis based on the price elasticity of demand for the involved products.	EC statistics

Judgement criteria		Indicators		Data sources
A4	Effect of the EPS on prices in terms of price variability	A4.1	Price variability of products chosen for counterfactual analysis at different market level.	EC statistics
		A4.2	FOB price variability of products exported in the EU and of products sent to other countries for products/countries chosen for counterfactual analysis	

B) Export Refunds scheme

Judgement criteria		Indicators		Data sources
B1.	How often have export refunds been actually granted?	B1.1	For each product, analysis on the quantity time series that have received export refunds	EC statistics
B2.	What is the likely effect of the ERS on the quantity of products available on the EU markets?	B1.1	Correlation between variation of EU internal production and variations of quantity of products benefiting of ER.	Cronos EC statistics Comext
		B2.2	Variation of quantity of products that benefited from ER on total quantity of F&V benefiting of ER.	
		B3.3	Variability of EU internal production and EU internal supply (production plus net exports) for products with and without ER chosen for counterfactual analysis .	
B3.	What would the impact on domestic prices have been if the ERS had not been in place?	B3.1	Comparison, for each product, of the data on the timing of export refunds and on withdrawals	EC statistics
B4.	Effect of the ERS on price variability of F&V	B4.1	Price variability of products chosen for ER counterfactual analysis at different market level.	EC statistics FAOSTAT Comext
		B4.2	FOB prices variability of products exported by the EU for products/countries chosen for counterfactual analysis.	

4.1.1.3 Data sources and limits

For non EU countries, we used data on trade taken from the Comtrade database and data on production from the Faostat database. In some cases, we found that reported exports exceeded domestic production, something that is difficult to justify given that the data refers to perishable products. Moreover, in some cases of country/product combinations, the series of data on trade was not complete.

A further problem arises with data on tomatoes. The production data from the Faostat database does not distinguish between tomatoes for fresh consumption and for processing.

The analysis on zucchini (courgettes) was not possible because the Faostat database does not keep data on this product.

As we have already defined in the paragraph 3.2.1 “Limits of the analysis on Export refunds for processed products”, the analysis carried out within theme 1 does not consider the effects of ER for processed F&V products on the stability of their market.

4.1.1.4 Entry Prices scheme analysis

A1 - How often the Standard Import Values have fallen below the trigger Entry Price?

In the preparatory analysis, we conducted a preliminary analysis of the number of cases when SIVs were recorded at a price below the trigger EP and of their distribution, taking such an indicator as a proxy for the *potential* relevance of the EPS in affecting the flows of EU imports. The analysis was carried out taking into due consideration the working of preferential treatment of some countries.

This analysis has revealed quite different situations, depending on the country of origin and the products considered, although the analysis has confirmed the possibility of maintaining imports at prices below the trigger EP despite the existence of the EPS. Imports from some CEEC and SEMC countries such as Poland, Hungary, Bulgaria, Macedonia and Morocco in general, for example, have shown relatively large numbers of such occurrences.

Another general point is that a notable difference can be made for imports from countries other than those mentioned above, depending on whether imports come from the northern or from the southern hemisphere. In the first case, more distant countries like the US or Canada show very few recorded SIVs below the trigger EP, no matter which product is involved, while for countries closer to the EU border the situation varies according to the product involved: for all citrus fruits - with the exception of lemons - there are almost no recorded SIVs below the trigger EP for imports from Morocco, Turkey and Egypt. The same is observed for cherries and grapes imported from Turkey. In the case of zucchini and tomatoes, on the other hand, "breaking" SIVs are more frequent, especially in periods when the internal supply is also available on the EU market. One exception to this regularity is represented by imports of apples from China, whose SIVs have recently often been below the TEP.

In the case of imports from the southern hemisphere, occurrences of SIVs below the trigger entry price are relatively fewer, and they are mostly observed in periods when there are few imports. Their impact in terms of a disincentive to low priced imports is therefore likely to be limited.

The preliminary analysis revealed that the effects of the EPS are far from being clear and homogeneous across products and trade partners. While there is no general evidence that the existence of the EPS is capable of influencing low price imports, some specific cases have emerged – both from the preliminary analysis and from the debate that has been conducted in the recent past among operators in the sector – that deserve closer scrutiny. For this reason we will focus on a detailed analysis of daily SIVs for tomatoes imported from Morocco, lemons imported from Turkey and apples imported from China, comparing them with daily EU prices (See section A3 in the present chapter).

A2 - What has been the likely effect of the EP on the quantity of imports that have reached EU markets?

In order to detect a possible effect of the EP System on the quantities of F&V that enter the EU market, we analyzed the data on production and exports of a number of products (see Tab. 4 for major EU trade partners.

For each product and for each of the major exporters, we analyzed the evolution over the period 1995-2005 of the share of exports towards the EU-15 out of total exports and total production, based on data from the Comtrade and FAOSTAT databases respectively.

The detailed results are reported in the Annex to EQ1, where the series of exports towards the EU-15, exports to other countries and production are included, along with the relative shares.

The overall objective of such an analysis was to detect whether or not a consistently different pattern could be detected for products subject to the EPS and products which are not.

As expected, the results are quite diversified, depending once again on the product and the country of origin.

Tab. 4 - Products and countries of origin analyzed to assess the impact of EPS on the variability of quantities reaching the EU market.

Products	Countries
Subject to the EPS	
Apples	Argentina, Brazil, Chile, New Zealand, South Africa
Pears	Argentina, Chile, China, South Africa
Table grapes	Argentina, Brazil, Chile, Egypt, South Africa
Oranges	Argentina, Egypt, Morocco, South Africa, Uruguay
Tomatoes	Israel, Morocco, Turkey
Cucumbers	Bulgaria, Hungary, Lithuania, Morocco, Romania, Turkey
Globe artichokes	Morocco, Tunisia, Egypt
Not subject to the EPS	
Kiwifruits	Chile, New Zealand
Grapefruits	Argentina, Israel, South Africa, Turkey, USA
Melons	Brazil, Costa Rica, Israel, Morocco, Panama
Strawberries	Egypt, Morocco, Usa
Onions	Argentina, Australia, Chile, Egypt, New Zealand
Beans	Egypt, Kenya, Morocco, Senegal
Sweet peppers	Israel, Morocco, Turkey
Asparagus	Mexico, Morocco, Peru

Evolution of the share of exports to the EU over total exports and total production

The first indicator relates to the structure of exports of the major exporters of F&V to the EU.

The graphs below (one for fruits and one for vegetables) indicates the average share of exports towards the EU-15 over the period 1995-2005 over total exports and total production for all major products and countries. Values on the left of the horizontal axis indicate situations where exports are specialized towards the EU. Values on the top part of the vertical axis indicate cases of export-oriented production.

Products subject to the EPS are indicated with a red square , while others are marked with a blue triangle .

Fig. 4 - Shares of Exports towards the EU-15 over total Exports and total Production for a selection of fruits and countries of origin

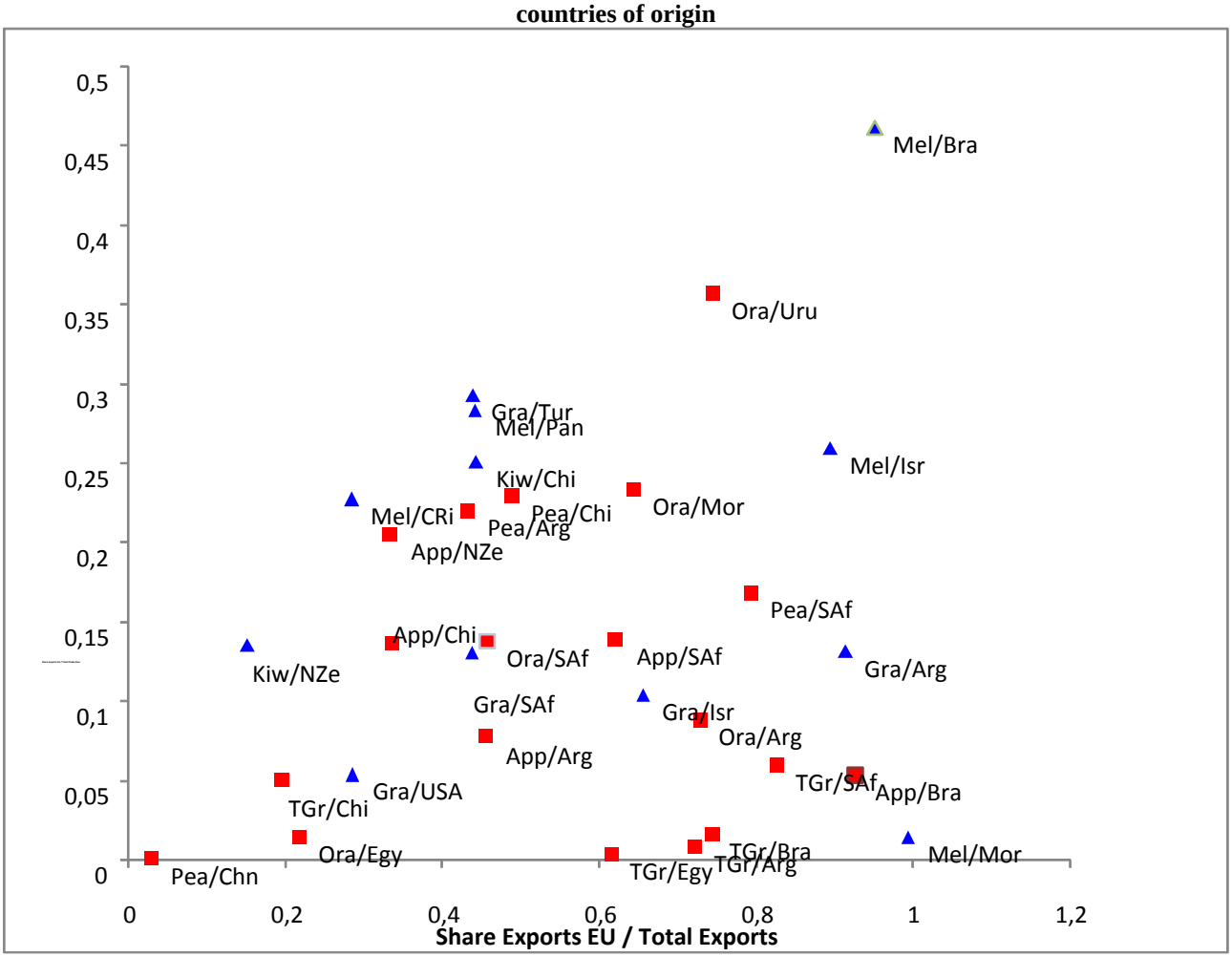
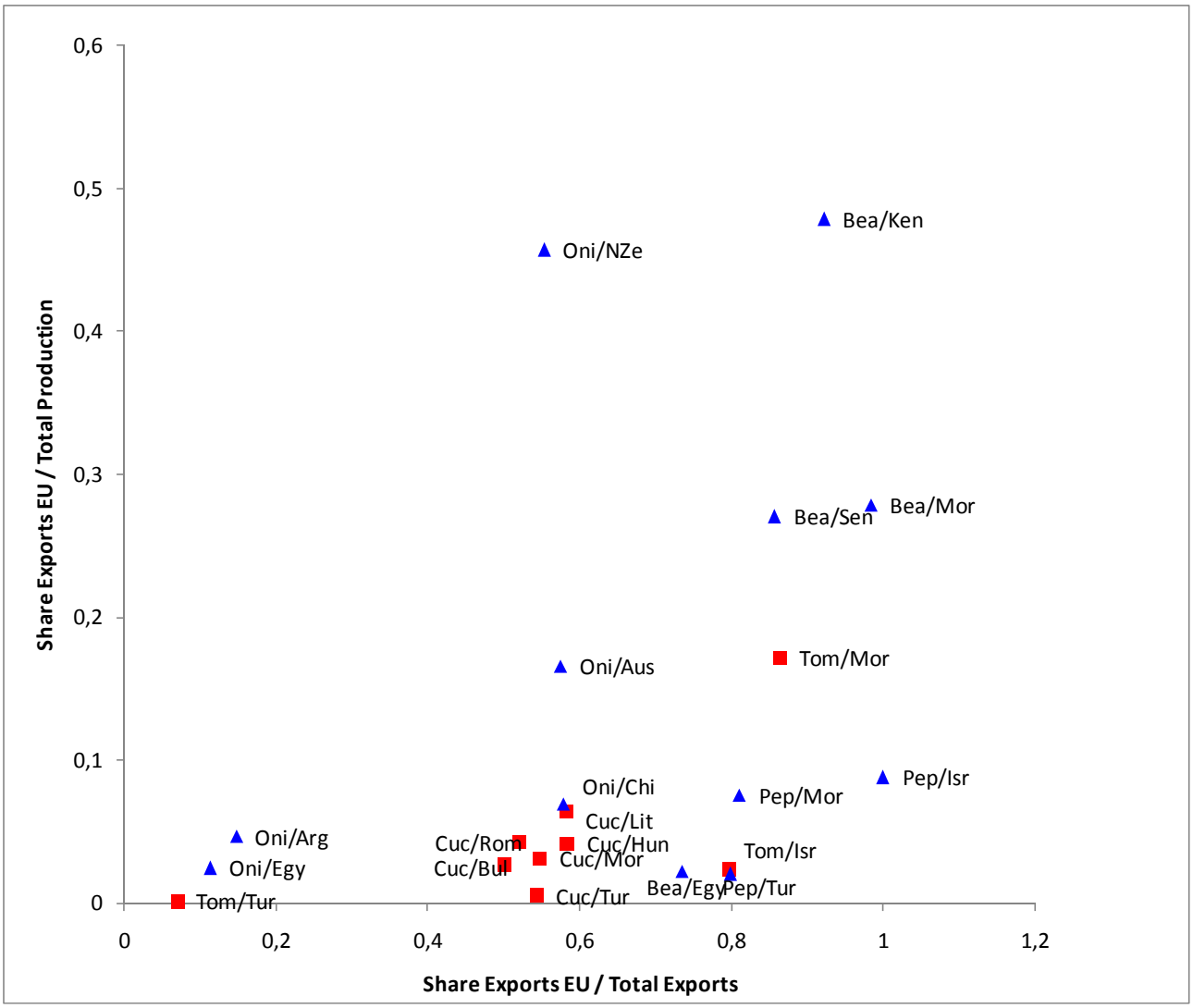


Fig. 5 - Shares of Exports towards the EU-15 over total Exports and total Production for a selection of vegetables and countries of origin



Legend – Countries and Products abbreviations:

Countries				Products	
Arg	Argentina	NZe	New Zealand	App	Apple
Aus	Australia	Pan	Panama	Bea	Beans
Bra	Brazil	Rom	Romania	Cuc	Cucumbers
Bul	Bulgaria	Ken	Kenya	Gra	Grapefruits
Chi	Chile	SAf	South Africa	Kiw	Kiwifruits
Chn	China	Sen	Senegal	Mel	Melons
CRi	Costa Rica	Tur	Turkey	Oni	Onions
Egy	Egypt	Uru	Uruguay	Ora	Oranges
Hun	Hungary	USA	United States of America	Pea	Pears
Isr	Israel			Pep	Peppers
Lit	Lithuania			TGr	Table Grapes
Mor	Morocco			Tom	Tomatoes

For both fruits and vegetables, comparison of products for which there are Entry Prices with those for which there are no Entry Prices does not show a clear dichotomy, thus suggesting that, per se, the possible effect of

the EPS is not such as to determine a definite structure of exports. Other factors, such as the distance the EU borders, are likely to be equally, if not more relevant.

Share of exports variation to EU, USA and Australia out of total production variation for apples, oranges, table grapes and countries identified for the counter factual analysis

The second indicator that has been formed in order to detect whether there has been an impact of EP system on the flows of exports towards the EU is the comparison between the *variations* in exports towards the EU and towards other countries.

The hypothesis we wanted to verify with such an indicator is whether being subject to the EPS represents a hindrance to the possibility of expanding exports towards the EU in cases of surplus in the countries of origin. This would, in fact, be a manifestation of the sheltering role that a system such as the EPS ought to play, protecting the EU market from imported instability, especially instability due to excess supply.

In order to determine whether such an effect existed, for each product chosen for the counterfactual analysis and for the major countries of origin, we measured the average ***elasticity of exports towards the EU in relation to production***, that is, the ratio between the percentage change in exports towards the EU and the percentage change in production.

In the absence of any barrier to trade, and assuming that no other factor would modify, over the years, the structure of production and exports of the considered products, one would expect to measure an elasticity equal to one.

On the contrary, if the EPS constituted a barrier to the expansion of exports towards the EU the elasticity of exports toward the EU in relation to production would be less than one.

The comparison of annual percentage changes in exports towards EU and exports towards non EU is shown in a series of graphs for each product and country and in a table which summarizes the results, all included in the Annex to EQ1.

Other than for Argentina's exports of apples, oranges and pears and a few others combinations, the hypothesis of a unit elasticity between exports to the EU and production must be rejected. This evidence is consistent with the presence of some form of effective hindrance to the potential expansion of exports towards the EU following increased domestic production in many of the EU trading partners.

Nevertheless, this finding alone is not sufficient to conclude that the EPS is at the origin of such a phenomenon, especially if we note that the pattern of links between production and exports to the EU is common to both products subject to the EPS and not.

Such barriers, in fact, could be due to other phenomena, such as, for example, the organisation of markets in destination countries. Given the prevailing organisation of the retail markets of F&V, particularly in northern EU countries, which is dominated by large retailer chains, suppliers from foreign countries must have the capacity to continuously supply the market with the quantity and quality required by the purchaser. Therefore, the flows of exports from origin countries cannot be related only to the availability of production surplus.

As indirect support for the idea that the EPS cannot be considered the major factor behind the existing hindrance to trade, Tab. 5, 6 and 7 below show the comparison of values of elasticity of exports as regards domestic production for exports towards the EU-15, USA and Australia for the years 1994-2005, for apples, oranges and table grapes.

Tab. 5 - Comparison of the elasticity of apples exports towards the EU-15, the US and Australia in relation to domestic production. (1994-2005)

	Argentina			Brazil			Chile			China			New Zealand			South Africa		
	EU-15	USA	Austr.	EU-15	USA	Austr.	EU-15	USA	Austr.	EU-15	USA	Austr.	EU-15	USA	Austr.	EU-15	USA	Austr.
1994	1.89	1.46	n.a.	165.56	111.23	n.a.	1.91	2.44	n.a.	-4.41	-0.45	n.a.	-2.12	-1.31	37.18	n.a.	n.a.	n.a.
1995	3.85	11.85	n.a.	28.69	40.31	n.a.	5.28	0.95	n.a.	n.a.	0.06	n.a.	4.83	5.24	-9.36	n.a.	n.a.	n.a.
1996	-3.71	-2.52	n.a.	-34.75	-33.34	n.a.	-0.68	3.35	n.a.	n.a.	2.37	n.a.	-1.10	-1.01	-20.95	n.a.	n.a.	n.a.
1997	-3.00	3.69	n.a.	44.04	-1.99	n.a.	0.63	0.46	n.a.	79.41	14.54	n.a.	-0.03	-3.22	217.21	n.a.	n.a.	n.a.
1998	2.01	5.03	n.a.	172.13	n.a.	n.a.	0.34	2.13	n.a.	4.59	-0.74	n.a.	0.87	0.16		5.53	4.15	n.a.
1999	-0.68	18.25	n.a.	20.53	n.a.	n.a.	0.82	0.70	n.a.	4.72	4.25	n.a.	10.29	6.61		0,1444	2.38	n.a.
2000	1.92	1.51	n.a.	0.52	-1.13	n.a.	1.61	0.03	n.a.	-84.16	-19.97	n.a.	-1.13	-0.66		-15.49	-10.05	n.a.
2001	1.51	1.14	n.a.	1.05	2.54	n.a.	1.41	1.43	n.a.	-63.73	-0.99	n.a.	0.81	0.82		-5.25	-7.09	n.a.
2002	0.89	2.35	n.a.	3.83	62.26	n.a.	n.a.	n.a.	n.a.	-16.26	-11.55	n.a.	1.78	1.83		-1.40	2.22	n.a.
2003	2.54	11.89	n.a.	-10.07	1.97	n.a.	n.a.	n.a.	n.a.	11.98	4.03	n.a.	-2.77	-3.07		0,125	1.43	n.a.
2004	-2.06	15.22	n.a.	5.85	45.12	n.a.	n.a.	n.a.	n.a.	7.53	2.22	n.a.	1.82	0.97		-0.74	-0.62	n.a.
2005	n.a.	n.a.	n.a.	2.67	6.37	7.56	0.01	-13.44	n.a.	-35.24	4.57	n.a.	7.65	1.63		1.24	1.23	n.a.

Note: n.a. = not available. Source: UN-FAOSTAT data processed by Agrosynergie.

Tab. 6 - Comparison of the elasticity of oranges exports towards the EU-15, the US and Australia in relation to domestic production. (1994-2005)

	Argentina			Brazil			Egypt			Morocco			South Africa		
	EU-15	USA	Austr.	EU-15	USA	Austr.	EU-15	USA	Austr.	EU-15	USA	Austr.	EU-15	USA	Austr.
1994	6.07	n.a.	n.a.	-8.21	111.23	n.a.	n.a.	n.a.	n.a.	-0,943	n.a.	n.a.	n.a.	n.a.	n.a.
1995	2.62	n.a.	n.a.	-1,15	40.31	n.a.	26.48	n.a.	n.a.	0,6512	n.a.	n.a.	n.a.	n.a.	n.a.
1996	0.05	2.83	n.a.	-2.87	-33.34	n.a.	-0.415	n.a.	n.a.	1,5949	n.a.	n.a.	n.a.	n.a.	n.a.
1997	0.11	n.a.	n.a.	-1.04	-1.99	n.a.	7.05	n.a.	n.a.	1,3104	n.a.	n.a.	n.a.	n.a.	n.a.
1998	-0.75	n.a.	n.a.	2.73	n.a.	n.a.	-8.18	n.a.	n.a.	-0,097	n.a.	n.a.	n.a.	n.a.	n.a.
1999	1.08	n.a.	n.a.	6.22	n.a.	n.a.	-1.72	n.a.	n.a.	0,4252	n.a.	n.a.	n.a.	n.a.	n.a.
2000	-3.78	n.a.	n.a.	4.31	-1.13	n.a.	n.a.	n.a.	n.a.	56,013	n.a.	n.a.	n.a.	n.a.	n.a.
2001	10.09	371.43	n.a.	-4.83	2.54	n.a.	n.a.	n.a.	n.a.	1,5444	n.a.	n.a.	6.39	7.79	848.40
2002	1.47	n.a.	n.a.	-8.01	62.26	n.a.	n.a.	n.a.	n.a.	4,3869	n.a.	n.a.	-18.31	0.01	-74.82
2003	-0.26	n.a.	n.a.	-9.14	1.97	n.a.	n.a.	n.a.	n.a.	1,2647	n.a.	n.a.	0.94	6.28	-12.60
2004	1.75	n.a.	n.a.	2.50	45.12	n.a.	35.17	n.a.	-3.51	1,4662	n.a.	n.a.	-1.65	0.39	n.a.
2005	-5.91	n.a.	n.a.	25.44	6.37	n.a.	-7.57	n.a.	16.96	2,1121	n.a.	n.a.	4.00	5.86	-24.68

Note: n.a. = not available. Source: UN-FAOSTAT data processed by Agrosynergie.

Tab. 7 - Comparison of the elasticity of table grapes exports towards the EU-15, the US and Australia in relation to domestic production. (1994-2005)

	Argentina			Brazil			Chile			Egypt			South Africa		
	EU-15	USA	Austr.	EU-15	USA	Austr.	EU-15	USA	Austr.	EU-15	USA	Austr.	EU-15	USA	Austr.
1994	0.82	n.a.	n.a.	-17.69	n.a.	n.a.	0.46	-0.17	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1995	3.29	n.a.	n.a.	3.09	56.40	n.a.	-0.81	-0.85	n.a.	2.22	n.a.	n.a.	n.a.	n.a.	n.a.
1996	-2.81	n.a.	n.a.	2.46	5.43	n.a.	2.82	1.27	n.a.	0.31	n.a.	n.a.	n.a.	n.a.	n.a.
1997	0.65	n.a.	n.a.	-0.88	n.a.	n.a.	-4.05	3.47	n.a.	6.19	-16.37	n.a.	n.a.	n.a.	n.a.
1998	-1.83	n.a.	n.a.	0.05	n.a.	n.a.	15.12	4.43	n.a.	0.02	n.a.	n.a.	n.a.	n.a.	n.a.
1999	1.33	8.12	n.a.	3.39	n.a.	n.a.	-2.45	1.29	n.a.	10.03	n.a.	n.a.	n.a.	n.a.	n.a.
2000	20.66	108.09	n.a.	16.06	66.87	n.a.	0.03	1.61	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2001	0.32	0.41	n.a.	20.61	-23.34	n.a.	0.64	2.27	0,00	n.a.	n.a.	n.a.	0.46	2.43	-133.18
2002	5.80	-2.01	n.a.	6.15	43.31	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.89	-2.33	-3.56
2003	-3.02	31.34	n.a.	-5.79	-9.77	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-0.30	-5.85	9.01
2004	1.46	-2.96	n.a.	-1.27	7.39	n.a.	n.a.	n.a.	n.a.	19.44	2.22	n.a.	3.80	-0.95	n.a.
2005	0.01	-4.33	n.a.	-37.37	-63.20	7.56	0.56	0.38	n.a.	36.20	4.57	n.a.	0.52	11.80	n.a.

Note: n.a. = not available. Source: UN-FAOSTAT data processed by Agrosynergie.

Apart from very few cases, underlined in the table, the elasticity of exports toward the EU-15 and towards the US are of the same sign, and their magnitude is, in general, not dissimilar, especially for origin countries such as New Zealand and South Africa, for which a very similar pattern of exports over the years can be detected towards the EU and towards the USA. For Australia there are few available data not completely in line with the elasticities found for the EU and the USA. Also in the case of oranges and grapes exports toward the EU and USA often show the same elasticities, while for Australia only few data are available.

The inference that we can confidently draw from this analysis is that, while certainly not excluded, the impact of the EPS is not such as to be clearly reflected on the structure of the flows of exports from the major EU trade partner, given the impossibility of isolating it from the impact of the many other factors affecting export decisions.

Variability of EU imports of products chosen for counterfactual analysis

A further indicator is obtained by comparing the variability of quantity imported by the EU-15 over the entire period 1995-2006 of the most relevant products subject to the EPS with the variability of imports of products not subject to the EPS, as chosen for the counterfactual analysis.

Once again, the objective of this analysis is to verify whether a systematic difference can be detected between the two groups, so that it might be credibly attributed to the EPS. In particular, we sought to verify whether the presence and functioning of the EPS might have induced a *lower* variability, due to the reduction of EU imports at low prices.

The table below reports data on the coefficient of variation, average and standard of quantities imported by the EU-15 from the set of extra EU-15 countries, for the period 1995-2006, obtained from the EU Comext database.[18] The first panel includes products subject to the EPS, broken down by vegetables and fruits, while the second panel includes products not subject to the EPS.

[18] The data used are calendar year (January-December) total imports reported by the Comext database. For products which may be stored for a significant period of time, they may include exports of products belonging to two subsequent producing reasons. In the Annex to EQ1 there is a similar table with the data for the EU-25 and the period 1999-2006 which confirms the result.

Tab. 8 - Comparison of variability of imports in the EU -15 (1995-2006)

		EU-15 imports from Extra EU-15 countries		
		Coefficient of Variation	**Average (tons)**	**Standard Deviation (tons)**
Subject to EPS	Tomatoes	0.42	271 847	114 840
	Cucumbers	0.47	29 174	13 758
	Courgettes	0.74	20 006	14 902
	Artichokes	1.24	3 068	3 796
	Vegetables (weighted average)	***0.452***		
	Oranges	0.09	850 307	79 903
	Grapes	0.32	359 951	116 055
	Apples	0.17	736 644	127 003
	Pears	0.12	290 960	34 163
	Fruits (weighted average)	***0.157***		
	F & V (weighted average)	***0.195***		
Not subject to EPS	Asparagus	0.35	35 063	12 144
	Onions	0.18	291 760	51 711
	Beans	0.46	102 029	46 787
	Peppers	0.45	80 168	35 957
	Vegetables (weighted average)	***0.29***		
	Grapefruits	0.14	378 050	53 200
	Melons	0.41	193 545	78 637
	Strawberries	0.33	39 391	13 052
	Kiwifruits	0.20	173 399	34 917
	Fruits (weighted average)	***0.229***		
	F & V (weighted average)	***0.253***		

Source: EU – Comext data processed by Agrosynergie

The result of the analysis is that no general conclusion regarding a systematic effect of the presence of the EPS system on the variability of imports can be drawn. Nevertheless, it is worth noting that the quantity-weighted average of the coefficient of variation CV for imports of fresh vegetables which are not subject to the EPS (0.29) appears to be lower than the corresponding figure for the products with an EP (0.452) while the opposite is true for the fruits considered, where the average value for those subject to the EPS (0.157) is lower than the one for the counterfactual set of products (0.229).

Even on a product-by-product basis, the comparison reveals no difference that might suggest a consistent stabilization role associated with the presence of the EP system.

Although this analysis too cannot be considered conclusive, the evidence provided by this indicator certainly does not support the hypothesis that the EPS might have consistently contributed to a reduction of the variability of imports.

A3 - What impact would the additional imports have had on domestic prices?

Impact of the EPS on the level and variability of EU domestic prices

As mentioned many times, the EPS is intended to contribute to stabilising EU internal prices by reducing the occurrence of imports at very low prices.

In principle, the effect of the application of the EPS on the level of EU prices could be determined by knowing the relevant elasticity of demand of the products involved, and by estimating the reduction in prices that would be caused by the sale, on domestic markets, of the additional imports that would have reached the EU market, had the EPS not been in place. Unfortunately, given that no reliable quantitative estimate of such

potential additional imports can be obtained from the available data, such a direct way of assessing the impact of the EPS on price levels cannot be pursued.

On the other hand, even a simple comparison of the *levels* of prices between products which are subject to the EPS and those that are not would be meaningless, given that it makes no sense to compare the price of, say, apples with that of melons.

We therefore decided not to pursue further the attempt of providing a quantitative measure of the impact of the EPS on the level of prices, and focused on the impact on price *variability* instead, for which a comparison across different products is legitimate.

With no possibility of directly determining the impact of the functioning of the EP system on price *levels* , we can indirectly look for evidence of an impact of the EPS on the *variability* of prices by comparing the characteristics of the time series of prices for products that are subject to the EPS and products that are not.

For this analysis we have used the data available through the Agriview database, which records the domestic daily prices for a number of representative wholesale markets in the EU.

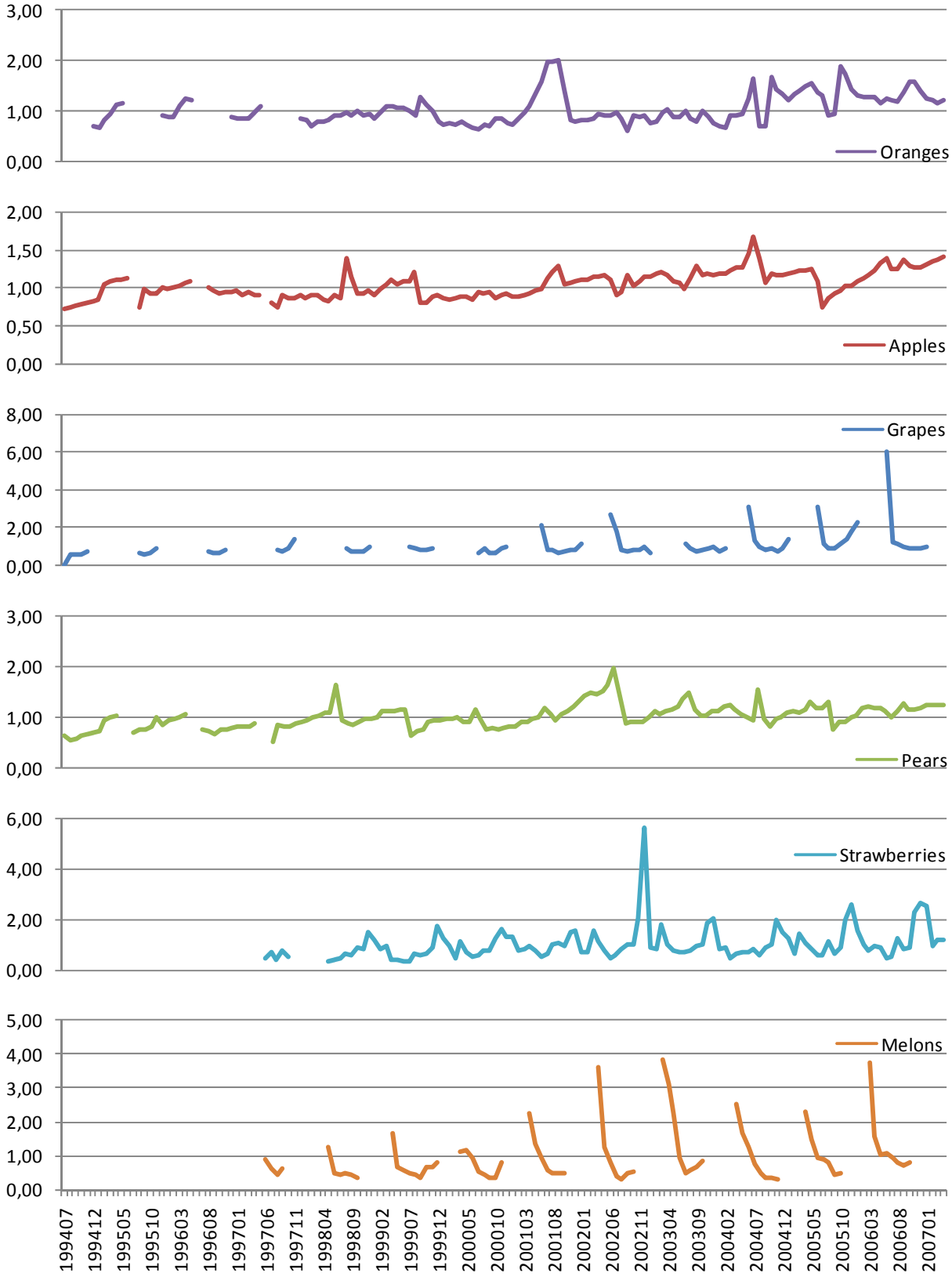
A first analysis has concerned the series of indexes of EU average monthly prices for those products selected for the counterfactual analysis for which sufficiently dense series were available. [19]

The indexes were formed by first calculating the monthly prices as the simple average of the prices reported in the Agriview database for the main markets, converting all of them into current euro and then dividing each value by the overall series' average, in order to check for differences in magnitudes. In this way each series of indexes will have an average of one.

The following graphs (Fig. 6) report the time series of monthly price indexes from July 1994 through January 2007, for the four fruits and the two vegetables we considered respectively.

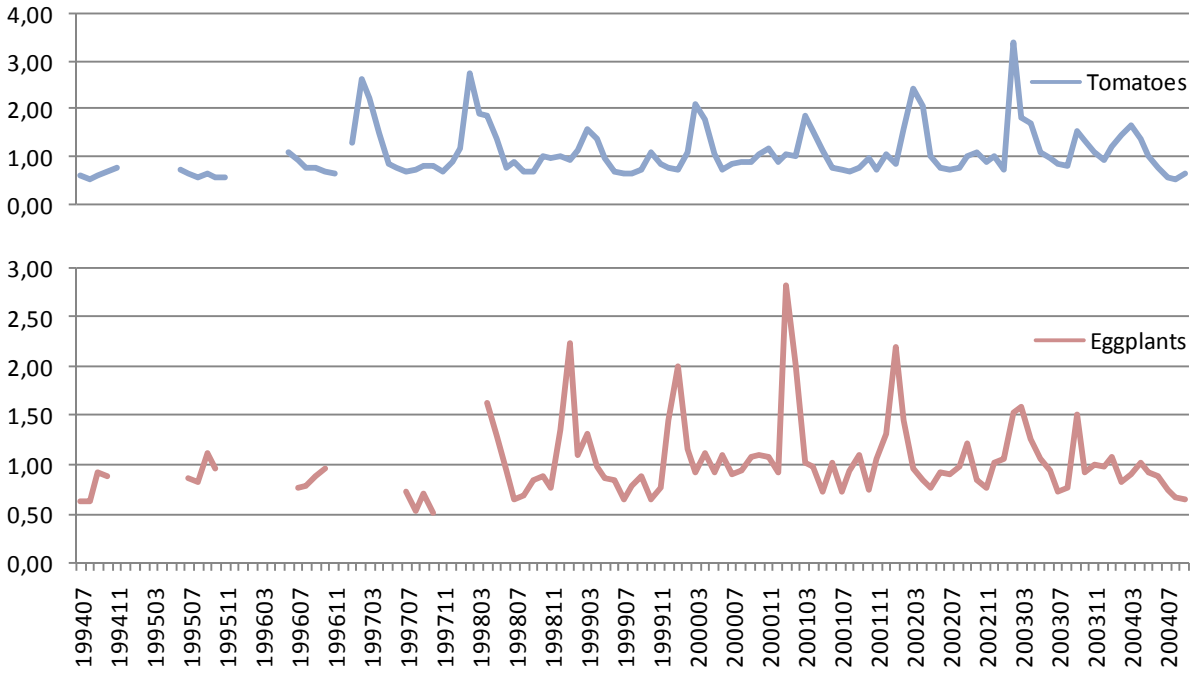
[19] Of the 16 products chosen for the counterfactual analysis, no sufficiently long and consistent series of prices was available for kiwifruits, grapefruits, cucumbers, artichokes, zucchini, asparagus, peppers, onions and beans. We were therefore left with only seven products. In addition to the price of fresh tomatoes, we used eggplants as an example of a vegetable not subject to the EPS.

Fig. 6 - Time series of monthly price indexes for fruits. EU Averages, July 1994 – January 2007



Source: Agriview database, EUROSTAT for the exchange rate for conversion $/€

Fig. 7 - Time series of monthly price indexes for vegetables. EU Averages, July 1994 – July 2004



Source: Agriview database, EUROSTAT for the exchange rate for conversion $/€

As can be seen, while no evident trend can be visibly detected, all series show a clear seasonal pattern. This is important to consider, given that the seasonal variability of prices, which is a feature of fruit and vegetable consumption, might dominate and hide the differential impact of the EPS that we seek to detect. Therefore, before calculating indexes of variability, the series of EU-average monthly price indexes have been processed to control for both trend and seasonality. We did this by taking the $\Delta\Delta_{12}$ differences.[20]

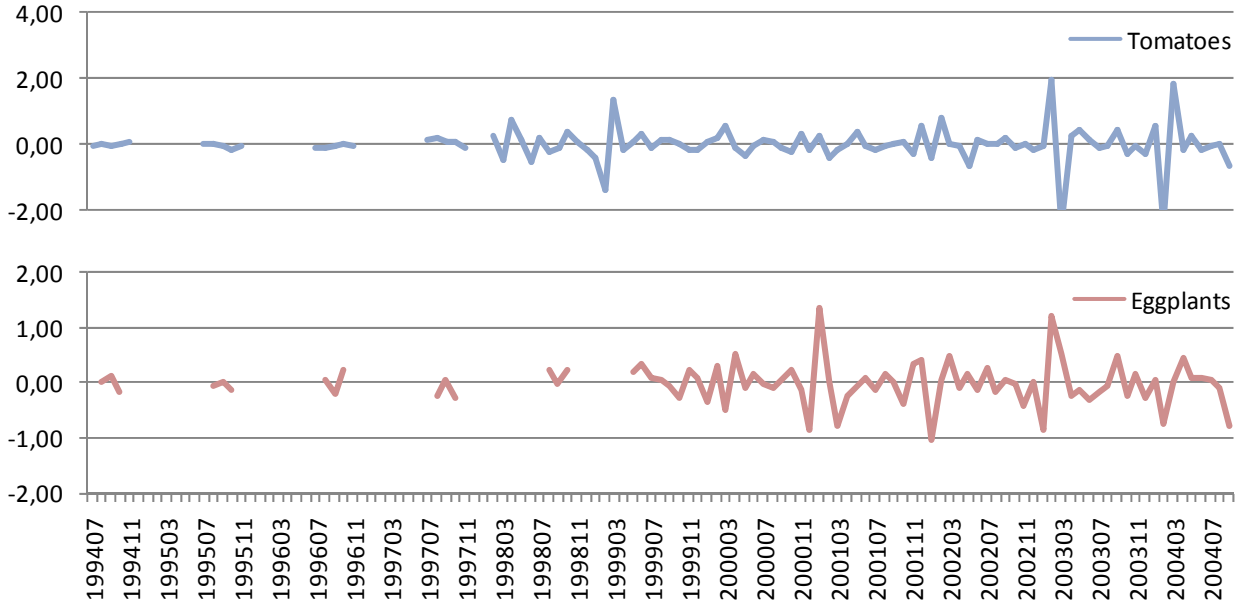
The resulting indexes capture the residual variability of the price series, net of effects due to magnitude, trend and seasonality. The following graphs report the $\Delta\Delta_{12}$ series of monthly prices for the six fruits (oranges, grapes, apples, pears, melons and strawberries) and the two vegetables (tomatoes and eggplants) considered in the analysis respectively.

[20] In the time series literature, the "delta" operator Δ is used to indicate the operation of taking differences between values of the series. In general, for a time series p_t, for $t = 1, ..., T$, the Δ_n series is obtained as: $\Delta_n p_t = p_t - p_{t-n}$
The series $\Delta\Delta_{12}$ is obtained by applying the Δ_{12} operator first and then the Δ_1 operator. The Δ_{12} operation has the effect of eliminating from the series of monthly data any seasonal component of period 12, while the Δ_1 operation eliminates a possible linear trend.

Fig. 8 - Time series of monthly $\Delta\Delta_{12}$ differences price indexes for fruits. EU Averages, July 1994 – July 2004.

Source: Agriview database, EUROSTAT for the exchange rate for conversion $/€

Fig. 9 - Time series of monthly $\Delta\Delta_{12}$ differences price indexes for vegetables. EU Averages, July 1994 – July 2004.



Source: Agriview database, EUROSTAT for the exchange rate for conversion $/€

Visual analysis of the graphs confirms that both trends and seasonality have been eliminated, and that all series are centred around zero, as expected. Also, we can note that the variability of strawberry prices has been sizeably higher than that of other fruits,[21] especially in the period between 1999 and 2001, while no evident difference can be noted between the variability of prices of tomatoes and eggplants, or between the variability of prices of other fruit products, other than strawberries.

Of course, visual inspection is not sufficient for detecting more subtle differences. We therefore calculated quantitative measures of the characteristics of the $\Delta\Delta_{12}$ series. For each series, the number of observations, average, standard deviation, minimum, maximum, interquartile range, asymmetry and kurtosis were calculated and listed in the Annex to EQ1 (Para. 1.1.4. – "*Impact of the EPS on the level and variability of EU domestic prices*").

Tab. 9 below reports only the most relevant parameters. The standard deviation is the measure of variability we have considered.[22] Skewness is a measure of the asymmetry of the distribution. A positive skewness indicates a more concentrated mass of probability on low values, so that the graph of the distribution would have a long tail to the right. On the other hand, negative skewness indicates a longer tail to the left. A perfectly symmetrical distribution would have zero skewness. Kurtosis, for its part, is a measure of how "peaked" the distribution is. Higher kurtosis means that the variance is due more to infrequent extreme deviations, as opposed to frequent modestly-sized deviations.

The expected effect of a stabilization mechanism such as the EPS might be considered, which would cut the lower tail of the distribution (i.e. reducing the occurrence of very low prices), is that of inducing *lower standard deviation, positive skewness and higher kurtosis*.

[21] Notice the different scale on the graph of strawberry price indexes.

[22] Given that the series of indexes have been normalized and de-trended to have a common mean of zero, this value can legitimately be compared across commodities.

Tab. 9 - Comparison of variability of prices in the EU - 15 for fruits and vegetables (Jul 1994-Apr 2007)

		No of observations	Standard Deviation	Skewness	Kurtosis
Fruits					
With EP					
	Oranges	120	0.244	0.06	3.45
	Apples	142	0.152	-0.25	4.18
	Grapes	60	0.461	-3.98	24.24
	Pears	141	0.164	0.57	5.22
Without EP					
	Strawberries	106	0.902	-0.18	10.62
	Melons	51	0.451	-0.02	3.85
Vegetables					
With EP					
	Tomatoes	131	0.465	-1.31	9.88
Without EP					
	Eggpants	111	0.448	-0.13	1.40

Source: Agriview data processed by Agrosynergie

Although a statistically significant test cannot be conducted, given the limited number of cases considered, we can note that the only result which is consistent with the presence of a price stabilization effect at the level of average monthly prices is the lower value of the standard deviation for prices of fruits subject to the EPS, when compared to the corresponding index for products that are not subject to the EPS.

However, we should also consider that the two groups include quite different products, and that apples, pears and oranges have a much longer marketing season than strawberries and melons, and that storage may help to explain the lower variability of de-seasonalized prices of apples and pears.

The comparison of the results for tomatoes and eggplants shows that, once the effect of seasonality has been excluded, the two series of prices have similar variability, as measured by the standard deviation of the $\Delta\Delta_{12}$ index of prices (0.465 for tomatoes and 0.448 for eggplants). The distribution of tomato price indexes is characterized by a higher frequency of values around the mean and relatively heavier tails when compared to that of eggplants, as witnessed by the kurtosis values. In combination with the negative asymmetry, this seems to be at odds with the prediction of a significant effect of the Entry Price System on the EU average monthly prices.

In general, the values of skewness for tomatoes, apples, pears and oranges, is at odds with the predictable effects of a price stabilisation mechanism that would eliminate the lower tail of the price distribution.

Although the robustness of the analysis is low due to the limited number of cases for which consistent time series of prices were available, the conclusion that we can legitimately draw from the analysis conducted is that there is no evidence, both for fruits and vegetables, of a difference in the level of EU average monthly prices that could be imputed to the working of the EPS.

Of course, monthly averages of prices at the EU level might hide many phenomena which could be relevant at the local level for some specific products and specific origins. Previous studies have found indirect evidence of such local relevance of the EPS. Chemnitz and Grethe (2005) for example analyzed the case of tomato imports from Morocco, finding that the EPS effectively restricts Moroccan tomato exports[23], while Goetz and Grethe (2007) analyzed the case of imports of apples and pears from China, also concluding for a

[23] Chemnitz, C. and H. Grethe, *EU Preferences for Moroccan Tomato Exports – Who Benefits?* Contributed paper presented at the XIth Congress of the European Association of Agricultural Economists. The Future of Rural Europe in the Global Agri-Food System. Copenhagen, 24-27 August 2005.

restrictive effect of the EPS[24]. However, those analyses focused only on the time series characteristics of the SIVs of the products considered, with no attempt at linking them to the actual market prices in the EU destination market. Our aim here is, instead, to try and detect the kind of relationship that exists between the value of imports and the prices recorded in local EU markets. Even for the few products considered, however, the resulting high number of possible product/country of origin combinations would make the analysis of price variation very difficult, thus we conducted a detailed analysis of the possible impact of the EPS on *daily prices* only for three exemplary cases: tomatoes imported from Morocco, compared with the prices collected on the major Spanish markets, apples imported from China, compared with prices in all major European markets and lemons imported from Turkey, compared with prices collected in Cyprus, Italy, Spain and Portugal.

In order to highlight the impact of these imports on EU daily prices, we performed a comparison of recorded Standard Import Values (SIV) of these products/origins with the daily prices for the main EU markets as reported by the Agriview database. In particular, we attempted to identify the existing correlation between SIVs and EU wholesale market prices.

Coefficients of correlation were calculated on the series of daily prices and contemporaneous SIVs, and also on the series of differences between each daily value and the corresponding value from the previous year. Once again, the differences serve to check for marked seasonal variation which is characteristic of F&V prices and which might induce what is called a 'spurious correlation' between import SIVs and prices. The tables below give the results of the analysis.

Each table reports two sets of values: the left hand panel refers to the actual series of daily SIVs and prices (indicated as "absolute values") and the values are therefore affected by the common seasonal pattern of the series. The right hand panel reports instead the values measured on the series of differences between each value and the corresponding value from the previous year (which we call "yearly differences")[25].

For each series, three values are reported indicating the coefficient of correlation, the number of observations on prices for that market, and the number of coincidences between daily price and SIVs respectively.

It is to be noted that the higher the significance of the calculated coefficient of correlation, the higher the number of coincidences.

Tab. 10 - Correlation among Spanish markets' daily prices and SIVs of tomatoes imported from Morocco (Period September-May, Years 1995-2007)

Country	*Market*	*correlation with SIV*	*number of obs.*	*number of coincidences*	*correlation with SIV*	*number of obs.*	*number of coincidences*
		On absolute values			*On yearly differences*		
Spain	***Alicante***	***0.58***	*625*	*494*	***0.77***	*372*	*270*
	Almeria	***0.50***	*1343*	*1091*	***0.61***	*1032*	*778*
	Barcelona	***0.29***	*94*	*36*	*-0.64*	*43*	*12*
	Granada	***0.33***	*344*	*304*	***0.42***	*168*	*143*
	Las Palmas	***0.65***	*613*	*547*	***0.74***	*411*	*356*
	Malaga	***0.73***	*886*	*671*	***0.82***	*620*	*435*
	Murcia	***0.11***	*1368*	*1113*	***0.41***	*1055*	*813*
	Valencia	***0.61***	*276*	*128*	***0.68***	*131*	*35*
SIV Morocco		***1.00***	*1447*	*1447*	***1.00***	*1184*	*1184*

Source: DG-Agri and Agriview data, processed by Agrosynergie

[24] Goetz, L. and H. Grethe, *Does the Entry Price System Restrict Fresh Fruit and Vegetables Exports from China to the EU?* Contributed paper presented at the 2007 IATRC Summer Symposium. Beijing, 8-9 July 2007.

[25] The correspondence has been ensured at the daily level. The price of the first day of the first week of January, for example, is subtracted from the price recorded for the first day of the first week of the following January, and so on.

As expected for series which have a common seasonal pattern, the correlations between daily domestic prices and contemporaneous SIVs, when measured on absolute values, are always positive.

Analysis of the correlation between the yearly differences, which eliminate the possible effect due to seasonality, confirms the existence of a strong underlying correlation between SIVs of Moroccan tomatoes and tomato prices on all southern markets (Alicante, Almeria, Malaga, Las Palmas) whereas there are not enough observations to allow for reliably measuring the correlation of Moroccan tomato price with the price in Barcelona or Valencia.

Tab. 11 - Correlation among European markets' daily prices and SIVs of lemons imported from Turkey (Years 1995-2007)

Country	*Market*	*correlation with SIV*	*number of obs.*	*number of coincidences*	*correlation with SIV*	*number of obs.*	*number of coincidences*
		On absolute values			*On yearly differences*		
Cyprus	***Nicosia***	***0.13***	*702*	*382*	***0.31***	*430*	*201*
Greece	***Achaia***	***0.48***	*26*	*15*	***-***	*0*	*0*
	Egio	***0.45***	*1446*	*790*	***-0.15***	*966*	*433*
	Xylokastro	***0.43***	*1444*	*748*	***0.14***	*1009*	*395*
Italy	***Catania***	***-0.28***	*974*	*475*	***0.00***	*518*	*194*
	Messina	***0.43***	*1603*	*825*	***0.10***	*1056*	*415*
	Palermo	***-0.19***	*708*	*339*	***-0.05***	*296*	*98*
	Siracusa	***-0.17***	*1506*	*869*	***-0.04***	*867*	*377*
Portugal	***Algarve***	***0.10***	*1170*	*648*	***-0.03***	*729*	*314*
	Oeste	***0.17***	*1147*	*630*	***-0.14***	*693*	*297*
Spain	***Alicante***	***0.27***	*1437*	*753*	***0.21***	*806*	*360*
	Malaga	***0.34***	*853*	*492*	***-0.42***	*445*	*218*
	Murcia	***0.32***	*2507*	*1386*	***0.13***	*1947*	*863*
SIV Turkey		***1.00***	*1535*	*1535*	***1.00***	*1049*	*1049*

Source: DG-Agri and Agriview data, processed by Agrosynergie

With regard to Turkish lemons, SIVs appear to be positively correlated with prices in Greece (Achaia, Egio, Xylocastro), Italy (Messina) and Spain (Alicante, Malaga, Murcia). In this case, however, if we exclude the effect of seasonality, the only market whose prices remain positively and significantly correlated with the SIVs of lemons from Turkey is, quite understandably, Nicosia in Cyprus.

Tab. 12 - Correlation among European markets' daily prices of Golden Delicious apples and SIV of apples imported from China (Years 1995-2007)

Country	Market	Correl.n with SIV	Number of obs.	Number of coincidences	Correl.n with SIV	Number of obs.	Number of coincidences
		On absolute values			On yearly differences		
Austria	Gleisdorf	**0.15**	108	87	**0.55**	52	37
	Wollsdorf	**-0.27**	621	145	**-0.11**	353	57
Belgium	Sint-Truiden	**-0.24**	852	515	**-0.03**	537	289
Czech Republic	Praha	**0.40**	107	89	**0.40**	60	44
Germany	Bodenseemarkt	**0.10**	275	132	**-0.09**	164	52
	Bonn	**0.30**	697	134	**0.12**	348	37
	Niedersachsen	**0.67**	79	70	**0.40**	34	30
	Stade	**0.04**	1372	167	**-0.03**	765	61
Spain	Girona	**-0.18**	2390	947	**0.05**	1722	547
	Huesca	**0.40**	281	175	**0.01**	49	32
	La Rioja	**0.35**	526	269	**0.05**	178	80
	Lleida	**-0.11**	3076	1107	**0.06**	2193	652
France	Angers	**-0.13**	1866	447	**0.22**	1325	194
	Montauban	**-0.13**	998	288	**0.04**	429	53
	Nimes	**-0.16**	1357	306	**0.29**	838	57
Greece	Hemathia	**0.20**	62	44	**-1.00**	8	2
	Naoussa	**0.05**	1649	253	**0.33**	1160	103
	Skydra	**-0.15**	1623	236	**0.10**	1076	76
	Tripolis	**0.26**	1283	214	**0.35**	803	63
	Volos	**0.55**	355	133	**0.49**	152	35
Hungary	Budapest	**0.35**	193	161	**-0.33**	93	72
Italy	Bolzano/Bozen	**-0.37**	3221	833	**-0.14**	2275	490
	Ferrara	**-0.29**	1683	150	**0.01**	966	8
	Ravenna	**-0.53**	1666	178	**-0.79**	1083	38
Netherlands	Den Bosh	**0.17**	363	181	**-0.22**	154	75
	Geldermalsen	**0.07**	2200	888	**0.07**	1431	521
Poland	Lubelsko-Sandomierski	**0.40**	185	162	**0.05**	43	37
Portugal	Cova da Beira	**-0.17**	1150	228	**-0.19**	666	84
	Guarda	**-0.07**	842	182	**-0.30**	341	62
	Oeste	**-0.34**	1416	317	**-0.12**	923	158
	Viseu	**-0.14**	1184	237	**-0.26**	713	91
SIV China		**1.00**	1306	1306	**1.00**	905	905

Source: DG-Agri and Agriview data, processed by Agrosynergie

Tab. 13 - Correlation among European markets' daily prices of Starking Delicious apples and SIVs of apples imported from China (Years 1995-2007)

Country	Market	Correl.n with SIV	Number of observations	Number of coincidences	Corre.n with SIV	Number of observations	Number of coincidences
		On absolute values			On yearly differences		
Spain	Girona	**0.13**	502	98	**-0.25**	139	18
	Lleida	**-0.41**	713	72	**-0.67**	215	9
Greece	Hemathia	**-0.02**	61	43	**-1.00**	8	2
	Naoussa	**0.13**	2 118	267	**0.35**	1 651	108
	Skydra	**0.07**	2 003	264	**0.25**	1 487	108
	Tripolis	**0.43**	1 468	216	**0.14**	964	83
	Volos	**0.46**	2 072	261	**0.55**	1 627	102
Italy	Bolzano/Bozen	**-0.02**	1 909	406	**-0.29**	1 362	181
	Ravenna	**-0.63**	312	182	**-0.33**	77	46
Portugal	Cova da Beira	**0.01**	940	139	**-0.29**	488	34
	Guarda	**-0.24**	691	127	**-0.41**	230	26
	Oeste	**-0.10**	985	140	**-0.22**	542	34
	Viseu	**-0.10**	1012	188	**-0.07**	563	63
SIV China		**1.00**	1306	1306	1.00	909	909

Source: DG-Agri and Agriview data, processed by Agrosynergie

The correlation between the SIVs of apples imported from China and prices on EU markets has been calculated for apples of two varieties for which we had detailed series of prices: Golden delicious and Starking delicious. The original SIVs (i.e. not de-seasonalised) are correlated with the contemporaneous prices recorded on the markets of Prague (CZ), Bonn, Niedersachsen (DE), Huesca (ES), Volos (GR) Budapest (HU), Lubelsko-Sandomierski (PL) for Golden delicious, Tripolis and Volos (Gr) for Starking delicious.

Once the seasonal effect is taken out, the series no longer express positive and significant correlations, with the only exception of Volos (GR) for both Golden Delicious and Starking Delicious.

The fact that, once the effect of seasonality has been eliminated, imports prices are uncorrelated with domestic EU prices for apples from China and for lemons from Turkey, can be explained by the limited quantitative relevance of such imports on the size of the EU market. In both cases, the evidence is not sufficient to conclude that the effect is due to the presence of the EPS.

The case of tomatoes from Morocco is more interesting. Careful daily price comparison shows that there is compelling evidence of a strong correlation between Moroccan SIVs and Spanish prices. Our analysis confirms through quantitative findings that, over the years, there has been competition between Moroccan and Spanish tomato productions in EU markets, a problem that has been recognized and addressed several times, for example through modifications to the preferential trade agreements with Morocco.

This, added to the previously noted high number of breaking SIVs, that is, the occurrences of imports of low priced tomatoes from Morocco, is indicative of the fact that, in this case, the possible role of the EPS in preventing price drops in the period when internal production is available has been rather limited. The question remains as to whether Spanish prices would have been lower even without imports from Morocco.

The analysis of data on surveillance of tomatoes has given some confirmation to findings of analyses already performed. Although the daily data refer only to the period from October 2006 to May 2007 and they would require further data for a deeper analysis, they make it possible to find some relationships between the available data.

We tried to analyse the relationship existing between daily imports of tomatoes from Morocco and the variables affecting SIVs of tomatoes imported from that country. Data on daily imports are collected in the first five days of each week. These data show a relatively higher import level of tomatoes on Monday, probably due to the assignment on that day of clearance made on Saturday or Sunday.

The econometric analysis of daily imports shows that the imported quantity is related positively to the price of tomatoes produced in Spain, to a dummy variable for imports made in October (DOct) that captures the effect of the lower zero tariff quota assigned to imports made in that month; a dummy variable for the first days of the weeks on which the analysis is made (DM) that, as we recalled before, always have a larger quantity of imports registered[26]. We also introduced a further dummy variable (DTEP) connected with days in which the published SIVs are below the trigger EP to test the effect of the possibility of enforcing the MTE on imports.

The dummy variable (DTEP) has a coefficient that is statistically not different from zero. This would mean that the enforcement of the MTE in the days in which the Morocco SIVs are below the trigger EP does not have effects on the quantity of tomatoes imported from Morocco. It means that the EPS has no effect on imports flows (in terms of decreasing of imports level), also in the cases in which the MTE is or should be applied. The results are:

Qimp	= 612	+ 8.2 PrSpain	– 664.6 DOct	+ 750.8 DM	– 42.9 DTEP	R2=0.66
	(139)	(2.8)***	(113.2)***	(88.4)***	(99.1)	

Bracketed figures show the values of standard errors of estimated coefficients, the three stars indicate that the significance of the first three variable is very high, being equal to zero with a probability lower than 0,001, while the dummy DTEP is not statistically different from zero. The R2 shows a good fit of the variables to the data.

Another regression analysis has been carried out on the daily SIVs of imports of tomatoes from Morocco. The analysis relates to the days for which the SIV calculation is performed, and not the publishing day of SIVs. The calculated SIVs are strongly related to the average daily price of tomatoes at the farm level in Spain. We also introduced a dummy variable to take into account the lower SIVs recorded in October and the imported quantities of tomatoes from Morocco to test the effects of imports on the SIVs level. The estimated equation has the following results:

SIV =	10.3	+ 0.69 PrSpain	- 7.4 DOtt	- 0.001 Qimp	R2=0.71	n=137
	(4.05)	(0.043)***	(3.73)*	(0.002)		

It is possible to see that farm prices in Spain is highly significant, as well as the dummy variable related to October, while the effects of imported quantities on SIVs is statistically not different from zero. We have also tried to make an estimation with the farm price lagged one day that gives results worse than the previous one.

Therefore the performed analysis shows that as far as fresh tomatoes imported from Morocco are concerned :

a) the SIV is strictly linked to farm prices in Spain;
b) imports are related to farm prices of tomatoes in Spain that are directly competing with such imports, moreover imports are also shaped by the zero tariff monthly quota allotments (probably imports are negotiated and priced according to market prices in the days of their actual import);
c) the EPS is without effects on imports, in the sense that when SIVs are below the TEP there are no changes on imported quantities, and also no stabilisation effects of the system.

[26] In regression analysis dummy variable are used to take into account the effects of qualitative phenomena, allowing shifts of the constant.

A4 - Effect of the EP on prices in terms of variability

Impact of the EPS on the level and variability of FOB prices of products exported to the EU

Although not such as to induce a significant change in the overall variability of EU domestic prices, the EPS might nevertheless be such that a change could be induced on the patterns of *import* values. The EU Entry Price System, in fact, is designed to limit the risk that low priced imports from abroad may negatively affect the regular functioning of EU markets.

If the system is such as to significantly affect trade decisions by EU partners, for a given product and a given country we should expect a systematic difference between the average prices of exports, depending on whether these are directed towards the EU or towards other countries. In particular, we would expect that, if the EPS constitutes an effective filter, prices of exports towards the EU should have, on average, higher and less variable prices when compared to the prices of the same product exported by the same Country of origin towards non EU destinations.

In order to verify whether such a difference exists in terms of level and variability of prices, we analyzed f.o.b. prices for products subject to the EPS, distinguishing between exports toward the EU and exports toward non-EU countries. For each product and for each of the main EU trade partners, we have analyzed f.o.b. prices by country of origin between 1999 and 2005[27].

The tables presented in the Annex to the EQ1 report the detailed results, while Tab. 14 and Tab. 15 below report, for each product/country combination, the percentage difference between the average level and the coefficient of variation of prices of exports towards the EU and towards other countries.

27 The data comes from the UN-Comtrade database. Prices are obtained as the ratio between the reported value and quantity. Given no direct comparison of actual price levels is made across commodities or across countries, no normalization has been performed on the data. Potatoes were not included in the product chosen for the counterfactual analysis. We include them here to provide one more case.

Tab. 14 - Comparison between average prices of fruit exports, 1999-2005, f.o.b price by country of origin

Subject to the EPS			Not subject to the EPS		
	Δ Avg.	Δ St. Dev.		Δ Avg.	Δ St. Dev.
Apples			**Mandarins, etc.**		
Argentina	16%	20%	Chile	-34%	-81%
Brazil	-3%	-74%	Morocco	**3%**	**-15%**
Chile	-20%	-61%	South Africa	-41%	-78%
New Zealand	5%	20%	Uruguay	**15%**	**-8%**
South Africa	6%	22%	**Grapefruits**		
Oranges			Argentina	4%	7%
Argentina	**6%**	**-52%**	Israel	-18%	94%
Egypt	-3%	-7%	South Africa	14%	16%
Morocco	-1%	-4%	Turkey	14%	10%
South Africa	**6%**	**-21%**	USA	-13%	-1%
Uruguay	**8%**	**-77%**	**Melons**		
Pears			Brazil	**3%**	**-18%**
Argentina	13%	46%	Costa Rica	32%	82%
Chile	*-11%*	*21%*	Israel	-2%	-3%
China	**27%**	**-20%**	Morocco	-4%	-39%
South Africa	*-1%*	*13%*	Panama	13%	65%
Grapes			**Kiwifruits**		
Argentina	**23%**	**-14%**	Chile	-8%	-46%
Brazil	**5%**	**-67%**	New Zealand	-19%	-8%
Chile	*-5%*	*80%*	**Strawberries**		
Egypt	78%	84%	Egypt	38%	60%
South Africa	6%	18%	Israel	-5%	0%
			Morocco	-6%	-119%
			USA	37%	45%

Source: Comtrade data processed by Agrosynergie

Tab. 15 - Average prices of vegetables exports, 1999-2005, f.o.b price by country of origin

Subject to the EPS				Not subject to the EPS			
		Δ Avg	Δ St. Dev.			Δ Avg.	Δ St. Dev.
Tomatoes				**Potatoes**			
	Israel	30%	47%		Egypt	19%	8%
	Morocco	**3%**	**-2%**		Israel	-6%	40%
	Turkey	68%	23%		Morocco	-4%	-29%
Courgettes				**Onions**			
	Bulgary	21%	16%		Argentina	**45%**	**-72%**
	Hungary	**32%**	**-33%**		Australia	**31%**	**-11%**
	Morocco	**2%**	**-90%**		Chile	-26%	16%
	Romania	14%	52%		Egypt	77%	103%
	Turkey	**62%**	**-3%**		New Zealan	**11%**	**-28%**
				Beans			
					Egypt	18%	9%
					Kenya	22%	96%
					Morocco	-45%	-158%
					Senegal	**1%**	**-85%**
				Peppers			
					Morocco	**15%**	**-74%**
					Turkey	61%	23%

Source: Comtrade data processed by Agrosynergie

The combination of higher levels and lower variability (highlighted in bold in the table) of prices of exports of fruits directed towards the EU can be found only in a number of cases, both subject to the EPS and not, such as for oranges (but only for the Southern Hemisphere countries, Argentina, South Africa and Uruguay) for pears (but only from China), for grapes exported by Argentina and by Brazil, mandarins originating in Morocco and Uruguay, and melons originating from Brazil (Tab. 14).

For vegetables, higher and less variable prices for exports directed towards the EU can be found for courgettes from Hungary, Morocco and Turkey, for onions (again, only from the Southern Hemisphere: Argentina, Australia and New Zealand), for beans originating in Senegal and for peppers exported by Morocco.

Somewhat strikingly, there are also cases of products subject to the EPS in which exports to the EU are characterized by lower and more variable prices. This is the case for pears and grapes originating from Chile.

The remaining cases of either higher but more variable, and lower and less variable prices are difficult to reconcile with the expected role played by the EPS.

In summary, the evidence provided by the analysis of f.o.b. prices by exporting countries cannot be considered as indicative of the conclusion that the Entry Price System is capable of inducing a selection of exports directed towards the EU.

The fact that the cases of higher and less variable export prices are concentrated in the Southern Hemisphere countries, in fact, suggests that such an effect should be imputed also, if not mainly, to the seasonal patterns of production (which do not overlap with the domestic products) and to the incidence of transportation costs.

4.1.1.5 Export refunds scheme analysis

In principle, export refunds might contribute to stabilizing the EU internal market by increasing the attractiveness of foreign destinations for products that could otherwise be sold on the domestic markets.

We have developed a series of indicators with the aim of ascertaining whether the consequences of such an incentive effect can be revealed from the available data on exports receiving refunds in the past ten years,

and whether the size of the induced response is such as to determine a significant effect in terms of overall market stability.

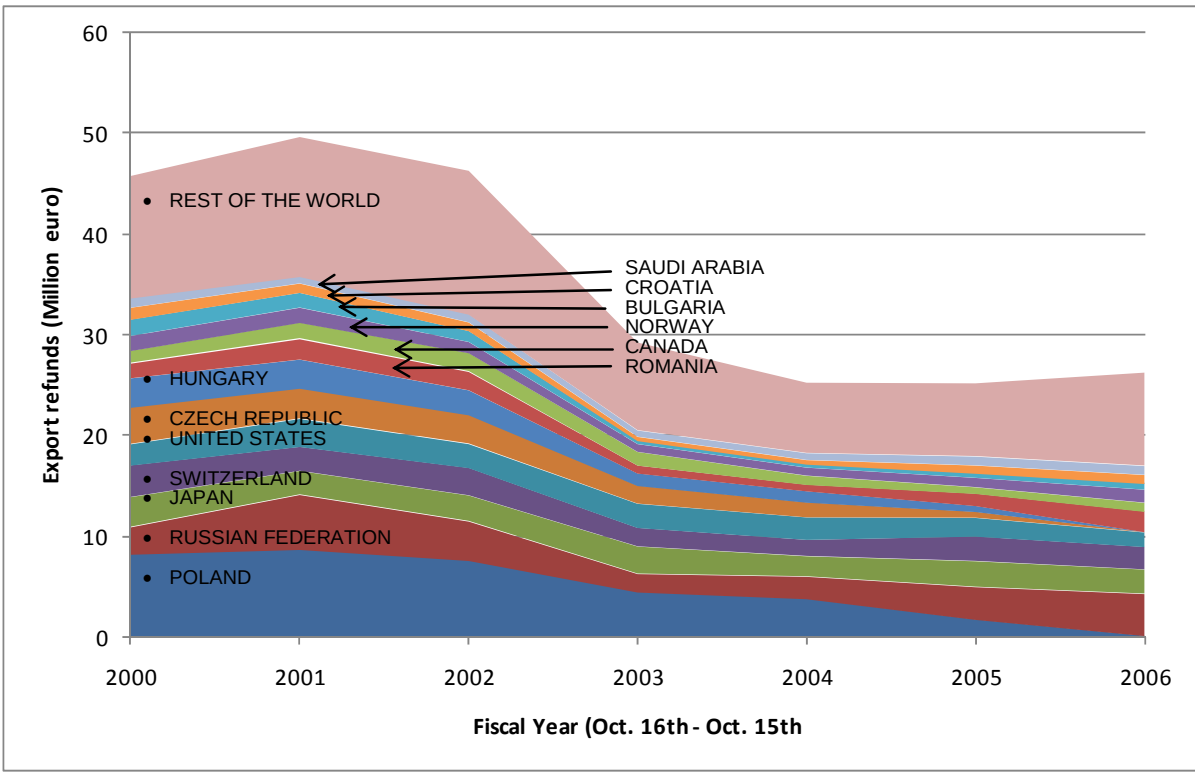
B1 - How often have the export refunds been actually granted?

The first criterion concerns the overall relevance of the phenomenon in the years considered for the evaluation. We have assessed this by noting the products and years when export refunds have actually been granted, and by relating the quantities of products receiving refunds to the amount of EU total exports and total production This is achieved through analysis of data obtained from different sources, as detailed below.

Analysis of ER expenditure by country of destination

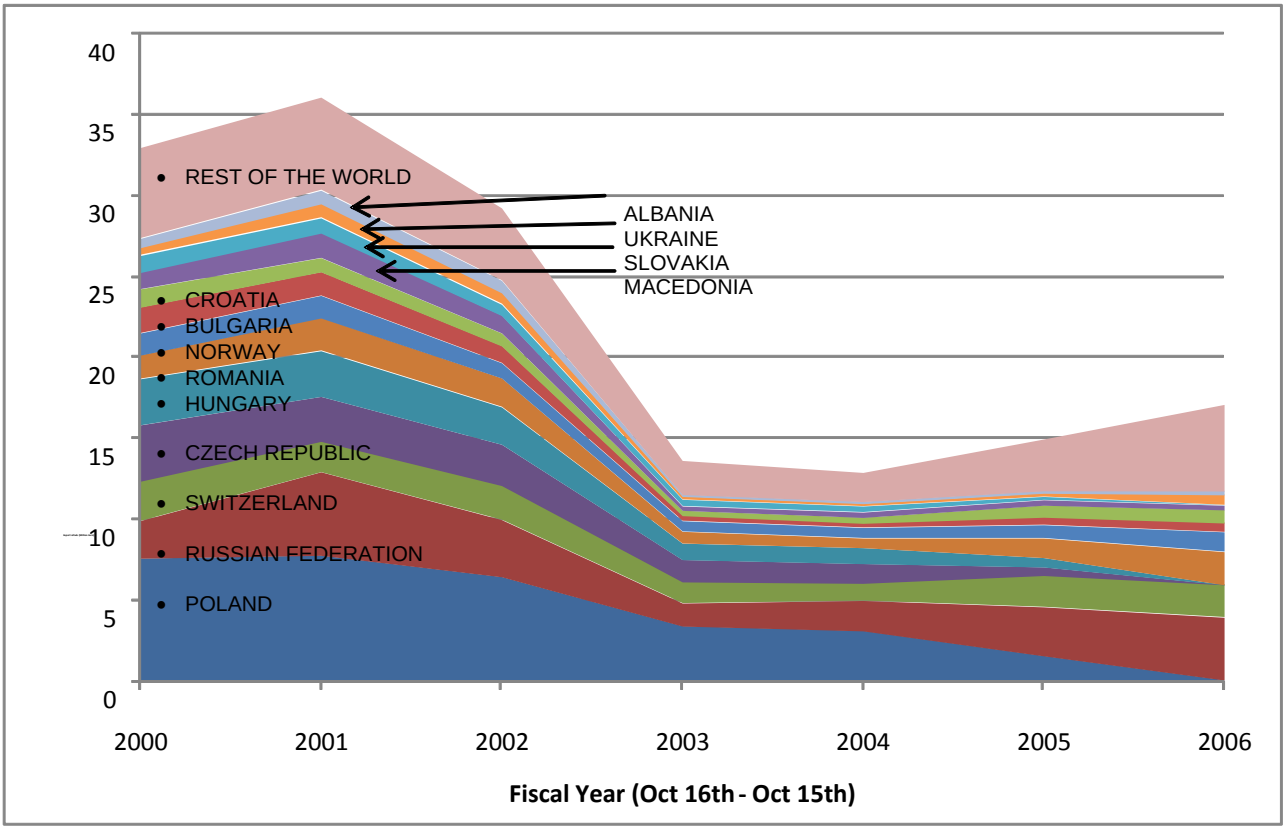
The EU budget data on export refunds report the destinations, but not the details of products and quantities receiving payments. Analysis of the CATS budget data provided by DG-Agri therefore allowed us to identify only the time evolution of payments of export refunds (ER) by fiscal year and by destination.

Fig. 10 - Export refunds for fruits and vegetables (fresh and processed) by destination. FY 2000-2006



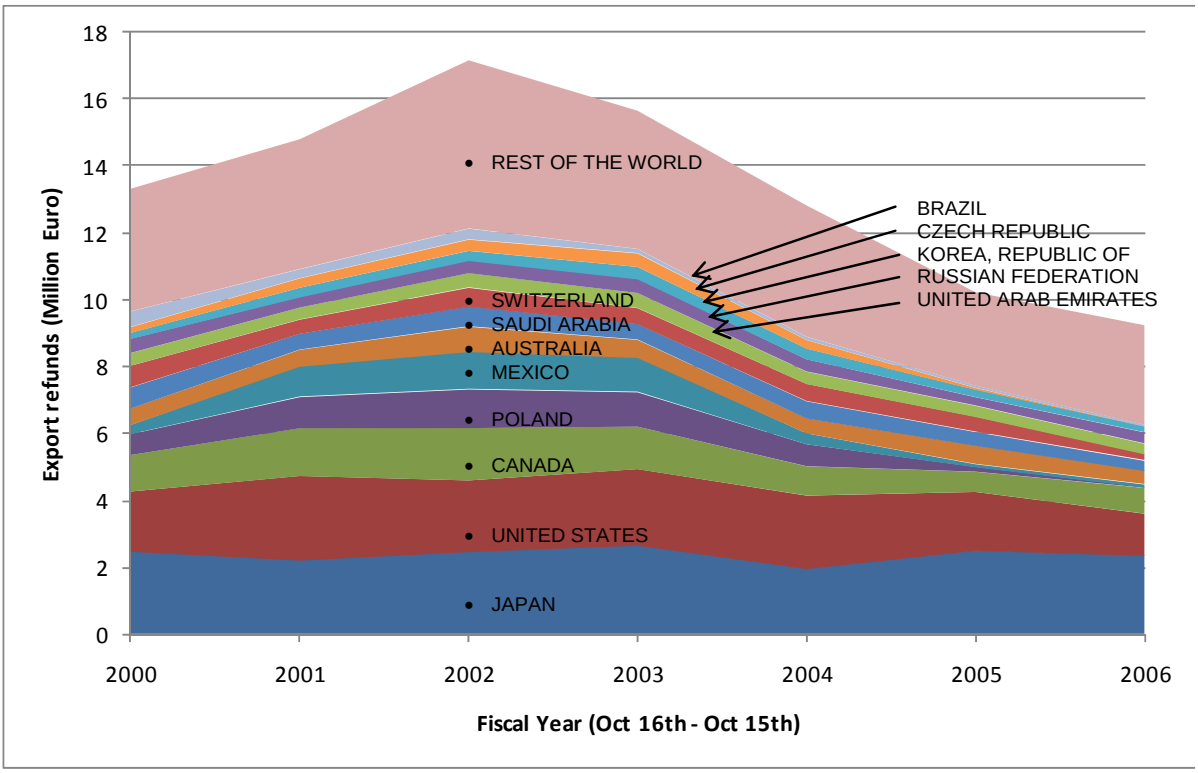
Source: DG-Agri and CATS data, processed by Agrosynergie

Fig. 11 - Export refunds for fruits and vegetables (fresh) by destination. FY 2000-2006



Source: DG-Agri and CATS data, processed by Agrosynergie

Fig. 12 - Export refunds for fruits and vegetables (processed) by destination. FY 2000-2006



Source: DG-Agri and CATS data, processed by Agrosynergie

With reference to the data for Fiscal Years 2000-2006, we note that ER on F&V (both fresh and processed) were higher in the FY 2000-2002, totalling over 40 million Euro per year, before gradually falling to about 26 million Euro per year in the last three fiscal years (Fig. 10).

In terms of destinations, Poland received the largest amount over the entire period 2000-2006, followed by the Russian Federation, Japan, Switzerland and the United States. After the 2004 EU enlargement, although total payments of ER diminished, subsidies granted to exports destined for other countries have increased, as an effect of both an increase in quantities of exports receiving the subsidy and an increase in unit subsidy, at least for some products.

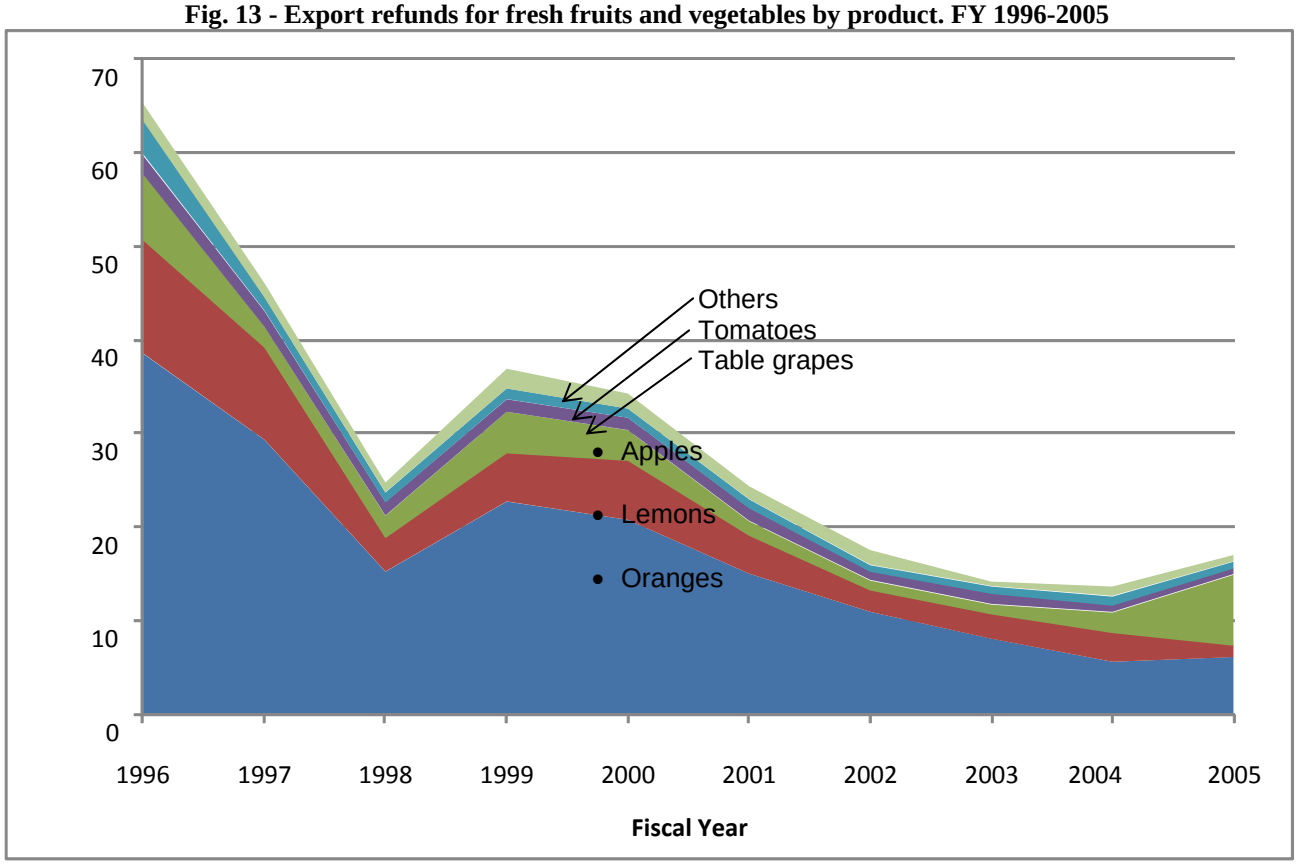
If we distinguish between fresh and processed fruits and vegetables, the relevance of the various destinations changes: The Russian Federation and other Eastern European countries, together with Switzerland, keep their predominance in terms of fresh fruits and vegetables, while overseas countries such as the United States, Japan and Canada become predominant in terms of processed fruits and vegetables (Fig. 12).

Analysis of ER expenditure and quantities receiving ER by product

This part of the analysis is based on the data on products benefiting from export refunds collected by the Commission offices as part of ERS management monitoring.

With reference to fresh products only, oranges received the highest share of export refunds, accounting for 58.45% of overall expenditure for export refunds over the period 1996-2005. Lemons and apples followed, with shares of 17.33% and 11.17% respectively, then table grapes and tomatoes, having a share of about 4% each. All remaining eligible products (almonds, hazelnuts, walnuts, peaches and nectarines) had negligible shares, totalling 4.5% of expenditure over the entire period.

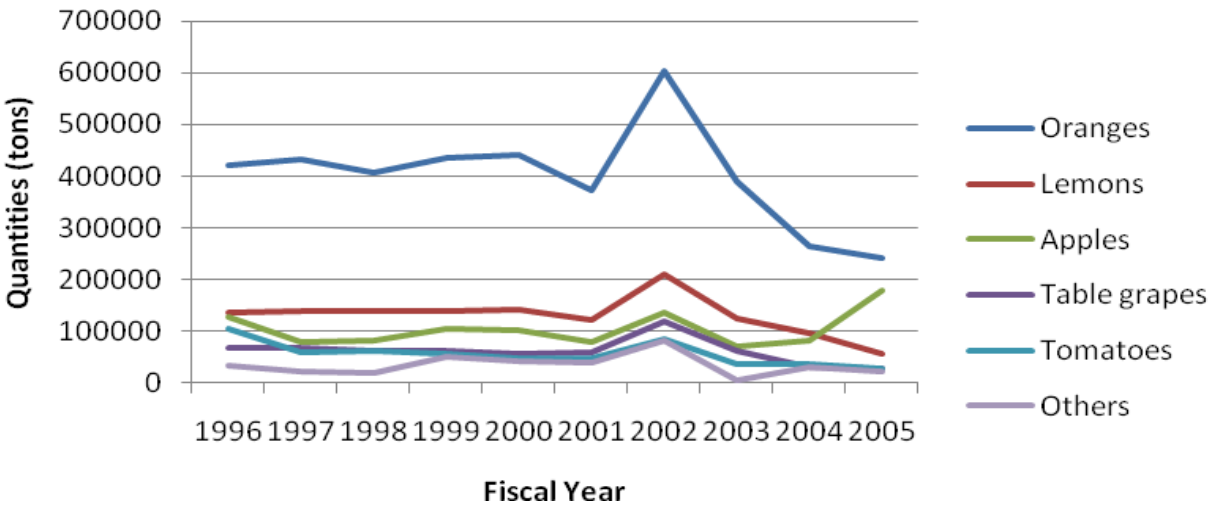
Fig. 13 - Export refunds for fresh fruits and vegetables by product. FY 1996-2005



Source: DG-Agri data processed by Agrosynergie

For all exported products receiving refunds, the data show that the respective quantities were quite constant from 1996 through 2000. Then, following a peak in 2002, and with the notable exception of apples, the quantity receiving ER fell steadily.

Fig. 14 - Quantity of products receiving export refunds, by product

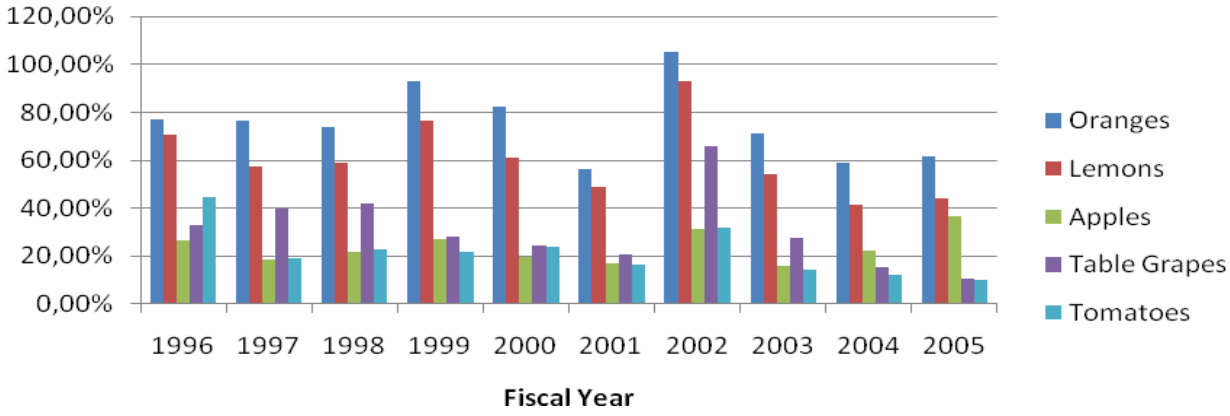


Source: DG-Agri data processed by Agrosynergie

The next step in the analysis was that of comparing the quantities receiving ER to the quantities of exports and of production. One problem in making such comparisons comes from the fact that the data on quantities receiving export refunds are collected for the period starting July 1st and ending June 30th, while the collection of data on EU supply of fruit and vegetables is based on the calendar year.[28]

Moreover, the data for 1995 were not used, given that the new regime constraining ER to the 1994 URAA rules started on July 1st 1995.

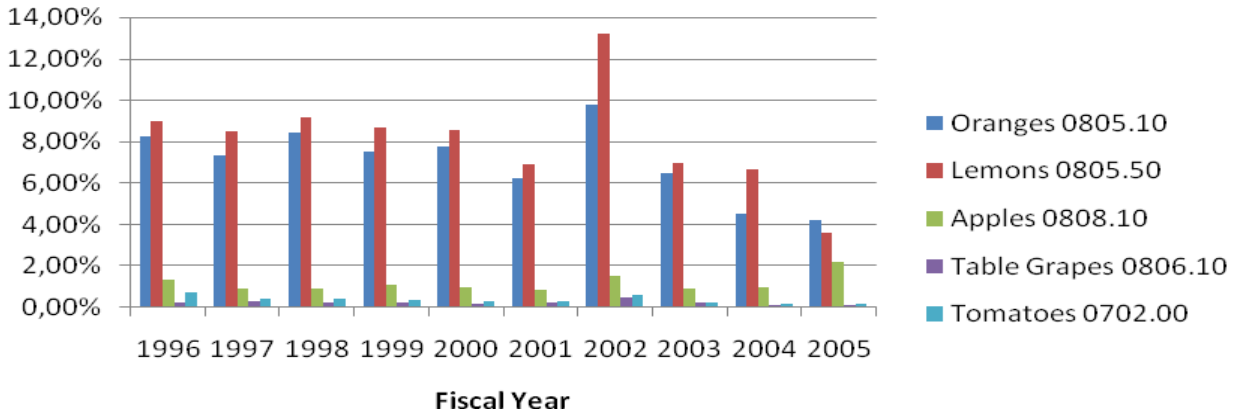
Fig. 15 - Products receiving export refunds. Shares of EU-15 total exports, by product and by year



Source: DG-Agri data processed by Agrosynergie

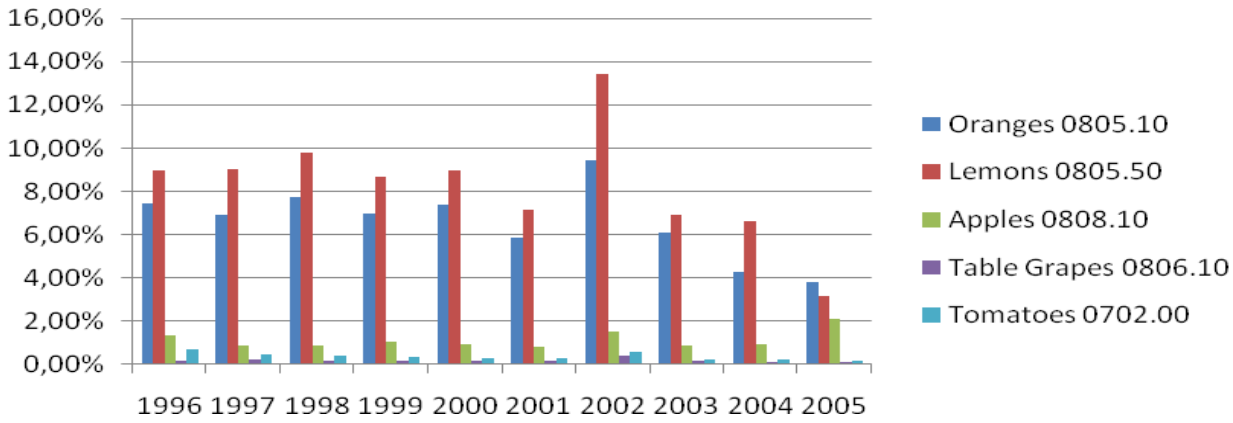
[28] For some years data on ER granted in each two month period were available and have been used to build statistics on products benefiting from ER comparable with product supply. For years in which such data were not available, two-year averages of data on products benefiting from ER were calculated and used. This choice introduces a smoothing of data on ER that can give a loss of information about the working and management of the ER scheme.

Fig. 16 - Products receiving export refunds. Shares of EU-15 total production, by product and by year



Source: DG-Agri data processed by Agrosynergie

Fig. 17 - Products receiving export refunds. Shares of EU-15 total consumption, by product and by year



Source: DG-Agri data processed by Agrosynergie

Tab. 16 - Relevance of ER for fresh F&V by product, averages over the period 1995-2005

	Share of:				
Products	Total ER expenditure (value)	Total EU-15 exports (quantity)	Total EU-15 production (quantity)	Total EU-15 consumption (quantity)([1])	Total EU-15 consumption (quantity)([2])
Oranges	58.45%	75.57%	7.05%	6.00%	5.56%
Lemons	17.33%	60.57%	8.13%	7.51%	7.35%
Apples	11.17%	23.74%	1.17%	1.02%	1.05%
Table Grap	4.32%	30.72%	0.24%	0.17%	0.19%
Tomatoes	4.23%	21.74%	0.38%	0.34%	0.40%
Others	4.50%				

Source: DG-Agri data, for quantities receiving ER and for ER expenditure; Comext for EU-15 exports, Faostat for EU-15 production and EU-15 consumption. All processed by Agrosynergie.

Note: ([1]) Consumption obtained as production + imports – exports;
([2]) Consumption as reported by Faostat.

The graphs and the table above highlight how export refunds have been granted, on average, to relevant shares of EU total exports of oranges (75.57%). and lemons (60.57%). and to respective shares of total exports of table grapes (30.72%). apples (23.74%) and tomatoes (21.74%); 2002 was the year when export refunds were most intense for all products considered.

When assessed in terms of total EU production and consumption, however, *export refunds involved non-negligible shares of production only for oranges and lemons*. The possible impact on the overall EU domestic market, therefore, should be expected to be relevant for these two products.

B.2 - What is the likely effect of the ERS on the quantity of products available on the EU markets?

Just as for the EPS, for the ERS too the evaluation question calls for an assessment of the impact on quantities reaching the EU domestic market. To this end, the first relatively simple indicator can be formed by measuring the quantities of exports of each product receiving refunds, as a share of total EU consumption.

Tab. 16 and Fig. 17 above show that the quantities receiving export refunds represented, on average over the period considered, non negligible shares of total EU-15 consumption for lemons and oranges and, to a lesser extent, for apples. For table grapes and tomatoes, on the other hand, the average share of total consumption never reached 1%.

Assuming that, had the ERS not been in place, the only consequence would have been that products exported and receiving a refund would have been sold instead on the consumer market, one would conclude that the impact would have been an increase in quantities available on the market ranging from 0.24% to 8.13%. However, such an assumption would be too simplistic and probably wrong. First, it would neglect the possibility that excess production would be withdrawn, something we will come back to shortly. Then, it would neglect the possibility that the quantities being exported would have been exported anyhow, even in the absence of the ERS, thus implying the existence of deadweight effects linked to the system. Finally, and most important, it would neglect the effect of a possible incentive to production due to the effect of the presence of the ERS on the price *expectations* of producers and traders.

In the preparatory analysis we tried to indirectly detect a possible incentive effect of the presence of ER on *exports*, by measuring a "qualitative elasticity" as the sign of the ratio between the change in exports and the change in the unit value of ER and the change in the share of exports receiving ER. The results of that analysis suggested that exports did not consistently react to changes in the amounts of ER, thus adding to the impression that such an incentive effect caused by the presence of ER is weak.

With a view to highlighting both a possible incentive effect of the ERS on EU *production* of F&V and ascertaining whether or not the management of the ERS has been such that it has been strategically used when most needed, below we explore the measurable relationships between the levels and variations of F&V production and the granting of ER.

In particular, we analyse:

- the correlation between changes in EU internal production and changes in the quantity of products benefiting from ER;
- the evolution over time of the quantities of products benefiting from ER and of the relative share in terms of total refunds paid;
- the variability of EU internal production and EU internal supply (production minus net exports) for the products chosen for the counterfactual analysis, in order to contrast with that of products subject to the ERS and that of similar products not subject to the system.

Correlation between variation of EU internal production and variations of quantity of products benefiting of ER

This criteria is designed to verify whether the decision to grant ER to a product is linked to the actual production of that product. A direct positive link could be an indicator that the ERS had also been managed in an attempt to contribute to price stabilization, by granting more ER in years in which the production of a product was larger than usual, and less in years of low production.

The analysis has been carried out by comparing yearly variations of ER granted (approximated by the quantity of product receiving ER) and yearly variations in EU production for the period 1996-2005. Each series of incremental ER granted (i.e. the difference between the quantities receiving ER granted one year and the corresponding amounts of the previous year) has been regressed against the corresponding series of incremental production (i.e. the difference between total EU production in one year and total EU production in the previous year). If the amount of ER granted responded systematically to changes in production according to the hypothesized management of the ERS described above, the coefficient of such regressions should be positive and statistically significant. The results are summarized in Tab. 17.

Tab. 17 - Coefficient and t-test significance of regressions for ER variations on variations of EU production (A) and on variations of total granted ER (B)

	A		B	
Product	**Slope coefficient**	**Significance**	**Slope coefficient**	**Significance**
Oranges	0.0294	0.139	**1.1351**	**0.011**
Lemons	**0.0525**	**0.057**	**1.9443**	**0.082**
Table grapes	-0.0003	0.423	2.3562	0.234
Apples	0.0073	0.161	0.3588	0.311
Peaches	**0.0113**	**0.025**	**3.5501**	**0.024**
Tomatoes	0.0027	0.250	1.3439	0.209

Source: DG-Agri data processed by Agrosynergie

Although they should be treated with caution, due to the limited number of available observations, the results show that only in the case of lemons and peaches is there some evidence of the ER responding to changes in production. For the other products there is no significant link. And for peaches the overall significance of the result is questionable, given the limited relevance of the quantities receiving export refunds over the period.

The data in the right panel of the table provide, on the other hand, some evidence that, at least for oranges, lemons and peaches, the link between individually granted refunds and total refunds has been positive and statistically significant.

The two sets of results taken together add some evidence about the possibility that the increase or decrease in export refunds granted seems to have been independent of the production conditions of the particular product involved, thus casting some doubt on the possible quantity-stabilizing role of the instrument.

Response of EU internal production to the presence of ER

Another way of exploring the relationship between production and ER is to test whether the presence of ER constituted an incentive to production.

To this end, we performed regressions, similar to those just described above, between changes in production and changes in export refunds granted the previous year. If production responded to the amount of ER granted the previous year, the slope coefficient of this regression would be positive and statistically significant. The results are reported in the table below.

Tab. 18 - Coefficient and t-test significance of regressions between variations of EU production and variations of ER granted over the previous year

Product	Slope coefficient	Significance
Oranges	-3.817	0.234
Lemons	-5.759	**0.099**
Table grapes	149.150	0.171
Apples	-4.018	0.444
Peaches	-18.815	0.199
Tomatoes	7.808	0.195

Source: DG-Agri data processed by Agrosynergie

Other than for lemons, no slope coefficient is significantly different from zero, and for lemons the slope is negative. This evidence is difficult to reconcile with the expression of a successful incentive to production from the actual release of export refunds.

The conclusion we can draw from this entire analysis is that there is no clear relationship between the presence of the ER and the level of either total production or total exports by the EU.

Although the result should be treated with due caution, given the limited number of years on which the analysis can be conducted, this also means that the presence of Export Refunds could generate non negligible deadweight effects, in the sense that the observed exports could have been achieved even without the granting of export refunds, with no significant impact on total quantities (and therefore prices) formed on the EU internal market.

The potential impact of ER on price stability, however, is further investigated in the next set of criteria.

B.3 - What would the impact on domestic prices have been had the ERS not been in place?

Under the naive assumption that the quantity that was exported and received export refunds would have been sold in the domestic market, the impact on prices would depend on the magnitude of the relevant price elasticity of demand.

According to the data reported in Tab. 16 above, the quantities benefiting from ER represented a percentage of total EU consumption ranging from 0.17% to 7.51%.

The release of such quantities on the domestic market, everything else being constant, would have caused reductions of average prices from less than 0.1% to 37.6%, as reported in the tables below, where various possible values of the price elasticity of consumption have been used.

Tab. 19 - Projected impact of absence of ER for fresh F&V, by product, on averages prices

Products	Increase in consumption	Reduction of average price assuming a price elasticity equal to:				
		-2	-1,5	-1	-0,5	-0,2
Oranges	6%	-3.0%	-4.0%	-6.0%	-12.0%	-30.0%
Lemons	7.51%	-3.8%	-5.0%	-7.5%	-15.0%	-37.6%
Apples	1.02%	-0.5%	-0.7%	-1.0%	-2.0%	-5.1%
Table Grapes	0.17%	-0.1%	-0.1%	-0.2%	-0.3%	-0.9%
Tomatoes	0.34%	-0.2%	-0.2%	-0.3%	-0.7%	-1.7%

Source: DG-Agri data processed by Agrosynergie

The impact on prices would have been significant only for oranges and lemons, but under the unlikely condition of very low absolute values for price elasticity. In all other cases, given the limited relevance of the quantities involved, the impact on EU level prices can be considered negligible at all reasonable values of demand elasticity.

The predicted impact on prices is also likely to be overestimated by neglecting the possibility of other mechanisms that producers and traders could have implemented in order to prevent domestic price drops. For the products for which withdrawals are allowed, the product exported could have been withdrawn instead, rather than being sold.

Whether or not export refunds and withdrawals have complemented each other to stabilise markets is assessed by comparing the data on the timing of export refunds and of withdrawals.

Comparison, for each product, of data on the timing of export refunds and of withdrawals

To analyze the relationships between the timing in which export refunds are granted and withdrawals are effected we have compared the series of quantity of fresh fruit and vegetables that benefited from export refunds with the corresponding series of products withdrawn from the market.

To highlight the possible relationship between the two instruments, however, it would not suffice to compare annual data[29]. Rather, it is necessary to look at higher frequency time series data.

We therefore formed the series of quantities receiving export refunds as calculated in the GATT book-keeping (Comptabilité GATT) data made available by the Commission, and the series of withdrawals[30] for the periods from July-August 1995 through July-August 2005 and compared them in terms of levels and their evolution over time.

The graphs in the Annex to EQ 1 illustrate all the products covered, namely: tomatoes, peaches and nectarines, table grapes, apples, oranges and lemons. In those graphs we plot the series of quantities withdrawn and the series of quantities receiving export refunds on a bi-monthly basis. We also calculated the coefficient of correlation between the two series. Given that, in many of these series, the presence of a decreasing trend is apparent, we also calculated the coefficient of correlation after checking for the linear trend.

The results are given in Tab. 20 below where, for comparison purposes, we also report the values calculated on the series of annual values, which will be commented on more extensively in the answer to EQ2.

[29] The comparison between *annual* withdrawals and export refunds will be conducted to a greater extent in the answer to EQ2, where the role of the ERS as a mechanism for crises prevention will be analyzed.

[30] Data regarding withdrawal of products were taken from the evaluation on the withdrawal system, available at: http://ec.europa.eu/agriculture/eval/reports/withdrawals/index_en.htm.

Tab. 20 - Correlation between export refunds and withdrawals (1995-2005)

	Bi-monthly data		*Annual data**	
Product	original series	detrended series	original series	detrended series
Tomatoes	0.339	0.181	0.454	-0.653
Peaches and Nectarines	0.695	0.709	0.414	0.461
Table Grapes	0.333	0.297	0.308	-0.150
Apples	0.357	0.367	0.024	-0.119
Oranges	0.516	0.502	0.801	0.289
Lemons	0.029	-0.025	0.471	0.167

Note: * For tomatoes: 1996-2005

Source: DG-Agri data processed by Agrosynergie

For all products, with the exception of lemons, the series of quantities receiving export refunds and that of products withdrawn appear to be positively correlated. Other than for tomatoes, where the correlation is mostly due to the common trend, controls on the linear trend do not make a significant difference.

The correlation value is particularly high (0.70) for peaches and nectarines, which means that export refunds and withdrawals have often been used concurrently: in periods when relatively high use has been made of withdrawals, there have also been larger amounts of export refunds granted. It is to be noted that this result is only in part due to the seasonality of production and the limited storability of peaches and nectarines, which reduces the time flexibility in the use of the two instruments, as revealed by the significant positive correlation existing between the series of annual values.

For table grapes, the results are affected by the fact that, after 1997 there has been practically no significant recourse to withdrawals. The positive correlation of 0.33, in this case, is mostly due to the presence of a common downward trend in the two series. At the level of annual de-trended series, the correlation disappears, something we will return to in the answer to EQ2, when we will comment on the role of the ERS as a mechanism for crisis prevention.

In the case of apples, the correlation between the two instruments is less clear, (0.36), this can be explained by the fact that, contrary to other fresh fruits, apples can be easily stored, and therefore both exports and withdrawals can occur over a longer period. The comparison of the time patterns of withdrawals and of exports receiving refunds reveals that there has been the habit of concentrating withdrawals at the beginning of the marketing season (September – October) whereas subsidized exports have occurred mostly later in the season (November – February). Withdrawals largely dominated, in terms of quantity, up to the season 2000/2001. From 2001/2002 on, the amounts withdrawn have been considerably reduced, while the quantities receiving export refunds have remained quite stable.

For oranges too the correlation between withdrawals and exports refunds is relatively high (0.52). In this case, export refunds have dominated, in terms of quantities, and seem to have occurred earlier in the season compared to withdrawals.

Lemons are the product for which the correlation between withdrawals and export refunds is lowest, indeed virtually zero. It must be considered, however, that other than in 1998 and 1999 withdrawals for lemons were a very limited phenomenon, whereas export refunds have been systematically used over the years.

From this analysis, we can conclude that, with the exception of lemons, the two instruments of product withdrawal and export refunds have been used concurrently within seasons, and therefore they have together contributed to stabilising the markets. The actual contribution of each of the two instruments, however, depends on their relative relevance: for table grapes, lemons and oranges, export refunds have played a role greater than that of withdrawals in preventing domestic price drops, although, as we have already seen, not such as to significantly affect the overall levels of market prices. In all other cases considered (tomatoes), the role of withdrawals has been much greater, and absolutely dominating in the case of peaches and nectarines.

B.4 - Effect of the ERS on price variability of F&V

In evaluating this criterion we have proceeded along two paths. A direct way of gauging the impact of the ERS on the variability of prices is linked to the analysis of the impact of the ERS on the level of prices, as illustrated in the previous section. Once the impact on the *level* of prices associated with the domestic sale of subsidized exports has been determined, the impact on the *variability* of prices could be quantified by comparing the variability of the series of actual prices and that of "projected prices", that is, the prices that can be predicted under the assumption that the exported quantities would have been sold on the internal market instead, along the lines of the method used for the evaluation of the F&V withdrawal system.[31] Once again, such a simplistic method neglects the possible incentive that the presence of export refunds might have created in raising the level of prices expected by producers, something it would nevertheless have provided. However, given that we see no easy method to reliably quantify such an incentive effect, we make no attempt at considering it. In so doing, we are aware that any impact of the ERS on the variability of prices we measure is likely to be overestimated to the extent that the incentive created by the expectation of receiving export refunds is relevant.

An alternative, indirect way of gauging the impact of export refunds on price variability is to compare price variation of exported products which are subject to ERS and those which are not. We focused on the price variability of products chosen for the ERS counterfactual analysis, based on time series data on market prices available from the Agriview database.

Projected price variability due to internal sale of exported quantities

If the quantity exported and receiving export subsidies had been sold on the domestic market, and assuming a negative price elasticity of demand, the impact would have been a reduction in prices, the intensity of which would depend on the prevailing value of elasticity.

The table below reports the results of a sensitivity analysis performed by modifying the indexes of prices (EU-15 level, as reported by Eurostat[32]) for the products receiving export refunds. Each year, the index of prices has been modified according to the change that would be induced by a percentage change in consumption equivalent to the additional sale of quantities exported that receive refunds, and for various levels of price elasticity of consumption.

For each product, the first row reports the coefficient of variation calculated on the observed series of historic price indexes over the period 1996-2005, and on the series of projected prices obtained by assuming the value of elasticity indicated in each column. The second row reports the corresponding percentage change in the coefficient of variation.

Tab. 21 - Change in price variability potentially induced by the ERS, at different values of elasticity of demand. (Eurostat price indexes of agricultural products, 1996-2005)

Product	Observed CV	η				
		-2	-1,5	-1	-0,5	-0,2
Tomatoes	10.81%	10.86%	10.87%	10.91%	11.00%	11.31%
	-	*0.43%*	*0.58%*	*0.87%*	*1.76%*	*4.60%*
Apples	17.56%	17.56%	17.56%	17.57%	17.59%	17.73%
	-	*0.02%*	*0.04%*	*0.06%*	*0.19%*	*0.99%*
Oranges	11.32%	11.76%	11.93%	12.30%	13.67%	20.90%
	-	*3.97%*	*5.46%*	*8.71%*	*20.84%*	*84.72%*
Lemons	9.47%	10.05%	10.30%	10.87%	13.25%	27.90%
	-	*6.21%*	*8.81%*	*14.85%*	*40.01%*	*194.73%*
Grapes	15.63%	15.59%	15.58%	15.56%	15.49%	15.29%
	-	*-0.22%*	*-0.29%*	*-0.44%*	*-0.87%*	*-2.18%*

Source: Eurostat data processed by Agrosynergie

[31] http://ec.europa.eu/agriculture/eval/reports/withdrawals/index_en.htm.

[32] Price indexes of agricultural products, output: base 2000=100 (annual) , obtained from http://epp.eurostat.ec.europa.eu/

With the exception of grapes, for which release on the domestic market of the quantities exported with subsidies would appear to marginally reduce the variability of prices, in all other cases the coefficient of variation of prices would increase. Once again, as already noted in commenting on the table reporting the impact on price levels, this effect would be significant only for oranges and lemons and for very low values of elasticity. In all other cases, the potential impact on price variability of removing the ERS, even in the short term, would be limited. Even for lemons, the product for which ER has been most relevant, and for an elasticity of -0.5, the effect in terms of price variability would be an increase in the coefficient variation from 9.47 to 13.25.

Moreover, it must be noted, once again, that these results are likely to be overestimated, given the simplified hypothesis according to which no other mechanism would be used to prevent the price drop caused by increased sales on the domestic market.

We also considered that, by mediating over the year and over the entire EU market, the results are likely to hide possible locally diversified effects in terms of price fluctuations for some products in some markets. However, there is very little we could do to avoid such approximations: any hypothesis on when and in which EU local market the exported quantities would have been sold would be pure guesswork, thus we decided not to go down this avenue.

Indeed, we did not pursue the attempt of directly measuring the impact of the ERS on price variability, turning to a more prudent indirect method, as detailed below.

Comparison of price variability of products chosen for ER counterfactual analysis

Tab. 22 gives the results of the analysis on price variability of F&V in domestic EU markets that have already been presented in the discussion on the possible stabilization effects of the entry price system, and we refer to that section for explanation of the values reported in the table (see Tab. 21 above). The only difference is that here products are aggregated according to the entitlement of exports to refunds.

The reader should recall that the signs of a stabilization effect, achieved through cutting the lower tail of the price distribution, might be revealed through low values of the index of variability (the standard deviation, here) and positive skewness.

Tab. 22 - Comparison of price variability in the EU - 15 for fruits and vegetables (1995-2004)

Product	Standard Deviation	Skewness	Kurtosis
Fruits			
Subject to ER			
Oranges	0.115	0.3	2.4
Apples	0.141	-0.6	6.7
Grapes	0.200	-0.6	2.7
Not subject to ER			
Pears	0.109	-0.7	2.8
Strawberries	0.450	-0.1	1.4
Melons	0.276	-0.2	-0.2
Vegetables			
Subject to ER			
Tomatoes	0.522	-0.9	10.0
Not subject to ER			
Eggpants	0.371	0.3	3.2

The largest variability among products analyzed is shown for tomatoes (a product eligible for ER), strawberries and eggplants (these two not covered). The lowest is reported for pears, also not covered by the ERS. In general, price variation seems to be dominated by other product characteristics, although it is

noticeable that, among the products that can be stored (oranges, apples and pears), and which for that reason show lower price variability, oranges and apples have higher price variation. If the ERS had any impact, it was clearly insufficient to reduce variation of prices below that of, for example, pears.

The values of the index of skewness are also not homogeneous. Positive skewness, which could indicate a possible stabilization effect induced by the ERS through the cutting of extreme lower prices, is shown only by two of the eight products on which the analysis was carried out: oranges, benefiting from ER, and eggplants that are not eligible for ER. All other products show negative skewness, irrespective of their export being entitled or not to refunds.

4.1.1.6 Conclusions

Conclusions on the Entry prices scheme

The previous analyses have tackled the question of ascertaining the stabilizing effect of the EPS on both quantities reaching the internal EU market and on prices, from a range of different perspectives.

The underlying rationale has been that of trying to highlight whether a systematic impact that involved only products subject to the EPS could be detected. This would have been unquestionable evidence that the EPS, per se, had been responsible for the possible stabilization of quantities and prices of the product in question.

In none of the analyses performed has such a general effect been found. In all cases we found that, although a stabilizing effect of the EPS cannot be excluded, neither can it be demonstrated. The result is not surprising, given that many factors contribute to determining the structure of F&V trade towards the EU.

We found that, in many instances, effects on import flows and price levels and variability could be reasonably attributed to the geographic origin. For highly perishable products such as F&V, in fact, it is reasonable to assume that transportation costs play a predominant role, as has been repeatedly suggested in the literature.

Nevertheless, this did not rule out the possibility that the EPS might have had a detectable impact in *some* special cases; attention was therefore paid to three of the most debated cases, namely tomatoes imported from Morocco, apples imported from China and lemons imported from Turkey.

The analysis of correspondence between daily prices in EU markets and SIVs of imports of these three products, however, has revealed interesting results. EU prices appear to be independent from the values of Turkish lemons and Chinese apples, although the evidence cannot be claimed to demonstrate that such independence is due to the functioning of the EPS. Other factors, and especially the limited quantitative relevance of these imports when compared to the size of the EU market, are likely to be at the root of such a finding.

For Moroccan tomatoes, the analysis conducted on the daily data of imported quantities, although only for the period from October 2006 to May 2007, shows that, the EPS has no effects on imports when the SIVs are below the trigger EP. Moreover the SIVs of these tomatoes seems linked to the prices of tomatoes at the farm level in Spain.

As a general conclusion, we can reiterate that in none of the analyses performed has a general effect in terms of market stabilization that could be linked unambiguously to the EPS been found.

However, in drawing conclusions on the stabilization effects of the EPS the changes going on in the sector must be considered. As we have underlined in the paragraph on the overall context evolution of the fresh F&V sector, the world market is increasingly dominated by large retailing chains that are often multinationals firms able to work in several countries. Their procurement strategies are mainly based on contracting to reduce the uncertainty normally associated with traditional forms of provision. This means on the one hand that for producers involved in contracting there is more certainty on the sales of their products, while on the other markets become thinner, increasing the price variability of all fresh F&V products.

Our conclusion is that **although a stabilizing effect of the EPS cannot be excluded, neither can it be proved, and the evidence gathered tends to make the likelihood and extent of such an effect rather negligible.**

Conclusions on the Export refunds scheme

The analysis of the Export Refund System, aimed at detecting its impact on the stability of the EU market for fruit and vegetables, started with the assessment of the overall relevance of the phenomenon.

Over the period 1995-2006, export refunds were granted to non negligible quantities of exports of oranges, lemons and apples, and, to a lesser extent, of tomatoes and grapes. In terms of EU domestic production and consumption, however, only for oranges and lemons have quantities receiving ER represented relevant shares, and therefore the question of assessing the potential impact on the stability of the EU market assumes, for these two products, a particular significance.

The most direct way to determine the effect the ERS has had on both quantities and prices would have been that of predicting which quantities would have reached the domestic market and consequently what prices would have formed had the ERS not been in place.

The easiest, and to some extent over simplistic, assumption is that the quantities exported, and that have received export refunds, would have been sold on the internal market for consumption. In order to avoid the need to make guesses on the period of the year when these quantities would have been sold and in which market, we conducted the analysis at the EU level, well aware that it might hide interesting local phenomena.

Given this assumption, the potential impact on quantities and prices has been explored via a sensitivity analysis carried out on various possible values of the relevant demand elasticity. We found that unreasonably low absolute values of the price elasticity of demand would be needed for the ERS to have produced sizeable effects in terms of overall EU price variability.

We also explored the extent to which the presence of export refunds might have represented an incentive towards increased production, exports or both. The conclusion we can draw from the analysis of correlation between changes in export refunds and changes in total exports and in total production is that there is no clear relationship consistent with a potential incentive effect determined by the presence of the ERS. Although the result should be treated with due caution, given the limited number of years on which the analysis can be conducted, this also means that the presence of Export Refunds might have generated non negligible deadweight effects, in the sense that the observed exports could also have been achieved without the granting of export refunds, with no significant impact on total quantities (and therefore prices) formed in the EU internal market.

Without detailed data on the specific origin, destination and prices of products receiving refunds, however, we could not pursue further the issue of the deadweight effects linked to the ERS. It remains a very interesting question to be explored, especially in terms of who the beneficiary of the ERS might have been. It is plausible, in fact, that even if no increase in the total amounts of exports were generated, the ERS might have had an effect in terms of the *distribution of exports by destination*, by increasing the amount of fresh fruits and vegetables reaching neighbouring countries such as some of the Central and Eastern European countries. The other road taken in the analysis has been that of indirectly revealing a possible systematic impact of the ERS, based on a comparison of products whose exports are entitled to refunds and products that are excluded from the ERS.

We compared quantities exported, prices and their variations for the set of products chosen for the counterfactual analysis, and did not find a clear distinction that could lead back to the presence of export refunds. The evidence taken all together suggests that, even if a stabilizing effect on EU domestic prices of the ERS cannot be excluded, the available data does not allow its identification from the effect of other factors outweighing it.

The analysis has been instructive in revealing the overall relevance of the phenomenon and the potential impact that the system might have had on the stability of the EU market.

The two parallel roads followed in trying to isolate and highlight the possible effect of the ERS in terms of induced stability of the internal market have led to the same result that, even if a stabilizing effect on EU

domestic prices of the ERS cannot be excluded, the available data show that there have been other factors outweighing it. Also in the case of the stabilization effects of ERs it must be recalled that the changes in the organization of the fresh F&V with the increasing share of products exchanged through contracting can generate more price variability for all F&V products.

For the export refund system, **based on an objective analysis of available data,** we conclude that **it had negligible effects in stabilizing the EU Fruit and Vegetable market.**

4.1.2 To what extent has the implementation of the entry price scheme contributed to avoid crises caused by abnormally low prices on the EU market? Can be any impact in this respect attributed to the export refunds? – EQ.2

4.1.2.1 Interpretation of the question and methodological approach

Abnormally low prices could form on the market for fruits and vegetables because of temporary surpluses that cannot be diluted over time through flexible marketing and storage management, given the high perishability of the products.

If the surplus is due to excess *domestic* production, withdrawals can and have been effected by EU producers to avoid such occurrences. Export refunds (ER) might have contributed to avoiding crises to the extent that some of the excess domestic production has found an outlet on foreign markets that would not have been profitable without the refunds. For this reason, the role of ER in preventing crises, if any, should be considered as complementary to that of withdrawals. Comparison of the data on the timing of export refunds and recourse to withdrawals, on a per product basis, may thus shed some light on the possible interaction between the two instruments.

The role of the Entry Price scheme (EPS) in this context is linked instead to the fortunes of *external* production. The EPS, in fact, could be decisive in sheltering the EU market from the consequences of abnormally high external supply, which could be potentially conducive to internal market crises if such high production were diverted from producing countries onto the international markets, including the EU.

The occurrence of abundant production abroad, however, is not sufficient to determine the condition for which a potential crisis on the EU market exists. The likelihood of 'importing' surplus crises depends on other concurring factors. First, given that – apart from cases of possible episodic strategic trade – the price of imported products is necessarily bounded from below by the average per unit transportation costs, 'imported crises' are less likely to occur for products imported from very distant countries, especially in the case of fresh fruits and vegetables, for which transportation costs are sizeable. Moreover, apart from products whose consumption depends exclusively or mainly on imports (and for which a price 'crisis' would be a bounty from the perspective of European consumers), in order to have a significant impact on EU prices imports should reach the market in periods when there is already an abundant internal supply, which makes it less likely that crises might be imported from productions originating in the Southern hemisphere.

All things considered, there are only a few cases for which the question of whether the implementation of the EPS might have contributed to avoiding crises caused by abnormally low prices on the EU market becomes relevant, and in this evaluation we focus on those cases. In particular, we analyze the cases of tomatoes and lemons, for which the two conditions of (a) being imported mostly by neighbouring countries, and (b) for which non negligible amount of imports add to EU production, are verified. We also explore the case of apples, mainly because of the intense debate that has been formed around the exponential growth of imports from China that has been witnessed in recent years.

In order to explore the role that the EPS has played in practice over the period covered by the evaluation, we have analysed the evolution over time of total production and of exports towards the EU of major trade partners, linking them with the trends of Standard Import Values (SIVs) for those products/origins. Moreover, we have explored the levels of prices that those products have reached, if any, in outlet markets other than the EU, as an indirect indication of potential crises that the EPS might have prevented.

As far as the role of export refunds is concerned, the "Evaluation of withdrawals and crisis management in fruit and vegetables sector"[33] identified the occurrence of crises according to the recourse to such an instrument. For the six products most involved in withdrawals (cauliflowers, tomatoes, dessert apples, peaches, nectarine and oranges), the withdrawals evaluation identified an index of "intensity of annual withdrawal" and an index of "intensity of price fall", depicting a map of the most relevant crises. The map shows the area of crises and the periods in which they occurred.

[33] http://ec.europa.eu/agriculture/eval/reports/withdrawals/index_en.htm

In answering this evaluation question we will move from the findings of the previous evaluation, comparing the levels of prices of the product most involved in withdrawals to the amount of exports of the same products (if any) that have received refunds, to find out the link between the identified crises and the recourse to export refunds.

One additional explored aspect is the possible concurrence, for some products, of withdrawals and imports. In particular in the cases of tomatoes and apples we have also compared the data on monthly withdrawals with the percentages below the trigger entry price.

4.1.2.2 Judgement criteria and indicators

The judgement criteria to answer the current evaluation question have been synthesized as follows:

Entry price scheme:

Have there been occurrences of exceptionally large supplies of fruit and vegetable products that could have been exported to the EU?

Data on production and export of the products/countries chosen for the counterfactual analysis have been analysed with the aim of identifying the periods of more abundant production. Also, exports from the same origins to countries other than the EU have been used to identify possible periods of excess supply that the entry price system might have helped in diverting from the EU market.

Has the entry price system been effective on such occasions?

Data on Standard Import Values and on domestic EU prices in the periods identified as potentially conducive to crises have been analyzed in order to show whether or not there has been a positive correlation between high world supply and the conditions for the theoretical application of specific duty in the EU.

Have there been cases of concurrent high levels of imports and withdrawals?

For the products subject to withdrawals, and for which the EPS is relevant, we explored the possibility that imports might have contributed to creating market crises by measuring the correlation between monthly imports and monthly withdrawals, over the period for which detailed data were available (June 1995 through Dec 2004).

Export refunds scheme:

Are export refunds payments linked to recourse to withdrawals?

Comparison of the data on the timing of export refunds and on withdrawals, on a per product basis, might shed some light on the possible interaction between the two instruments. Cross comparison with the results from a previous evaluation on withdrawals and crises management may reveal the role played by export refunds in preventing price crises.

In brief, the judgement criteria and indicators used for answering the evaluation question are contained in the following tables:

A. Entry Price System

Judgement criteria	Indicators	Data sources
A1. Extent of exceptionally large supply of F&V that could have been exported to the EU	A1.1. For each product, analysis of the quantity time series of production of the countries that traditionally export to the EU A1.2. For each product and country of origin, analysis on the relationship between exceptionally large production and exports towards the EU	Faostat Comext
A2. Extent of the effectiveness of the entry price system on occasions of exceptionally large supply of F&V	A2.1. Distribution of SIVs below the trigger entry prices A2.2. Correlation between high foreign production and frequency of SIV below the trigger EP A2.3. Correlation between SIVs below entry prices and the level of domestic EU prices, in case of abundant foreign production	EC statistics Faostat Agriview database on market prices
A3. Extent of possible cases of products/countries for which there is concurrent high imports and high recourse to withdrawals	A3.1. Correlation index, by product, between imports and withdrawals from the market	EC statistics Previous evaluation on Withdrawals of F&V

B. Export Refunds Scheme

Judgement criteria	Indicators	Data sources
B1. Extent of possible relation and interaction between export refunds and withdrawals, in preventing price crises	B1.1. Comparison of the data on the timing of export refunds and on withdrawals, on a per product basis	EC statistics (budget data, GATT annual accounting) Previous evaluation on Withdrawals of F&V Market prices deriving from previous evaluation on F&V

4.1.2.3 Data sources and limits

In addition to data and findings shown in the preparatory analysis and in answering EQ1, the answer to EQ2 has been based mainly on the data and findings of the "Evaluation of withdrawals and crisis management in fruit and vegetables sector"[34] and on data from the Faostat (production), Comtrade (exports towards non-EU) and Comext (EU imports and exports) databases.

For the definition of detailed distribution of export refunds over the year, we referred to the data from EC budget data, annual accounting GATT (*Comptatibilité année Gatt*). In these data, there are few instances in which there are negative figures for the quantities receiving export refunds (such as for table grapes in Jan-Feb 1996). We neglected such negative values by treating them as zeros.

4.1.2.4 Entry Prices scheme analysis

A1 - Extent of exceptionally large supplies of F&V that could have been exported to the EU

The idea underlying this judgement criteria is that overproduction of F&V in EU trade partner countries might contribute to inducing a crisis in the EU domestic market, if excess production could be exported to the EU. In such a situation, external protection as is intended to be provided by the EPS, may have an effect in sheltering the EU market from the entry of such low priced imports.

[34] http://ec.europa.eu/agriculture/eval/reports/withdrawals/index_en.htm

Two indicators have been built within this judgement criteria to ascertain:

(a) an index of occurrence of 'exceptionally large production' in the major EU trade partners that have exported fruits and vegetables towards the EU;

(b) the relationship between these abnormal increases in production and the corresponding changes in exports towards the EU.

Before calculating the two indicators, however, we carried out an exploratory analysis, measuring the existing correlation between domestic and World productions for all major products and EU trade partners.

All analyses are conducted by comparing the cases of products covered by the EPS with those of products not covered, consistently with the counterfactual analysis approach that informs the entire evaluation, and deepened for the cases of tomatoes and apples.

Correlation between domestic and World production

The magnitude of existing relations between domestic and world production has been measured for the products chosen for the counterfactual analysis (as listed in Tab. 3 of the Chapter 1) and major exporting countries.

The relationship has been measured as the index of linear correlation existing between the series of domestic and world productions obtained from the Faostat database for the period 1995-2006. The index of linear correlation can take values in the range -1 to +1 and, in the context of time series, can be considered as an indicator of the 'co-movement' of two series, that is, whether or not two series tend to move in the same direction (positive correlation) or in opposite directions (negative correlation).

In principle, if production in all countries responds in the same way to the same factors one should always observe correlations equal to one between production in any country and total world production. Values very far from +1 for any product in any country can be found when that country contributes little to world production, and indicates that domestic production is governed by idiosyncratic factors. This would also mean that production surplus in those countries would put a limited pressure on world prices, and thus would be less relevant in terms of potential price crises in the EU.

Of course, the relevance of production surplus for a product in any given Country vis-à-vis to possible 'global' crises on the market for that product depends on the share of domestic production out of world production.

Tab. 23 shows the correlation measured for the various products/countries considered (column A) along with the share of domestic over World production (column B)".

Tab. 23 - Correlation among domestic production and world production (column A) and share of domestic production over world production (column B) for the major EU trade partners for selected fruits and vegetables products

Fruits						Vegetables					
Subject to EP			Not subject to EP			Subject to EP			Not subject to EP		
	(A)	(B)		(A)	(B)		(A)	(B)		(A)	(B)
Apples			**Grapefruits**			**Cucumbers**			**Onions**		
Argentina	0.15	2.04%	Argentina	0.34	3.81%	Bulgaria	-0.78	0.37%	Argentina	0.50	1.32%
Brazil	0.57	1.46%	Israel	0.42	6.17%	Hungary	-0.65	0.32%	Australia	0.58	0.48%
Chile	0.72	1.85%	S. Africa	-0.52	4.85%	Lithuania	-0.46	0.03%	Chile	0.38	0.63%
N. Zeal.	0.13	0.93%	Turkey	-0.51	2.20%	Morocco	0.78	0.11%	Egypt	0.85	1.42%
S. Africa	0.64	1.05%	USA	0.94	41.5%	Romania	0.69	0.40%	N. Zeal.	-0.48	0.47%
						Turkey	0.86	4.80%			
Grapes			**Kiwifruits**			**Tomatoes**			**Asparagus**		
Argentina	0.38	3.94%	Chile	0.37	13.45%	Israel	-0.08	0.43%	Mexico	0.86	1.08%
Brazil	0.86	1.61%	N. Zeal.	0.89	25.80%	Morocco	0.68	0.94%	Morocco	-0.36	0.05%
Chile	0.86	2.89%				Turkey	0.93	8.09%	Peru	0.91	3.60%
Egypt	0.93	1.69%									
S. Africa	0.83	2.44%									
Oranges			**Melons**						**Beans**		
Argentina	0.26	1.25%	Brazil	0.93	0.71%				Egypt	0.77	3.77%
Egypt	0.04	2.67%	C. Rica	0.94	0.81%				Kenya	0.56	0.49%
Morocco	0.06	1.34%	Israel	-0.95	0.34%				Morocco	0.97	1.61%
S. Africa	0.10	1.81%	Morocco	0.88	2.19%				Senegal	-0.06	0.13%
Uruguay	-0.04	0.24%	Panama	0.73	0.17%						
Pears			**Strawberries**								
Argentina	0.90	3.66%	Egypt	0.95	1.96%						
Chile	-0.72	1.58%	Morocco	0.93	2.02%						
China	0.94	51.34%	USA	0.93	26.43%						
S. Africa	0.05	1.76%									

Source: Comtrade and Faostat data. Processed by Agrosynergie

The magnitude of observed correlations is widely diversified, revealing that for these products world production is, in general, not very highly integrated. There are, in other words, many local factors that determine the level of domestic production of fruits and vegetables, which differ from country to country.

Correlation of production of major EU trade partners with total world production is generally higher for products like apples, grapes, pears and melons among fruits, and beans among vegetables. For these products, therefore, excess domestic production might be relevant in potentially contributing to market crises in the EU, although, for the more distant countries such as Brazil, Chile, South Africa and China, the likelihood of such threats becoming reality is greatly reduced by the incidence of transport costs, which would make it very unlikely that production from those countries might ever reach the EU market at prices so low as to be conducive to a crisis.

Such a conclusion is based more on reasonable speculation than on the analysis performed. For fresh fruits and vegetables, transportation costs across the oceans are necessarily high. There is still the possibility that a trader might occasionally sell the product procured overseas below cost, but it is very unlikely that such behaviour would last for a long time, lest the trader go bankrupt.

On the other hand, correlations are low in the case of oranges, grapefruits, kiwi and also for most vegetables, therefore making possible production surpluses in the countries exporting these products less relevant in

relation to general worldwide overproductions that might generate crises having repercussions on the EU market.

For each product, analysis of the time series of production of the countries that traditionally export to the EU

The analysis of the evolution over time of domestic production has been conducted for the products chosen for the counterfactual analysis (as listed in Tab. 3 of the Chapter 1) and the major exporters towards the EU.

We considered the series of domestic productions obtained from the Faostat database for the period 1990-2006 already utilized and discussed in the answer to EQ1. (See section on "Effect of the EP system on the variability of quantity of F&V products").

Each series has been processed in order to identify occurrences of 'exceptionally large' production.

As a first approximation, an exceptionally large production could be identified by a sizeable increase in production observed in one year compared with the average production of previous years. We thus considered as an index of exceptionally high production the occurrence of a large positive deviation of current production from the underlying trend.

In our analysis, we first identified existing trends in the production of all F&V observed in the countries defined for the counterfactual analysis of EP, and considered years of exceptionally large supply those years when production exceeded by 10% or more the level of production predicted by the estimated linear trend.

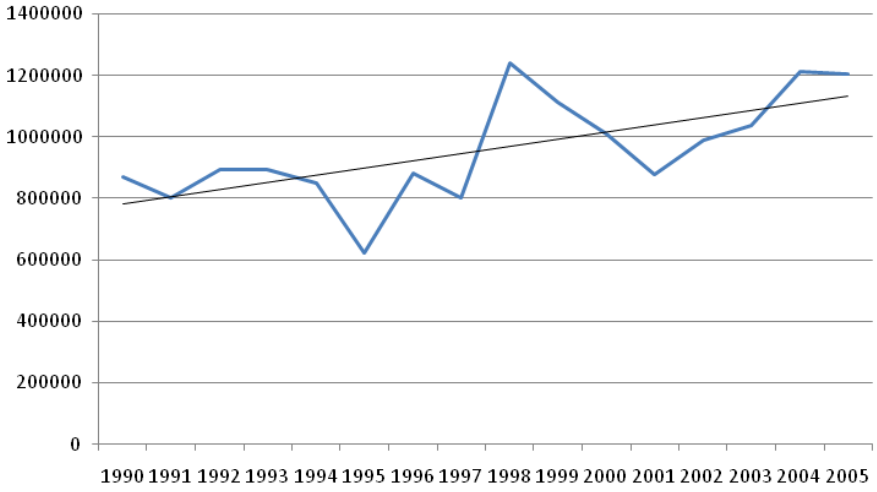
For each country, the first column of table 24 gives the number of times over the period covered in the evaluation (1995-2005) that such exceptionally large production has occurred.

With sizeable differences across countries and products, the table reveals that production boosts have been relatively frequent for grapes in Argentina and in Brazil (4 out of 11 years) and for Oranges and Mandarins in Uruguay (4 out of 11).

Also, the high values for cucumbers and strawberries demonstrate that, for these products, swings of plus or minus 10% of average production are normal rather than exceptional phenomena.

The graph below gives details of the most interesting case, that of tomatoes produced in Morocco, which shows that for this product and origin there have been two years (1998 and 1999) of 'production boost' that merit closer attention, since they might potentially have been contributing to a crisis.

Fig. 18 - Tomato production in Morocco. 1990-2005



Source: Faostat database processed by Agrosynergie

Analysis of the relationship between exceptionally large production and exports towards the EU

The second step in the analysis has been to check what kind of relationship existed between occurrences of such exceptionally large supply and changes in exports towards the EU. We identify three possible situations:

(a) a decrease in exports toward the EU associated with years of 'abundant' production

(b) an increase in exports towards the EU, but less than proportional in percentage terms; and

(c) a more than proportional increase in exports towards the EU;

and determined the number of times each of the possible situations occurred for each product/origin combination.

The results are summarized in Tab. 24, which gives, for all products selected for the counterfactual analysis and for all major trade partners[35], three columns: the number of times in which "exceptionally large productions" are observed (identified with the letter S), the number of times in which the corresponding exports towards the EU increased (X) and the number of times in which such an increase was larger than the percentage increase in the supply (XX).

Providing our method for identifying potentially dangerous production surpluses is valid, if the EPS has provided effective protection against possible 'imported instability', one would expect no occurrence of cases of type (c) in those instances.

More generally, an index of the degree of effective protection against crises guaranteed by the EPS per se, could be obtained by comparing the relative frequency of cases of type (b) and (c) between products which are subject to the EPS and products which are not.

[35] It has not been possible to check the effect of the identified 'exceptionally large production' for all years under review because, as we have already mentioned, trade data were not always available for all countries.

Tab. 24 - Number of times in which supply increased by more than 10% over the predicted value (S) and exports to EU increased (X) by a larger percentage (XX) per product and country

	Argentina			Brasil			Chile			Costa Rica			Panama			New Zealand			SA			Uruguay			Egypt			Morocco			Israel			Turkey			China			USA			Total		
	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX
Apples	2	1	1	2	2	1	1	1	1							1	0	0	1	0	0																					7	4	3
Grapes	4	4	3	4	2	2	0	0	0										0	0	0				1	1	0															9	7	5
Oranges	3	2	1																1	1	0	4	4	1	0	0	0	2	1	1												10	8	3
Pears	0	0	0				2	2	0										0	0	0																0	0	0				2	2	0
Mandarins																			1	1	1	4	2	2				3	1	1												8	4	4
with EP	*9*	*7*	*5*	*6*	*4*	*3*	*3*	*3*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*3*	*2*	*1*	*8*	*6*	*3*	*1*	*1*	*0*	*5*	*2*	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*36*	*25*	*15*
Grapefruit	1	0	0																0	0	0										1	1	1	3	1	1				3	1	0	8	3	2
Kiwi							1	1	1							0	0	0																								1	1	1
Melons				0	0	0				0	0	0	0	0	0													0	0	0	0	0	0									0	0	0
Strawberries																									5	2	2	10	8	7										4	3	3	19	13	12
without EP	*1*	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*5*	*2*	*2*	*10*	*8*	*7*	*1*	*1*	*1*	*3*	*1*	*1*	*0*	*0*	*0*	*7*	*4*	*3*	*28*	*17*	*15*
Fruits	10	7	5	6	4	3	4	4	2	0	0	0	0	0	0	1	0	0	3	2	1	8	6	3	6	3	2	15	10	9	1	1	1	3	1	1	0	0	0	7	4	3	64	42	30

	Bulgaria			Hungary			Romania			Lithuania			Morocco			Turkey			Israel			Egypt			Kenya			Argentina			Australia			Chile			New Zealand			Peru					
	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX	S	X	XX			
Cucumbers	4	3	2	4	2	2	3	2	1	3	0	0	4	2	2	1	1	1																									19	10	8
Tomatoes													2	2	0	0	0	0	1	0	0																					3	2	0
with EP	*4*	*3*	*2*	*4*	*2*	*2*	*3*	*2*	*1*	*3*	*0*	*0*	*6*	*4*	*2*	*1*	*1*	*1*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*22*	*12*	*8*
Asparagus													4	2	1																									3	3	2	7	5	3
Beans													5	4	2							1	0	0	1	1	0															7	5	2
Onions																						3	1	1				2	1	1	2	1	1	3	1	1	2	0	0				12	4	4
Peppers													3	3	2	0	0	0	0	0	0																					3	3	2
without EP													*12*	*9*	*5*	*0*	*0*	*0*	*0*	*0*	*0*	*4*	*1*	*1*	*1*	*1*	*0*	*2*	*1*	*1*	*2*	*1*	*1*	*3*	*1*	*1*	*2*	*0*	*0*	*3*	*3*	*2*	*29*	*17*	*11*
Vegetables	4	3	2	4	2	2	3	2	1	3	0	0	18	13	7	1	1	1	1	0	0	4	1	1	1	1	0	2	1	1	2	1	1	3	1	1	2	0	0	3	3	2	51	29	19
F&V																																										115	71	49

Source: Comtrade and Faostat data. Processed by Agrosynergie

Of the 89 detected events of 'exceptionally large production', 60% were associated with increases in exports towards the EU, and in more than one third of cases exports towards the EU increased proportionally more than production. Such percentages are a little higher for fruits than for vegetables.

What is more interesting for our analysis is that there is no systematic difference between products covered by the EPS and products not covered. For vegetables covered by the EPS, the number of 'exceptionally large productions', as well as the number of increases in exports towards the EU are exactly the same as those of vegetables not covered by the EPS.

For fruits, the share of increases in exports towards the EU following abundant harvests is even a little higher for products covered by the EPS. However this apparently odd result is largely due to the presence of exports toward the EU of table grapes and oranges from Southern Hemisphere countries, and such exports are effected in periods when the EPS is not enforced.

In particular, of the two cases of exceptional production detected in the series of tomato production in Morocco, only in one case has the corresponding increase in exports towards the EU been more than proportional.

In conclusion, **this analysis reveals no evident sign of a possible sheltering effect role played by the EPS against the risk of imported instability in the markets for the products chosen for the counterfactual analysis.**

The result might be due either to the fact that, because of the way in which it is devised and implemented, the EPS is not capable of effectively guaranteeing protection against imported crises, or that over the period considered there was no need to provide such a protection. However, in analyzing the relationships between production and exports of the main EU partner countries, we should consider that given the actual organization of the retailing sector in most EU countries, the increase in exports to the EU could not be observed without previous contracting between producers and traders. This may explain why in some cases exports grew more than internal production.

In order to better understand which of the two explanations is more likely to be true, we move on to analyze the data on recorded SIVs of EU imports and cross them with the data on foreign productions and on withdrawals.

A2 - Extent of the effectiveness of the entry price system on occasions of exceptionally large supply of F&V

The judgement criteria is aimed at highlighting the possible reactions of the EPS when exceptionally large production of a product has occurred that might have contributed to fuelling crises in EU markets.

The problem here is to define how to ascertain the reaction of the EPS when such conditions happen. Since an exceptionally large production in a country might affect the price of the product exported by that country, obvious information to consider is the value of SIVs recorded for EU imports of that product from that country. For the potentially relevant product/origin combinations, we therefore analyzed the distribution of SIVs with particular emphasis on situations in which the SIVs are below the trigger.

In addition to the analysis of the distribution of SIVs, which has been already conducted in the preparatory analysis, we also attempt to reveal the effect of "exceptionally large productions" both on EU domestic market prices and on the quantity of product withdrawn from the market, at least for products covered by EP and for which withdrawals are allowed.

Tab. 25 below reports the correlation calculated for these cases.

Tab. 25 - Correlation among monthly imports and the share of SIVs below the trigger EP

	Argentina	Brasil	Chile	New Zealand	SA	Uruguay	Egypt	Morocco	Israel	China	Romania
Apples	0.13	0.11	0.14	0.13	0.16					0.034	
Oranges					0.61		0.73				
Pears	0.11		0.1		0.08					0.34	
Mandarins										0.17	
Plums									0.93		0.55

	Bulgaria	Hungary	Romania	Morocco	Turkey	Israel	Egypt	New Zealand
Cucumbers	0.25	0.05	0.06	0.18	0.06			
Tomatoes				0.23	0.17	0.27		
Artichokes							0.64	

Source: DG Agri data processed by Agrosynergie

The correlations reported in the table above show that the percentage of SIVs below the trigger entry price is significantly and positively related to imports only for few products and partner countries. Particularly high is the correlation between the imports of plums, from Israel and Romania, of oranges from South Africa and Egypt, and artichokes from Egypt. For Moroccan tomatoes, the correlation index is 0.23, not particularly high.

For other products and partner countries the mechanism that might trigger the implementation of additional duties needed to protect the EU market has either been never required, or required when imports of the involved products and origins were low anyhow.

All this evidence suggests that it may be very difficult, if not impossible, to link the fact that SIVs have been below the trigger EP to cases of avoided potential crises. The difficulty we have already noted in answering the previous evaluation questions, of predicting which amounts of additional imports would have entered the EU market had the EPS not been in place, is confirmed. As a consequence, it becomes very difficult to ascertain, other than as a theoretical possibility, the role of the EPS in preventing crises due to excess supply on the EU markets.

Correlation between occurrence of SIVs below trigger entry prices and withdrawals

Before concluding the analysis on the possible role of the EPS in preventing surplus crises, we wanted to analyze in greater detail the possible relationship between the EPS and withdrawals, since the latter is the major tool in the EU Fruits and Vegetable CMO intended for the management of surplus crises, and therefore its use could be used as a signal of when potential crises have occurred.

A3 - Extent of possible cases of products for which there are concurrent high imports and high recourse to withdrawals

Before entering into the specifics of comparing the use of withdrawals with conditions for operation of the EPS as determined by the recording of SIVs below the trigger EP, we conducted an exploratory analysis to rule out the presence of cases of concurrent high imports and high recourse to withdrawals.

For products subject to withdrawals and for which the EPS is relevant, we calculated the simple index of linear correlation between monthly imports and monthly withdrawals, over the period for which we have detailed data (June 1995 through Dec 2004). The results are reported in Tab. 26.

Tab. 26 - Correlation between monthly imports and withdrawals (EU-15, Jun 1995-Dec 2004)

TOMATOES	-0.309	APPLES	-0.121
PEACHES	-0.302	PEARS	-0.227
TABLE GRAPES	-0.224	ORANGES	-0.127

Source: DG Agri data processed by Agrosynergie

All values turn out to be negative (as expected, given that it would be very strange for withdrawals to be effected in periods when significant imports also occur). Nevertheless, to highlight the patterns rather than just the levels, we have plotted the two series on the same graph, using the same quantity scale and also different scales in order to highlight the respective dynamics.

All the graphs are included in the annex to EQ2. From their examination, it can be noted, first, that for all products other than peaches, withdrawals have involved negligible quantities when compared to the amount of imports of the same product. By enhancing the scale on which withdrawals are measured, so that the variability of the two series can be directly compared by visual inspection, it can be appreciated that the concurrent occurrence of high levels of withdrawals and high levels of imports is almost non-existent. On the other hand, in most cases, peaks of withdrawals occur in months when imports are at minimum levels, thus providing indirect evidence that there are no loopholes in the mechanism governing withdrawals.

Relationship between SIVs below the trigger EP and recourse to withdrawals

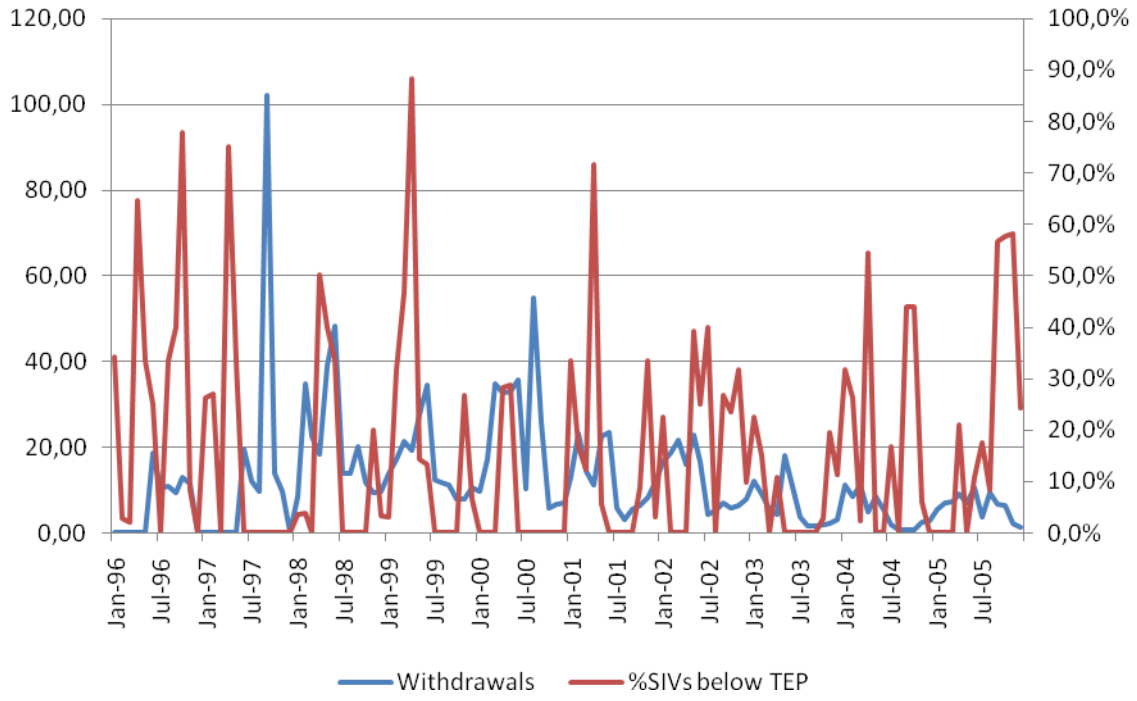
Having ruled out possible perverse interactions between imports and withdrawals, we explored the relationship between the occurrence of conditions for which the EPS could be effective, that is, the periods when there have been larger percentages of SIVs below the entry prices, and the periods when there had been higher recourse to withdrawals.

We deemed it interesting to analyze, for a few cases, the correlation existing between the percentage of SIVs below the trigger EP and the use of withdrawals on the minimum level of aggregation allowed by the information available on withdrawals, that is, on a monthly basis.

We did this for apples and tomatoes, the two products for which the possibility that imports might have contributed to de-stabilising the EU internal market has often been considered a real problem, in particular with reference to imports of tomatoes from Morocco and, more recently, of apples from China.

For each of these two products, we plotted the monthly series of percentages of SIVs below the trigger EP against the monthly series of withdrawals. The purpose of the graphs is to highlight the existence of overlapping peaks in the two series, that is, to detect cases of possible concurrent high recourse to withdrawals (taken as a signal of impending crisis) and of threats deriving from imports. Fig. 19 refers to tomatoes.

Fig. 19 - Withdrawals and % of SIVs below the trigger EP for tomatoes

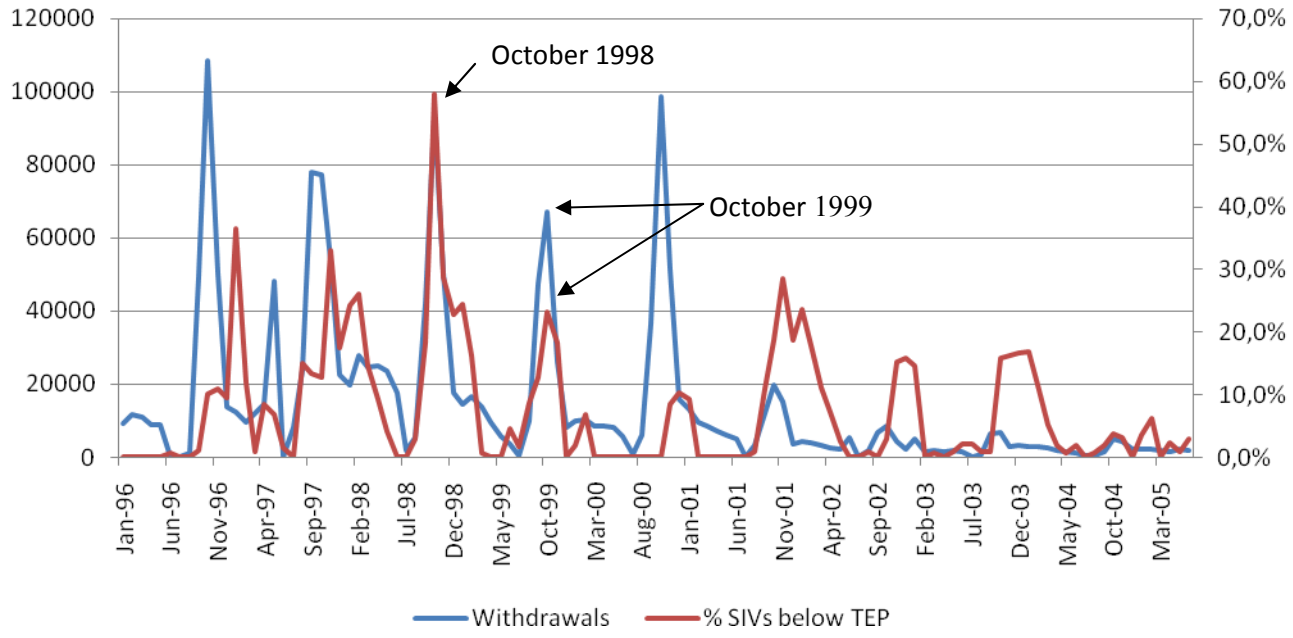


Source: DG Agri data processed by Agrosynergie

It shows that the correlation between the two series is weak. The series of withdrawal decreases over time, and manifests two clear peaks that do not match peaks in the series of the incidence of breaking SIVs. It is worth underlining that the peaks in this latter series are rather frequent in April of many years, which is when the trigger EP for tomatoes was higher.

Fig. 20 gives the same comparison for apples.

Fig. 20 - Withdrawal and % of SIVs below the trigger EP for apples



Source: DG Agri data processed by Agrosynergie

In this case, the two series show a higher degree of positive correlation (0.49) and significantly different from zero. However, this may largely be due to the common decreasing trend of the two series from 1995 to 2000. In fact, for the period 2000-2005 the correlation is not different from zero. There are two clear cases of concomitant peaks for the series, in October 1998 and in October 1999, when at the same time, high levels of withdrawals occurred while high percentages of SIVs were recorded below the trigger EP. This is an interesting result, to which we will return shortly, when discussing the correlation between SIVs below the entry price and EU level prices (See the next paragraph).

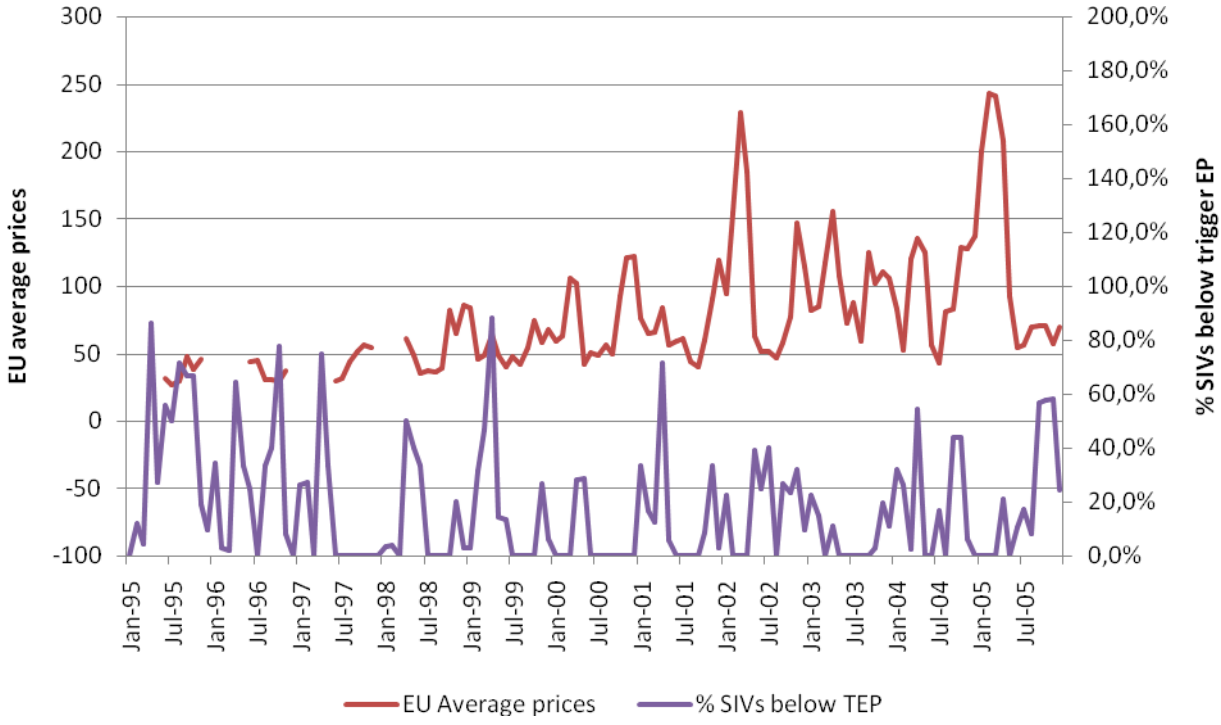
Correlation between occurrence of SIVs below the trigger entry prices and EU prices

Another indication of whether the occurrence of high numbers of SIVs below the trigger EP could be a signal that imports represented a threat to the EU market can be found in the comparison of the series of percentage SIVs below the Entry Prices with indexes of the EU monthly price of that product.

This indicator should not be intended as duplicating the analysis that has been carried out in answering EQ1, where we contrasted daily prices and SIVs. There the analysis was intended to highlight possible local instability induced by low priced imports, here the objective is to ascertain whether the phenomenon is so intense as to be considered potentially conducive to an EU level crisis.

Fig. 21 compares the monthly series of average price of tomatoes in the EU with the share of SIVs below the trigger EP.

Fig. 21 – EU Average prices of tomatoes and percentage of SIVs below the trigger EP

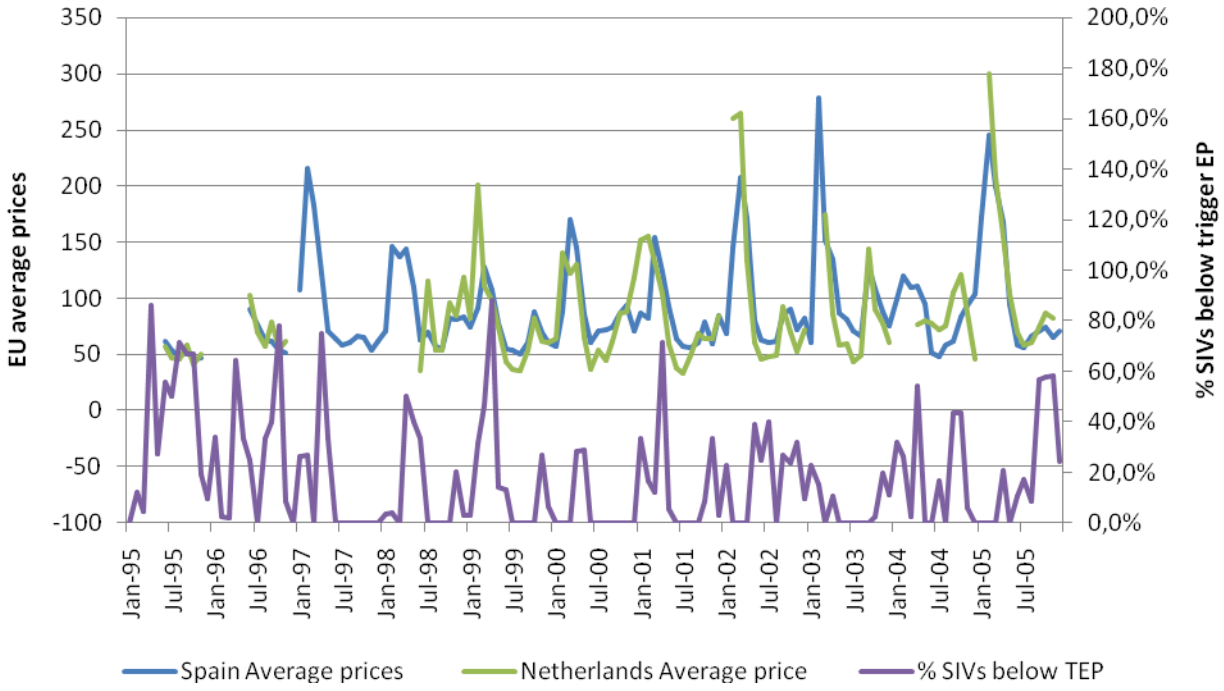


Source: Agriview DG Agri data processed by Agrosynergie

The two series do not show a strong link. Although there is a negative correlation (-0.22), low EU average prices are not systematically related to high percentages of SIVs below the trigger EP. On the contrary, there are many cases in which relatively high tomato prices are recorded in months when there are relatively high percentages of SIVs below the trigger EP, occurring in April, when the EP is set at its maximum value.

In order to detect whether the situation might be different at the level of individual Countries, we considered also the average monthly prices of tomatoes in Spain and in the Netherlands. Fig. 22 below reports the comparison of those monthly average prices with the series of SIV percentages below the trigger EP.

Fig. 22 – Average prices of tomatoes in Spain and the Netherland, and percentage of SIVs below the trigger EP



Source: Agriview DG Agri data processed by Agrosynergie

In this case too the correlation is weak, and actually weaker than that recorded at the EU average level (see Tab. 27 below). Spain and Netherlands monthly tomato prices are not significantly linked to the occurrence of SIVs below the trigger EP during the same month. Note that this result does not contradict the positive correlation measured for daily Spanish tomato prices and SIVs of Moroccan imported tomatoes that we discovered when answering EQ1. Here we consider the total number of SIVs, and not only those recorded for Moroccan origin, and we refer to the monthly values: evidently part of the day-by-day variability is lost when considering monthly data, and this attenuates the correlation.

All this confirms that the possibility of linking price crises to the occurrence of low SIVs is something that can be verified at the level of single markets, and even in those cases, it would not in general be conducive to persistent and generalized market crises, even at the level of single Countries like Spain or the Netherlands.

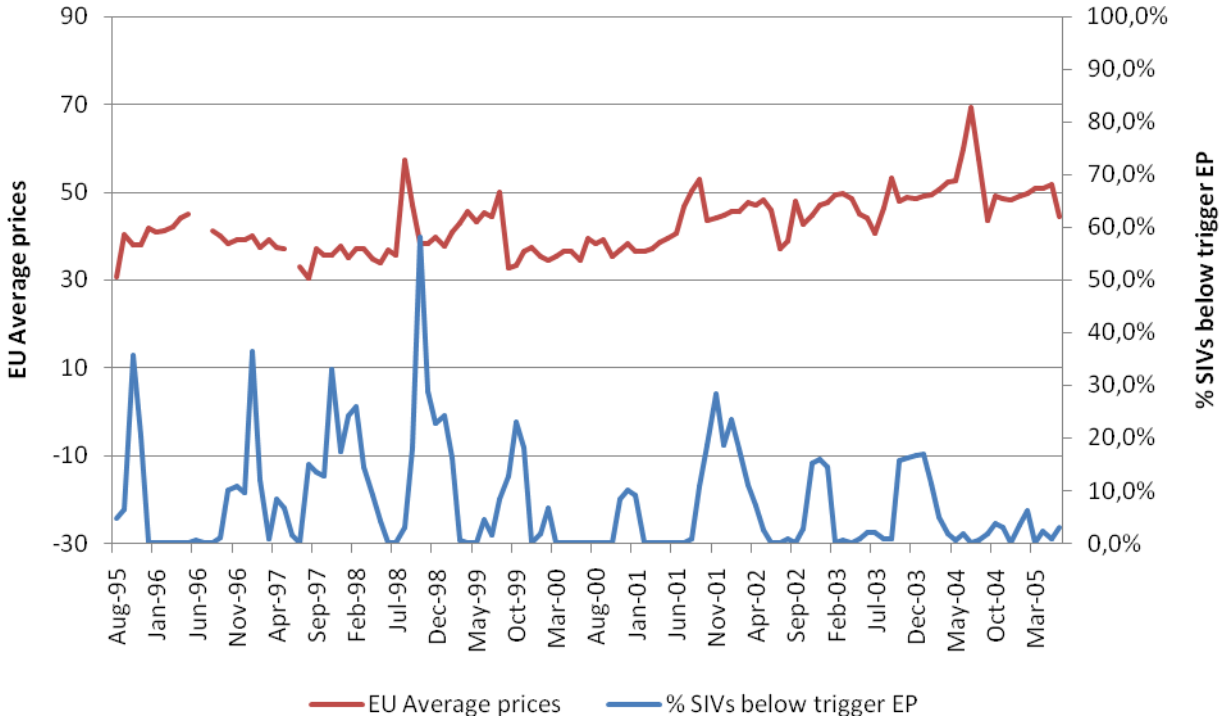
Tab. 27 - Correlation between tomato prices in selected EU countries and percentage of SIVs below trigger entry prices (1996-2004)

Spain	Netherlands	EU Average prices
-0.082	-0.113	-0.227

Source: Agriview DG Agri data processed by Agrosynergie

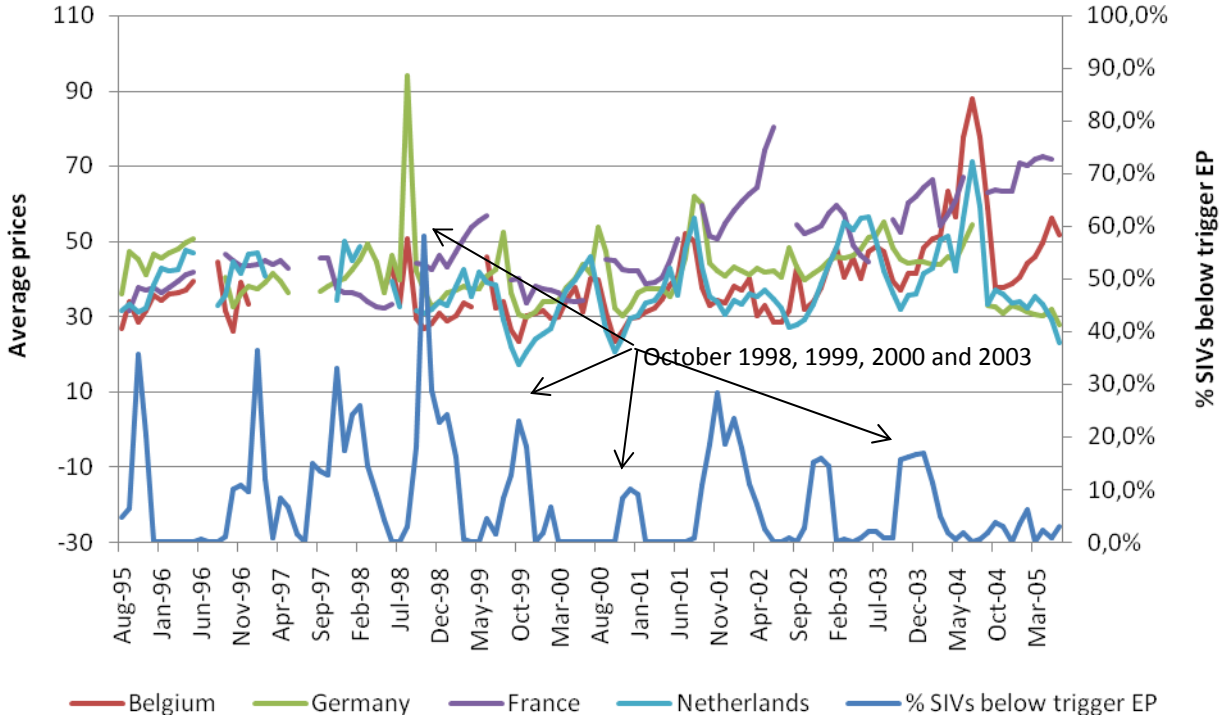
A similar analysis has been conducted for apples. Fig. 23 shows the comparison of monthly EU average level of apple prices and percentages of SIVs below the trigger EP, while Fig. 24 compares the latter with the prices recorded in Belgium, France, Germany and the Netherlands.

Fig. 23 – EU Average monthly Apple prices and percentage of SIVs below trigger entry prices (1996-2004)



Source: Agriview DG Agri data processed by Agrosynergie

Fig. 24 - Average monthly Apple prices in selected EU countries and percentage of SIVs below trigger entry prices (1996-2004)



Source: Agriview, DG Agri data processed by Agrosynergie

Here too the relationship between the monthly average prices at the EU level and the share of SIVs lower than the trigger EP is weak: the correlation index between the two series is negative, as expected, but not very high in module. The link is weakest for France and somewhat stronger in Belgium and Germany. (See Tab. 28 below).

Tab. 28 - Correlation between apples prices in selected EU countries and percentage of SIVs below trigger entry prices (1996-2004)

Belgium	Germany	France	Netherlands	EU average prices
-0.269	-0.215	-0.042	-0.193	-0.126

Source: DG Agri data processed by Agrosynergie

As opposed to what we could find for tomatoes, for apples, as already noticed when commenting on the relationship between SIVs and withdrawals, there are two cases that may be deemed as price 'crises'.

This occurs in general in October, when the price of apples is at its minimum with the release on the market of new production each year. In October 1999 and, to a lesser extent, October 1998, 2000, and 2003, these low monthly prices of apples (particularly in Belgium and the Netherlands) occurred while relatively high percentages of SIVs below the trigger EP were recorded in the same months.

Combining the two results obtained from the comparison of withdrawals and prices with the series of percentage SIVs below the trigger entry price, we can conclude that, from 1998 to 2000 and in 2003, there were periods of crisis for the apple market in the EU corresponding to the initial marketing season, and that in such cases imports might have contributed to this phenomenon that the EPS has certainly helped to highlight through the mechanism of recording SIVs.

That imports *per se* are the cause of price crises, however, is highly questionable. It must also be considered, in fact, that the concentration of SIVs below the trigger entry prices in the months of October could also be due to the practice of importers storing imported apples and declaring them for duty reasons only at the moment of sale. October, when new domestic production arrives, is also the moment to rotate stocks, and therefore the residual stored product must be sold. Without detailed data on the actual relevance of imports in quantity terms, it is impossible to draw any conclusion on the contribution of imports to price crises, and, what we are more concerned about here, on the role that the EPS might have played in preventing such crises.

In conclusion, while the information role that the EPS system has played in these and other cases must be duly recognized, how effective the system has been in terms of limiting the consequences of a potentially more serious crisis is a question that remains unanswered, given the virtual impossibility of ascertaining how much additional imports could have entered the EU market if the EPS had not been in place. A more articulate answer might be provided in the future, when longer series of detailed imported values and quantities will be made available through the monitoring system that the EU Commission has set up for apples.

4.1.2.5 Export refunds scheme analysis

As we already pointed out in the introductory section, Export Refunds might play a role in preventing crises due to abnormally low prices to the extent that they would create a means to 'dispose' of surplus production in addition to what the EU already permits through the instrument of market withdrawals.

For surpluses due to excess *domestic* production, in fact, withdrawals can and have been effected by EU producers to avoid excessive price drops.

For this reason, the role of ER in preventing crises, if any, should be considered as complementary to that of withdrawals, and that is the reason why we tackle this part of the evaluation by comparing the data on the timing of export refunds and of recourse to withdrawals, on a per product basis, with the aim of shedding some light on the possible interaction between the two instruments.

As we have already defined in the paragraph 3.2.1 "Analysis limits on Export refunds for processed products" the analysis carried out within theme 1 will not consider the effects of ER for processed F&V products on the stability of their market.

B1 - Extent of possible relations and interactions between export refunds and withdrawals, in preventing price crises

In the answer to EQ 1 (paragraph 4.1.1.5), the comparison between the quantities receiving ER and the amounts withdrawn has been already presented. The analysis has been conducted for the periods when data on export refunds granted by products were available, that is on a bi-monthly basis from 1995 through 2005.

The objective of the comparison between the quantity of product receiving export refunds and the quantity withdrawn was to reveal whether or not the two instruments had combined to prevent drops in the internal EU price.

We formed the series of quantities receiving export refunds and the series of withdrawals for the periods from July-August 1995 through July-August 2005 and compared them in terms of levels and their evolution over time. The results were that the role of ER in stabilizing the market was comparable or greater than that of withdrawals for table grapes, oranges and lemons, although, as already noted in answering EQ1, especially for table grapes, the impact cannot be considered such as to have a significant impact on the level of prices, considering the limited share of quantities involved out of total EU consumption (see Tab. 16 on page 75).

Here, we analyse the same data by focusing on the possible role of ER in terms of preventing crises, and therefore by considering the concurrent use of the two instruments at the level of aggregate seasonal data.[36] The graphs in the Annex to EQ 2 illustrate all the products covered, namely: tomatoes, peaches and nectarines, table grapes, apples, oranges and lemons. In those graphs we plot the series of quantity withdrawn and the series of quantities receiving export refunds on an annual basis.

The right hand panel of Tab. 20 on page 79 already listed the values of correlations measured for the two series, but we reproduce it here for ease of reference.

Tab. 29 - Correlation between export refunds and withdrawals (aggregate seasonal values, 1995-2005)

	*Annual data**	
Product	original series	detrended series
Tomatoes	0.454	-0.653
Peaches and Nectarines	0.414	0.461
Table Grapes	0.308	-0.150
Apples	0.024	-0.119
Oranges	0.801	0.289
Lemons	0.471	0.167

* For tomatoes: 1996-2005

Source: DG-Agri data processed by Agrosynergie

The values in the table reveal that only for peaches and nectarines could the use of export refunds be linked to that of withdrawals, and therefore considered an instrument used to prevent crises. Even in this case, however, the very limited relevance in terms of quantities involved leads us to conclude that ER are not used in the EU to prevent crises due to abnormal low prices.

This raises the question of what the deadweight effect of the presence of such an instrument might have been, especially in those cases when it has been used to a sizeable extent (table grapes, oranges and lemons).

[36] For tomatoes, peaches and nectarines and table grapes, the data have been aggregate over the calendar year, from January through December. For apples, oranges and lemons, we used a different aggregation to be sure not to overlap data referring to different production Seasons. We used the period September-August for apples, November- October for oranges and July-June for lemons.

What is striking, in all cases, but especially in the case of oranges, lemons and table grapes, is the systematic recourse to export refunds, which have been almost constantly released every season from 1995 through 2004 for quantities of about 394, 127 and 60 thousand tons respectively per season.

Tab. 30 - Quantities receiving export refunds (Average per season 1995-2005)

Product	*Average quantity (tons)*
Tomatoes	55 198
Peaches and nectarines	24 815
Table grapes	59 152
Apples	94 311
Oranges	394 031
Lemons	126 967

Source: DG-Agri data processed by Agrosynergie

In this case, it is difficult to attribute to such an instrument the role of crisis prevention (unless one considers the risk of a crisis a constant feature of the market for these products).

4.1.2.6 Conclusions

Conclusions on the Entry prices scheme

The analysis conducted has shown that the conditions for which imports might constitute a real menace to the EU fruits and vegetables market have not materialized frequently during the period covered by our analysis.

Exports towards the EU by major exporting countries have not always proportionally followed increases in domestic production, and the years of more abundant productions have not corresponded closely to years of low priced products being exported to the EU. These results may also be the effect of the increasing relevance within the fresh F&V sector of retail procurement strategy based on contracting, that would make it difficult to export the surpluses of domestic products.

All of the analyzed indirect evidence points to the conclusion that the role of the EPS in preventing crises due to abnormally low prices is very limited.

For two of the potentially most interesting cases, comparison of the percentage of SIVs below trigger entry prices with recourse to withdrawals and with EU prices has revealed that, over the period considered, only in one instance (October 1998 for apples) is there clear evidence that a crisis could have been partly imported from abroad.

How effective the system has been in terms of limiting the consequences of a potentially more serious crisis, however, is a question that remains unanswered, given the difficulty in ascertaining precisely how many additional imports might have entered the EU market had the EPS not been in place.

As a general conclusion, we can say that, although in principle the implementation of the EPS might contribute to preventing crises due to abnormally low prices, the conditions for which this could have been needed have been rare. **Although a contribution of the EPS in preventing crises due to abnormally low prices cannot be ruled out, available objective information does not allow us to ascertain, even in those rare cases when it might have been needed, what the contribution has actually been in quantitative terms.**

Conclusions on the Export refunds scheme

As far as **export refunds** are concerned, the analysis conducted has revealed that the exploitation of the possibility of exporting surpluses and receiving refunds has, only in the case of peaches and nectarines, complemented the use of withdrawals. Even in that case, however, the quantities involved are small when compared to total EU production, which leads us to conclude that export refunds have not been used in the EU to prevent crises due to abnormal low prices.

However, for other products for which the amounts involved in export refunds are much larger than those that have been withdrawn from the market, such as for oranges, lemons and table grapes, the role of export refunds as a mechanism for crisis prevention must be considered secondary.

4.2 Theme 2: Development of the EU trade

The entry price scheme was applied as a result of the Uruguay Round (URAA) commitments for agricultural trade. In addition, the entry price applies differently to some countries and products within the framework of bilateral agreements. Evaluation theme 2 "Development of the EU trade" poses the question as to whether or not the entry price system has involved a constraining effect against imports of products affected by the system. In the pages below we undertake a discussion on how entry prices and export refunds may have affected EU trade flows since the end of the Uruguay Round.

4.2.1 To what extent has the implementation of the entry price and export refunds schemes influenced the development of the EU trade in fruit and vegetable products? – EQ.3

4.2.1.1 Interpretation of the question and methodological approach

The evaluation question can be approached by studying the changes to EU trade and relating them, when possible, to the implementation of the entry price system and the size of export refunds. There are some differences between the approaches followed to analyse imports and exports and their relation to EP and ER respectively.

As for the EP scheme, the study combines a number of methods to assess:

I. The extent to which EU import flows of products subject to EP, have been more or less dynamic than import flows of products not covered by EP. One part of the study is based on the comparison of import growth rates. A cross study will test whether the existence of EP has influenced bilateral trade flows between relevant supplying countries and the EU.

II. The degree of trade protection granted by the EP among preferential and non-preferential suppliers in cases in which different EP levels are levied. This includes the assessment of ad-valorem equivalents (measuring the different level of protection faced by these types of suppliers), the value of the preference margin or tariff revenue forgone by the EU and the extent to which the Entry Price Quotas, when they exist, have been filled by the preference-receiver countries.

III. The potential impact of phasing out entry prices on selected products by applying a partial equilibrium model. The model considers imports from different sources as imperfect substitutes. Its main advantage lies in the detailed specification of policy instruments, such as tariff-rate quota and entry prices, and in the monthly differentiation of trade impacts, which vary seasonally for this kind of goods.

We further detail the empirical application of the methods applied and, where needed, these are developed in methodological annexes. We also recognise the limitation of any quantitative analysis given the significant complexity of the fruit and vegetable markets. Results have to be interpreted with care by taking into account that trade is driven by a number of determinants difficult to capture in terms of quantitative indicators. We added some qualitative considerations, based on the knowledge of how markets work and the way the EP operates, in order to qualify the results of the assessment. However, the combination of quantitative analysis and qualitative remarks are helpful in providing a meaningful answer to the question on the extent to which trade flows may have been significantly influenced by the EP system.

As for the ER scheme, the analysis combines three approaches:

- The extent to which the dynamism of EU export flows of products covered by ER has changed since the end of the URAA up to recent times. The study compares export growth rates for different products and periods, and looks also at the export growth rate of relevant products not covered by ER. While the specific impact of ER is not determined, we can discuss, at least, whether the dynamism of EU exports has been slowed down during a period of substantial reduction of ER.
- The extent to which export increases or decreases can be associated with increases and decreases in ER per exported unit or in the percentage of exports covered by ER.

- Assessment of the potential impact of phasing out the ER on selected products by applying a partial equilibrium model that follows a similar approach to the one applied to discuss EP. The model will look at the possible economic effects of export refunds' abolition on EU market penetration in selected non-EU markets.

4.2.1.2 Judgment criteria and indicators

The judgement criteria and indicators used for answering the evaluation question are the following:

A - Entry price scheme:

Judgement criteria	Indicators	Data sources
A1. Development of EU imports of EP products. - Impact of EP implementation. - Differential import growth of EP products with respect to products non covered by EP - Differential impact on values and volumes	A1.1 For each product, for reference periods and for each major supplier, imported quantities and values. Relative changes. A1.2 Comparisons refer to before and after the URAA implementation period and to most recent period.	COMEXT
A2. Protection levels and preferences - Extent of the equivalent protection - Assessment of preference margins and rents - Effect of entry price quotas	A2.1 For each product, average monthly ad valorem equivalents for each major MFN and preferential suppliers A2.2 Value of the preference margins for products and suppliers with reduced entry price. Comparison of export price to the EU and non-EU markets. A2.3 Monthly exports from preferential suppliers to the EU. Tariff-rate Quotas.	TARIC COMEXT Agricultural Protocols
A3 Assessment of policy changes on the EP system	A3.1 Simulation results on import quantities and prices from different sources. Scenarios based on changes on entry prices.	Partial equilibrium trade model.

B - Export refunds scheme:

Judgement criteria	Indicators	Data sources
B1. Development of EU exports of ER products.	B1.1 For each product, exported quantities. Relative changes Comparisons refer to before and after the URAA implementation period and to most recent period.	COMEXT,
B2. Extent to which the reduction of export refund reduces export growth	B2.1 For each product and major export market, quantities exported, and subsidies granted, per ton and in percentage of exported value.	EU schedule and notifications to WTO, CATS data base CATS database
B3. Assessment of policy changes in the ER	B3.1 Simulation results on EU export quantities and prices. Scenarios based on changes on EU export subsidy rates.	Partial equilibrium trade model.

4.2.1.3 Data sources and limits

The comparison of trade flows before and after the implementation of the EP has been carried out by using COMEXT database. This provides imported quantities for each product, for reference periods and for each major country supplier. For the preparatory analysis, the COMTRADE database was used to look at the different behaviour of major import players in F&V markets. COMEXT tables have been available on a monthly basis since 1995. Data for 1992 to 1994 were available from COMEXT. Available data for such years allow for reading data for tariff positions corresponding to specific periods of the year, so comparisons on a seasonal basis were possible between the pre and post-UR periods. Data used refer to EU-15 and to EU-25, as indicated in the tables presented in this study. To assess the effect of entry price quotas, monthly exports from preferential suppliers to the EU and Tariff-rate Quotas have been analysed using COMEXT and Agricultural Protocols. Data on SIV for commodities and countries have been gathered from TARIC database, whereas average monthly ad valorem equivalents for each major MFN and preferential suppliers, for each product have been calculated combining TARIC and COMEXT data.

The comparison of trade flows before and after the implementation of the ER has also been carried out by using COMEXT database. As regards information on export refunds for specific commodities, we encountered difficulties with data provided by DG Agri, covering only in some years all commodities. However, as export refunds data were available for several years, an evaluation has been made.

4.2.1.4 Entry Prices scheme analysis

In the pages below we will focus first on the assessment of EP scheme on trade developments. In the second part, we will consider the issue of trade protection and trade preferences for given F&V and suppliers. Finally, we will refer to the results of the trade modelling effort to examine the possible impact of eliminating some entry prices.

A1 - Development of EU imports concerning products within the EP scheme

We acknowledge that the entry price system has seasonal impacts, in many cases even on specific days. This is recognised in the trade model we develop later in this Chapter. However, we wonder whether the existence of the system has affected EU import trends in the medium-term.
In the paragraphs below we examine the development of EU imports for a sample of F&V products between the average import volumes for the following periods: 1992-1994, 1995-1997, 2000-2002 and 2005-2007.
For the comparisons we have basically considered the 8 products listed in:

- Tab. 1 (Chapter 1) with EP (tomatoes, artichokes, cucumbers, courgettes, oranges, apples, pears, table grapes). We also considered clementines because of their relevance as a fruit imported from preferential partners.
- the 8 products listed in Tab. 3 (Chapter 1) without EP (onion, beans, asparagus, sweet peppers, grapefruits, melons, strawberries, kiwifruit).

Average annual growth rates for the selected products have been calculated between two subsequent periods[37].

Tab. 31 and Tab. 32 below summarise import changes from major suppliers for the F&V identified for the counterfactual analysis, as listed in chapter 1 (Tab. 3). To estimate the overall change, as we did in section 2.1 of the preparatory analysis, we estimated the annual rate of change for the total amount of products with EP and without EP, as well as the "simple arithmetic average of the product sample" of the set of products considered[38].

[37] Annual growth rates between two values X_1 and X_2 are given by: $Y = 100 * (\exp (\ln X_1/X_2)/T)-1)$ where T is the number of years between the two values. The indicator Y represents the constant rate that applied to the initial value every year produces the final value at the end of the period.

[38] This operation provides with an average change without weighing for the corresponding tons.

Tab. 31 - Sign (+/-) of EU import changes

	EU-15			EU-25
Products with EP	**1992-94 to 1995-97**	**1995-97 to 2000-02**	**2000-2002 to 2004-2006**	
Positive	Courgettes, oranges, table grapes, pears, apples	Courgettes, tomatoes, artichokes, table grapes, pears.	Courgettes, tomatoes, artichokes, table grapes, pears. cucumbers, oranges, apples, clementines.	Courgettes, tomatoes, artichokes, table grapes, pears. cucumbers, oranges, apples, clementines.
Negative	Tomatoes, cucumbers, artichokes, clementines	Cucumbers, oranges, apples, clementines.		
Products without EP	**1992-94 to 1995-97**	**1995-97 to 2000-02**	**2000-2002 to 2004-2006**	
Positive	Onion, beans, asparagus, sweet peppers, grapefruits, melons, strawberries, kiwifruit	Onion, beans, asparagus, sweet peppers, melons, strawberries, kiwifruit	Onion, beans, asparagus, sweet peppers, grapefruits, melons, strawberries, kiwifruit	Onion, beans, asparagus, sweet peppers, grapefruits, melons, strawberries, kiwifruit
Negative		Grapefruits	Grapefruits	Grapefruits

Source: Comext and own elaboration. See Annex to EQ3 – "Import Growth"

Tab. 32 - Product sample comparisons

	EU-15		EU-25	
	1992-94 to 1995-97	**1995-97 to 2000-02**	**2000-2002 to 2004-2006**	
Total change (*):				
Products with EP	5.1	-0.5	6	5.5
Products without EP	5.1	3.9	5.7	5.6
Simple average of product sample (**):				
Products with EP	5.8	4.6	14.3	13
Products without EP	21	8.6	9	7.4

Source: Comext and own elaboration. See Annex to EQ3 – Para. 1.1 "*Import Growth*".

Note:

(*) Adding the total tons of products considered in each group.

(**) Calculating the simple arithmetic average of the rates of change of the products considered in each group.

What is may be seen from the observed medium-term import rates is that in the first part of the period under review (until 2000-02), the dynamism of EP products was lower than that observed for the products without the EPS. In the later period, that is from 2000-02 to 2004-06, EP products' import growth appeared to be, on average, higher than the products without the EPS. This is not suggesting at all that the EP contributed to boosting trade, but at least that the EP scheme did not constrain import growth for the products covered by the system.

It is not easy to isolate the effect of the EPS from other drivers of observed trends. Nevertheless, we can suggest some possible factors that may determine the relevance of EPs on trade flows:

- EU import behaviour varies significantly depending on the product and on the origin country. Many fruit imports have a counter seasonal nature and are concentrated in periods when they do not

overlap with North Hemisphere harvests. For example, most of the apple import growth between 1992-94 and 1995-97 took place in the period between March and August (see the Annex to EQ3 – Para. 1.1 "*Import Growth*").

- Import changes in the short-term are strongly related to the surplus and deficit conditions of the EU market, and closely linked to weather conditions. In the medium term, import growth can be also explained by improved growing and storage techniques that allow for increased competition, shortening of off-season periods and more frequent overlapping periods. Some countries are able to harvest earlier and later so that the supply season is extended for many products with and without EP.
- Price competition still plays a role but it is losing relevance, as a growing amount of fruit and vegetables are sold through direct long-term contracts between suppliers and distribution platforms outside the spot markets. This change in market channels and operations has certain implications on the quality of the product. Thus, interviewed citrus traders mentioned the need to upgrade the quality of their products to be able to compete, facing the standards required by large-scale distribution. For oranges as for most fresh fruit, trading companies do not report the relevance of low-quality segments in the most important EU markets, mostly when private standards are even more restrictive than public standards and are becoming a quasi-compulsory private sector quality certification scheme for fresh fruits and vegetables, in particular EurepGAP[39] . This process tends to reduce the relevance of the EP for oranges and clementines and for other fresh fruits.
- The EP system can be restrictive at particular times of reduced import prices, but has not limited import growth in the past ten years. As far as apples are concerned, the autumn season in the Northern Hemisphere, in particular November, seems to be when the entry price has proved to be of some relevance because of the appearance of SIVs below entry prices. And the absence of entry prices in the fall and spring seasons in the Northern Hemisphere can help one to understand a part of the increase in table grape imports. However, for this product as for other fruits (oranges, apricots, and peaches & nectarines) entry prices have not shown themselves to be restrictive, based on the low frequency of SIVs below EP reported.
- There is also the possibility for traders to partially evade the influence of EP and the likelihood of additional tariffs. This is particularly easy for storable fruits and vegetables and could explain why the EP appears to be more relevant in products like tomatoes and cucumbers than in products such as apples and oranges. For this latter product, the reasons why imports decreased during the URAA implementation period cannot be found in the operating of the EP scheme, but rather from other factors such as the increase in the domestic supply in the EU market.
- The EU import policy has faced significant changes since the end of the URAA negotiations. First, the entry price system replaced the old previous reference price scheme, keeping a significant protection for certain periods of the year. However, between 1995 and 2001, entry prices, ad valorem duties and maximum tariff equivalents were reduced according to URAA commitments. In other words,, the protective effect of the system was eased during the period 1995-2001.
- Bilateral agreements for some countries often lead to reduced entry prices for given origin countries (see below) although the EPs have been kept for most of the preferential origin countries. However, fruit and vegetable trade with South Africa and Chile has significantly increased after the signature of Association Agreements, which has to do with the removal of ad valorem duties. Logically, new Member States (mostly Bulgaria, Poland, Romania and Hungary) have benefited from accession to the EU, as they were constrained by entry prices in certain products before EU accession.
- The system can still play a role in the event of import surges. This was shown by the significant increase in pear and apple imports in the last period, in particular from China. Between 2003 and 2005, European apple imports rose by more than 300,000 tons in three years, with a downward

[39] EurepGAP is a private sector body that sets voluntary standards for the certification of agricultural products around the globe, and its requirements must be fulfilled in order to supply many European retailers

pressure effect on EU market prices[40]. It is not unusual to see the frequency of SIV below TEPs increasing when trade flows are increasing, so the EP system becomes a tool to monitor trade rather than a real constraint on trade.

- Transport costs intervene in CIF price determination. Closer exporting countries to EU borders tend to show a certain sensitiveness to the EP scheme . This may have had some relevance in Morocco and Turkey shipments of tomatoes, and in F&V imports from New Member States before EU accession. It is striking that EPs have been of a certain importance for Moroccan exports of courgettes, cucumbers and tomatoes in spite of the preferential EP.

A more detailed picture of monthly import trends in the period 1995 – 2006 has been depicted in Annexes to EQ3 – Para. 1.2 "*Monthly imports 1995-2001*" and Para. 1.3 "*Monthly imports 2002-2006*". Both Annexes show the monthly evolution of EU imports for the selected products covered and not covered by EP, providing details for main EU suppliers of each product, the first referring to the period 1995-2001 (implementation of URAA commitments) and the second to the period 2002-2006[41]. In the related graphs we also give the level of TEP[42] so as to check the relationship between TEP levels and the evolution of monthly imports from leading EU partners. It is worth stressing that the EU import behaviour of some products covered by the EP scheme tended to be more dynamic since 1999, especially where the origin country is a preferential country (such as the case of Morocco-tomatoes).

Furthermore there is no evidence that the EP scheme has constrained import growth of the affected F&V products in the period 2000-2002 to 2004-2006. As summarised above in Tab. 32 during that period, imports of EP products in the EU-25 in the sample of products considered in the counterfactual analysis grew by 5.5% annually against average annual import growth of 5.6% of the group of products not subjected to EP.

Analysis of panel data

An econometric approach through panel data of bilateral trade flows with a group of trading partners was adopted to analyse, with a statistical test, whether or not the existence of EPs has affected trade flows[43]. Bilateral imported volumes in the EU, relating to major EU partners and to products selected for the counterfactual analysis (as listed in Tab. 3 – Chapter 1) were taken from COMEXT, and an estimation of import changes for selected periods has been performed. The "gravity equation" relates such bilateral trade flows with a series of variables that could potentially affect a bilateral flow from country "i" in product "j". Among these variables we consider:

- GDP per cap of supplying country "i", which picks up the trends in demand conditions in this country.
- GDP change of supplying country "i", which reports on the overall production capacity in this country.
- Production change of product "j" in country "i", which considers the variations of the supply conditions in country "i".
- Production change of product "j" in the EU-15, which is related to the fluctuations of the supply conditions in the EU.
- Trade-agreement variables: Dummy variables that identify country "i"'s participation in a bilateral trade agreement in the studied period.
- Fixed effects denoting the existence of an entry price for product "j" (dummy variables

[40] On January 17, 2006, the Fruit & Vegetable Management Committee adopted a European Commission proposal to introduce a system of import licenses for apples.

[41] In fact, what we represent in the Annexes are indices, taking the average monthly imports in 1995 as a reference value (= 100) in the first one and the average monthly imports in 2001 in the second one.

[42] We note that only MFN EPs are depicted to simplify the graphs. Some preferential exports also benefit from reduced entry price (see below).

[43] A summary of the regression model's methodology is presented in Annex to EQ3- Par. 1.4 "*Methodology of gravity model"*.

that identify country "i"'s participation in a bilateral trade agreement in the studied period).

- Fixed effects for neighbouring country (dummy variables that denote partner countries that are neighbours to EU-15 (Bulgaria, Egypt, Hungary, Israel, Morocco, Romania and Turkey).

Changes of bilateral import flows between two years ("initial" and "final") for a given period in the EU-15 were estimated for the following products:

With EP	Without EP
Tomato	Green beans
Cucumbers	Sweet peppers
Courgettes	Asparagus
Artichokes	Grapefruit
Oranges	Melons
Clementines	Strawberries
Fresh grapes	Kiwifruit
Pears	
Apples	

As for the periods under review, these were selected with a difference of five years between the "initial" and the "final" years for each period. With this time span we expect import differences to reflect medium-term changes.

As for partner countries, we included the main suppliers of F&V: Australia, Bulgaria, Brazil, Chile, China, Costa Rica, Egypt, Hungary, Israel, Kenya, Morocco, New Zealand, Panama, Romania, Senegal, Turkey, USA, Uruguay and South Africa[44].

A selection of products and countries defines the trade flows that are studied in the model, which is presented in more detail in the Annex to EQ3 – Para. "1.5 *Gravity flows*". In brief, 101 flows with EP and 90 without EP were considered for each analysed period: 1993-1995, 1995-2000, 2000-2005 and the complete period 1993-2005[45].

Note that the linear regression model tests the hypothesis that percentage changes in the dependent variable (import volume of product "j" of country "i") are related to changes in the explanatory variables (production in the EU-15 and in partner country "j", GDP in partner country "j", existence of trade agreements, existence of an entry price, character of a country "j" as a neighbour of the EU-15)[46].

For each period, a cross-section regression is estimated[47] to undertake a statistical test of the effect of each of the aforementioned variables on trade flows. Basically, we aim to test the hypothesis that EPs have a significant influence on trade flows or that the coefficient estimated for the dummy variable "existence of entry price" is significantly different from zero. It may be worthwhile to indicate that it is difficult to isolate

[44] Obviously, the number of observations does not equal the number of countries times the number of products because of the existence of zero trade flows.

[45] In fact, we take biannual averages: 1993 = 1993/94; 1995 = "1995/95", 2000 = "2000/01" and 2005 = "2005/06" . We consider that this procedure is sufficient to soften the effect of short-term fluctuations on the statistical analysis. In addition, it can be noted that (i) the number of observations is large enough to test the differential effect of EPs on bilateral import changes by distinguishing which bilateral flows are affected by EP and which are not; and (ii) a main source of short-term fluctuations is explicitly considered by taking into account production changes in the EU and the partner country as explanatory variables.

[46] The variables denoting values (trade, production and GDP) are presented as a Δ Log, which denotes a proxy of "percentage change". Consequently, what is tested is the extent to which percentage changes in trade flows are affected by percentage changes in the explanatory variables. This procedure reduces the risk of endogeneity of the explanatory variables.

[47] The regression method used is Ordinary Least Squares. In order to avoid endogeneity of domestic production in the EU and EU trading partners, the variable production change was calculated for one lagged period (for example for the analysis between period T_1 and T_2, production change is calculated for T_1 and $T_2 - 1$.

the impact of EP from other factors that can affect trade flows, though the present exercise tests the separate effect of a number of variables which affect supply and demand.

It should be also noted that the indicators of goodness of fit of the statistical model to the set of observations are varied, and the regression is only statistically significant at levels of 5% for the regressions carried out for 1995-2000 and for 1993-2005, while significance levels were 6% for 1995-2000 and 14% for 2000-2005[48]. However, our purpose is not using the models for forecasting trade but to test whether or not certain variables could have influenced changes in trade flows.

Tab. 33 provides an overview of the model's results, which are presented in greater detail in the Annex to EQ3, Para. 1.5 "*Gravity flows*". The table picks up the coefficients of the variables which have been deemed statistically significant (showing the levels of significance and the sign of the estimated coefficient in brackets). As mentioned, the fitness of the models casts doubts about the size of the coefficients (that is to say about the ability to forecast). Nevertheless, we try to answer the simple question as to whether or not entry prices have influenced import growth and the models provide us with indications about it.

The EP dummy variable is only statistically significant (and negative) in the period 1995-2000. This suggests that trade growth might have been limited by the existence of the EP scheme during that period. The frequency of SIV values below TEP presented peaks for individual products in the quoted period: apples (1998), tomatoes (1995-1997), clementines (1997) and grapes (2000). This may help to understand the possible effect that EPs still played during the URAA implementation period.

However, it is not clear that the appearance of breaking SIV denotes constraining trade for all products. This also depends on the strategy of traders. Some traders report the intention to sell their products at the lowest possible price compatible with the TEP, thus avoiding additional specific tariffs. This indicates that the effects of the EP cannot be easily caught by the appearance of breaking SIVs.

In the last five year period, our statistical analysis does not support the hypothesis that the EP scheme affects bilateral import growth. This does not mean, as pointed out in previous sections, that the EP system is not effective at certain times or moments of short-term surplus from given foreign suppliers. But in the medium-term, import growth does not appear to be significantly affected.

As for other variables of estimated regressions, it is worth noting that the preferential treatment with Morocco showed a negative influence in the first period (when entry prices were introduced) but this influence disappeared later. As for other countries that enjoy preferential treatment, only the agreement with Egypt appears to be significant in later years. While foreign production variables show the expected sign in most cases, EU production frequently appears with a negative sign, but sometimes with a positive sign[49].

[48] In traditional statistics analysis, the lower the significance level, the stronger the evidence.

[49] This indicates that increased imports may be the result of a shortage in the EU but also of an increased demand that pulls both domestic and foreign produces.

Tab. 33 - Variables with statistically significant coefficients in the linear models

	Period			
	1993 to 1995	**1995 to 2000**	**2000 to 2005**	**1993 to 2005**
Production in partner countries	Apples (<0 ***)	Courgette (>0 **)	Sweet Pepper (>0 **)	Melon (>0 ***)
		Orange (>0 ***)	Artichoke (<0 **)	Apples (>0 *)
		Melon (>0 **)		Pears (>0 *)
		Apples (>0 ***)		Beans (>0 **)
		Pears (> 0**)		Onion (>0 **)
		Beans (> 0*)		Sweet Pepper (>0 *)
Production in the EU		Onion (<0 ***)		Beans (<0 **)
		Cucumber (>0 **)		Grapefruits (>0 *)
		Beans (<0 **)		Apples (>0 *)
		Sweet Pepper (<0 ***)		Strawberries (>0 *)
		Courgettes (<0 **)		
		Artichokes(>0 ***)		
		Asparagus (> 0 ***)		
		Oranges (<0 ***)		
		Grapefruit (> 0 ***)		
		Apples (<0 ***)		
		Strawberries (<0 ***)		
		Kiwis (<0 **)		
Entry prices		Tomato (<0 **)		
		Clementine (<0 *)		
		Apples (<0 ***)		
		Pears (<0 **)		
		Fresh grapes (<0 **)		
Trade agreements	Morocco (<0 **)			Egypt (>0 **)
Other variables	Neighbouring (>0 **)	GDP (>0 *)		
		GDP per cap (>0 **)		
F value	1.447	2.265	1.282	1.567
Significance	0.063	0.000	0.143	0.028

Source: Regression results. See Annex to EQ3- "*Gravity flows*"

Note: ***Passes at 99-percent confidence level; **passes at 95-percent level; and *passes at 90-percent level.

1993 = 1993/94; 1995 = "1995/95", 2000 = "2000/01" and 2005 = "2005/06".

Relative change of import values compared to change of import volumes

As suggested in previous sections, the pricing of products that face EP can reflect different strategies of traders in the EU market. Some trading experts suggest the possibility of a twofold segmentation of EU imports and the role to be played by the EP system in influencing low qualities from accessing the EU market. Nevertheless, the reasons why value upgrading can take place are diverse. Consulted experts mention, among others, the increase in transport costs, the growing demands for quality from retailers and consumers and the strategy of some traders to avoid facing high tariffs in surplus situations.

We have looked at the development of import value growth in the EU, compared to import quantity growth, to check whether or not quality or value upgrading has actually taken place. Value and volume growth of EU imports were measured between 1995/97 and 2000/2002, and between 2000/02 and 2004/2006 for products affected by entry prices and products not covered by the system, with focus on the products selected for the counterfactual analysis[50].

[50] The Annex *to EQ3 1.6 " Value and volume growth - COMEXT*" provides with the detailed calculations.

The results show that between 1995/97 and 2000/02, value growth of imported products in the EU was higher than volume growth for all products considered in the sample except for beans and clementines[51]. Between 2000/02 and 2004/06, the number of products with value growth of imports higher than volume growth went down considerably, limited to only one product with EP (oranges) and four products without EP (onions, grapefruit, kiwifruit and sweet peppers). This would give perhaps a false image of limited movements to value upgrading of products imported into the EU, since one cannot forget that between 2001 and 2006 there was an appreciation of the Euro against the USD of over 40%.

To help disentangle this issue, it is relevant to compare developments in the EU market with developments in other major importing markets such as Japan and USA. This was carried out by comparing value and volume import growth in USA, EU-15 and Japan between 2000/01 and 2005/06 by using the figures calculated for the preparatory analysis (See also the Annex to EQ3, Para. 1.6 "*Value and volume imports growth*"-COMTRADE). It was seen that:

- Value growth of imports in the EU was higher than volume growth for all products considered in the analysis[52] .
- Value growth of imports in USA was higher than volume growth for all products considered in the analysis, except for peppers.
- Value growth of imports in Japan was higher than volume growth for all products considered in the analysis, except for beans, clementines, melons and grapes.

In short, while the appreciation of the Euro has been pushing down prices estimated in Euro, the value of EU imports in USD has grown faster than their corresponding volumes. While the value upgrading of imports would tend to reduce the frequency of breaking SIVs, the appreciation of the Euro pushes in the opposite direction.

A2 - Protection levels and preferences

Within the framework of products affected by the entry price regime, there are a number of cases for which the EP level has been reduced according to preferential agreements granted by the EU to several developing partners. In particular, there are 14 cases in which preferential entry prices are applied. The list is shown in the Tab. 1 in the Annex to the EQ3, Para. 1.7 "*Analysis of Preferences*", indicating the preference-receiver country, and other relevant data. The entry price reduction is accompanied by an abolition of the *ad valorem* tariff. Usually, the quantities with the right to such abolition correspond to those that have been granted reduced entry prices[53].

Ad valorem equivalents for MFN and preferential suppliers

In this section, a comparison between MFN suppliers and reduced EP suppliers is made through the concept of the *ad valorem* equivalent (AVE) tariff, measuring the different level of protection faced by these types of suppliers. To pass from specific to *ad valorem* tariffs, the specific tariff component of the EP scheme has been divided by the border price of the product for each country. SIVs have been used as proxies for these border prices, collected between 1st January 2004 and 31st December 2006.

As seen in the sections below, the six products with reduced EP have been considered, taking into account the periods of the year with reduced EP. Because of changes in EU commercial policies (both MFN and

[51] The products in the sample are tomatoes, peaches and nectarines, apples, oranges, pears, cucumbers, artichokes, beans, courgettes, table grapes, onions, asparagus, grapefruit, kiwifruit, sweet peppers, melon, strawberries and clementines.

[52] This indicates that increased imports may be the result of a shortage in the EU but also of an increased demand that pulls both domestic and foreign produces.

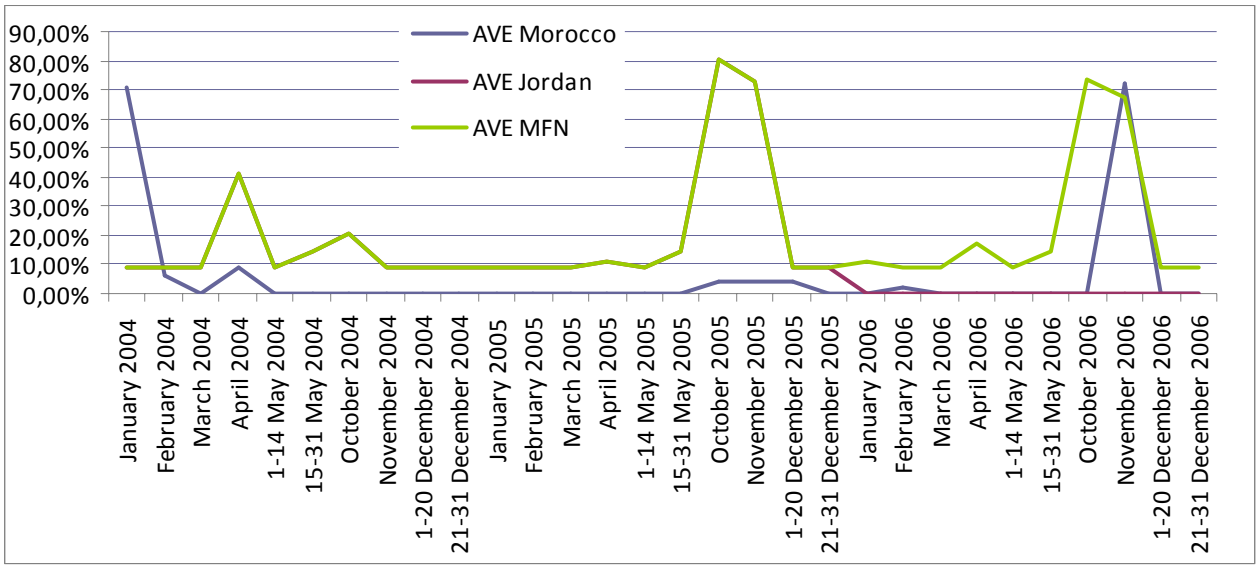
[53] The exceptions are Jordanian cucumbers (CN 0707 00) and citrus fruits (CN 0805), with 2,000 tonnes and 1,000 tonnes in 2006, respectively, with *ad valorem* tariff elimination. Notice that these two concessions apply for broader product categories than the products granted with reduced EP. Additionally, Egyptian oranges (CN 0805 10) have a quota for the *ad valorem* tariff reduction, but the corresponding Euro-Mediterranean Agreement recalls that one part of such quota corresponds to the quantities and periods with reduced EP.

preferential), the "period of analysis" has been taken so that each time span with identical MFN and preferential conditions is chosen. Additionally, because of sudden SIV changes, no period longer than a month has been considered. Tab. 2 to 6 in the Annex to the EQ3, Para. 1.7 "*Analysis of Preferences*" show the periods in which different AVEs have been calculated for the countries involved (MFN and the ones with preferences) in the case of tomatoes, cucumbers, artichokes, courgettes, oranges and clementines.

Tomatoes

In the next graph the AVEs for the three partners (MFN, Morocco and Jordan) are shown. As expected, the reduced entry price combined with the *ad valorem* tariff exoneration is shown to be a significant advantage for the two preferential suppliers in most periods.

Fig. 25 - Calculated AVEs for the three partners. Tomatoes.



Source: Taric data processed by Agrosynergie

Only in the first period for Morocco – January 2004 – is AVE higher than MFN suppliers. Analysing SIV data, it is easy to see that the border price for Moroccan tomatoes was significantly lower than its reduced EP: therefore, they would have paid all the MTE if the customs clearance had been made on the basis of the standard import value[54], while MFN suppliers did not pay any specific tariff, the final result being a higher AVE for Morocco than for MFN suppliers. It seems that a seasonal pattern is repeated in later marketing years: the highest rates of protection occur in October and November, especially for MFN suppliers (peaks over 70%). Morocco had another peak in November 2006, stemming– again – from a very low border price. Jordan has always had 0 AVE since January 2006.

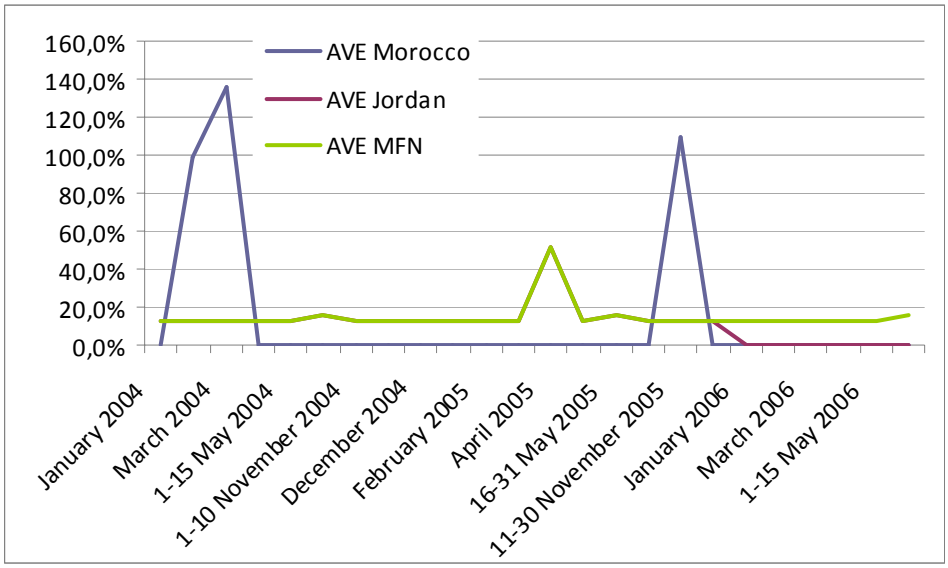
Cucumbers

As expected, the reduced entry price combined with the *ad valorem* tariff exoneration is seen to be a big advantage for the two preferential suppliers (Morocco and Jordan) in most periods.

[54] It may be worth stressing that for calculating this AVE, a *naïve* behaviour of traders is assumed, so that for the calculation of the tariff only the possibility of the classification of the products according to the SIV is taken into account. In fact, this is a simplification adopted to illustrate the less favourable case for traders in tariff terms, since under these situations of high specific tariffs, expected quite often, traders prefer to be levied under the other two alternatives that the EP Regulation allows for this purpose to give them more leeway. These other alternatives for calculating the entry price of every shipment are i) the fob price of the products in their country of origin plus the costs of insurance and freight up to the EU borders, or ii) the customs value minus the duty.

As expected, MFN conditions are harder than preferential conditions in most of the periods in which several partners enjoy from preferential EP. Only in February and March 2004 and the second period in November 2005 did Morocco face higher protection than MFN due to very low border prices that caused its cucumbers to be levied with the MTE, leading to peaks over 100%. Apart from these peaks and a "smaller" peak for MFN suppliers, there are minor differences between the *ad valorem* part of the regime and the full AVE calculated. This occurs because quite often each partner pays no specific tariff, indicating that it fits quite well with the regime and does not undercut it. As in the case of tomatoes, Jordan's AVE has remained at the 0% level.

Fig. 26 - Calculated AVEs. Cucumbers, 2004-2006

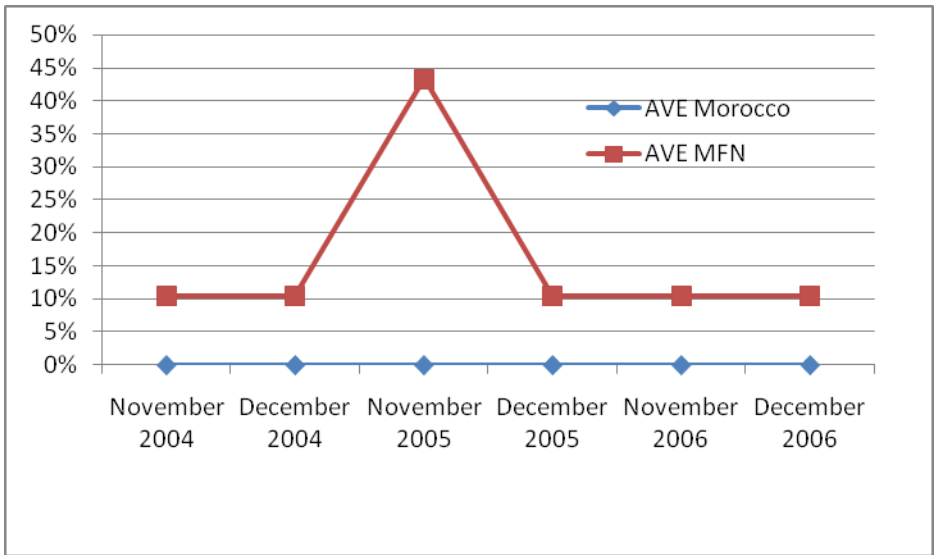


Source: Taric data processed by Agrosynergie

Artichokes

As can be seen in the graph, AVE for Morocco is 0%, since it never undercuts its preferential EP and has been granted a tariff exemption. The MFN artichokes usually face the 10.4% *ad valorem* tariff, with the exception of November 2005, when border MFN prices were abnormally low and the full MTE would have been levied if the customs clearance had been made on the basis of the standard import value: the calculations show a peak of 43% AVE.

Fig. 27 - Calculated AVEs for Morocco and MFN countries. Artichokes.

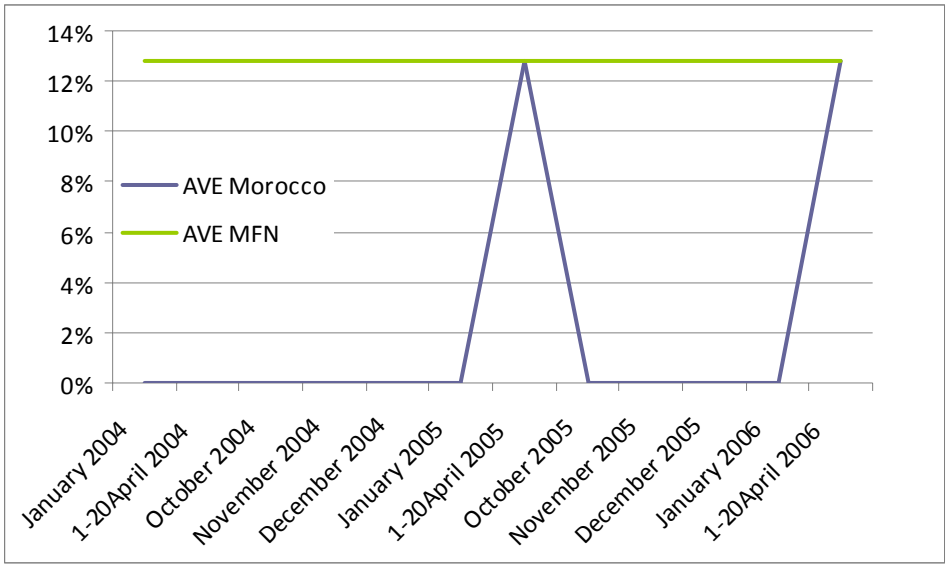


Source: Taric data processed by Agrosynergie

Courgettes

As the next graph illustrates, AVE for Morocco is zero except in the periods when the quota is completely full (see next section on quotas): then the AVE becomes identical to the MFN at 12.8%. This happens as the respective EPs are not undercut over the periods in the three years. Jordan has no limitation in the *ad valorem* exemption and neither does it undercut its preferential EP, therefore its AVE is zero. No trade flows from Jordan were reported.

Fig. 28 - Calculated AVEs for Morocco and MFN countries. Courgettes, 2004-2006



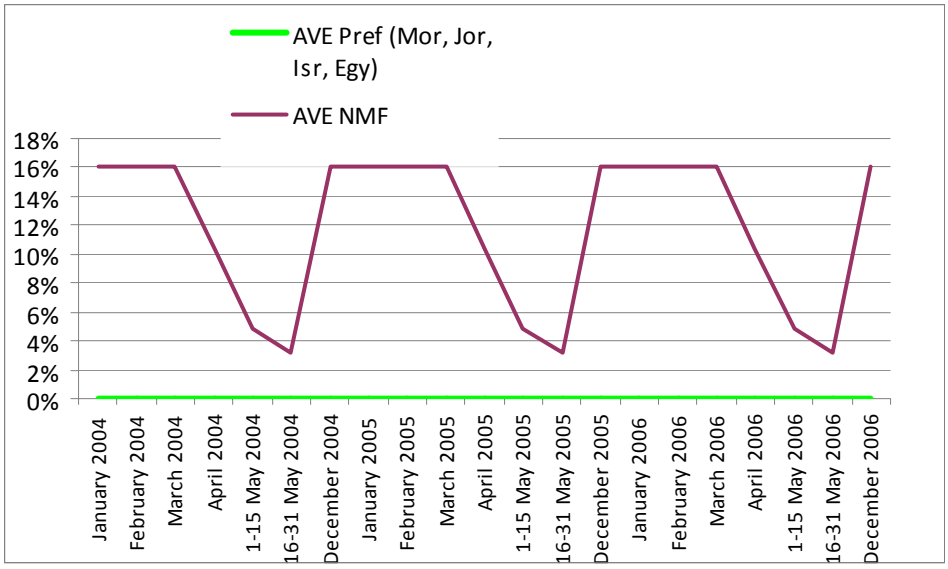
Source: Taric data processed by Agrosynergie

Oranges

Apparently this product is the most difficult to analyse, since several partners have benefited from reduced EP for some years, but it appears that different EPs have not been undercut in the periods of analysis for the three years considered. Also, for all the preferential partners the AVE is 0% (tariff exemption) and for the

MFN oranges, the structure of the AVE replicates the *ad valorem* tariff structure: 16% between December and March and lower protection for April and May.

Fig. 29 - Calculated AVEs for preferential and MFN countries. Oranges, 2004-2006

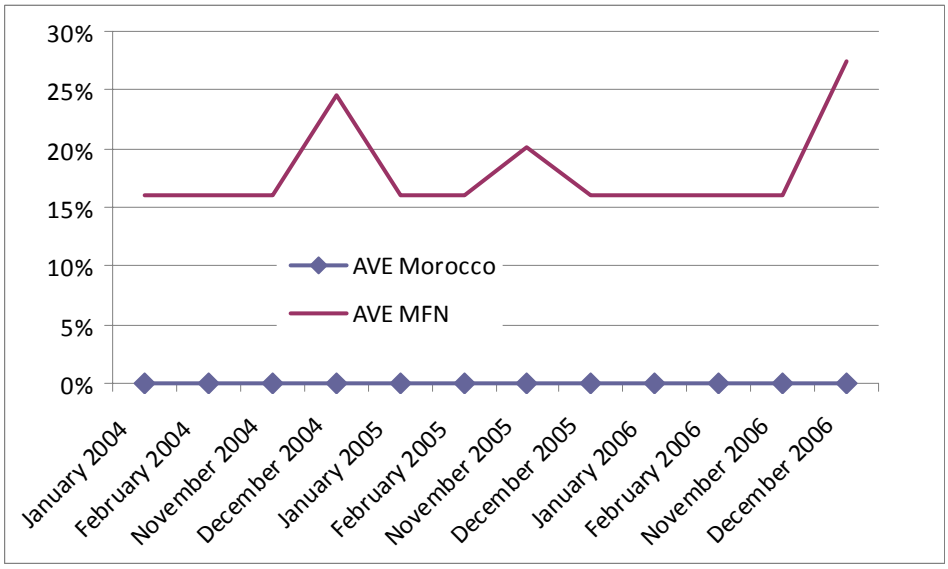


Source: Taric data processed by Agrosynergie

Clementines

For this product, as for others previously mentioned, no trade flows from Jordan were reported as benefiting from the reduced EP. Therefore, the comparison is made between MFN countries and Morocco. As the next graph depicts, Morocco has never undercut its preferential EP and, together with the *ad valorem* tariff exemption, this means that seemingly, Moroccan clementines were not involved in the EP system. Simultaneously, MFN clementines faced, as a minimum, the 16% *ad valorem* tariff with higher AVEs in the periods when the MFN EP was undercut. These peaks are of minor importance – AVEs of between 20 and 27% – reflecting the relatively low amount of the MTE and other specific levies paid compared to the border price of the product.

Fig. 30 - Calculated AVEs for MFN and Morocco. Clementines, 2004-2006



Source: Taric data processed by Agrosynergie

Value of preference margin and quota rents

Trade preferences create an economic rent for the preference-receiver country, since preferential exporters can take advantage of the reduction of entry prices and tariffs through two alternatives (or a combination thereof): a product with the same border price as an MFN product can be sold in EU markets cheaper than its competitors, increasing its market share, or, alternatively, a product sold in destination markets at the same price as an MFN represents a higher price perceived by preferential exporters. To assess this rent, the value of the preference margin (VPM) was calculated. The VPM is the estimate in monetary terms of the potential value of benefits to a preference-receiving country for a particular product. This indicator corresponds to the tariff revenue foregone by the EU.

As there are two types of preferences involved, the VPM has been split into two different addends. The first addend assesses the gain due to the specific tariff cut, which in turn is caused by the EP reduction. The second addend of the expression corresponds mostly to the gain due to the cutting of the *ad valorem* part of the tariff[55]. For ease in showing subsequent results, every addend is "labelled" with a different denomination. The first addend is called "specific gain" and the second is the "ad valorem gain". It is worth emphasising that the specific gain is equivalent to an entry price quota rent, as discussed above. Apart from the general results concerning the marketing year as a whole, a period-by-period analysis has been carried out within each season (see Annex to EQ3, Para. 1.8 "*Seasonal Value of Preferences*").

Calculations of the VPM for the 14 preferential cases shown above have been made for every period with a different entry price level, taking as initial period the moment in which the entry price reduction came into force and as final period the latest month with available data. COMEXT data for trade flows have been used, together with daily SIV, and actual MFN and preferential border treatment extracted from the TARIC database. Daily SIVs have been used as proxies of the border price for imports; for every period considered, the average of these SIVs has been compared with the EP level to determine the amount of the specific tariff to be paid. Thus, it is assumed that the customs clearance had been made on the basis of the standard import value at the European border. The next sections highlight the most relevant results country by country, whereas in the annex to the EQ3 all the tables with the results of the calculations are shown.

Morocco

In the case of Morocco, the last update[56] of EU trade Agreements (current regime of reduced EP) came into force in January 2004 for all products, except tomatoes, whose application began in October 2003. The next paragraphs summarize the results of the empirical calculations product by product.

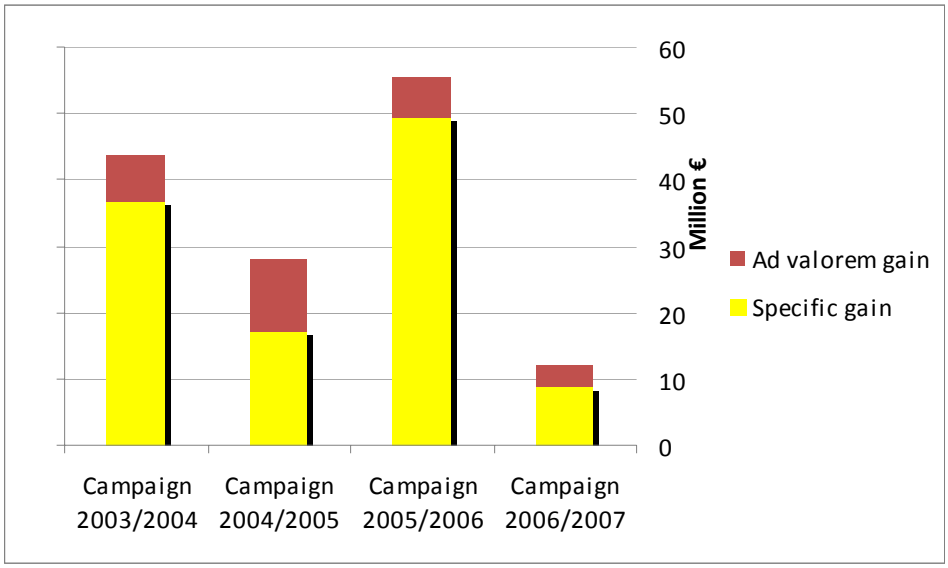
A. Tomatoes

For tomatoes, the reduced entry price begins on 1st October and finishes on 31st May of the following year. We consider this time span as a marketing year in our calculations. A first point to remark is the crucial importance of the preferences granted to Moroccan tomatoes in most marketing years. Overall VPM is usually over 30% of the value of Moroccan tomato exports to the EU that are covered by the reduced EP. In the three complete marketing years considered, the VPM ranges between 28 and 55 million Euro. Specifically, within this amount, more than two thirds correspond to the reduced EP and the remainder to the *ad valorem* tariff exemption. The graph below shows the overall VPM and its components for the marketing years considered.

[55] Part of the effect of the differences in specific tariffs is still kept in a coefficient in the second addend. This happens since it is not possible to fully disentangle these two simultaneous preferences.

[56] Updated list of applicable arrangements for each non-EU countries: http://ec.europa.eu/taxation_customs/customs/customs_duties/rules_origin/introduction/article_403_en.htm

Fig. 31 - Tariff revenue forgone by the EU for Moroccan tomatoes and its components.



Source: our calculations based on Comext and Taric data. Caveat: calculations for the marketing year 2006/2007 correspond only to the period October to December 2006 because of data availability at the moment of calculation.

In the marketing year 2004/2005, a lesser preponderance of the Entry Price quota component (representing about 60% of total transfer to Morocco in the period) can be observed. The reason is the high export prices – compared with the average for all the marketing years. In this case Morocco is exploiting its preferential entry price to a lesser extent, and, for this same reason, there is a lower value for total preferences. On the other hand, with lower average marketing year prices, as happens in the other cases, the significance of the reduced entry price is clear, as shown by the value and participation of the specific gain over the VPM (over 80% in 2003/2004 and 2005/2006 marketing years).

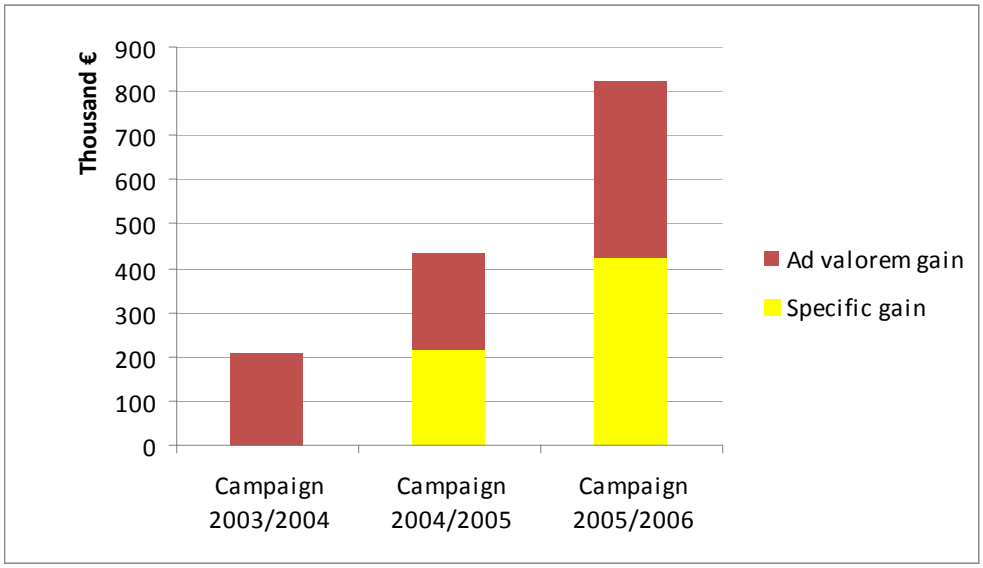
The second feature to stress, partly derived from the previous results, is the large relevance in monetary terms of the reduced EP. This means that the EU is giving up significant tariff revenue because of this preference. If the EP quota is compared with the value of trade under reduced EP, one can notice that the rate ranges between 30% and almost 50% - again with the exception of marketing year 2004/2005. A graphic illustration of this is shown in Fig. 1 of the Annex to EQ3, Para. 1.7 "*Analysis of Preferences*".

In the marketing year 2004/2005, the significance of the specific gain over the value of preferential trade was only 11%, for two reasons. On the one hand, the aforementioned situation of high border prices, leading to little advantage taken from reduced EP. Secondly, the high value of exports in that marketing year. At any rate, the specific gain in that case accounted for more than 17 million Euro.

B. Cucumbers

For cucumbers, the reduced entry price begins on 1st November and finishes on 31st May of the next year. We consider this time span as a marketing year in our calculations. Unlike the case above, calculations show that the significance of the reduced EP is much less than for tomatoes. In fact, it seems that the *ad valorem* tariff exemption is as important as the reduced EP. The next graph shows both types of preferences.

Fig. 32 - Tariff revenue forgone by the EU for Moroccan cucumbers and its components.



Source: our calculations based on Comext and Taric data.

In absolute terms, the specific gain is of lesser importance compared with tomatoes: it reaches values of up to 400 thousand Euro. Simultaneously, in relative terms the potential benefits accruing to Morocco from reduced EP are minor compared with the value of trade covered by this reduced EP (see Fig. 2 in Annex to the EQ3, Para. 1.7 "*Analysis of Preferences*").

Preferences are about 20% of the value of trade covered by them, and within the two types, specific and *ad valorem* gains have recorded similar amounts in the last two marketing years, i.e. 10% each. A behaviour mentioned in the case of tomatoes appears more clearly in the case of cucumbers: a "learning effect" seems to appear among Moroccan exporters to the EU. No specific gains are accrued in the first marketing year, whereas there are gains in following years.

C. Artichokes

Morocco was granted reduced EP in November and December for globe artichokes, and the analysis has been made for these two months as a marketing year for 2004, 2005 and 2006. First, it is worth mentioning the minor importance of this product compared to others, both in trade value and in VPM. Actually, the greatest value of trade was in the 2004 marketing year, with 30 thousand Euro of trade. Apart from this first fact, the crucial importance of preferential EP seems noteworthy: between 60 and 83% of VPM is specific gain, since the Moroccan export price is almost always between 92% MFN EP and Moroccan EP. Also, it appears that Moroccan exporters are able to take the best possible advantage from reduced EP. Fig. 3 in Annex to EQ3, Para. 1.7 "*Analysis of Preferences*" compares the specific gain with the total tariff revenue forgone by the EU. Preferences are between 22% (year 2006) and 43% (years 2005 and 2004) of trade value.

D. Courgettes

Moroccan courgettes have been granted reduced entry prices in two different periods of the marketing year: first, from October to the end of January, and then, from 1st to 20th April. In the intermediate period, Moroccan products face the usual MFN EP. For this product, the significance of the reduced EP is small, since the specific gain is, as a maximum, about 8% of the total transfer to Morocco in the marketing years considered. Overall, VPM accounts for about 11% of the value of exports.

E. Oranges

Morocco enjoys reduced EP (264€/ton) from December to the end of May in fresh oranges. But it never takes advantage of it since Morocco never undercuts the MFN entry price (354€/ton). Therefore, the preferential concession has had no practical relevance. Overall VPM is about 11% of total trade, naturally all of it coming from the *ad valorem* tariff exoneration. The VPM ranges between 50 and 58 million Euro in the marketing years analysed.

F. Clementines

Moroccan clementines have been granted reduced entry prices from November to the end of February, these four months corresponding to a marketing year in the analysis carried out. In the first part of the marketing year (November and December), border prices tend to be relatively low and, therefore, Morocco is able to take some advantage of the EP reduction; but it is never so low that Morocco is restricted by the maximum effective protection. In the second part of the marketing year, as happened in the previous case of oranges, no specific gain occurs in January and February, and therefore reduced EP is of minor practical relevance: Morocco is not undercutting the MFN EP level. Overall, specific gain is between 20 and 30% of total transfer, with the aforementioned distribution by periods. The amount of the total transfer is around 16-19% of the value of trade in the two complete marketing years. The monetary values are shown in Fig. 4 Annex to EQ3 - "*Analysis of Preferences*".

Jordan

In the case of Jordan, the last update of EU trade Agreements (current regime of reduced EP) came into force in January 2006 for all products. Thus the results that are shown below correspond only to one marketing year, and are often incomplete, therefore generalizations should not be made. As there were no reported imports from Jordan of artichokes, oranges and clementines in the periods when reduced EP was in force (up to March 2007), nothing can be said about the significance of this preference in quantitative terms. If any conclusion is to be drawn, it is that the reduced EP has not encouraged the trading of these products.

A. Tomatoes

For tomatoes, the reduced entry price begins on 1st October and finishes on 31st May of the following year. Because of data availability, only the periods between January and 15-31 May 2006 have been considered. A first point to make is that preferences granted to Jordanian tomatoes correspond to about 10% of the value of Jordanian tomato exports to the EU. The VPM is slightly over 60 thousand Euro. Specifically, within this amount, less than 20% corresponds to the reduced EP, while the remainder accounts for the *ad valorem* tariff exemption. Fig. 5 in Annex to EQ3, Para. 1.7 "*Analysis Preferences*" shows the size of total trade, VPM and specific gain.

B. Cucumbers

For cucumbers, the reduced entry price begins on 1st November and finishes on 31st May of the following year. Because of data availability, only the periods between January and 16-31 May 2006 have been considered. As in the previous case, calculations show that the significance of the reduced EP is minor compared to the *ad valorem* tariff exemption. In fact, this situation is augmented compared with tomatoes since, with a similar trade value, the VPM is greater (higher *ad valorem* MFN rates) and the value of the specific gain is lower because of a very low benefit from the reduced EP. In fact, MFN EP is undercut only once in the six periods considered. Fig. 6 in Annex to EQ3, Para. 1.7 "*Analysis of Preferences*" shows the size of total trade, VPM and specific gain.

C. Courgettes

As happened with Moroccan courgettes, the gap between preferential EP and MFN EP is very narrow, and Jordan does not take advantage of the reduced EP in the period considered. At any rate, more periods of analysis are required to obtain an assessment with a sounder empirical foundation, since data have been

gathered only for January 2006 and the period 1-20 April 2006. The VPM corresponds only to the *ad valorem* tariff exemption, and accounts for about 3 thousand Euro, while the value of trade in the period is close to 27,000 Euro.

Israel

In the case of Israel, the only products enjoying EP reduction are fresh oranges from December to the end of May, benefiting from a reduced EP level of 264€/ton whereas the MFN EP level is 354€/ton in the same periods. This last update of EU trade Agreements (current regime of reduced EP) has been in force since January 2004. The analysis of average SIV since that date indicates that Israel has never undercut the MFN EP level, as shown in Fig. 7 Annex to EQ3, Para. 1.7 "*Analysis of Preferences*", so Israel does not take advantage of the reduced EP for fresh oranges. Currently, all the potential transfer is in the form of *ad valorem* exoneration, and accounts for between 10 and 13% of the value of trade for the product. It does not seem plausible that changes will occur in the near future, since the difference between border prices (about 600€/ton) and MFN EP is relatively large.

Egypt

As for Israel, Egypt only enjoys EP reduction in its exports of fresh oranges to the EU from December to the end of May. These exports benefit from a reduced EP level of 264€/ton whereas the MFN EP level is 354€/ton in the same periods. This last update of EU trade Agreements (current regime of reduced EP) has been in force since June 2004. Just as for Israeli oranges, the preference has been useless in all cases in the past since Egypt has never undercut the MFN level, saving some part of the specific tariff. The different values are illustrated in Fig. 8 in the Annex to EQ3 -"*Analysis of Preferences*". With regard to future marketing years, border prices for Egyptian oranges seem to be closer to the MFN EP level than is the case for Israel. Thus, if either of the two countries seems able to take advantage of the reduced EP in the future, it seems more likely to be Egypt.

Is the entry price quota binding?

Among the 14 cases with reduced EP, only three products from Jordan do not face any quantitative limit[57]. In other cases, EU imports from preferential suppliers have been monitored, comparing the size of the Entry Price Quota for each period from the beginning of the reduced EP to the end of 2006, to assess whether countries are taking full advantage of this preference in quantitative terms.

There is a group of products for which the quota is far from being binding. That is the case of Israel fresh oranges: there is a 200,000 tonnes quota with *ad valorem* tariff abolition. The reduced EP is in force within this quota between December and May. In the three marketing years considered (2003/2004, 2004/2005 and 2005/2006), average trade flows were about 20,000 tonnes, that is, about 10% of the quota.

In the case of Jordan, there is an overall quota with *ad valorem* tariff exemption for citrus fruits (CN 0805), accounting for 1,000 tonnes in 2006, simultaneously the EP reduction is in force for several (and different) months within the year for fresh sweet oranges and fresh clementines. Hence, the quota overlaps the reduced EP for the two products and the analysis must verify whether the overall quota is preventing the use of the reduced EP. No imports from these two products were reported in 2006, and the overall quota is far from being restrictive, since citrus imports were less than 30 tonnes. In addition, there is an overall quota for cucumbers and gherkins (CN 070700) from Jordan, accounting for 2,000 tonnes in 2006. This quota overlaps with the reduced EP between November and May for cucumbers (CN 07070005). Imports of cucumbers accounted for about 800 tonnes in the periods with reduced EP in 2006, whereas the total imports of cucumbers and gherkins in 2006 were about 900 tonnes. Hence, the use of the overall quota by the product with reduced EP is about 40% in the reported year.

[57] Actually, the two quotas for Jordan correspond to the *ad valorem* tariff exemption, with no indication in the corresponding Euro-Mediterranean agreement of the EP quota. At any rate, these existing tariff rate quotas may limit the usage of the reduced EP and are considered using this approach. Jordanian products without any quota are tomatoes, artichokes and courgettes.

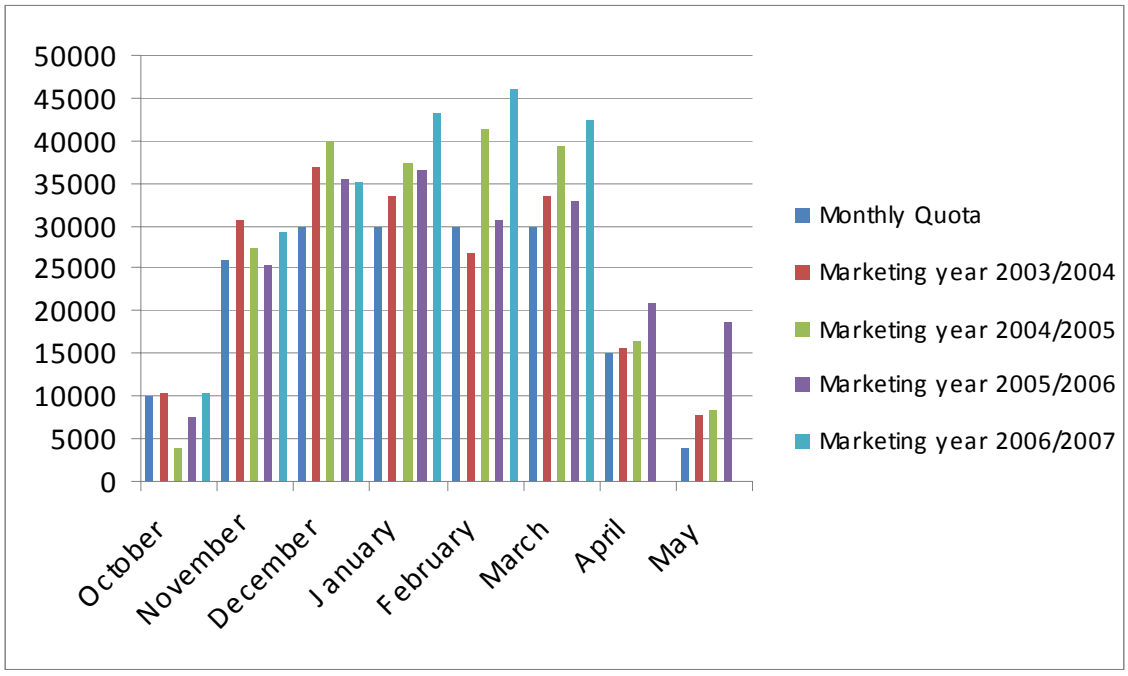
Similarly, for Moroccan artichokes the 500 tonnes is far from being fully exploited, since the maximum quantity imported by the EU was about 48 tonnes (marketing year 2004/2005). The cases of Moroccan clementines (130,000 tonnes of quota) and oranges (300,000 tonnes of quota) are similar, with a higher level of quota usage. For clementines, the average level of imports in the three marketing years was around 57% of the quota, and for oranges this average usage accounted for 40% of the quota.

For Moroccan cucumbers we noted a different behaviour. For this product, the 5,600 tonnes EP quota was exceeded only in the last marketing year considered. In this case, part of the marketing year 2006/2007, since data were available only until March 2007. In the previous marketing year the level of usage was about 80% of the quota. Thus, one can suppose an increase in the supply in light of the reduced EP that has led to the current situation of overuse of the quota.

Even clearer is the situation of trade flows greater than the quota in the cases of Egyptian oranges and Moroccan courgettes. In the case of Egyptian oranges, there is an EP quota of 34,000 tonnes between December and May: in the two complete marketing years 2004/2005 and 2005/2006, trade flows were around 3 times the quota. For Moroccan courgettes, quantities imported to the EU have been exceeding the EP quota since the first marketing year of concession (2003/2004). It may be worth stressing that this quota also applies for the *ad valorem* tariff, which often makes the difference in the rate of protection between MFN and preferential suppliers. In the last two marketing years, the quota has doubled, as Fig 9 in the Annex to the EQ3, Para. 1.7 "*Analysis of Preferences*" shows.

As for Moroccan tomatoes, there are two simultaneous quotas for each marketing year. First, basic monthly quotas between October and May have been agreed, and second, the additional quota from November to May - the amount varies depending on whether or not the basic quota is exceeded. Hence, compliance with the monthly quotas seems the main factor to investigate. In the graph below the comparison between the monthly quota and actual trade flows is shown. As can be seen, only the quota in October is not exceeded. In all the other periods quotas are clearly exceeded in almost all marketing years. The highest levels of quota excesses occur in December, January and March (excesses of between 10 and 40%) and May, when the quota is often doubled, and in the 2005/2006 marketing year the quota value was exceeded by four times.

Fig. 33 - Moroccan tomato import trends and monthly quotas in force (tons).



Source: Agrosynergie calculations based on Taric data and EU-Morocco Agreement

A3 - Assessment of Policy changes on EP

We have developed a partial equilibrium model approach, tailored to model trade impacts of specific policy instruments[58]. The intention is to simulate the possible economic impact of reducing entry prices to a level that they become irrelevant. That is to say, we assess the impact of reducing the protection component of entry prices to zero.

The proposed model approach unites the following characteristics:

- It is a partial equilibrium model, tailored to model trade impacts of specific policy instruments such as the Entry Price and Export Refunds (see next sections on ER).
- Apart from this detailed specification of policy measures, the impacts are calculated on a seasonal basis, since the model focuses on the periods when EPs apply, because the main intention of the exercise is to illustrate the specific impact that would occur in given seasons or periods of the year.
- It considers imports from different sources as imperfect substitutes, which can be undertaken through a non-linear Armington type model. According to Armington's approach, products of different origin, including intra-EU and main partner countries, appear as imperfect substitutes[59].
- The modelled market is the EU-25.
- A composite demand is formed by different sources, including intra-EU-25 sources plus the most important extra-EU-25 suppliers. We take the intra-EU-25 trade data as a seasonal proxy of domestic availabilities.
- The projections are based on comparative static simulations, on a monthly basis for a reference year.
- As a first approximation, the import model is applied to tomatoes, cucumbers, clementines and table grapes which offer a range of situations in the EU horticultural market.

It is to be underlined that the model results are sensitive to the choice of elasticities used for the behaviour equations. Our modelling strategy has opted for using relatively high levels for elasticities, which involve a certain degree of overestimation of trade effects[60]. This procedure can be valid when we seek to identify potential ceilings on the impact of trade liberalisation. Moreover, to acknowledge that results are sensitive to the elasticities chosen, two scenarios have been run to represent the parameters characterising the behaviour equations (domestic and import demand elasticities, export supply elasticities and Constant Elasticity of Substitution[61]). The two scenarios are labelled "higher and lower elasticities"[62], respectively.

What is the main objective of the simulations? We start with the monthly import flows in the EU-25 from main sources. These include the internal sources represented by monthly intra-EU supplies, and the foreign sources given by the main EU import partners. We also estimate reference values for the *ad valorem* equivalent represented by the EP (which are calculated by following the procedure indicated in the section "*Protection levels and preferences*"). Then we simulate the impact of the phasing out of entry prices, which means removing the protection component implied by the EP (e.g. no application of the additional tariffs related to import prices below the TEP but keeping the ad valorem duties).

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[58] This model follows the methodological approach introduced in García Álvarez-Coque, J. M.; Martinez, V; M. Villanueva (2007), *F&V Trade Model to assess Euro-Med Agreements. An application to the fresh tomato market*, TRADEAG Project, WP 07/3.

[59] See Armington, P.S. (1969). "A Theory of Demand for Products Distinguished by Place of Production". *I.M.F. Staff Papers*, Vol.16. N. 1.

[60] For example, a value of 5 for a third-country's supply elasticity means that 1% of world price increase involves an increase in exports of the country concerned by 5%. This value reflects a high degree of flexibility of the supply response.

[61] It is the parameter which measures the degree of substitution between intra-EU trade and imports from different origins. See Armington, op. cit.

[62] The two assumptions for elasticity scenarios are the following:

	"Higher"	"Lower"
EU domestic demand elasticity	1	0,5
EU intra trade supply elasticity	2	1
Third countries supply elasticity	10	5
Elasticity of substitution	5	2,5

The Annex to EQ3 "*1.9 Trade Model*" contains a detailed description of the methodology as well as the elasticity assumptions and the basic data used to model the impact of phasing out the entry price system for fresh tomatoes, cucumbers, clementines and table grapes. Thus, in this application of the trade model, we consider two vegetables which should present presumably higher impacts when removing the entry price system, and two fruits for which the trade impact of such removal is expected to be lower.

As a summary of the simulation results, it can be noted that, for most of the marketing year taken as the reference period (2005/06 average), the impact of removing the entry price seems negligible. This is due to the fact that for a number of months the SIVs are above TEP, so their removal leaves things relatively constant. If we estimate the overall impact for the total marketing year, results are as follows:

Tab. 34 - Impact of entry price removal (total marketing year)

Sales in the EU - Tomatoes

	Assumption Higher elasticities			Assumption Lower elasticities		
	Initial Sales (tons)	Final Sales (tons)	Variation Sales (%)	Initial Sales (tons)	Final Sales (tons)	Variation Sales (%)
Intra-EU-25	2 263 461	2 226 465	-1.6	2 263 461	2 248 713	-0.7
Morocco	217 377	288 751	32.8	217 377	244 694	12.6
Turkey	33 085	33 607	1.6	33 085	33 358	0.8
Israel	23 190	27 272	17.6	23 190	24 774	6.8

Sales in the EU - Cucumbers

	Assumption Higher elasticities			Assumption Lower elasticities		
	Initial Sales (tons)	Final Sales (tons)	Variation Sales (%)	Initial Sales (tons)	Final Sales (tons)	Variation Sales (%)
Intra-EU-25	9 306 994	9 299 270	-0.1	9 306 994	9 304 309	0
Morocco	40 098	57 472	43.3	40 098	45 928	14.5
Turkey	60 627	60 546	-0.1	60 627	60 599	0

Sales in the EU - Clementines (*)

	Assumption Higher elasticities			Assumption Lower elasticities		
	Initial Sales (tons)	Final Sales (tons)	Variation Sales (%)	Initial Sales (tons)	Final Sales (tons)	Variation Sales (%)
Intra-EU-25	887 188	883 574	-0.4	887 188	885 455	-0.2
Israel	1 288	1 287	-0.1	1 288	1 288	0
Morocco	84 598	91 930	8.7	84 598	88 102	4.1

Sales in the EU – Table grapes (*)

	Assumption Higher elasticities			Assumption Lower elasticities		
	Initial Sales (tons)	Final Sales (tons)	Variation Sales (%)	Initial Sales (tons)	Final Sales (tons)	Variation Sales (%)
Intra-EU-25	551 371	551 335	0	551 371	551 357	0
Brazil	18 135	18 221	0.5	18 135	18 168	0.2
Chile	242	242	0	242	242	0
South Africa	627	627	0	53 141	53 138	0

Source: Agrosynergie calculations based on COMEXT and TARIC data.

(*) Note that for these two products, simulations have been carried out for the periods of the year when EPs are applicable.

Note: Elasticities considered in the table are: EU domestic demand elasticity; EU intra trade supply elasticity; Third countries supply elasticity; Elasticity of substitution.

The impact of the abolition of the EP scheme can be measured in terms of the loss of domestic EU sales provoked by the increase in foreign competition. The Table describes the "initial (intra-EU) sales" in the reference scenario and the "final (intra-EU) sales" that would result from the abolition of the EP scheme. What is relevant is the difference between both figures, which approximates the impact on domestic supply.

As indicated in the above table, the impact of the abolition of the EP scheme on overall EU imports is very low for the four products and for both elasticities assumptions. In turn, the impact can be significant for specific sales to the EU of given origins and seasons, in particular with Morocco, which could see its sales to the EU increasing by almost 33% for tomatoes, 43% for cucumbers and 8% for clementines. The impact on Israel tomato sales is also significant, ranging from 7% to 17% depending on the elasticity assumption. As far as table grapes are concerned, most imports are of a counter seasonal nature and outside the period of application of the system, so the impacts are concentrated in September with very low changes.

As indicated above, the main effects are concentrated in given months. In the following tables, we select the seasonal impacts that are most significant (see Annex to EQ3, Para. 1.9.2. "*Import model*" for details[63]):

Tab. 35 - Model results for specific months - Tomatoes

		Sales in the EU		Price in the EU		
	Period	**Initial Sales (MT)**	**Final Sales (MT)**	**Variation Sales (%)**	**Variation EU Price (%)**	**Variation Export Price (%)**
Intra-EU-25						
	October	166 773	160 101	-4	-2	
	November	177 581	148 092	-16.6	-8.7	
Morocco						
	April	18 698	18 602	-0.5	-0.1	-0.1
	June	2 656	3 158	18.9	-3.5	1.7
	August	585	712	21.8	-3.9	2
	October	8 927	8 304	-7	-1.4	-0.7
	November	27 364	98 828	261.2	-31.9	13.7
Turkey						
	April	2 842	3 632	27.8	-4.9	2.5
	June	6 628	6 610	-0.3	0	0
	August	846	844	-0.2	0	0
	October	1 469	1 408	-4.2	-2	-0.4
	November	585	398	-32	-4.9	-3.8
Israel						
	April	1 967	1 957	-0.5	-0.1	-0.1
	June	703	701	-0.3	0	0
	August	358	430	20	-3.6	1.8
	October	587	2 270	286.7	-25.8	14.5
	November	1 237	3 577	189.2	-28.8	11.2

Source: Model results. Agrosynergie calculations based on COMEXT and TARIC data.

Tab. 36 - Model results for specific months - Cucumbers

[63] We present here the "higher elasticity" results that show the largest effects.

	Period	Sales in the EU			Price in the EU	
		Initial Sales (MT)	Final Sales (MT)	Variation Sales (%)	Variation EU Price (%)	Variation Export Price (%)
Intra-EU-25	March	753 073	745 813	-1	-0.5	15.2
	21-31 Dec	945 894	945 711	0	0	0.4
Morocco	March	5 448	22 472	312.5	-25.2	-0.2
	21-31 Dec	8 541	8 892	4.1	-0.8	0
Turkey	March	3 408	3 332	-2.2	-0.2	-0.2
	April	2 813	2 810	-0.1	0	0.6

Source: Model results. Agrosynergie calculations based on COMEXT and TARIC data.

Tab. 37 - Model results for specific months - Clementines

	Period	Sales in the EU			Price in the EU	
		Initial Sales (MT)	Final Sales (MT)	Variation Sales (%)	Variation EU Price (%)	Variation Export Price (%)
Intra-EU	December	293 940	290 328	-1.2	-0.6	0
Israel	December	41	39	-2.8	-0.3	-0.3
Morocco	December	32 802	40 134	22.4	-4.8	2

Source: Model results. Agrosynergie calculations based on COMEXT and TARIC data.

Tab. 38 - Model results for specific months - Table grapes

	Period	Sales			Price in the EU	
		Initial Sales	Final Sales	Variation Sales (%)	Variation EU Price (%)	Variation of Export Price (%)
Intra-EU	September	163 557	163 557	1	0.0	0.0
Brazil	August	54	140	162.2	-17.5	10.1
	November	12 434	12 434	1	0.0	0.0
Chile	21-31 July	200	200	1	0.0	0.0

Source: Model results. Agrosynergie calculations based on COMEXT and TARIC data.

The tables above show that EU trade would be severely affected by the abolition of the EP scheme only in selected months. This is the case of November for tomatoes, when tomato prices in the EU might decline by 7-8% as a result of EP abolition. At the same time, third country export benefits are also concentrated in specific periods. For example, Moroccan exports of tomato in November, Morocco exports of cucumber in March and Israel exports of tomato in October and November. As for clementines and table grapes, the main impacts for the EU would be in December for clementines, and in September for table grapes. However, in both cases, the overall impact on market prices would be negligible.

What emerges from the analysis carried out is that the TEP could be lowered considerably in significant parts of the marketing year without significant trade effects. Nevertheless, this conclusion does not reject the possibility that the system plays a price stabilization role in certain periods of the marketing year.

4.2.1.5 Export refunds scheme analysis

In the pages below we carry out the assessment of the ER scheme on EU export trends.

We first examine the medium-term export trends from 1993/94 to 2004/06 with focus on EU-15 exports and with reference to the development of EU-25 exports during the last part of the period. Our main intention here is to examine the export performance of products that benefit from ERs.

Next we move on to relate export trends with observed changes in export refund levels, in terms of outlays and volumes. Again, the analysis considers the EU-15 for the whole period, although we cite some differential developments at the EU-25 level. In this case we are interested in assessing the possible connection between the observed export changes and the changes in ERs.

Finally, we discuss, by using the trade model introduced in the previous section, the possible impact of a complete phasing out of the ER scheme. We take EU-15 exports for 2000 and for 2005 as a benchmark and, by applying the trade model, we simulate the impacts on EU production and trade which would result from a complete removal of the export subsidies.

As for the products considered in these three steps of the analysis, in the first part we observe the export trends of products considered in the counterfactual analysis. In the second part we focus on ER expenditure, including fresh fruits, nuts and processed products. In the third part we carry out the analysis of impacts for the four fresh F&V that account for over 80% of ER expenditure (tomatoes, oranges, apples and table grapes).

B1 - Development of EU exports of products within the ER scheme

The next series of tables represent the relative export performance of products subjected or not to the ER scheme[64], including an update of the analysis carried out for the preparatory analysis of the present evaluation. Export performances of products within the ER scheme have generally been worse than the export performance of products not covered by the ER scheme. Relative performance of products within the ER scheme was even worse in the later period.

The beginning of the URAA implementation period was accompanied by a low dynamism of total EU exports of F&V products, within ER scheme, as Tab. 39 shows for the period 1992/94 to 1995/97. Nevertheless, the average export growth rate was positive in both groups of products eligible and not eligible for ER. Oranges were the product within the ER scheme showing the sharpest decrease between 1992/94 and 1995/97, with a 12% export reduction.

Tab. 39 - Sign (+/-) of EU-15 export change (volumes)

[64] Details for products are presented in the Annex to EQ3 – "1.10 Export growth".

	1992-94 to 1995-97	1995-97 to 2000-02	2000-2002 to 2004-2006
Products within ER scheme			
Positive	Clementines Apples Tomato	Clementines, Apples Table grapes	Tomatoes Clementines Table grapes
Negative	Orange Table grapes	Orange Tomatoes	Apples Oranges
Products without ER scheme			
Positive	Pears Kiwifruit Onion	Pears Kiwifruit Onion Cucumber Sweet Peppers Melons Strawberries	Pears Kiwifruit Onion Cucumber Sweet Peppers Melons Strawberries
Negative	Cucumber Sweet Peppers Melons Strawberries		

Source: COMEXT data processed by Agrosynergie.

Note: Products within ER: Clementines, tomatoes, oranges, table grapes, apples. Products without ER: Pears, Kiwifruit, onion, cucumber, sweet peppers, melons, strawberries.

Tab. 40 - Product sample comparisons

	1992-94 to 1995-97	1995-97 to 2000-02	2000-2002 to 2004-2006	
	EU-15		EU-25	
Total change (*):				
Products within ER	-0.4	0.8	-0.7	3.3
Products without ER	5.3	8.5	8.3	9.3
Simple average of product sample (**):				
Products within ER	3.8	1.6	-0.1	2.3
Products without ER	2.8	5.4	9.9	8.4

Source: Agrosynergie calculations based on COMEXT.

Note: Products within ER: Clementines, tomatoes, oranges, table grapes, apples. Products without ER: Pears, Kiwifruit, onion, cucumber, sweet peppers, melons, strawberries.

(*) adding the total tons of products considered in each group.

(**) calculating the simple arithmetic average of the rates of change of the products considered in each group.

It is not possible to isolate the impact of the ER scheme from other effects that determine export competitiveness. In the case of fresh fruits such as oranges and apples, the increasing competition of a wider variety of fresh fruits, many of them of tropical/exotic character, is not favouring export growth. The exchange rate may also play a role in determining export competitiveness. The appreciation of the Euro currency (over 40% since 2001) does not help to improve competitiveness of EU shipments. Nevertheless, price competitiveness in the world F&V market is less and less relevant as has been discussed previously. Because of non-price factors, including the role of private standards, we cannot be conclusive about the impact of exchange rates on individual product exports.

B2 - Export refunds and export changes

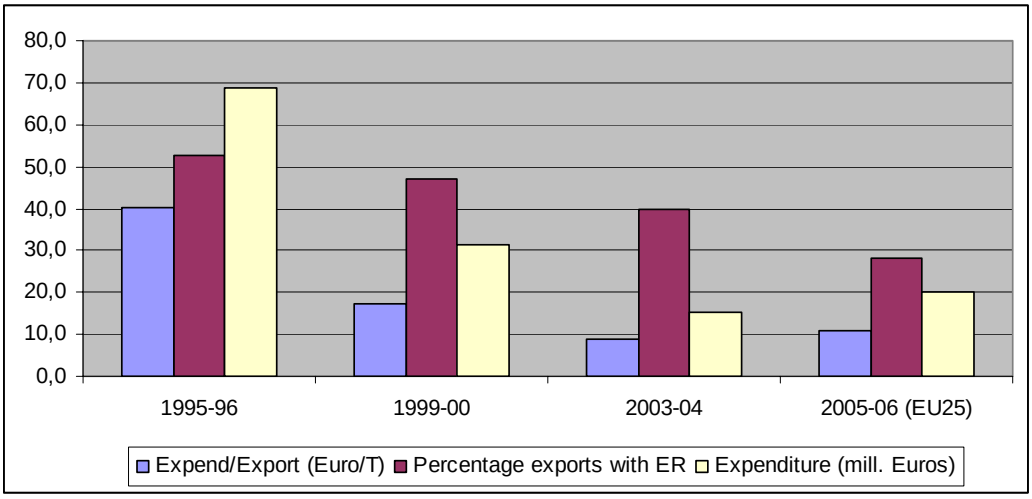
The preparatory analysis carried out in paragraph 2.4 reported a dramatic decrease in export refunds for most F&V during the period of implementation of Uruguay Round (URAA) commitments. The empirical work carried out for this preparatory analysis suggested the absence of a clear association between changes in exports and changes in (i) average export refunds per exported unit; and (ii) percentage of total exports covered by export refunds.

We have further developed the analysis of these aspects by representing individual trends for the following selected fresh F&V products that receive most of the ER expenditure: fresh tomatoes, oranges, apples, lemons, table grapes and peaches and nectarines. This list does not fully correspond to the products chosen for the counterfactual analysis but they account for 98% of the total expenditure in ER for fresh F&V. The Annex to EQ3 – "1.11 Export Refunds" shows, for selected fresh F&V that benefit from ER, the following variables:

- Exported quantities
- Total ER expenditure
- Percentage of exported quantities with ER
- Average ER expenditure per exported unit.

The data collected since the marketing year 1995/1996 allow us to examine the main changes during the URAA implementation period. We also represent years 2003/2004, 2004/2005 and 2005/2006 to depict the most recent developments. Summary graphs of trends for the considered product sample are shown below, in Fig. 34 and Fig. 35, with individual changes presented in the aforementioned annex. To facilitate interpretation we present results in the form of indices, taking 1995/1996 = 100[65]. The height of each bar in Fig. 35 is the percentage of each variable in relation to the base marketing year 1995/96.

Fig. 34 - Export Refunds for a representative sample group of F&V. Total group.



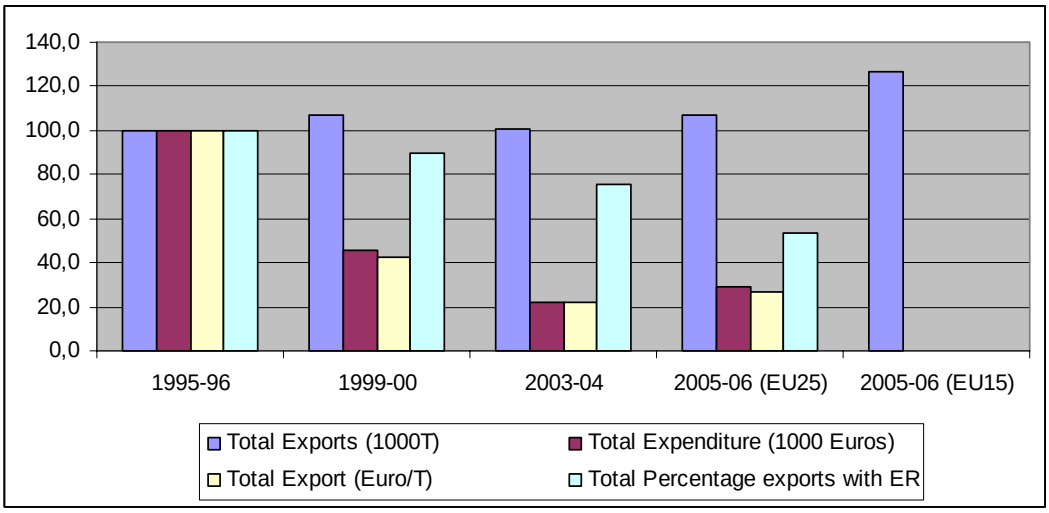
Source: COMEXT, DG Agri, Processed by Agrosynergie.

Note: Products in the sample group: fresh tomatoes, oranges, apples, lemons, table grapes and peaches and nectarines. Export figures for 1995/1996, 1999/2000 and 2003/2004 correspond to EU-15. Total expenditure, euro/ton and percentage exports for 2005/2006 with ER were calculated for the EU-25.

Note that the vertical axis expresses total Expend/exports in Euro/tons, percentage of exports with ER and total expenditure in millions of Euro, as indicted in the legends.

[65] Values for the different years are shown as percentages on the values of the variables corresponding to the marketing season 1995/1996.

Fig. 35 - Exports and Export Refunds for a representative sample group of F&V (Indices, 1995/96 = 100). Total group.



Source: COMEXT, DG Agri, Processed by Agrosynergie.

Note: Products in the group: fresh tomatoes, oranges, apples, lemons, table grapes and peaches and nectarines. Export figures for 1995/1996, 1999/2000 and 2003/2004 correspond to EU-15. Total expenditure, euro/ton and percentage exports for 2005/2006 with ER were calculated for the EU-25.

Note that the vertical axis expresses total exports in 1000 tons, total expenditure in 1000 Euro, total exports in Euro/tons, total percentage of exports with ER, as indicted in the legends.

As suggested in Fig. 35, the largest adjustments in ER expenditure took place in the 1990s and early years of the present decade. By 2003/2004, total expenditure in ER and average expenditure per exported unit were about one fifth of the 1995/1996 figures. The percentage of exported quantities eligible for ER also declined dramatically, and is still declining. Thus, this percentage was in 2005/2006 about 28% of total exports for the considered group of products, which is about half of the level reached in 1995/1996. In the last two seasons the expenditure increased slightly for some of the products, in particular fresh apples, which is clearly related to the Enlargement process. Apples and oranges account for about two thirds of total ER expenditure for fresh F&V. Total ER expenditure has been significant and relatively stable for oranges in the last three years. However, average expenditure figures per exported unit are following a decreasing trend and are about 5% of the export price of products like oranges and lemons, with significantly lower rates for other products in the ER scheme. This trend casts doubts as to the effectiveness of this instrument for export promotion strategy unless the subsidies are concentrated in targeted shipments or destinations.

Total ER expenditure for all fresh F&V products reached about 38% of the URAA ceiling in 2005/2006. The next table shows the current situation, including processed F&V. We see that the downward adjustment of ER for processed F&V has been larger than for fresh F&V[66] since the end of URAA.

[66] According to COMEXT data, EU exports of processed products with ER have been a little more dynamic than exports of fresh fruits with ER, and their annual export growth rate was 2.4% between 1996/1998 and 2000/2002, and 2.9% between 2000/2002 and 2002/2004.

Tab. 41 - Total ER expenditure for F&V products

Description of products	Subsidised exports		Annual commitment levels	
	Outlays (Mio ECU) (2)	Quantity ('000 t)	Outlays (Mio ECU)	Quantity ('000 t)
Fruit and vegetables, fresh	20.2	520	52.8	753.4
Fruit and vegetables, processed	0.6	52.6	8.3	143.3
Fruit and vegetables, fresh	Percentage of commitment levels (%)		38	69
Fruit and vegetables, processed			7	37

Source: WTO, DG Agri, Processed by Agrosynergie

As shown in the Preparatory analysis in Chapter 2.4, the downward trend of ER is also observed in the percentage of exports covered by ER. For total fresh F&V this percentage decreased from 52.9% in 1995-96 to 20% in 2005/2006, though the percentage is still over 20% for some products such as hazelnuts, oranges, lemons and apples. For processed F&V the decrease has been even larger, from 30.8% in 1995/96 to 14.2% in 2005/2006. In the mentioned preparatory analysis chapter we can see that there is not a clear association between ER and export performance, as with a high frequency the export decrease/increase corresponds to an increase/decrease in the ER per exported unit (or to an increase/decrease in the percentage of exports benefiting from ER). This leads to the hypothesis, in tandem with the conclusions of answers EQ1 and EQ2, that the ERS has not had a significant impact on EU exports.

B3 - Assessment of policy changes in the ER system

Export Model

We have sought to simulate the impact of a full removal of export subsidies on selected F&V products, with focus on EU-15 exports. For this purpose we have used a trade model with a similar methodological basis to the one defined to assess the entry price system (see section "Assessment of policy changes on EP").

The Annex to EQ3, Para. 1.9.1. "*Export Model*" contains the elasticity assumptions and the basic data used to model the impact of the removal of the ER system in fresh tomato and cucumber markets. Detailed results are also presented in the aforementioned annex, for the two assumptions of "higher" and "lower" elasticities[67].

The world market is modelled considering total world demand (excluding the EU-15) and the main sources of supply: domestic production, imports from EU-15 and imports from the rest of the World (ROW). The EU export value and export refunds are presented in the following table, for the years 2000 and 2005. From such data we can calculate the ER percentage out of all EU-15 exports. We model four F&V products which account for 80% of ER expenditure for fresh F&V. We can see that, out of the four commodities considered, only oranges appear to present a significant export trade percentage[68].

[67] The two elasticity scenarios are:

	"Higher "	"Coger"
World domestic demand elasticity	1	0,5
World domestic supply elasticity	2	1
EU and ROW supply elasticities	10	5
Elasticy of substitution	5	2,5

[68] The model assumes benchmark values for the subsidy in terms of the value of exported products entitled to ER.

Tab. 42 - Export Value and Export Refunds for selected F&V

	EU15 Export value (Euros)		Total ER (000 Euros)		ER (% Export value)	
	2000	2005	2000	2005	2000	2005
Tomatoes	205 585 367	269 851 811	1 014	1 051	0.5	0.4
Oranges	175 962 536	180 180 117	22 738	8 608	12.9	4.8
Apples	236 452 775	239 490 388	4 353	3 255	1.8	1.4
Table grapes	170 070 869	235 728 205	1 338	756	0.8	0.3

Source; COMTRADE, DG AGRI, processed by Agrosynergie

The trade impact of the abolition of the ER scheme was simulated by assuming the abolition applied to the years 2000 and 2005. Tab. 43 shows the impact on EU-15 exports or "sales".

As we can see in the table below, trade impacts are only significant for oranges. The impact on total EU exports may reach a range of between 7 and 14% of total export volumes if abolition took place in 2005. The impact on prices is also significant for oranges, but with the export refund level granted in 2005, the reduction of prices is 1.5% (the abolition of the export refund level granted in the year 2000 involves a larger price loss, of 4%). Impacts on exports and prices are much lower for other products, with perhaps higher variations for apples (decrease in total exports between 3 and 6%).

Tab. 43 - Summary of results: Trade impact of the phasing out of EU Export Refunds (EU-15)

		"High elasticity"			"Low elasticity"		
	Period	**Variation Sales (%)**	**Variation World Price (%)**	**Variation of Export EU Price (%)**	**Variation Sales (%)**	**Variation World Price (%)**	**Variation of EU Export Price (%)**
Tomatoes	**2000**	-1.6	0.3	-0.2	-0.8	0.3	-0.2
	2005	-1.3	0.3	-0.1	-0.7	0.3	-0.1
Oranges	**2000**	-32.6	8.5	-3.9	-17.9	8.5	-3.9
	2005	-14.4	3.2	-1.5	-7.5	3.2	-1.5
Apples	**2000**	-5.7	1.2	-0.6	-2.9	1.2	-0.6
	2005	-4.5	0.9	-0.5	-2.3	0.9	-0.5
Table grapes	**2000**	-2.6	0.5	-0.3	-1.3	0.5	-0.3
	2005	-1	0.2	-0.1	-0.5	0.2	-0.1

Source: Export Model results

Moreover, we have carried out a welfare analysis on the abolition of the ER scheme, under the "high-elasticity" scenario. Details of the calculation are presented in the Annex to EQ3 - Para. 1.9.1 "*Export Model*". The net welfare effect is built up by the net loss for EU exporters[69] plus the savings in ER expenditure:

The calculations are summarised in the following scheme:

[69] The loss for exporters is given by the "producer surplus" technique. It is given by the formula: $Vo\ t - Vo\ 0{,}5\ \varepsilon\ t^2$ where t is the percentage change in export prices, Vo is the initial export value and ε is the export supply elasticity, which is assumed to be equal to 10. Nevertheless, because of the small size of the second term, we can approach the export loss with Vo t.

Year	Net change for EU exporters (million euro)	Net change for EU tax payers (million euro)	Net change in welfare (million euro)
2000	-8	29	21
2005	-4	14	10

Source: Our calculations based on export model results. See "Annex to EQ3 "Export model"

The loss is only significant for orange and apple exporters, with 3 million Euro and 1 million Euro in 2005, respectively. As far as taxpayers are concerned, they would benefit from the savings in ERs. The result of the reform implies a net welfare gain of around 10 million Euro for the EU-15 for the four products concerned. Taking into account that these products represent about 4/5 of the total expenditure, we could expect a net welfare of 12 million euro.

4.2.1.6 Conclusions

In this section we offer an assessment of EQ3 by referring first to the entry price scheme, before moving on to the export refund scheme. We will follow the judgement criteria presented at the beginning of the present Chapter. It has to be underlined that it seems very difficult in many cases to isolate the impact of the mentioned schemes from the impact of other trade-related factors.

Conclusions on the Entry prices scheme

Development of EU imports of products within the EP scheme

We have examined EU import trends for fresh F&V for the following periods: 1992-1994, 1995-1997, 2000-2002 and 2005-2007. For the comparisons we have basically considered 9 products within the EP scheme (tomatoes, artichokes, cucumbers, oranges, clementines, apples, pears, table grapes and courgettes) and 8 products not covered by the EP scheme (onions, beans, asparagus, sweet peppers, grapefruits, melons, strawberries, kiwifruit).

Between 1992-941992/94 and 1995-19971995/97, that is to say during the first years of the URAA implementation period, imports of products not in the EP scheme showed more dynamic trends than imports of products within the EP scheme. However, there is no evidence that the EP scheme has constrained import growth of the affected F&V products in the period 2000-2002 to 2004-2006.

It appears that entry prices are not currently as constraining as in the past. An initial explanation refers to the implementation of the URAA agreements, which pointed to a significant reduction in the protective effect of the system after its setting up.

A second explanation concerns the pricing policy of products to which EPs are applied. One possibility refers to the twofold segmentation of EU imports, suggested by some interviewed experts, with EPs playing the role of influencing low quality products from accessing the EU market. This hypothesis has not been clearly endorsed by answers to EQ1 and EQ2 which refer to the non-conclusive evidence of the role of the EPS in influencing low-priced imports. This leads us to consider other reasons why value upgrading can take place, such as the increase in transport costs and the quality demands of retailers. This trend is supported by the fact that the value of imports in the EU, valued in USD for most of the considered F&V, has grown faster than corresponding volumes, as is happening in other major importer countries such as the US and Japan.

We carried out a statistical analysis based on panel data of bilateral trade flows in the EU. We tested the relationship between import changes for the individual F&V and main partner countries with a series of variables that can affect trade (*GDP and GDP per capita, production changes, the nature of the partners as neighbours or partners of bilateral agreements with the EU, among others variables*) including the existence of entry prices. While during the period of implementation of the URAA there are signs that the existence of

the scheme could have had some influence on bilateral trade flows, there is no statistical evidence that the EP system has significantly affected import growth in the most recent years.

The EP scheme can still play a role when an import surge occurs, as happened for pear and apple products in recent seasons. Moreover, the appreciation of the Euro has been pushing downward international prices valued in Euro. The EP system can also be relevant for certain seasons, products and suppliers, in particular products of perishable nature and origins with lower transport costs to the EU market. We consider the EP tool as a way of monitoring trade rather than as a real constraint to trade.

In general, the EP system does not appear to have a significant influence on the medium-term trends of import growth of the products covered by the system. Nevertheless, EPs present localised effects on certain products, origins and seasons. The system appears to be a way of signalling market perturbations rather than a relevant trade restriction.

Protection and preferences

We have estimated the Ad Valorem Equivalent (AVE) as a measure of the protection level implied by the EPs. As regards the comparison of the protection rate provided by the EP system, *as estimated by the AVE for both MFN and preferential partners*, protection rates can be different for the MFN of those faced by preferential suppliers. In fact, import prices from MFN and preferential suppliers can be independently below or above the corresponding EPs. It is even possible that the preferential supplier may face higher protection rates than MFN partners if the preferential supplier's price undercuts its EP and the MFN partner does not have this constraint.

In fact, AVEs are greater or similar in value for preferential partners than for MFN partners only in some periods, when preferential EP is undercut, and the specific tariff could then be levied if the customs clearance had been made on the basis of the standard import value. This is the case for tomatoes, cucumbers and courgettes. When import prices from MFN and preferential partners do not undercut their respective EP, differences in calculated AVEs correspond to the *ad valorem* duty reduction, applied to preferential partners.

Overall, the highest protection rates occur for cucumbers (peaks over 100% AVE) and tomatoes (AVEs can climb up above 70%). In such cases, the peaks occur when imports are priced below EPs. The other extreme corresponds to preferential partners who always respect the EP ceilings for artichokes, clementines and oranges and when AVEs are 0%.

We also assessed the value of the preference margin (VPM) or potential value of benefits to a preference-receiving country for a particular product. This indicator corresponds to the tariff revenue forgone by the EU by the preferential schemes. There was only a significant relevance of the EP reduction in monetary terms only in the case of Moroccan tomatoes and, to a lesser extent, Moroccan clementines. There is very little relevance for Jordan tomatoes and cucumbers and Moroccan courgettes, artichokes and cucumbers. For all the aforementioned products, seasonal differences with regard to observance of the preferential EP must be taken into account for deeper conclusions, as shown previously in the corresponding section. (See para. “Value of preference margin and quota rents”). In the cases of oranges from Egypt, Morocco, Israel and Jordan, preferential EP has not led to a potential monetary transfer to these preference-receiver countries.

We finally examined the use of Entry Price quotas. For some products, they are clearly exceeded in most periods and marketing years, as is the case for Moroccan tomatoes and courgettes and Egyptian oranges. At any rate, as actual flows are well above quotas for these products, their effect appears to focus on a limitation of the value of the preference margin rather than a limitation of trade flows.

Quotas seemed to have become exhausted in the case of Moroccan cucumbers in the last marketing year. It is early to state whether, in the future, the quota will remain as an effective instrument to limit imports, or, alternatively, whether Moroccan exporters are likely to continue trading without the preference.

At the other extreme, there is a large amount of unused quota for Israeli oranges and Moroccan artichokes. In the case of Moroccan clementines, there is lesser leeway, since the unused part of the quota is about 40%.

In conclusion, except for the cases of tomatoes and cucumbers in certain seasons and surplus situations, protection levels do not appear to be significantly affected by the EP scheme, and even the reduced TEPs seem to have little influence on trade flows.

Analysis of policy changes

A partial equilibrium model helped to simulate the impact on monthly import flows in the EU-25 from main sources that would result from the phasing out of the EP scheme. The application of the trade model considered two vegetables (tomatoes and cucumbers) and two fruits (table grapes and clementines). It is to be underlined that the results of any quantitative exercise such as that applied in this study have to be treated with caution, given the sensitiveness of the model to certain assumptions, such as the elasticities of behavioural equations. Nevertheless, as a summary of the simulation results, it can be noted that, for most of the marketing year taken as the reference period (2005/2006 average), the impact of removing the entry price seems negligible. This is due to the fact that for a number of months the SIVs are above entry prices, so their removal would have a negligible effect.

Significant effects on EU imports may occur in given seasons. In particular, tomato import prices in November could decline by 7-8% as a result of the EP abolition.

Consequently, a careful examination of the entry price system suggests that the maintenance of the system could be restricted to those periods of the marketing year when occurrences of SIVs below the trigger EP are most recurrent, without substantial trade effects. However, the system can still exert some influence in certain periods of the year when it plays a role in stabilizing EU F&V products prices.

Conclusions on the Export refunds scheme

Development of EU exports of products within the ER scheme

The beginning of the URAA implementation period was accompanied by a low dynamism of total EU exports of F&V products within the ER scheme. After 1995, the export performance of products within the ER scheme has generally been worse than the export performance of products outside the ER scheme. However it is not possible to isolate the impact of the ER scheme from other effects that determine export competitiveness. In the case of fresh fruits such as oranges and apples, the increasing competition of a wider variety of fresh fruits, many of them of an exotic nature, is not favouring export growth. Exchange rates may also play a role in determining export competitiveness. Nevertheless, price competitiveness in the world F&V market is less and less relevant. Because of non-price factors, including the role of different types of standards (phyto-sanitary, retailers requirements, etc.), we cannot give definite conclusions about the reasons why products within the ER scheme performed worse than products outside the ER scheme.

Extent to which the reduction of export refunds reduces export growth

Total ER expenditure for all fresh F&V reached about 38% of the WTO ceiling in 2005-2006. In the last two seasons expenditure increased slightly for some of the products, in particular fresh apples, which is clearly related to the EU Enlargement process. Apples and oranges presently account for about two thirds of total ER expenditure for fresh F&V. Average expenditure trends are falling, and are set at about 5% of the export price for products like oranges and lemons, with significantly lower rates for other products in the ER scheme. This trend casts doubts as to the effectiveness of the use of this instrument for export promotion strategies, unless the subsidies are concentrated on targeted shipments or destinations

The percentage of exported quantities eligible for ER also declined dramatically and is continuing to do so. For all fresh F&V this percentage decreased from 53% in 1995-1995 to 20% in 2005-2006, though the percentage is still over 20% for some products such as hazelnuts, oranges, lemons and apples. For processed F&V the decrease has been even larger, from 31% in 1995-1996 to 14% in 2005-2006.

The examination of export changes and ERs suggests the absence of evidence of an association between ER expenditure and export changes, as very often an export decrease/increase is accompanied by an increase/decrease in ER expenditure per exported unit or an increase/decrease in the percentage of exports benefiting from ER. As supported by answers to EQ1 and EQ2, the impact of the ER instrument on export markets is unclear, and it rather appears to be a measure to alleviate the EU market in times of saturation.

Assessment of policy changes in the ER scheme

We have sought to simulate the impact of a full removal of export subsidies for selected F&V. For this purpose we used a trade model that adopts a methodology similar to the one defined to assess the entry price system. We modelled the impact of a complete abolition of export subsidies in the EU-15 market on four products that account for 80% of export refunds for fresh F&V (apples, table grapes, fresh tomatoes and oranges). Only oranges appear to be significantly affected by the phasing out of ER. Impacts on exports and prices are much lower for other products, with perhaps higher variations for apples (with a drop in total exports of between 3 and 6%).

Moreover, we have carried out a welfare analysis on the possible removal of the ER scheme. In 2005, this would have involved a net loss for EU exporters of the aforementioned products of around 4 million Euro. Coupled with a budgetary saving of 14 million Euro, the net welfare gain would be around 10 million Euro for the EU-15.

In conclusion, the phasing out of export refunds appears to be a welfare improving measure that would allow a more efficient use of budgetary resources.

4.3 Theme 3: Competitiveness of the EU fruit and vegetable sector

The concept of competitiveness of a particular sector of a country is generally associated with its ability to meet the demand expressed by consumers by maintaining/increasing its presence in the market. Generally this concept can be measured by means of an index capable of synthesising changes over time in the ability of domestic production to satisfy demand expressed by consumers both in the country and abroad.

In a perfectly competitive market in which homogeneous goods are sold, the competitiveness of a country's productive sector depends on its ability to sell its products at a price not higher than the price of its competitors. It is therefore strongly linked with the costs structure characterising the specific sector, which in turn can be affected by several factors. Some of these factors are under the control of farmers or other economic agents within the sector (structural change; adoption of innovations; level of coordination within the sector). Other factors can be thought of as being exogenously determined (exchange rate, trade policies, agricultural support policies, etc.).

In a sector such as that of fresh F&V, competitiveness is increasingly dependent on what can be defined as non-price factors. These are mainly organisational and innovative capabilities within the production supply chain that put the F&V sector in a position to meet the changing needs of the large retail industry that, within the EU and in other developed countries, and now also in developing countries, has become the main supplier of food at the retail level. It is quite understandable that the EP and ER system, affecting prices at different levels in the supply chain, may modify only the EU's F&V price competitiveness.

4.3.1 To what extent has the implementation of the entry price and export refunds schemes influenced the competitiveness and market orientation of the EU fruit and vegetable sector? - EQ.4

4.3.1.1 Interpretation of the question and methodological approach

The evaluation question is aimed at understanding the effects of EP and ER in the F&V sector in determining the ability of the EU F&V sector to compete in both the domestic market and the world market and to react to changes in market signals.

To answer the evaluation question it is important first of all to define what meaning is to be given to competitiveness and market orientation concepts. Competitiveness is a microeconomic notion applied to firms that relates to their ability to stay in the market in the long run. It is based on the ability to remunerate employed resources at their opportunity costs and to make a profit, in order to introduce innovations, increasing factor productivity and lowering production costs. In this way firms can continue to stay in the market even when prices diminish, as happens in the long run.

The concept of competitiveness also applies to production sectors and industries at the regional or national level. In this case competition among different regions/nations is relevant in achieving larger market shares. The competitiveness of a production sector is linked to the performances of firms located in the relevant territory, and therefore is also determined by factors underpinning a firm's cost competitiveness. In recent years growing concern has been given to other factors determining competitiveness besides costs. These factors are linked to the economic and social environment in which farmers operate. As we have seen at the beginning of the report, the radical changes going on in the F&V sector are increasingly influenced by such factors.

To evaluate the effects of EP and ER on the competitiveness of the F&V sector in the EU, it must be considered that the competitiveness of a sector is determined not only by border measures but also by internal and external factors such as:

- structural changes of farms involved in the production of fruit and vegetables
- availability of innovations and the readiness of farms to adopt them;
- changes in the exchange rate of competing countries;
- intervention policies.

The impact of these factors on competitiveness can be difficult to assess without the help of complex quantitative models. To overcome these difficulties it may be useful to consider that the factors mentioned above have the same effect on the different F&V produced within the EU irrespective of the nature of border measures adopted for each of them. Therefore a comparison between the evolution of market shares of products covered and not covered by EP and ER can be quite effective in assessing the effects of the two border measures. Of course, to gain useful insights from this analysis, the products not covered by EP to be taken into account must have a significant domestic production.

Market orientation is the firm's organisational process of generating marketing intelligence and of disseminating and responding to such intelligence. This is related to the ability of food industries to react promptly to changes in consumer preferences, by putting on the market products with the required characteristics related to quality, safety, timing and so on[70]. It has become a major goal of the reformed CAP to have an agricultural sector in which farmers produce what consumers really demand, avoiding surpluses of unwanted products. In this context, prices contribute to the generation of marketing intelligence, correctly steering farmers' choices. The question here is to understand whether EP and ER for F&V have affected production prices in such a way as to prevent their role of signalling consumer preferences.

4.3.1.2 Judgment criteria and indicators

1. **Ability of EP for F&V produced in the EU to bring about more favourable market quota trends in the domestic market than those of products not benefiting from EP.**

If EP is effective in preventing low price imports that could erode the competitiveness of domestic F&V, products without EP could suffer the competition resulting from low-price imports. Comparison of the trends of the quota of intra-EU imports out of all EU imports and of the quota of domestic production out of all consumption of products with EP and products without EP in the period 1995-2006 will help to assess EP effects. Since preferential EP could create more favourable conditions for imports from preferred countries, the findings from the analysis developed within Theme 2 will supplement results on the analysis of the effects of EP on competitiveness.

2. **Ability of ER granted to EU fresh F&V to bring about a more favourable evolution of external trade trends than products not benefiting from ER.**

Comparison of the trends of EU exports of fresh F&V benefiting from ER with all EU exports of F&V in the period 1995-2006 will make it possible to assess ER effects on competitiveness. The analysis will also take into account the period 1995-2000, in which ER was gradually reduced to reach the agreed Gatt ceiling. To gain more insight into the effects of ER on competitiveness it is useful to extend the comparison to the year 1993-94, when unlimited ERs were granted to F&V with a higher unit refund.

3. **Ability of ER granted to EU processed F&V to bring about a more favourable evolution of external trade trends.**

The analysis of the effects of ER granted to processed F&V on their competitiveness will be developed discussing the main findings of the evaluation from the previous Agrosynergie "Evaluation of measures regarding processed tomatoes " and "Evaluation of measures regarding fresh and processed peaches, nectarines and pears " carried out on processed tomatoes and on processed fruits.

4. **Ability of EP and ER in F&V sector to affect farm prices, modifying market orientation.**

[70] In a sector like the fruit and vegetable efficient market orientation cannot be achieved only by means of price signalling. It can be increased by means of the improvement of vertical coordination within the chain. Institutions such as Producer Organisations in the F&V sector have the role of increasing producers' market orientation.

The underlying hypothesis of this evaluation criteria is that prices, in a perfectly competitive market, have the role of transmitting "consumers preferences" to farmers guiding efficiently their choices. Policies supporting market prices, as well as non-competitive market structures, divert market prices from their competitive market equilibrium. Should the price signalling mechanism be distorted by these factors, market orientation would also be biased. Therefore the problem here is to assess and quantify the effect of the EPS and of ER on farm prices.

Usually the support effect of border measures on domestic prices is evaluated through the difference with world prices that are approximated by CIF prices. This cannot be done in the case of F&V in the EU because the EPS may have effects on the quality of imported products. A way to overcome this difficulty is to evaluate the price effect of EP and ER, comparing for the main partner countries the fob prices of exports destined to the EU and exports destined to other countries.

The proposed method for answering evaluation question 4 is based on the following criteria, indicators and data sources:

A - Entry price scheme:

Judgement criteria	Indicators	Data sources
A1. Ability of EPS on F&V produced in the EU to bring about more favourable market share trends in the domestic market than those of products not benefiting from EPS	Share of extra-EU imports of F&V with and without EP. Share of EU domestic supply of F&V for EU consumption.	COMEXT,
A2. Ability of EPS to affect farm prices, modifying market orientation	Fob prices of F&V exported to EU and third countries of products with and without EP.	COMEXT, CATS

B – Export refunds scheme:

Judgement criteria	Indicators	Data sources
B1. Ability of ER granted to EU fresh F&V to bring about more favourable external trade trends than those of products not benefiting from ER	EU exports to third countries as a ratio of world exports of F&V with and without ER.	COMEXT
B2. Ability of ER granted to EU processed F&V to bring about a more favourable evolution of external trade trends	Discussion of the main findings of previous evaluations carried out on processed tomatoes and on processed fruits	- Evaluation of measures regarding processed tomatoes - Evaluation of measures regarding fresh and processed peaches, nectarines and pears
B3. Ability of ERS of F&V to affect farm prices, modifying market orientation	Fob prices of F&V exported to EU and to third countries of products with and without ER.	COMEXT, CATS

4.3.1.3 Data sources and limits

The data used in answering this evaluation question are in most cases those already used in the preparatory analysis. These data have been supplemented with information extracted from the FAOSTAT database that was employed to get data on farm prices, world imports and exports and from the Comext database that was deployed to extract intra-EU trade and extra-EU data.

As we have already pointed out, in some cases of country/product combinations the series of data on trade are not complete. Moreover data on tomatoes from the Faostat database do not distinguish between production for fresh consumption and for processing. The analysis on zucchini (courgettes) was not possible

because the Faostat database does not have data on this product. In the case of onions processing was not performed because of inconsistency[71] between EU and Faostat data.

4.3.1.4 Entry Prices scheme analysis

A1 - Ability of EPS on F&V produced in the EU to bring about more favourable market share trends in the domestic market than products not benefiting from EPS

The hypothesis underlying the judgement criteria is that the EP system could hinder, at least in principle, the development of trade between the EU and third countries, avoiding the imports of relatively low priced F&V products covered by the scheme. If this hypothesis were true, the imports of such F&V would be lower than levels actually needed, and they would be substituted by domestic production.

In the preparatory analysis two indexes that are a representation of the evolution of EU competitiveness within the world market of F&V products were analysed. The first one is the ratio between the EU imports of each product and EU domestic production. It was shown that for most F&V products both in the EP scheme and out of it, during the period from 1995 to 2006 index trends may roughly be divided into two different phases. In the first one, from 1995 to 1999-2001 the share diminished because EU imports grew less than domestic production, while in the following phase, from 1999-2001 to 2006, the share increased. This pattern was not followed by some products such as: table grapes, asparagus, other melons and peppers. In the case of these products the index steadily increased in the whole period under review.

The second index that was built is the ratio between EU domestic production and EU consumption. These indexes showed a less clear situation, in that for all fruit products covered by EP, in the first period from 1995-97 to 1999-2001 production increased faster than consumption, while from 1999-01 to 2003-05 EU production of fruit with EP decreased faster than EU consumption. In the case of fruit without EP in both sub-periods EU domestic production increased but at a lower rate than consumption. As far as vegetables are concerned, the domestic production of products with EP increased more than consumption in the first period while the opposite is observed for the second period. In the case of vegetables without EP domestic production diminished in both periods, while EU consumption showed small increases.

Here we discuss two further indexes that are linked to the competitiveness of the EU F&V sector and its evolution after the introduction of the EP system in 1995. The first is the share of EU imports from third countries in relation to world imports. The index has been calculated for each product identified for the counterfactual analysis of EP as listed in Tab. 3, Chapter 1. We calculated the share in terms of quantity and values. Data on world imports were extracted from the Faostat database. Because EU countries are entered individually in the database, world imports also cover intra-EU imports. Therefore intra EU imports extracted from the Comext database were deducted from the Faostat world imports total value and quantity.

To calculate the share of the value of imports it was also necessary to homogenize the different currencies used in the Faostat database, in which values are expressed in US dollars, and in the Comext database, where values are in Euros. To do this we used the average yearly exchange rate between the Euro and US dollar as published by Eurostat. The two indexes of the share of F&V imported by EU-15 from third countries out of all world imports are given in Tab. 44.

[71] Deducting from the Faostat data of world exports of onions the Comext intra EU-15 trade of onions for some years gives negative values of trade.

Tab. 44 - Share of EU imports out of total world imports in quantities and values for products chosen for counterfactual analysis of EP system

Products covered by the EP scheme

	Apples		Grapes		Oranges		Pears		Artichokes		Cucumber		Tomatoes	
	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q
1995	14.9%	30.2%	9.3%	13.2%	15.7%	32.9%	18.8%	37.8%	0.3%	10.9%	7.3%	12.5%	15.8%	12.5%
1996	18.1%	29.8%	9.4%	14.1%	17.5%	36.8%	17.7%	35.4%	0.3%	8.2%	5.4%	8.0%	15.0%	8.0%
1997	21.4%	28.1%	11.5%	12.5%	20.4%	30.2%	21.8%	30.7%	0.1%	4.1%	2.8%	3.4%	5.6%	3.4%
1998	24.3%	25.3%	13.9%	13.5%	19.4%	29.5%	28.3%	35.6%	0.1%	3.7%	3.0%	4.0%	7.3%	4.0%
1999	30.9%	29.7%	15.1%	15.4%	24.1%	32.8%	30.5%	36.3%	0.3%	7.3%	3.4%	3.1%	8.4%	3.1%
2000	31.4%	21.7%	19.6%	14.6%	28.6%	26.4%	36.1%	26.2%	0.5%	10.2%	5.7%	2.7%	16.1%	2.7%
2001	40.3%	22.5%	24.3%	14.1%	41.4%	29.6%	37.3%	24.2%	0.2%	8.3%	8.9%	3.9%	14.2%	3.9%
2002	36.4%	22.8%	23.3%	15.0%	25.3%	23.3%	34.8%	25.4%	0.6%	14.7%	7.7%	4.3%	16.3%	4.3%
2003	22.5%	22.6%	14.8%	15.1%	16.1%	23.6%	20.7%	25.3%	0.6%	27.9%	2.7%	3.4%	6.2%	3.4%
2004	18.4%	23.3%	12.4%	16.3%	12.9%	23.4%	16.0%	23.8%	0.6%	25.6%	1.5%	2.8%	4.8%	2.8%
2005	17.7%	21.7%	13.5%	17.3%	14.0%	24.1%	15.7%	24.8%	1.4%	46.1%	1.8%	3.4%	6.0%	3.4%

Products not covered by the EP scheme

	Grapefruit		Other melons		Strawberries		Kiwifruits		Asparagus		Beans		Sweet peppers	
	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q
1995	26.2%	42.8%			6.1%	25.7%			4.3%	10.4%	23.9%	28.8%	4.1%	9.8%
1996	27.9%	52.3%	11.4%	11.8%	6.9%	25.8%	24.6%	46.2%	5.6%	12.4%	27.5%	35.4%	5.4%	10.3%
1997	30.0%	50.3%	13.5%	11.0%	10.8%	27.9%	34.5%	52.2%	7.4%	11.2%	33.8%	31.6%	8.3%	10.9%
1998	38.2%	55.3%	16.0%	12.3%	10.3%	33.6%	41.6%	61.1%	8.3%	12.4%	36.1%	37.5%	7.7%	11.6%
1999	37.2%	49.9%	18.3%	13.6%	17.7%	27.0%	44.1%	52.9%	9.8%	12.9%	45.4%	41.6%	9.6%	11.6%
2000	42.6%	46.1%	30.4%	14.3%	26.4%	24.7%	48.7%	45.4%	14.7%	11.1%	66.5%	44.0%	15.2%	13.0%
2001	50.9%	42.3%	30.2%	14.6%	34.6%	26.7%	71.4%	49.4%	18.8%	11.6%	71.5%	51.7%	17.8%	14.0%
2002	41.4%	38.4%	37.5%	16.9%	29.3%	23.8%	57.0%	53.4%	19.6%	13.2%	57.4%	51.1%	14.5%	12.5%
2003	32.3%	36.9%	21.8%	19.5%	11.9%	20.9%	33.8%	52.3%	12.6%	14.5%	39.8%	55.2%	8.3%	13.1%
2004	21.8%	33.7%	17.0%	20.9%	8.6%	25.5%	24.8%	48.0%	10.2%	14.3%	39.8%	68.5%	6.8%	13.4%
2005	27.8%	39.8%	20.7%	22.2%	8.9%	30.1%	24.5%	44.8%	12.6%	15.2%	34.7%	57.0%	7.9%	15.1%

Source: COMTRADE, FAOSTAT, processed by Agrosynergie

As far as fruits covered by the EP are concerned, in the period from 1995 to 2005, the share of quantities imported by the EU over world imports decreased in the case of apples, oranges and pears, while only table grapes had a growing share. Among vegetables under the EP scheme the share of EU imports increased in the case of artichokes, while it fell for tomatoes and cucumbers. As far as F&V not covered by the EP scheme is concerned, the share of EU imports decreased only for grapefruit, while for other products (melons, strawberries, asparagus, beans, peppers) it rose or remained constant (kiwifruits).

The share of the value of EU imports over the values of world imports of F&V for all products increased from 1995 to 2001/2002 and fell in the second period. This pattern is particularly clear for fruit and for vegetables in which the share of imports from EU neighbouring countries is relatively lower, such as beans, asparagus and sweet peppers. The trends for the value of EU imports are strongly influenced by Euro-US dollar exchange rate trends.

The share of EU domestic production over the world production of F&V fell for most products chosen for the counterfactual analysis of the EP system (Tab. 45). The only exceptions were the share of EU production of oranges, grapefruits and kiwifruits, which showed a small increase. However, it is worth observing that some products (apples, table grapes, melons) whose share of production in the period from 1995 to 2005 decreased, in the years until 2000 the share increased slightly.

Tab. 45 - Share of EU production out of total world production for products chosen for counterfactual analysis of the EP system

	Products covered by the EP scheme													
	Apples		Grapes		Oranges		Pears		Artichokes		Cucumber		Tomatoes	
	EU15	EU25	EU15	EU25	EU15	EU25	EU15	EU25	EU15	EU25	EU15	EU25	EU15	EU25
1995	17.0%		41.6%		9.0%		18.0%		74.0%		6.9%		14.6%	
1996	16.8%		44.7%		8.4%		17.8%		73.1%		6.3%		15.6%	
1997	15.3%		41.8%		9.0%		14.8%		72.2%		6.5%		15.1%	
1998	16.0%		44.2%		7.8%		15.3%		71.6%		5.7%		15.4%	
1999	16.7%		45.3%		9.3%		15.2%		70.0%		5.3%		15.0%	
2000	18.0%		42.3%		8.9%		15.9%		67.5%		4.8%		15.1%	
2001	16.2%		41.3%		9.9%		14.5%		66.3%		4.6%		14.6%	
2002	15.7%		38.8%		9.9%		14.7%		66.7%		4.6%		12.5%	
2003	13.0%		39.2%		9.9%		14.0%		61.0%		4.5%		13.0%	
2004	12.9%	18.9%	40.1%	41.7%	9.0%	9.1%	14.1%	14.9%	64.6%	64.8%	4.3%	5.8%	13.7%	14.5%
2005	12.2%	17.2%	37.4%	38.5%	9.4%	9.5%	13.1%	13.6%	59.3%	59.5%	4.1%	5.6%	13.3%	14.0%

	Products not covered by the EP scheme													
	Grapefruit		Other melons		Strawberries		Kiwifruits		Asparagus		Beans		Sweet peppers	
	EU15	EU25	EU15	EU25	EU15	EU25	EU15	EU25	EU15	EU25	EU15	EU25	EU15	EU25
1995	0.9%		11.9%		27.5%		0.8%		6.9%		13.2%		9.9%	
1996	0.7%		11.4%		26.5%		0.8%		6.4%		13.3%		9.8%	
1997	0.8%		11.9%		24.1%		0.7%		6.0%		13.4%		9.5%	
1998	0.9%		11.9%		25.3%		0.7%		5.6%		12.6%		8.9%	
1999	0.9%		12.2%		26.7%		0.8%		5.3%		12.6%		8.7%	
2000	0.8%		10.8%		27.3%		0.8%		4.4%		12.9%		8.4%	
2001	0.9%		8.6%		26.6%		0.8%		4.3%		12.8%		8.5%	
2002	1.1%		8.4%		25.6%		0.9%		3.7%		12.3%		8.2%	
2003	1.0%		8.4%		23.1%		0.8%		3.4%		10.5%		7.8%	
2004	1.0%	1.8%	8.0%	8.2%	21.8%		0.9%	0.9%	3.3%	3.7%	10.2%	10.3%	7.9%	8.5%
2005	1.4%	2.2%	7.9%	8.1%	23.5%	29.3%	0.9%	0.9%	3.3%	3.7%	9.4%	9.4%	7.8%	8.4%

Source: FAOSTAT, processed by Agrosynergie

The different indexes in which the competitiveness of the EU F&V sector can be synthesised show in many cases that the EU fresh F&V sector is losing its leading positions in the world market. The only index that could be interpreted in a different way is the share of EU imports over world imports that, for many F&V products, particularly those included in the EP, might point to a relative reduction in EU imports. However, it is hard to link such trends with the effects caused by the EP system on product competitiveness. Instead, it may be the effect of different situations characterising the market of F&V products chosen for the counterfactual analysis. It is a fact that products under the EP scheme in many cases in the EU market have the character of "mature" goods in the product life cycle. This means that EU consumption of these goods has already reached its maximum or is increasing slowly, with the consequence that increases in imports are mainly due to the substitution of EU production with foreign produced goods. At the same time, world imports of F&V increased faster than EU imports as an effect of the better conditions of market access and the increase in the demand from consumers in emerging countries, where higher incomes give the opportunity to have a healthier, more varied diet in which F&V occupy a relevant position. On the other hand, some F&V not covered by the EP scheme may be seen in the growth phase of the product life cycle. The growing consumption of these products also affects the patterns of their imports in the EU.

In the case of tomatoes, the share of EU imports from third countries out of all world imports decreased considerably in 1996 and in 1997, becoming relatively stable afterwards. As it was underlined, both in the preparatory analysis and in the answering of EQ3, the zero tariff quotas with preferential entry price granted to Morocco, the main trading partner of fresh tomatoes, have been binding for most of the analyzed period. Such quotas were increased several times keeping EU imports of tomatoes from Morocco in line with the evolution of world trade of this product.

We underlined that some indexes have shown different trends in the period under review, however the overall trend of such indexes showed a slow decline of the EU fresh F&V sector position within the world competitive arena. We have seen that such a tendency became clearer after 2000/01. It is possible that such a pattern has been influenced by the evolution of the Euro exchange rate that was declining until 2001, then rose in subsequent years.

A2 - Ability of EPS to affect farm prices, modifying market orientation

The judgement criteria relate to the ability of the EP system to affect EU farm prices of F&V products included in the scheme, modifying producers' market orientation. This effect could be due either to an increase in farm prices or lower price variability. The latter effect has been analysed as part of the answer to EQ1. Here we will concentrate on the analysis of the effects of the EP system on the level of farm prices.

In the preparatory analysis yearly fob prices of products chosen for the counterfactual analysis of the EP system of F&V were taken into account in order to identify:

- possible selection effects of the EP scheme on the quality of imported products;
- price competitiveness of products from different trading partner countries.

In addition to this analysis, monthly prices of EU products were compared to prices of corresponding imported products. This comparison was performed only for products under the EP scheme because prices of imported F&V at the wholesale market level were available only for products being extracted from the EU Commission daily representative price database used to calculate the daily SIVs.

The performed analyses have shown that the EP does not have a selection effect: prices of products exported to the EU are on average not higher than prices of products exported to other countries. The analysis also showed that such a pattern characterizes products exported from countries far from the EU, for which transport costs have a high incidence, as well as products imported from neighbouring countries.

Here we have analyzed fob prices of products exported to the EU, comparing them with farm prices received by EU producers. This comparison is aimed at finding out the effect of the EP scheme on EU farm prices, verifying whether the difference between prices of F&V products covered by the scheme and the fob prices of products exported by the main partner countries to the EU is larger than that of products not covered by the EP scheme. Fob prices used in the comparison were already used in the preparatory analysis, while EU farm prices are a weighted average of the prices published by the Faostat database for EU countries. The weights were chosen according to the production of each country out of all EU-15 production. Prices are expressed in US dollars per kilo of product. For each product we calculated average prices referring to the three-year periods 1995-1997, 1999-2001 and 2003-05. The EU average farm price is used as a benchmark for the comparison of fob prices. The results are summarised in Tab. 46.

The figures given in the table show that the difference between fob prices and EU farm prices is larger in the period 1999-2001 for all fruits, probably because of the devaluation of the Euro exchange rate in that period. Fruits covered by EP show that EU farm prices are generally lower than the corresponding fob prices of products exported to the EU. As the table shows, this difference is due to the fact that in many cases these products are exported to the EU from southern hemisphere countries, in seasons in which EU production is not on the market. As we pointed out before, in such cases the high incidence of transport costs on the market price justifies the exporting of high quality products with higher prices. As far as F&V exported by northern hemisphere countries are concerned, it can be seen that prices of oranges exported by Egypt have prices very close to the benchmark, while those of Morocco are higher and rise slightly. Relative prices of pears exported by China and of table grapes exported by Egypt decreased from the first period to the last one.

Figures on fruits not covered by the EP scheme describe different situations. In the case of counter seasonal exports, quite often prices of products exported to the EU are higher than EU farm prices. The only exception is exports of kiwifruits, whose fob prices decreased and were lower than EU farm prices. For products exported from northern hemisphere countries, it can be observed that prices of strawberries exported by Egypt and Morocco are much lower than the corresponding EU product farm price, while those of Israel are higher but decreasing, while in the case of melons, the few prices available for Israel and Morocco were higher than the EU farm price.

Tab. 46 - Differences between EU prices at the farm level and fob prices of exports by the main partner countries of products chosen for the counterfactual analysis of the EP

Products covered by the EP scheme

Product	Country	Average 1995-97	Average 1999-01	Average 2003-05
Apples	EU	100.0	100.0	100.0
	Argentina	135.8	191.0	93.7
	Brazil	116.2	159.1	112.8
	Chile	84.0	127.8	88.4
	New Zealand	204.9	188.0	159.6
	South Africa		96.4	113.8
Oranges	EU	100.0	100.0	100.0
	Argentina	120.8	164.4	100.7
	Egypt	97.7	111.9	91.5
	Morocco	134.1	144.9	140.9
	South Africa		125.8	100.0
	Uruguay	115.9	157.9	110.3
Pears	Eu	100.0	100.0	100.0
	Argentina	150.2	178.4	80.3
	Chile	89.3	117.9	79.3
	China	126.5	111.5	61.7
	South Africa		89.7	92.2
Table Grapes	EU	100.0	100.0	100.0
	Argentina	171.7	190.5	99.3
	Brasil	175.1	145.2	163.2
	Chile	86.8	118.1	85.3
	Egypt	121.2	69.3	65.7
	South Africa		105.8	120.9
Tomatoes	EU	100.0	100.0	100.0
	Israel	475.7	369.9	292.2
	Morocco	96.6	77.6	128.9
	Turkey	132.3	100.1	174.6
Cucumbers	EU	100.0	100.0	100.0
	Bulgaria	182.9	126.5	229.2
	Hungary	152.8	114.9	
	Morocco	109.6	61.2	83.7
	Romania	85.2	65.2	98.6
	Turkey	159.7	99.3	128.8
Artichokes	EU	100.0	100.0	100.0
	Egypt	59.7	42.1	45.8
	Morocco	253.3	189.6	206.3
	Turkey	103.1	201.1	161.6

Products not covered by the EP scheme

Product	Country	Average 1995-97	Average 1999-01	Average 2003-05
Grapefruits	EU	100.0	100.0	100.0
	Argentina	164.8	219.8	132.5
	Israel	180.0	214.3	232.0
	South Africa		148.2	122.2
	Turkey		165.5	179.9
	Usa		236.6	214.5
Kiwifruits	EU	100.0	100.0	100.0
	Chile	53.6	83.5	40.9
	New Zealand	113.1	136.7	68.1
Melons	EU	100.0	100.0	100.0
	Brazil	108.2	127.8	125.9
	Costa Rica	159.1	147.2	83.4
	Israel		283.0	
	Morocco			195.6
	Panama		175.1	183.3
Strawberries	EU	100.0	100.0	100.0
	Egypt	22.1	22.3	33.5
	Israel	203.5	197.0	120.7
	Morocco	37.0	38.7	47.7
	Usa	115.8	133.2	136.5
Asparagus	EU	100.0	100.0	100.0
	Morocco	11.1	3.3	4.6
	Peru	17.8	14.1	12.7
	Thailand	48.7	28.1	25.6
Beans	EU	100.0	100.0	100.0
	Egypt	16.6	24.0	25.5
	Kenya	96.9	171.6	135.1
	Morocco	45.1	65.0	45.1
	Senegal	41.4	70.4	38.9
Onions	EU	100	100	100
	Argentina	72.15	83.41	57.56
	Australia	82.94	81.80	65.77
	Chile	60.84	71.75	57.12
	Egypt	59.55	42.05	58.00
	New Zealand	83.33	61.76	73.40
Peppers	EU	100.0	100.0	100.0
	Morocco	62.8	75.1	44.8
	Turkey	75.2	93.7	75.2

Source: FAOSTAT, processed by Agrosynergie

Among vegetables under the EP scheme, the prices of tomatoes exported by Israel were noticeably higher than corresponding EU farm prices, although the difference was falling. Fob Prices for Morocco were relatively closer to EU farm prices, with differences varying from one period to another, while Turkey's tomato prices were higher than the EU farm price. In the case of cucumbers fob prices were higher than EU farm prices in Bulgaria, Hungary and Turkey, while they were decreasing for cucumbers exported from Morocco and lower and increasing for Romania. Prices of artichokes exported by Egypt were lower than EU prices at the farm level and also decreasing. Prices of artichokes exported by Morocco and Turkey were considerably higher than the prices at the farm level in the EU.

The prices of vegetables out of the EP scheme followed a different pattern from the products we have just described. Generally fob prices are lower than the prices at the EU farm level. The only exception was beans

exported from Kenya. In several cases the differences between the two prices were rather large, as in the case of asparagus exported from Morocco and beans from Egypt.

The differences between farm prices at the EU level and fob prices of products exported to the EU that we have discussed do not seem related to effects induced by the EP scheme. Instead, they seem to be related to factors already analysed in the preparatory analysis as well as within the development of the other evaluation questions. In particular, fob prices are relatively higher for products imported in the EU in the counter season or from farther distances. At the same time, the differences between the two prices becomes ever smaller in the case of products imported from countries whose competitive pressure on the EU market is increasing, as it happened for pears imported from China.

4.3.1.5 Export refunds scheme analysis

B1 - Ability of ER granted to EU F&V to bring about a more favourable evolution of external trade than products not benefiting from ER

The judgement criteria are based on the idea that the ER is potentially an instrument that is capable of boosting EU exports of F&V to third countries. If this hypothesis were true, the exports of such F&V would be larger than could otherwise be exported.

The export model developed within evaluation question 3 simulated the effects of the abolition of ER on four products – tomatoes, oranges, table grapes and apples – in 2005, under two different hypotheses on the level of price elasticity, that define the range in which the true value of elasticity should be placed. The simulated effects of the abolition of ER would be a decrease in exports in the case of oranges, between 14.4% and 7.9%, depending on the level of elasticity. Oranges would be the product most affected by the abolition of ER, because it is the product to which the largest sum for ER is granted. The other product most affected by the abolition of the ER would be apples, whose exports, according to the simulation model, would diminish within a range of between 4.5% and 2.3%. The impact of ER on EU exports of table grapes and tomatoes would be relatively smaller than the one observed for oranges and apples, ranging from -1% and -0.5% for table grapes, while in the case of tomatoes the reduction would be between 1.3% and 0.7%. Therefore, according to the simulations performed with the model, ER seem to have significant effects only on the exports of oranges.

The simulated impact of the elimination of ER is conditioned by the hypothesis behind the export model, whose strengths and weaknesses have been discussed answering the evaluation question. To get further insight into the effects of ER on F&V trade, we have built two indexes that may be seen as capable of representing the competitiveness of EU F&V in foreign markets and its evolution in the period following the introduction of new rules on the granting export subsidies for F&V introduced in 1995. They are the share of EU exports to third countries over world exports in terms of both values and quantities. The indexes have been calculated for products identified for the counterfactual analysis of ER as listed in Tab. 3 (Chapter 1), in order to make the usual comparison between products benefiting and not benefiting from ER.

Data on world exports were collected from the Faostat database. As we have also done in the case of imports, since EU countries are included individually in the database, it was necessary to deduct intra-EU exports from world exports. Indexes were calculated for the aggregate EU-15, making it possible to have a series long enough to analyse trends in world market shares.

Tab. 47 shows the evolution of the two indexes from 1995 to 2005. The shares for most products are decreasing in terms of both value and quantity. However, pears and melons showed increasing shares of EU exports in both value and quantity, while the share of exported quantities of cucumbers also increased. It is interesting to observe that among the different products covered and not covered by the ER system artichokes are the product with the largest loss in the world export share held by EU-15 exports, particularly in the case of quantities exported. However the world market of artichokes is relatively small and, as we have already seen for imports, market shares of EU products are continuously eroded, particularly because of the competition from products exported by Egypt.

In addition to artichokes, two products had the largest decrease in the share of exports: oranges and apples. In the case of oranges the loss of the share of EU exports is particularly large. The fact that the three products with an increasing share are not covered by the ER scheme, while the two products that get the largest percentage of ER granted to F&V - whose unit refund and the quantity of product benefiting from ER has widely and continuously diminished after 1995 - have the largest loss in the share of exports, seems to attach to ER the ability to boost EU exports in world markets, increasing their competitiveness. The impact of export refunds may be particularly effective in the markets of Central and Eastern European Countries that, as we showed in Fig. 11 of paragraph 4.1.1.5, have a large share of total expenditure for ER of fresh F&V.

Tab. 47 - Share of EU exports out of all world exports in quantities and values for products chosen for counterfactual analysis of the ER system

F&V with ER

	Apples		Grapes		Oranges		Clementines		Tomatoes	
	Share Quantity	Share Value	Share Quantity	Share Value	Share Quantity	Share Value	Share Quantity	Share Value	Share Quantity	Share Value
1995	15,5%	20,9%	8,5%	7,4%	25,4%	32,4%	32,3%	84,1%	13,7%	20,5%
1996	16,5%	24,2%	11,6%	8,1%	21,7%	27,5%	28,8%	49,9%	12,6%	18,6%
1997	13,8%	19,3%	9,1%	8,0%	21,1%	21,5%	32,4%	47,9%	17,7%	25,2%
1998	14,0%	19,3%	7,9%	6,6%	20,8%	22,8%	39,3%	68,1%	15,1%	23,3%
1999	14,4%	16,4%	11,1%	8,3%	19,0%	21,3%	30,5%	42,8%	13,7%	19,6%
2000	16,5%	18,5%	9,8%	8,0%	19,1%	18,5%	36,2%	54,5%	11,3%	18,5%
2001	14,3%	17,9%	12,5%	11,2%	22,2%	25,1%	32,6%	57,6%	13,8%	19,3%
2002	12,8%	18,3%	7,3%	7,3%	19,3%	26,1%	30,1%	52,1%	12,3%	21,1%
2003	11,3%	16,6%	8,3%	9,1%	16,1%	23,7%	30,1%	52,7%	10,5%	16,9%
2004	8,4%	13,0%	7,1%	7,6%	13,3%	18,6%	25,4%	44,4%	11,4%	17,3%
2005	10,6%	14,5%	8,3%	9,6%	10,2%	16,0%	28,0%	47,2%	9,8%	16,1%

F&V without ER

	Artichokes		Peppers		Cucumbers		Kiwifruits		Melons	
	Share Quantity	Share Value	Share Quantity	Share Value	Share Quantity	Share Value	Share Quantity	Share Value	Share Quantity	Share Value
1995	26.6%	40.3%	15.9%	37.8%	10.1%	21.6%				
1996	7.9%	28.1%	15.5%	37.2%	10.5%	17.9%	29.7%	35.7%	3.6%	9.6%
1997	9.6%	31.4%	15.2%	31.2%	12.2%	21.7%	36.5%	63.2%	2.9%	10.5%
1998	11.3%	33.1%	17.8%	35.3%	12.4%	24.9%	28.4%	49.0%	3.2%	7.7%
1999	7.7%	23.7%	16.8%	31.0%	11.9%	21.6%	26.4%	30.7%	2.5%	6.1%
2000	6.7%	18.0%	16.4%	28.0%	12.4%	18.4%	30.2%	29.2%	2.9%	8.5%
2001	7.8%	27.7%	16.9%	24.2%	13.8%	23.6%	29.7%	28.6%	3.2%	7.5%
2002	8.3%	19.9%	18.5%	31.8%	12.2%	19.2%	24.9%	23.6%	3.4%	9.3%
2003	6.2%	19.0%	16.4%	35.0%	10.9%	20.5%	23.5%	17.3%	3.4%	7.6%
2004	5.0%	16.5%	12.9%	25.0%	11.7%	15.1%	23.1%	15.6%	3.6%	8.1%
2005	7.5%	31.1%	14.1%	23.6%	11.4%	18.7%	28.0%	29.6%	3.8%	9.8%

	Pears		Strawberries	
	Share Quantity	Share Value	Share Quantity	Share Value
1995	10.8%	16.5%	17.8%	31.4%
1996	14.9%	19.6%	14.1%	27.9%
1997	17.6%	22.0%	17.5%	30.6%
1998	11.2%	18.2%	17.5%	28.5%
1999	10.3%	12.8%	12.7%	21.4%
2000	11.0%	13.2%	11.1%	16.1%
2001	13.4%	18.0%	11.6%	17.5%
2002	11.5%	17.9%	12.3%	20.0%
2003	11.9%	20.6%	11.3%	19.8%
2004	14.5%	23.3%	15.0%	23.9%
2005	17.4%	26.9%	15.0%	21.2%

Source; FAOSTAT, Comext processed by Agrosynergie

B2 - Ability of ER granted to EU processed F&V to bring about a more favourable evolution of external trade trends

Among the products benefiting from ER within the processed F&V CMO, processed tomatoes receive the most significant share. ER for processed tomatoes are granted only to a specific kind of product, "peeled tomatoes" packed in cans with a weight greater than 1 kg. Since the year 2000 the unit ER is fixed at €45 per metric ton within a maximum of 127,431 tons per year, however in recent years the quantity of peeled tomatoes benefiting from the subsidy has been around 75.000 tons per year.

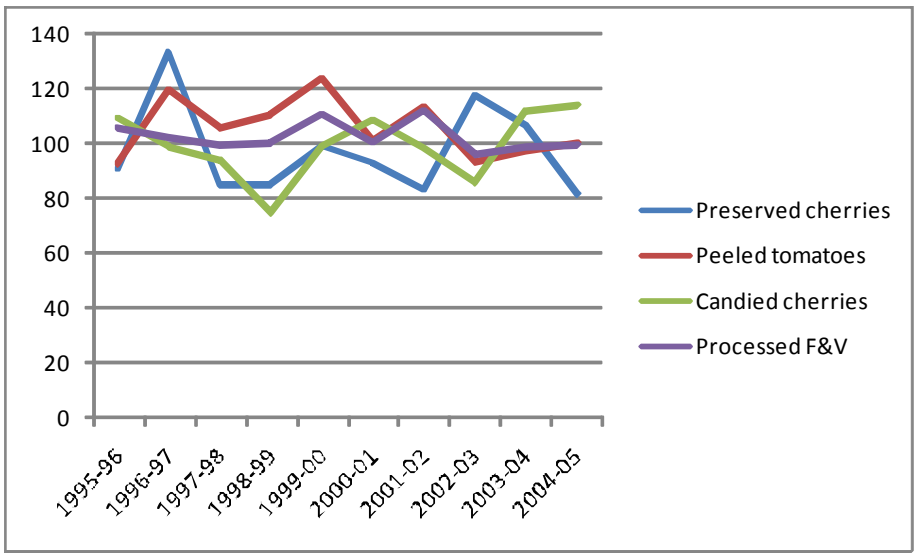
It is not possible to know the exported quantity of this kind of product, because Comext does not report the trade of "Peeled tomatoes, whole or in pieces" according to their packaging. However for this category of products in the last five years exports averaged around 280,000 tons per year. Therefore, less than 30% of this product would benefit of export refunds.

The assessment of the effects of ER granted to processed tomatoes on their competitiveness is made difficult by two factors. The first is its strong links with the subsidy paid to EU processing tomato producers that, within the support instruments provided by the CMO, was by far the most relevant factor affecting the competitiveness of the EU processed tomato industry. A further difficulty arises from the fact that the share of EU exports on the world trade of peeled tomatoes is larger than 70%. Therefore, to analyse the effects of ER in the event of its phasing out, it would be necessary to distinguish between short- and medium-term effects. Although the support system helped to increase the competitiveness of the EU processed tomato industry, according to the results of the Evaluation report "Evaluation of measures regarding processed tomatoes[72]", in recent years Euro exchange rate trends have had the effect of reducing the share of EU products on world markets.

Looking at other processed F&V, in the first year of implementation of the URAA a large share of exports of preserved cherries and candied cherries used to receive an ER (74% for both products). In the following years this share was gradually reduced, reaching 33% and 21% respectively in 2004/05. Also the unit subsidy was reduced according to URAA commitments. It is difficult to assess the effect of ER without a thorough analysis of the factors affecting the competitiveness of such products, however it is worth observing that despite the fall in granted ER the exports of candied cherries in 2004/2005 show an increase vis-à-vis the average level in the two years before the implementation of the URAA, while those of preserved cherries show a decrease, as shown in Fig. 36. The ER granted in the period 1995-2005 to other processed F&V were for a negligible share of total exports: 7% for prepared hazelnuts, while the ER for orange juice has been zero since 2003/2004. In figure 36 orange juice is not reported because the subsidy granted was 3% of exported quantity until 1997/98, reached 2% in 1998/99 and was almost zero afterwards. No ER were granted to orange juice from 2003/04.

Other processed F&V benefit from the ER fixed for sugar within that CMO if they have sugar added, or from the ER for cereals in the case of glucose and glucose syrup added. It is not possible to distinguish the share of sugar ER paid for processed F&V. According to an estimate referring to 1999/2000 quoted in the "Evaluation of measures regarding fresh and processed peaches, nectarines and pears[73]" the sugar added in processed F&V benefiting from ER was equal to 60,000 tons (50,000 tons forecast for the following year).

Fig. 36 – Quantity trends for exported processed F&V benefiting from ER (average 1992-94 = 100)



Source: European Commission data processed by Agrosynergie

[72] http://ec.europa.eu/agriculture/eval/reports/tomatoes/index_fr.htm

[73] http://ec.europa.eu/agriculture/eval/reports/peache/index_fr.htm

B3 - Ability of ERS of F&V to affect farm prices, modifying market orientation

The export model developed in the answer to EQ3 has also estimated the effects of the ER scheme on the prices of products benefiting from the subsidy. The analysis was performed on products benefiting in 2005 from ER chosen for the counterfactual analysis. It showed that the effects of ER on the price of oranges exported by the EU was -1.5%. It was the largest estimated effect, while for the other three products analysed the effect of an abolition of ER would be much lower, ranging from -0.5% for apples, -0.1% for table grapes and -0.1% for tomatoes.

To supplement the analysis on the impact of ER on prices, we have calculated the fob prices of EU-15 exports of products chosen for the counter factual analysis of ER as listed in Tab. 3, Chap. 1. These prices have been calculated from Comext data on trade and refer to the period from 1995 to 2006. For each product we calculated an index based on the three year average fob prices taking the period 1995-97 as base. The results of the analysis are shown in Tab. 48. Besides artichokes, the price of products that show the largest increases are those of table grapes and oranges, which are two products benefiting from ER. The case of oranges is particularly interesting because in a situation of increasing EU fob export prices, the reduction of both unit ER and the quantity of products benefiting from the subsidy may have contributed to the wide decrease in the share of EU exports on the total world exports, which we underlined in the previous paragraph.

The capability of ER to affect farm prices depends on the transmissibility of the subsidy from traders, the beneficiaries of the payment, to producers. In perfectly competitive markets the subsidy would flow along the vertical production chain to farmers and to the owners of resources employed in farming. The market power of firms operating at different levels of the production chain, as well as the relevant natures of factor supply, may reduce the transmissibility of the subsidy to agricultural producers. However, it is also true that if the subsidy is not fully transmittable to farmers because of the not perfectly competitive market structure, according to the hypothesis putted forward for this evaluation criterion, it would imply that price signalling is biased, reducing the overall market orientation.

Tab. 48 - Fob prices of EU exports for products chosen for counterfactual analysis of the ER system

	Tomatoes	Onions	Cucumbers	Artichokes	Peppers	Oranges	Clementines
1995-97	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1996-98	106.3	102.6	100.0	97.4	104.8	100.1	95.2
1997-99	106.0	104.9	102.5	97.7	106.0	100.7	93.7
1998-00	116.0	99.2	107.5	101.7	112.4	101.2	97.8
1999-01	116.1	86.9	107.8	111.0	113.8	105.3	109.0
2000-02	126.8	90.5	115.0	117.7	120.1	111.6	115.5
2001-03	124.4	98.0	120.2	125.6	124.2	122.1	121.1
2002-04	123.2	96.0	120.4	124.6	127.6	129.8	119.7
2003-05	120.7	87.2	121.0	137.0	124.0	132.6	119.3
2004-06	122.1	91.4	125.0	164.9	115.0	134.9	116.0

	Table grapes	Apples	Melons	Pears	Strawberries	Kiwis
1995-97	100.0	100.0	100.0	100.0	100.0	100.0
1996-98	100.5	101.0	95.9	104.4	104.5	106.7
1997-99	105.0	95.5	95.7	102.1	103.2	105.3
1998-00	105.9	92.1	89.3	102.6	105.2	96.0
1999-01	113.3	95.0	93.5	100.7	106.1	105.2
2000-02	124.8	104.6	100.9	109.0	111.5	116.1
2001-03	130.1	110.0	105.4	114.1	119.7	115.3
2002-04	131.4	111.5	103.1	113.2	119.9	103.8
2003-05	135.2	105.2	98.7	110.8	115.0	100.3
2004-06	140.2	106.2	95.1	112.8	109.5	102.7

Source: FAOSTAT, Comext processed by Agrosynergie

To assess the ability of ER of F&V to affect farm prices, we have analysed producers' prices series published by Faostat available from 1995 to 2005. From the database we extracted farm prices, expressed in US dollars per ton, of the products chosen for counterfactual analysis of ER. These prices have been converted into Euro using the average yearly exchange rate between the Euro and US dollar published by Eurostat. From the yearly prices in Euro we calculated indexes of the three years' averages, taking the average referring to the

three year period 1995-97 as the base value. The results of this elaboration are reported in Tab. 49. The indexes shown in the table give a picture on the effect of ER on farm prices that is much less clear than the one portrayed by the analysis of fob prices. First, as we have already underlined in other analyses that used data expressed in dollars subsequently converted into Euro, the series show a decrease from the first years until 2000-2001 and an increase in following years, induced by exchange rates. Moreover the relationship between fob prices series and farm prices series seems rather tenuous. In fact, while most products' farm prices show an increase in the period under review, the farm prices of oranges had a small decrease. The largest increase in producer prices was for kiwis, whose series of fob prices showed no change in the period. Therefore, the data available do not allow us to ascertain the transmission of the ER subsidy on farm prices. Insofar as it is not possible to ascertain the effects of the subsidy on farm prices, neither can we identify its ability to bias farm market orientation.

Tab. 49 - EU farm prices for products chosen for counterfactual analysis of the ER system

	Tomatoes	Onions	Cucumbers	Artichokes	Peppers	Oranges	Clementines
1995-97	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1996-98	108.6	98.2	98.4	98.5	101.0	92.5	94.9
1997-99	111.7	92.9	92.9	101.5	96.1	84.2	85.0
1998-00	111.6	82.5	82.0	97.8	88.9	75.3	81.4
1999-01	102.2	77.7	69.5	87.5	81.5	72.6	77.6
2000-02	103.1	79.8	65.5	84.7	80.8	70.2	74.8
2001-03	109.7	86.0	74.6	106.5	87.9	81.8	79.2
2002-04	114.6	87.0	85.0	125.0	103.6	93.6	86.0
2003-05	117.5	89.4	97.6	135.2	114.7	99.8	91.3

	Table grapes	Apples	Melons	Pears	Strawberries	Kiwis
1995-97	100.0	100.0	100.0	100.0	100.0	100.0
1996-98	103.5	92.8	95.7	100.1	99.1	101.5
1997-99	110.0	80.4	90.4	98.2	83.1	102.7
1998-00	102.9	73.2	80.8	93.4	73.5	96.3
1999-01	92.9	70.1	76.5	82.2	66.8	90.0
2000-02	93.1	73.8	72.7	87.3	69.6	101.2
2001-03	99.9	87.6	80.6	106.5	87.4	118.9
2002-04	110.2	102.1	91.0	127.7	105.6	144.9
2003-05	115.7	108.7	100.3	131.1	116.0	157.7

Source: FAOSTAT, Comext processed by Agrosynergie

4.3.1.6 Conclusions

The analysis carried out in answering this evaluation question has confirmed several findings of the preparatory analysis and of other evaluation themes, adding new insights on the effects of the two schemes. The main conclusion regarding the ability of the two schemes to affect the competitiveness of the EU F&V sector and its market orientation is that they had very different impacts that will be discussed in greater detail below by means of a comparison of the two.

Conclusions on the Entry prices scheme

The various indexes proposed to synthesise the competitiveness of the EU F&V sector have been aimed at identifying the effects caused by the EP system through the comparison between the performance of products covered by EP and products outside the system. In general, the indexes show a reduction of the shares owned by EU F&V products of world markets. This does not seem related to the nature of external protection characterising the different products, while the evolution of the Euro exchange rate may have had an important role. In this scenario it is difficult to isolate the effect caused by the EP system. What can be said is that the EP scheme has not kept out of the EU market imports of F&V products, particularly from southern hemisphere countries, in periods in which they do not compete directly with EU production. However, to evaluate fully the effect of EP on the competitiveness of EU imports it is also necessary to take into account the fact that the existence of the scheme may have a preventative effect on the imports of low priced products that would otherwise be imported if the scheme was not available, and that it is not possible to assess the dimension of such imports with available data and analytical tools.

The counterfactual analysis showed that generally speaking the prices of products either imported out of the EU production season or from faraway countries are higher than EU farm prices, while products competing directly with EU domestic production are often lower. However, the effect of EP is not clearly separable, since what has been observed for farm prices is true both for F&V under the EP scheme and for products out of it. In this situation it is not possible to conclude that EP can affect price signalling and reduce the market orientation of EU farmers.

Conclusions on the Export refunds scheme

The indexes related to the competitiveness of EU exports of F&V on world markets showed an improvement for some fruits outside the ER scheme. On the other hand, the competitiveness of EU exports of oranges, the product that benefited most from it, was reduced. However the evolution of Euro exchange rate particularly after 2002 may have contributed to reduce EU F&V exports competitiveness.

Given the large and continuous decrease of both the unit subsidy and of the quantity of oranges that received ER, it is possible that in the past, before the implementation of the URAA and immediately after, the ER helped the competitiveness of the oranges exports.

The analysis has not been able to assess the effects of ER granted to processed F&V on their competitiveness. This was due to several factors linked to the joint effect of processing aid in the case of processed tomatoes or because of the lack of data on ER for sugar added in processed fruit.

The effects of ER on farm prices of fresh F&V are more difficult to assess. The analysis we have performed does not allow us to conclude that the ER scheme had effects on farm prices distorting price signalling.

4.4 Theme 4: Management, administration and efficiency of the entry price and export refunds schemes

Theme 4 centres on the analysis of the management and administration system of the entry price and export refunds mechanisms for fresh and processed F&V, and the evaluation of the efficiency of the whole system, particularly in achieving the objective of stabilising prices and guaranteeing the placement of the products in the market.

Moreover, EQ 5 examines whether management and administration procedures of entry price and export refunds schemes have been sufficiently *simple* and *proportionate* to the specific objectives of the schemes, as shown in the intervention logic.

EQ 6 analyses the *efficiency* of the schemes in relation to objectives (specific, intermediate and global), as defined in the intervention logic. The topic is linked to previous evaluation question themes and their findings.

The efficiency assessment of entry price schemes is based on the collection and analysis of both quantitative and qualitative data covering the delivery mechanism. The cross-analysis of data is necessarily qualitative, consisting of searching for and matching patterns across the data produced during the preparatory analysis and the first evaluation theme: market stability.

4.4.1 To what extent have the management and the administration of the entry price and export refunds schemes been sufficiently simple? To what extent have the administrative requirements been proportionate to the objectives of the schemes? - EQ.5

4.4.1.1 Interpretation of the question and methodological approach

EQ5 seeks an evaluation on the adequacy, in terms of simplicity and proportionality to the objectives, of the actual management and administration system for both schemes, EPS and ERS. The evolution over time of the implementing procedures framework has been considered in the present analysis, as well as the concrete operational functioning of both schemes at different implementation levels: the EU Commission, the Member States and the operators.

For each scheme, we focused on two relevant aspects related to:

1. the concept of "*simplicity*" of the management and administration of the EPS and ERS, and
2. the "*proportionality*" of administrative requirements to the specific objectives of each scheme.

It should be stressed that the "simplification process" for the management and administration of the EPS and ERS is embedded in the broader "simplification process" of the whole CAP. The *simplification process*[74], as developed by the Commission, has been implemented with the aim of revising the legal framework, administrative procedures and management mechanism to make them more transparent and understandable,

[74] The most important steps toward the *CAP simplification process* of management and administration have been introduced by the following regulations:

- *Communication from the European Commission presented to the Council and Parliament, in July 1994, on the development and future of Community policy in the fruit and vegetable sector (COM(94) 360 final – 27 July 1994).*
- *Regulation (EC) No 1535/2003, regarding simplification in the processed fruit and vegetables (tomatoes, peaches and pears).*
- *Report from the Commission to the Council and the European Parliament on the simplification of the common market organisation in fruit and vegetables, Brussels, 10.8.2004, (COM(2004) 549 final).*
- *Communication from the Commission of 19 October 2005 on Simplification and Better Legislation for the Common Agricultural Policy [COM(2005) 509 final - not published in the Official Journal]*, that introduce the difference between Technical and Political Simplification.
- *Communication of the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Implementing the Community Lisbon programme: A strategy for the simplification of the regulatory environment Brussels, 25.10.2005.(COM(2005) 535 final).*
- *Action Plan - October 2006 on Simplification of the Common Agricultural Policy DG Agriculture and Rural Development - Working Paper, about implementation of actions, work in progress and new proposals on the simplification process.*

as well as updating some old and complex regulations. This process started more than ten years ago but could not be applied in the period under analysis because the implementing regulations for these specific schemes (EPS and ERS) have not yet been adopted, only proposed[75].

Therefore, in this sense, and for the purposes of the present evaluation, the *simplicity* of a procedure is taken to mean the extent to which operating instructions are:

- "*clear, transparent and accessible by the operators*": definitions and concepts used in the procedures have to be clear, comprehensible at an operator level and not subject to possible different interpretations,
- *uniform* among different member States, in their implementation and application,
- *adequate*, in terms of streamlined procedures and/or administrative requirements and bureaucracy.

In short, a procedure can be defined *sufficiently simple* if it does not represent an obstacle to making the system effective.

Therefore, to answer the present EQ, we have analysed the extent to which procedures established for management and administration are "simple" in the above mentioned terms by means of a qualitative analysis of the judgement on "the simplicity of the scheme" given by operators involved at different levels.

Furthermore, we analysed the administrative complexity, at the various administrative and management levels, of the specific instruments (different kinds as technology, data and information flow schemes, disclosure or training) adopted with the aim of simplifying the relative procedures[76].

Moreover, a comparison among national institutions involved in the functioning of EP and ER has been conducted for different MS considered in the direct interviews plan.

The second part of EQ5 is focused on the procedures' proportionality to the specific objectives, as shown in the intervention logic.

Specifically, as far as the "*proportionality[77] of procedures to specific objectives"* is concerned, we mean that administrative requirements for the entry price and export refunds schemes shall avoid possible procedural shortcomings or excesses in the actual system applied at all operating levels. On the basis of the principle of proportionality, indeed, as defined in the Treaty of the European Community, Community action must not be more than is strictly necessary to achieve the goal pursued.

In order to evaluate whether administrative requirements are *proportionate*, the study is based on a general procedures chart resulting from an analysis of the legal framework, administrative procedures and management mechanisms of the schemes, matched across the actors involved, at the EU Commission and National level for the MSs involved in our deep interviews plan.

Different points of view emerging in direct interviews have been underlined in the following analysis by category of stakeholders (national institutions, such as ministries and customs, and operators) and by country, on the basis of the main economic attitude of each country (countries with a main propensity towards production of F&V and ones with a main propensity towards import/export).

[75] In particular, there is only one specific regulation about the ERS (Commission Regulation (EC) No 1961/2001 of 8 October 2001, laying down detailed rules for implementing Council Regulation (EC) No 2200/96 as regards ER on fruit and vegetables), which introduced a specific simplification of the management of ER and reduction of expenses. A new tendering system (A3) was introduced.

[76] On this point, the Protocol on the principles of subsidiarity and proportionality, attached to the Treaty of the European Community, specifies that "The form of Community action shall be as simple as possible, consistent with satisfactory achievement of the objective of the measure and the need for effective enforcement". (Point 6).

[77] Introduced with the Maastricht Treaty in article 5 of the Treaty of the European Community (The Treaty of Amsterdam has annexed to the Treaty the Protocol on the principles of subsidiarity and proportionality), the principle of proportionality is a general principle of Community law, and is a parameter for assessing the legitimacy of Community acts in relation to the goals that Community action is pursuing. According to this principle, a Community act may be deemed legitimate if it is appropriate or necessary in relation to the goals to be attained.

4.4.1.2 Judgment criteria and indicators

The judgement criteria and indicators used for answering the evaluation question are the following:

A - Entry price scheme:

Judgement criteria	Indicators	Data sources
A1. Entry prices management is (or not) sufficiently simple.	1.1 Opinion of interviewed stakeholders expressing a positive / negative perception of "administrative simplicity" in the applied procedures	Analysis of the regulations and application procedures at the national level Deep Interviews
	1.2 Presence of criticalities in the procedures framework	Analysis of the regulations and application procedures at the national level Deep Interviews
	1.3 Actual procedures chart considering the homogeneity of procedures applied in different MS	Analysis of the regulations and application procedures at the national level Deep Interviews
A2. Administrative requirements are (or are not) proportionate to the objectives of the EPS	2.1 Cases of shortcomings in the procedures system and cases of excessive or redundant procedures in relation to objectives and opinion on "administrative proportionality to the objectives" expressed by interviewed stakeholders	Analysis of the regulations and application procedures at the national level Deep Interviews
	2.2 Analysis of procedures framework considering up-to-dating with respect to regulatory modifications over time	Analysis of the regulations and application procedures at the national level

B – Export refunds scheme:

Judgement criteria	Indicators	Data sources
B1. Export refunds management is (or not) sufficiently simple.	1.1 Opinion of interviewed stakeholders expressing a positive / negative perception of "administrative simplicity" in the applied procedures	Analysis of the regulations and application procedures at the national level Deep Interviews
	1.2 Presence of criticalities in the procedures framework	Analysis of the regulations and application procedures at the national level Deep Interviews
	1.3 Actual procedures chart considering the homogeneity of procedures applied in different MS	Analysis of the regulations and application procedures at the national level Deep Interviews
B2. Administrative requirements are (or are not) proportionate to the objectives of the ERS	2.1 Cases of shortcomings in the procedures system and cases of excessive or redundant procedures in relation to objectives and opinions on "administrative proportionality to the objectives" expressed by interviewed stakeholders	Analysis of the regulations and application procedures at the national level Deep Interviews
	2.2 Analysis of procedures framework considering up-to-dating with respect to regulatory modifications over time	Analysis of the regulations and application procedures at the national level

4.4.1.3 Data sources and limits

In order to analyse national procedures, we focused mainly on Council and Commission regulations and national guidelines on the functioning of EP and ER, collected in different MS.

Other sources for gathering information have been the deep interviews with 55 main organisations involved in the functioning of EPS and ERS and other available documents (i.e. the Commission audit[78], Court of Auditors special reports[79]).

Deep interviews were conducted in seven MSs (France, Germany, Greece, Italy, Netherlands, Spain and United Kingdom) on the actual application of EPS and ERS, aiming to gather qualitative information. Namely, 13 operators, 16 professional circles of importers and exporters, 7 customs offices, 7 paying agencies, 7 ministries of agriculture, 3 ministries of finance and 2 ministries of international trade were consulted.

4.4.1.4 Entry Prices scheme analysis

A1 - Entry prices management is or not sufficiently simple

Opinion of interviewed stakeholders expressing a positive / negative perception of "administrative simplicity" in the applied procedures

The first step of the analysis was to identify the main procedures of EPS operations, on the basis of existing regulations and information gathered at the National level. Tab. 50 shows the six main procedures and the managing body for each of them: European Commission, national bodies and operators.

We then classified opinions gathered during deep interviews, distinguishing between operators and National bodies, based on the following study themes:

1. Clearness and transparency,
2. Accessibility of operators to the scheme,
3. Level of "non-bureaucracy",
4. Procedure's adequacy in relation to the correct functioning of the scheme.

For each study theme we looked at the frequencies of answers given by the interviewed stakeholders, and we then highlighted possible weaknesses for each procedure.

[78] Special Corps of Inspectors in the Fruit and Vegetable Sector. Import arrangements (Regulation (CE) n° 3223/94). Summary of Findings in Eight Member States, Doc. AGRI.J.2 – 60898, Brussels, 14 March 2003.

[79] Court of Auditors, Special Report No 7/2001 concerning export refunds – destination and placing on the market; Special Report No 9/2003 concerning the system for setting the rates of subsidy on exports of agricultural products (export refunds); Special Report No 1/2003 concerning the prefinancing of export refunds.

Tab. 50 - Chart of the main administrative procedures of the EPS

Main procedures	Management level	Description
1 - Data collection at the national level on the representative markets	**National Body**	Daily collection of fresh F&V prices and relative quantities imported from non-EU Countries, as established by the Art. 2 of the Reg. EC 3223/94, in the representative markets listed in the Art. 3 of Reg. EC 3223/94. Representative prices are recorded for each product listed, for all available varieties and sizes, at the importer-wholesaler or wholesaler-retailer (if the first one is not available) stage. In the latter case they are reduced by 9% to take account of the wholesaler's trade margin and by € 0,7245 per 100 kg to take account of the costs of handling and market taxes and charges. These prices are reduced by marketing margin of 15% for the marketing centres of London, Milan and Rungis and 8% for other marketing centres, and the costs of transport and insurance within the customs territory. Providing of F&V data collected to the EC, by 12 noon (Brussels time) the following working day (Art. 2 Reg. EC 3223/94). The authorised national body uploads the collected data directly in the WUSI system (Web Upload Secure Interface) or the NewIDES system, a software package that allows the treatment of data files that are sent by the Member States Administrations to the DG Agriculture of the European Commission.
2 - SIV calculation	**European Commission**	Each working day the EC fixes for each product under the entry price scheme and for the periods set out in the Annex of the same regulation and for each origin a SIV equal to the weighted average of representative prices less a standard amount of ECU 5/100 kg and ad valorem customs duties.
3 - EP data publishings	**European Commission**	EC updates, on the TARIC system, the SIVs data every day at 6.00 pm. EC publish the SIVs data on OJ every morning at 9.00 am.
4 - Implementation of TARIC data at the national level	**National Body**	The SIVs, calculated on the basis of all EU quotations, are sent via e-mail to each concerned national authority. Customs of each MS receive TARIC data and publish the national version of TARIC, adding VAT and eventual national portual taxes.
5 - Operator's choice among differerent declaration methods	**Operator**	Determination of the EP based on the choice of importers among 3 methods, as established by the Art. 5 of Reg. EC 3223/94, in order to classify the products according to the Common Customs Tariff in (Reg (EC) 2913/92, Art. 30, paragraph 2). - Fob price or "Invoice Method": according to the Art 5, Par.1, Letter A of Reg. 3223/94, "to the fob price of the products in their country of origin plus the costs of insurance and freight up to the borders of the Community customs territory, where that price and those costs are known at the time the declaration of release of the products for free circulation is made. Where the aforementioned prices are greater by more than 8 % than the standard import value, the importer must lodge the security referred to in Article 248 (1) of Regulation (EEC) No 2454/93, equal to the amount of duty which he would have paid if the classification of the products had been made on the basis of the standard import value applicable to the lot in question". - Custom value or "Deductive Method": "to the customs value calculated in accordance with Article 30 (2) (c) of Regulation (EEC) No 2913/92 applied only to the imported products in question. In that case, the duty shall be deducted as provided for in Article 4 (1). In that case the importer must lodge the security referred to in Article 248 (1) of Regulation (EEC) No 2454/93, equal to the amount of duty which he would have paid if the classification of the products had been made on the basis of the standard import value applicable to the lot in question". The importer shall have one month from the sale of the products in question, subject to a limit of four months from the date of acceptance of the declaration of release for free circulation, to prove that the lot was disposed of under conditions confirming the correctness of the prices referred tothe Invoice method or to determine the customs value referred to the Deductive method. In any case the invoice after the sell is required by the customs. The security lodged shall be released to the extent that proof of the conditions of disposal is provided to the satisfaction of the customs authorities. Otherwise the security shall be forfeit by way of payment of the import duties. - "SIV comparison Method": "to the standard import value calculated in accordance with Article 4 of this Regulation".
6 - Customs clearance, controls and duties payments	**National Body (Customs)**	The TARIC system provides to customs agents all the necessary information to establish the correct duty, considering the different methods chosen by the operator, the possible perferential duty for the country of origin, the eventual limited quota benefiting of preferential agreements (Tariff rate quotas), SIV level, Trigger entry price level, and relative duties level for each product. Management of duties and securities payments. Administrative checks on import documents and on importers, on the basis of a risk analysis. Physical checks on imported products, on the basis of a risk analysis. Verification of required proofs after the sell, in the cases of Invoice and Deductive method.

The grid below (Fig. 37) summarises the results of this analysis, matching all the 6 main administrative procedures (lines) of the EPS and the opinions of interviewed witnesses on the themes listed above, used as criteria to measure the procedure's simplicity (columns).

Fig. 37 - Scheme on the simplicity of EPS procedures as perceived by interviewed actors for each procedure

Procedures of EPS		Opinion on clearness and transparency			Opinion on the system's accessibility			Opinion on the absence of bureaucracy			Opinion on procedure's adequacy			Level of simplicity perceived by National Bodies and operators
		Operators	National Bodies		Operators	National Bodies		Operators	National Bodies		Operators	National Bodies		
			Ministry of Agriculture	Ministry of Finance and Customs		Ministry of Agriculture	Ministry of Finance and Customs		Ministry of Agriculture	Ministry of Finance and Customs		Ministry of Agriculture	Ministry of Finance and Customs	
1 - Data collection at the national level on the representative markets														
2 - SIV Calculation														
3 - EP data publishings														
4 - Implementation of TARIC at the national level														
5 - Operator's choice among differerent declaration methods	5.1 - "Invoice Method"													
	5.2 - "Deductive Method"													
	5.3 - "SIV Comparison Method"													
6 - Customs clearance, controls and duty payments	6.1 - Customs clearance and TARIC up-dating													
	6.2 - Physical and administrative checks													
	6.3 - Duties payments and securities lodgement													

Legenda:

Levels of simplicity perceived for each procedure:

- *High*
- *Medium*
- *Low*
- *At all*

The final column of the grid (Fig. 37) gives a general overview of opinions gathered for all four themes chosen as criteria to assess the perceived simplicity level of procedures. It was decided to give a high level only if all levels of simplicity perceived for each theme are high, a medium level if there is at least one medium or low level, and a low level only if this judgement is clearly prevalent. The summary column, showing the perceived level of simplicity, may accordingly be used to give a judgement that reflects the findings of the entire analysis for each procedure and for each actor interviewed. In particular, it is established that only those procedures with a medium or high level of perceived simplicity can actually be deemed to be sufficiently simple.

Procedure 1 - "Data collection at the national level" - The first procedure presents a medium level of administrative simplicity in terms of clearness and transparency, due to the fact that the procedure related to the fresh F&V market quotations is not sufficiently standardised by EU regulations. There emerged the existence of two different data collection methods: direct data collection in the market; telephone data collection by interviews to the major importers. On the other hand, the procedure is adequate in relation to the correct functioning of the scheme, because it allows the Commission to continuously monitor EU market prices. In terms of bureaucracy, this procedure is managed by MSs in different ways, therefore the administrative burden perceived by interviewed national bodies is higher in those countries where data is collected by direct surveys in the markets, and is lower in those countries where data is collected by telephone data collection. Therefore, we can reasonably deduce that procedure 1 has a medium level of perceived administrative simplicity, according to the 7 national authorities interviewed.

Procedure 2 - "SIV calculation" - The SIV is the most relevant point of reference for operators' trading decisions, In the opinion of operators and professional circles, the SIV daily calculation published by the European Commission presents a low level of clearness and transparency because of the methodology used for the calculation, which is considered very complicated and not very transparent. Indeed, in their opinion, if the parameters used for the SIV calculation are not updated, there is the risk that the SIV could be lower than the actual market price, as shown in details in the next paragraph. The further procedural improvement hoped for by interviewees is that of making the method for calculating SIVs clearer and updating its parameters.

Procedures 3 and 4 - "EP data publishing and its implementation at the national level" - Procedures 3 and 4, related to the publishing of TARIC provided by the European Commission; its national version, managed by the competent national authorities, do not present any criticalities. EP data publishing guarantees widespread access to price information and provides an overview of the F&V market, which is very important for operators when making trade decisions. As shown in the table below, high levels of simplicity are observed on the basis of all the aforementioned themes. These procedures are perceived by all the interviewees as being very useful, efficient and on time every day. Furthermore, some of the national authorities interviewed suggest the publishing of SIV levels also on Saturdays and Sundays, and not using the Friday level for the weekend, with the aim of improving the existing system.

Procedure 5 - "Operator's choice among EP declaration methods" - Procedures regarding customs clearance and EP declaration have been analysed by distinguishing among the three methods which operators can choose to declare entry prices. As declared by the interviewed stakeholders[80], it is important to emphasise that the most commonly used is certainly the "SIV comparison" method, because it is considered the most simple and accessible by operators. As deep interviews revealed, the Invoice method is not currently used at all in France and Spain, while the Deductive method is not used in Greece, but is used quite a lot in Spain, Germany and France. It is important to note that the percentage use of the Deductive method is higher for large-sized importers, but not used at all by small importers nor by cooperatives producing F&V that import only small quantities of products to supplement their own production and ensure a continuous supply to their customers. The latter choose exclusively the SIV comparison method.

Opinions on simplicity as perceived by interviewees have been classified on the basis of three methods:

- The "Invoice method" is considered by 14.5% of interviewees as the simplest method, because the importer can declare the price established in the invoice. Thus it has a high level of clearness and transparency and adequacy for both operators and national bodies. But actually it is not used very

[80] There are no available data concerning this specific topic from National Customs.

much because most F&V trade is made on a commitment basis, through direct agreements with big distributors, and so importers have no invoice at the clearing time. The reduced accessibility of operators and the low perceived level of "non-bureaucracy" are due to the fact that it is necessary to lodge a bank security. Such a system is binding for small importers that cannot easily obtain guarantees or the trust of banks, while big importers always have an open bank account within the customs for guarantees.

- The "Deductive method" is considered quite complicated by 34.5% of interviewed stakeholders, because it is considered bureaucratic, risky and costly in administrative terms. In the opinion of 20% of all operators, the low level of accessibility and of non-bureaucracy is due to the need to lodge the security, but also to necessary administrative documentation. Since the procedure entails the deduction of some costs (transport, insurance, storage and commercial margins), operators often make mistakes in calculating transport costs, and this represents another risk factor for importers: if they make mistakes in calculations they end up paying higher duties. In the opinion of customs' authorities, the method has a low level of transparency and adequacy, since it often allows operators to pay duty that is lower than that actually due. Moreover, 14.3% of customs offices interviewed declare that they have a heavier workload of controls compared with the other two methods, due to the greater difficulty in carrying out checks due to the greater number of documents to be checked. Moreover, the low level of transparency of the Deductive method is also confirmed by an audit of the EC carried out in the period 2001-2002[81].
- The "SIV comparison method" is the most commonly used by importers (80-90% circa), because it is considered the easiest system to apply and requires no security. Moreover, it is considered by customs and national bodies to be the most functional and correct, since it is based on official references of the European Commission. Prices are exact and definite, and for Customs it represents an official reference mark. It is largely agreed by stakeholders that with the "SIV comparison method" it is impossible to avoid specific duties.

It can therefore be summarised that the procedures for "Invoice" and "SIV comparison" methods are sufficiently simple, while procedures for the "Deductive" method are not sufficiently simple.

Procedure 6 - "Customs clearance, controls and duty payments" - As regards the customs clearance phase, the procedures can be considered reasonably simple in terms of clearness and transparency, adequacy and accessibility by operators, as well as in terms of homogeneous implementation of procedures among MSs. This simplicity is indeed guaranteed by the TARIC system, which provides all the information needed by operators, and this perception of simplicity is also confirmed by the opinions of operators and customs officers. On the other hand, the "general"[82] customs controls procedures (both administrative and physical checks) are considered long and complicated. Indeed, as regards the weight of bureaucracy, some operators complain about a high level of bureaucracy of customs controls during the clearance phase, mainly caused by the length of controls, the lack of agents in customs offices, infrastructural shortcomings, possible costs for warehouses in ports and finally the number of documents to be checked at customs.

Another relevant factor of procedure simplification refers to the simplified declaration. Council Regulation No 2913/92 of 12 October 1992 establishing the CCC[83] makes it possible to carry out the declaration outside customs and directly within the importer's structures. The domiciliation of customs clearance greatly simplifies the procedure.

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[81] Special Corps of Inspectors in the Fruit and Vegetable Sector. Import arrangements (Regulation (CE) n° 3223/94). Summary of Findings in Eight Member States, Doc. AGRI.J.2 – 60898, Brussels, 14 March 2003. Par 2.2.3.1: "The deductive method, which requires close monitoring by the importer or customs agent, provides an opportunity to pay less duties in the long run.".

[82] As applied to all EU imports, and therefore not specifically concerning the EPS

[83] Community Customs Code (Title IV, Chapter 2, Section 1.II, Art.76, par.1): "In order to simplify the completion of formalities and procedures as far as possible while ensuring that operations are conducted in a proper manner, the customs authorities shall, under conditions laid down in accordance with the committee procedure, grant permission for: … C) the goods to be entered for the procedure in question by means of an entry in the records; in this case, the customs authorities may waive the requirement that the declarant presents the goods to customs. The simplified declaration, commercial or administrative document or entry in the records must contain at least the particulars necessary for identification of the goods. Where the goods are entered in the records, the date of such entry must be included".

In conclusion, the customs clearance phase is based on clear, standardised and sufficiently simple procedures, with reference to customs clearance, TARIC registration, the customs management of duties and securities payments, while the control phase presents a medium level of simplicity, which could be improved in terms of time frames, personnel and infrastructures made available.

In order to further simplify administrative procedures regarding F&V trade, the Commission[84] established in 2007 a simpler control system which is directly carried out by exporters in Third Countries[85] when exporting to the EU market. With this new procedure the European control system recognizes the certifications issued by the main trading partner, making it possible to reduce the general administrative workload for both operators and customer officers, as well as reducing delays, administrative costs and general expenses for the European importers.

Presence of criticalities in the procedures framework

This analysis is focused on the identification of procedural criticalities, which are taken to mean procedural dysfunctions or weaknesses that may distort the operation of the system. Following the scheme of the most important procedures of the EPS, below are the main findings of the analysis:

Procedure 1 - "Data collection at the national level" - The most important criticality observed is that there is no standard procedure to collect market prices and quantities (direct data collection in the market; telephone data collection by interviews to major importers). Moreover, MSs have not implemented any kind of control on the quality of data collected nor an ex-post validation system, with the exception of the United Kingdom, where periodical audits are carried out on operators' structures for the crosschecking of supplied data. Furthermore, we saw that the EC has not drawn up any sanctions against possible irregularities, or against incorrect data provided to EC offices.

Procedure 2 - "SIV calculation" - The interviewed stakeholders and, in particular, most national authorities, stated that the calculated level is frequently lower than the actual average market price. The main weaknesses identified by about 20% of interviewees, with regard to the parameters used in the SIV calculation[86] (which are supposed to contribute to reducing the SIV level vis-à-vis European price levels), are as follows:

- The cost of transport increased, consumer prices increased, but the SIV was not adjusted or updated over time.
- Calculation of the SIV is mostly based on the prices of II Category products (present in great quantity at a low price) and not on the "Extra" Category, (less quantity, higher price).
- The calculation is based on wholesale prices and not on the final prices of the large-scale retailers, which have the most weight on markets. The average sale price is not considered.

Procedure 6 - "Customs clearance, controls and duty payments" - As regards customs clearance, operators complain of criticalities due to inefficiencies detected in particular in customs' structures, such as:

- the shortage of personnel in customs' offices, which causes delays (in some Member States);
- the opening hours of customs' offices, which in one Member State close at 5 o'clock in the afternoon, are considered as a real limit for some importers, who are forced to wait for the day after to clear goods;
- the lack of infrastructures in ports and of free space for customs clearance, which causes delays in clearing goods

The analysis of additional information, gathered from official sources such as Court of Auditors special reports, did not uncover specific criticalities (in terms of simplicity) of the 6 procedures we have analysed.

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[84] « Document de travail des services de la Commission vers une reforme de l'Organisation Commune des Marches dans le secteur des fruits et légumes frais et transformés ». Synthèse des travaux d'analyse d'impact, 2007. Par. « Une simplification nécessaire ».

[85] At the end of 2007 eight Third Countries, which represent 44% of total EU imports, signed the aforementioned agreement (Switzerland, Morocco, South Africa, Israel, India, New Zealand, Kenya and Senegal).

[86] Consisting of a reduction in national weighted average prices, taking away maintenance costs, market taxes, the profit margin of wholesalers and retailers, freight and insurance charges and a forfeit quota.

Actual procedures chart considering the homogeneity of procedures applied in different MS

A further factor considered in the evaluation of procedure's simplicity is the level of homogeneity of the implementation of procedures among different MSs. As deep interviews revealed, the main non-homogeneous elements are the following:

1. National Body involved in the functioning of the EPS. The structure of national organizations is quite different among the 7 MSs. Some MSs, such as France, Italy, Greece and Spain, have involved many authorities in the functioning of the EPS (Ministry of Agriculture, Ministry of International Trade, Ministry of Finance and Customs), while other MSs, such as Germany, the Netherlands and the UK, have only two authorities involved (Ministry of Agriculture and Customs).

2. The methodology for the collection of prices in representative national markets (Art. 3 of Commission Regulation No 3223/94). In the MSs of Southern Europe, such as France, Greece, Italy and Spain, collection quotations[87] in representative markets are mainly carried out directly by physical market surveys, while in the MSs of Northern Europe, such as the Netherlands, telephone polls are conducted on the biggest importers, and in the United Kingdom, where data are collected from the two main markets of London and are supplemented by telephone surveys with leading UK importers. Also taking into account controls on the quality of data obtained by telephone, this procedure is more exposed to risks relating to data quality.

3. Information flows among national institutions. Most information flows relate only to the national body and the competent General Directorate within the European Commission. There are no official communications among national authorities and among different MSs. In terms of the simplification of procedures, the widespread use of ICT has attained a high degree of homogeneity and efficiency. The decision[88] on the renewal of an Action Programme for Customs in the Community (Customs 2013) will probably further develop and modernise the trans-European computerised systems underpinning the implementation of customs policy[89].

A2 - Administrative requirements are or not proportionate to the objectives of the EPS

Cases of lacks in the procedures system and cases of excessive or redundant procedures with respect to objectives and opinions on the "administrative proportionality to the objectives" expressed by interviewed stakeholders

In order to evaluate whether administrative requirements are proportionate, the first step of our analysis was to identify all procedural shortcomings or excesses vis-à-vis the specific objectives of the EPS, resulting from the intervention logic analysis (Chap. 5), matched across the information gathered by deep interviews.

Procedure 1 - "Data collection at the national level" – As explained in the above paragraphs, the method to collect national data is not uniform among MSs, data collected are not sufficiently checked by national authorities and there is no ex-post validation procedure. The risk is that, without a standard method for data collection and validation, this shortcoming could affect the quality of data, with the consequence that the SIV calculation would be based on data which are not validated and not representative of real market prices. The daily collection of prices represents an important instrument to monitor F&V market prices at a national level and allow the Commission to observe price trends, in relation to the specific objectives of "protection of internal price from world market fluctuations" and of "avoiding disturbances in the community market arising from offers at abnormal prices from third countries". We can thus deduce that the proportionality of

[87] The quotation is the determination of the daily market price and relative quantity for a given product in the representative markets.

[88] COM/2005/0531 def. "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions". Unlocking Europe's full potential. Commission Legislative and Work Programme 2006.

[89] "The Customs 2013 programme will tackle a number of new challenges, such as securing the supply chain and support for the use of a common risk management system, while promoting the incorporation of risk management into all aspects of customs work. Customs 2013 will continue to support activities to protect traders from piracy and counterfeiting. The Customs programme will also support the further development of initiatives to set up a paperless electronic customs environment while underpinning indispensable initiatives such as modernisation and simplification of the customs legislation".

procedure 1 to the aforementioned objectives could be improved by introducing a standard and uniform method in all MSs.

Procedure 2 - "SIV calculation" – In addition to the above mentioned effects on the simplicity of the procedure, the criticism of not updating calculation parameters (procedural shortcoming) can lead to negative effects on the calculation of SIVs, by affecting the actual level of SIVs, thus hampering the achievement of domestic price stability goals. Therefore, as confirmed also by interviewed stakeholders, procedure 2 does not appear to be fully proportionate to the objectives of the scheme, in terms of a procedural shortcoming regarding the updating of parameters.

Procedure 3 – "EP data publishing" - As agreed by most interviewed National bodies, daily data publishing could be an excessive procedure vis-à-vis the objective of "protection of internal prices from world market fluctuations" and of "avoiding disturbances in the community market arising from offers at abnormal prices from third countries". Indeed, most of the stakeholders interviewed suggested the replacement of the daily calculation of SIVs with a weekly or twice-weekly survey, in order to guarantee the stability of domestic prices and overcome the shortcomings of unexpected non-publications. In this case, what is challenged is not the procedure but merely the frequency of publications on the part of the EC. As far as our analysis revealed, this procedural evolution would not lead to dysfunctions of other procedures involved by the EPS and, what is more, would be less costly

Procedure 4 – "Implementation of TARIC data at the national level" - This procedure makes it possible to easily access relevant information on prices and duties, thus assisting importers' decisions, contributing to facilitate access to Community markets for the development of countries and to simplify customs offices' work. No relevant shortcomings or excesses have been observed, therefore the procedure is considered proportionate to the system's goals, as also confirmed by the interviewed customs offices and operators.

Procedure 5 - "Operator's choice among EP declaration methods" - With reference to the procedure for the EP declaration by operators, the "Invoice" method and the "SIV comparison" method do not present relevant procedural shortcomings or excesses, as also confirmed by interviewed stakeholders, therefore the procedures appear proportionate to the system's goals. With regard to the "Deductive" method, there is the risk, also detected by the aforementioned Commission Audit, that this method could help importers to avoid the payment of additional duties, for imports with preferential agreements exceeding the fixed contingent, and specific duties, when the SIV is below the TEP. In particular, 14.5% of customs offices interviewed (and in general 34.5% of all interviewees) stated that, when the market is tense (surpluses of F&V products in the EU market and low prices), importers declare a value above the SIV level, with the deductive method, and around 1 to 3 months later they demonstrate to the same customs that they have sold the commodity at a very high price, presenting the invoice of sale for at least one lot of the same commodity, according to Commission Regulation No 3223/94. Therefore this procedure does not seem to be proportionate to the specific objectives of "protection of internal prices from world market fluctuations" and "avoiding disturbances in the EC market arising from offers at abnormal prices from third countries".

Moreover, this procedure does not respect the hierarchy among customs' methods for determining value, as defined by art. 29 to 31 of Council Regulation No 2913/92 of 12 October 1992 establishing the Community Customs Code (CCC), as also observed by customs. Indeed, the customs value has to be determined according to the provisions of the Customs Code. A valuation hierarchy is established in Articles 29 – 31. If no transaction value can be determined (Art. 29) the sequential valuation methods have to be used (Articles 30 – 31). In conclusion, the procedure used under Commission Regulation No 3223/94 regarding the "Deductive method" is rather controversial since there is a contradiction between Commission Regulation No 3223/94, which introduces the three methods from which to choose "at the discretion of the importer" and the CCC, which establishes a precise hierarchy of "priorities" for choosing the method.

Procedure 6 - "Customs clearance, controls and duty payments" - Finally, with reference to customs activities, the time frames involved in clearance and control phases are considered excessive, in terms of workload (with bureaucracy weighing down the procedure, administrative workload for the requested securities, double checks for quality and for phyto-sanitary criteria, required documentation, time necessary to complete administrative procedures). In few countries, according to customs offices, the above dysfunctions are largely caused by a shortage of staff in customs offices and by the lack of adequate infrastructures in ports. The procedure may thus be considered as being not fully proportionate to the specific objectives of the EPS.

Analysis of procedures framework considering the updating of regulatory modifications over time

As regards the updating of the procedural framework, it is important to note that the EPS did not undergo big changes in Community regulations during the period 1994-2006.

As regards the representative markets of MSs, French national bodies consider it necessary to update the regulations that are pointed out for 9 markets[90], among which some have fallen into disuse today (i.e. the market of Dieppe). Nowadays, the only representative markets in France are Rungis, Perpignan (mainly for tomatoes) and Marseilles (mainly for citrus fruits). However, representative markets in Spain[91] and in Italy[92] have been updated. The updating of representative markets is particularly relevant considering that prices recorded in marginal markets can also affect the SIV calculation and contribute to decreasing the SIV level in relation to the real level of the EU price average. Finally, most national bodies involved in EPS functioning emphasized that the "market of reference" no longer has a physical location, pursuant to the simplified declaration[93], therefore the method for data collection should also be updated.

All national bodies interviewed agree that ICT development has helped with updating activities. Particularly from the customs point of view, the most important phase of procedural updating was in 1996: indeed, after the URAA, most customs offices updated all procedures through a computer program and began to manage information flows via computer.

4.4.1.5 Export refunds scheme analysis

B1 – Export refunds management is or not sufficiently simple

Opinion of interviewed stakeholders expressing a positive / negative perception of "administrative simplicity" in the applied procedures

In recent years, the interest in and use of ER on the part of exporters has fallen considerably. It is to be stressed, for instance, that in some of the MSs selected for deep interviews, namely the Netherlands and the United Kingdom, there have been no applications for ER for years.

Moreover, Council Regulation No 1182/2007 of 26 September 2007 abolished the ERS for fresh F&V products, while it confirmed export refunds for sugar, incorporated in some processed F&V products. This regulation came into force on 1 January 2008.

In order to assess the simplicity of procedures implemented for the ERS, we use the same methodology as that already illustrated in the section on EPS analysis. Accordingly, the first step of the analysis was to identify the main procedures, on the basis of the desk analysis and the information collected through deep interviews (see below Tab. 51). The table shows the four main procedures identified in the functioning of the ERS and the relative actors (Operators, EC, Customs and Paying Agencies).

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[90] Paris-Rungis, Marseille, Rouen, Dieppe, Perpignan, Nantes, Bordeaux, Lyon, Toulouse.

[91] For Spain, Art. 3 of Commission Regulation No 3223/94 indicated: Madrid, Barcelona, Seville, Bilbao. Subsequently, Commission Regulation No 553/95 of 13 March 1995 amending Regulation (EC) No 3223/94 added the markets of Zaragoza and Valencia.

[92] For Italy, art. 3 of Commission Regulation No 3223/94 indicated Milan as Italy's representative market. One year later, Commission Regulation No 553/95 of 13 March 1995 amending Regulation (EC) No 3223/94 added the market of Bologna. Therefore, until 2002, Italy had two representative markets: Milan and Bologna. Reg. (EC) No 1947/2002 established that the representative market for Italy is only Milan. In recent years, other markets have become relevant in Italy, such as Padova, Verona and Bologna, even if 16% of F&V products imported in Italy from abroad are distributed through the Milan market.

[93] Council Regulation No 2913/92 of 12 October 1992, Community Customs Code (Title IV, Chapter 2, Section 1.II, Art.76, par.1).

Tab. 51 - Chart of the main administrative procedures required by the ERS

Main procedures		Management level	Description
1 - Application systems (A3 and B):			Operators have the possibility to choose among different system: the system A3 (invitations to tender) with advance fixing of the refunds and the system B without advance fixing refunds, according to the EC Reg. 1961/2001.
	1.1 - A3 system with advance fixing refunds	**Operator**	System A3: Exporters submit a written tender showing the quantity and requested export refund rate. Awards are made to all tenders that offered an export refund rate equal to or lower than the maximum rate fixed by the EC, and for the total quantities requested in the tender. Exporters can apply for quantities no larger than one half of total quantities eligible for export licences. Applications must be accompanied by the lodging of a security equal to 20 Euro/net tons.
	1.2 - B system without advance fixing refunds		System B: Exporters apply to the competent bodies of MS for a licence by no later than the second working day following the date of acceptance of the export declaration for the products with a view to obtaining a refund at the valid rate for the export period in question.
2 - Publishing of EC regulations		**European Commission**	The EC publishes specific regulations establishing which products benefy of ER for each export period (every three months) in the Official Journal of the European Communities.
3 - Customs controls		**National Body (Customs)**	Physical control of products and administrative controls. Ex post controls.
4 - ER payments		**National Body (Paying Agency)**	Administrative controls and payments

Using the same analysis methodology presented previously and applied to EPS procedures, for the ERS too we have produced the following grid (Fig. 38) which cross-matches the main procedures with opinions obtained during deep interviews, classified by theme/criteria used to measure the level of perceived simplicity.

The study themes for the classification of collected opinions are the same as those used for the EP section (*Clearness and transparency*; *Accessibility of operators to the scheme*; *Level of "non-bureaucracy"*; *Procedure's adequacy for the correct functioning of the scheme*). It was decided to give a high level only if all levels of simplicity perceived for each theme are high, a medium level if there is at least one medium or low level, and a low level only if this judgement is clearly prevalent, as reported in the summary column of the grid below.

Fig. 38 - Scheme on the simplicity of ERS procedures as perceived by interviewed actors for each procedure

Procedures of EPS		Opinion on clearness and transparency			Opinion on the system's accessibility			Opinion on the absence of bureaucracy			Opinion on procedure's adequacy			Level of simplicity perceived by National Bodies and operators
		Operators	National Bodies		Operators	National Bodies		Operators	National Bodies		Operators	National Bodies		
			Paying Agency	Ministry of Finance and Customs		Paying Agency	Ministry of Finance and Customs		Paying Agency	Ministry of Finance and Customs		Paying Agency	Ministry of Finance and Customs	
1 - Operator's choice:	A3 system and related application													
	B system and related application													
2 - Publishing of EC regulations														
3 - Customs controls														
4 - ER payments														

Legenda:

Levels of simplicity perceived for each procedure:

- *High*
- *Medium*
- *Low*
- *At all*

It should first be noted that, unlike the analysis carried out for the EPS, which refers to the whole sample, consisting of 55 different organisations interviewed, for the ERS 51% of the global sample took part in the interview on ERs (28 answers obtained out of a total of 55 organisations interviewed). The remaining organisations did not take part, since they had little or no knowledge of the topic (National bodies managing EP data collection, some operators dealing only with imports, most interviewees in the Netherlands and all interviewees in the UK, where ERs are not used).

The results of this analysis conducted on each of the identified procedures were as follows:

Procedure 1 - "Operator's choice among different application systems (A3 and B)". The system most commonly used for the ER application is system B[94]: in general, it is mainly small-sized exporters that prefer system B, since it is simpler to manage, easy to access and does not require securities. Medium- and large-sized export firms, on the other hand, choose the most convenient system on a case-by-case basis. They often request both certificates for A3 and for B and manage them in tandem throughout the export period. Indeed, after having obtained the A3 certificate (about 10 days after submitting the application), which guarantees a certain quantity of exports with a subsidy at a fixed refund rate, the exporter has 4 months[95] to complete the entire volume of exports fixed in the certificate. During these 4 months, the exporter may also request the certificate for system B, up to the completion of the quota established by the EC. The operator's choice is considered as rather difficult, since it may use one system or the other depending on the time available for completing exports allowed with the A3 certificate and on the availability of the quota for system B. When making this choice, the exporter must also consider the "risk" factor: the A3 system may indeed be "risky", since it entails the lodgement of a security, corresponding to 20 Euro/ton, accordingly if all the goods declared in the A3 certificate are not exported within the period in which the certificate is valid, the security is kept by the customs office. The B system may also be "risky", because of the "First come first served" method. If there are many applicants, and the quantity of the contingent is already fully used, the exporter will not be able to obtain the fixed quota established for subsidies, and is forced to export without ER.

Procedure 1.1 – "A3 system, with advance fixing refunds". The introduction of the A3 system in 2001 has helped to improve transparency as well as to simplify procedures, in line with the Commission aim of simplification process. Accordingly, 57% of interviewees consider clear and transparent the procedures for the A3 System. In terms of operator accessibility, as above mentioned, the bank security required to participate in the A3 system is deemed as too high a risk that not all exporters can afford to take, as also reported by 71.4% of stakeholders. Accordingly, the lodgement of the security is an obstacle for some small-sized exporters. Furthermore the A3 system appears to be afflicted by an administrative burden, as reported by 72% of interviewees, especially if one considers the number of documents to be presented and checked, the costs and the risk involved with the lodgement of the security. In this context tangible and intangible costs are considered to be greater than the benefits that may accrue. It is even more evident when considering the benefits of ER, which are gradually falling (in terms of refund rates). Summarising these different results and evaluating the procedure in its complexity we can consider these procedures as being sufficiently simple.

Procedure 1.2 – "B system, without advance fixing refunds". Procedures for the B system are clear and transparent, since the method for the granting of subsidies is based on the "First come, first served" method, as also stated by both operators and National bodies (71% of interviewees). Furthermore, the B system is easily accessible to operators due to the fact that it is not necessary to lodge a security. It is only in relation to bureaucracy and the adequacy of procedures that minor criticalities emerge, referring to the large number of documents that customs offices and paying agencies are required to check. However, 78% of interviewees (consisting mainly of operators), declared that they did not perceive an excessive bureaucracy level in the implementation of this system. Therefore, we can consider the procedures of the B system as being sufficiently simple.

Procedure 2 - "Publishing of EC regulations". The amount of export refunds is set by the European Commission and published both online and in the Official Journal of the European Communities. With reference to the publishing of EC regulations, national bodies agree that procedures implemented by the Commission are actually transparent and accessible to all operators. Furthermore, consequent bureaucratic burdens for operators and National bodies were not noted. The procedure is also considered adequate, by

[94] On the basis of information gathered through the interviews in the 7 MSs, it emerged that 80-90% of exporters prefer the B system.

[95] The A3 certificate is valid for 4 months from its release.

stakeholders, for the correct functioning of the system. In conclusion we can consider procedure 2 to be sufficiently simple.

Procedure 3 - "Customs controls". It should be noted that this procedure is very complex: the exporter's first step is to inform the competent customs office in its territory, at least 24 hours prior to the commencement of loading operations, and to indicate the anticipated duration of loading. The competent local customs office carries out the administrative and physical checks of the goods, attends quality controls managed by the authorised national agency, and finally places a seal on the cargo, certifying that it has been checked and is ready to be exported. The sealed cargo is transported, in the case of road or railway transport, to the final customs office prior to leaving the European Community. The final customs office at the EU border again checks all of the exporter's documentation, but can also decide to repeat checks on the goods. These are usually carried out when the seal has been tampered with for any reason during the journey from one customs office to another, or on the basis of a risk analysis or at the discretion of the inspectors. About 85% of interviewed operators report that customs control procedures are simple in terms of transparency and clarity, but they are also considered long and muddled, due to: the large number of checks, the complex procedures, the excessive number of staff required to complete all customs controls and the slowness of such controls. 75% of interviewed operators judge procedures to be inadequate, and 90% of the sample complained of the existence of excessive administrative burdens. In short, the level of simplicity perceived by the actors interviewed is low, and thus the procedures for customs controls, taken as a whole, are not considered sufficiently simple.

Procedure 4 - "ER payments". After having exported the entire quantity allowed by export certificates, the operator has to provide all the required documentation to the authorised paying agency. After having carried out all the administrative checks and received authorisation from the customs office, the paying agency, within 3 months of the day of receipt of all necessary documents, pays out the ER. Clearly all these steps take time, and sometimes there are long delays before the payment phase is reached, especially if documentation is incomplete, and it is necessary to wait for any missing documentation (or replace it in agreement with the paying agency). Often delays are due to the absence of the T5 certificate proving the departure and destination of the goods (for further details see the next paragraph).

The most relevant documents that the exporter must provide to the paying agency are:

- Export certificate, A3 or B;
- Export declaration on the basis of the SAD (Single Administrative Document) form;
- Security acceptance;
- Certification for quality norms conformity;
- Documents of transport;
- European Community Transit Document T5;
- Proof of product destination (if required).

In general, the results of the analysis show that payment procedures are clear and transparent, as also reported by around 90% of interviewees. Nevertheless, according to 60.7% of all the sample interviewed (operators and national bodies) , this procedure is inadequate in relation to the functioning of the system, and has a considerable bureaucratic burden, because of the large number of documents that operators have to present and national bodies have to check.

Presence of criticalities in the procedures framework

In addition to the various criticalities mentioned in the previous analysis indicator, the following emerged:

- Procedure 3 - "Customs controls". In addition to the general complexity of required procedures, interviews showed up a specific criticality regarding the T5 document, which is often missing in documentation supplied by operators. The T5 control form is a document governed by provisions implementing the Community Customs Code and serves to check the use and destination of a product. The T5 document travels with the goods until the Community border customs which, after having affixed the Community outgoing date and the relative official stamp, returns it to the issuing customs office, which in turn transmits it to the paying agency. On the basis of information acquired during the interviews, this document is often lost in all of the MSs under review: sometimes it is mislaid by the EU border customs office, sometimes by the issuing customs office, and sometimes by the operator itself.

The absence of this document causes delays to the subsequent payment of ER, since the paying agency may decide to block payment or to ask for "replacement" documentation. In any case, the effect of this criticality is that of lengthening administrative time frames for payments, as happens in particular in Spain and Italy. Furthermore, considering the customs system for ex-post controls, according to Council Regulation No 4045/89, the biggest criticalities and delays emerging in some countries (the most troublesome situation is in Italy), were that ex post controls start with a huge lag time (in Italy it is up to 1 year after the refund payment and frequently 2 years after the original export activity). This is the result of customs having to activate many internal procedures, after the conclusion of the refund payments procedure, such as the general and specific (by operation) risks analysis and validation, as well as the reporting of suspicious cases from regional customs offices. The operational complexity for Custom officials is to reconstruct the entire history of an export a long time after the actual operation. They also have to check all the exporter's relations with its suppliers and customers, invoices, payments, financial and administrative aspects. Custom officers (and sometimes the national Financial Police or institutions from other countries are also involved in this control procedure) can therefore stay for weeks or for months in the exporter company to perform all requested checks, resulting in a workload criticality.

- Procedure 4 - "ER payments". As we previously reported, the procedure for ER payments is considered "simple" by both paying agencies and operators, although with the aforementioned criticisms relating to T5 certification. Nevertheless, in some MSs there are anomalous and excessive delays in custom offices communications, concerning the results of their checks, to the paying agency, causing a possible payment procedure block. Another criticism emerged in the case of possible delays in reporting irregularities on the part of customs offices: the paying agency must in any case proceed with the ER payment and, if customs checks are negative, the paying agency is later forced to recover any paid sums, further complicating the bureaucratic procedure.
- With special reference to ER for processed products, the analysis was considerably hampered by the difficulty in finding export firms that benefit from these subsidies willing to take part in deep interviews. Below we summarise the information collected and the criticalities observed for each MS:

  In France we have been reported that there was only one firm that benefited from ERs for processed products, namely: sour cherries and jam to Tunisia.

  In Germany, the only criticality noted refers to the difficulty in checking the actual quantities of sugar and glucose contained in processed products. In one or two cases, indeed, after a careful ex post validation, errors were detected for quantities declared, with the payment office having to recover the subsidies already paid to the exporter. According to German National bodies, greater ex ante controls are required.

  In Greece no particular criticalities emerged for ER for processed products. According to National bodies since sugar is a sensitive sector, an improvement on control system in this sector is needed.

  In Italy the volume of ER for processed products is very small, and 95% of this volume refers to peeled tomatoes. According to National bodies in the past there had been cases of fraud in the same peeled tomatoes sector for products exported to Canada.

  In Spain, according to National bodies, exporters asking for ER for fresh F&V numbered 45-50, while exporters asking for ER for processed F&V were only 8 or 12, mostly for jams, and they benefit from ER only on the quantity of sugar. In 2006 the percentage of ER for processed products on sugar was 25% of all Spanish refunds paid by the FEGA in all sectors. In Spain too only few firms apply for ER for processed products, and these operate mainly in the areas of transformed citrus fruits and cherries.

  In the Netherlands ER for fresh F&V amount to about 10,000 Euro a year, while ER for processed products amount to about 40,000 Euro a year for sugar refunds. According to Dutch National bodies there are no criticalities for ER for processed products.

  In the United Kingdom, ERs are not used for either fresh or processed products.

Additional information gathered from Court of Auditors[96] reports show that most irregularities refer to the falsification of evidence on product destination. Indeed, refunds are payable in advance on condition that a guarantee is lodged and the guarantee is released when all required documents, including proof of arrival, have been presented and accepted by customs offices. "The requirement for presenting proof of arrival creates a disproportionate administrative burden in relation to the amounts involved". . As noted in Court of Auditors report[97], procedures of "export refunds in general are complex, the legislation is detailed, the paperwork onerous".

Actual procedures chart considering the homogeneity of procedures applied in different MS

As regards non homogeneous procedures applied at a national level, the main elements are as follows:

1. National Body involved in the functioning of the ERS. National institutions involved in the functioning of the ERS are quite different among MSs. In general, the Ministry of Agriculture manages the issue of export licences, with the exception of Italy, where this role is covered by the Ministry of International Trade, Spain, where the responsible organisation is the Ministry of Industry, Tourism and Trade, and the UK, where this role is played by HM Revenue and Customs (Customs and International Unit). Finally, France is the only MS where the payment agency also manages the issue of export licences. In relation to all the other paying agencies, this administrative organisation offers to Viniflhor the complete and efficient management and control of an ER procedure, from the export licences issue to the final payment of refunds.

2. The organisation of Payment Agencies. The administrative organisation of payment agencies is quite different among MSs. In fact, EU regulations do not provide a clear indication to MSs, but give a general indication of the possibility of electing more than one payment agency (Commission Regulation No 1663/1995, Council Regulation No 1290/2005). In many MSs the ER payment agency is part of the national administration of agricultural policies, and a horizontal scheme is implemented, i.e. ERs are granted by a single organisation, regardless of the sector. In France, on the other hand, there is a vertical administration structure, i.e. there is a payment agency for each sector (Viniflhor is the payment agency in the F&V sector). Other exceptions are Italy, where the SAISA is an independent organisation of the Customs Agency and not of the Ministry of Agriculture, and Germany, where ER payments are managed by an office of the Ministry of Finance. With reference to payment procedures, the main organisational differences that have emerged between MSs appear to be related to delays to administrative controls and to ER payment time frames: in particular, in France, payments are always regular and effected about one month after Viniflhor receives the dossier with all the necessary documentation. In Germany payments are very regular, according to German National bodies. In Greece it takes 3 to 4 months for the exporter to receive ER. In Spain 1 to 4 months are needed for the FEGA to proceed with payments: normally these payments are regular, and 1 or 2 months are needed to effect ER payments, nevertheless sometimes there are delays owing to the lack of documentation or authorisation on the part of customs offices. In these cases 3-4 months are needed to complete payments to exporter. According to Italian customs offices, 8-10 months are needed to effect ER payments. The analysis on the homogeneity of organisations at a national level, shows that the organisation is more efficient when there are fewer organisations involved: a case in point is France, where the same organisation manages all phases of an ER procedure, from managing the ER application and issuing certificates and licences to creating a dossier for every ER application, administrative controls and the final payment of ER. Spain is another special case, with a separate management system in place depending on the type of certificate chosen by the operator: the A3 system is managed by the Ministry for International Trade, while the B system is managed by the FEGA.

3. Information flows among national institutions are very similar and homogeneous in all MSs. In general, information flows are between the national body and the competent General Directorate within the European Commission. At the national level, there are official communications only between customs and the payment agency (in fact, generally the latter has to wait for control results from the customs to proceed with payments to exporters).

[96] Official Journal of European Communities 2001/C 314/01 and 02 of 8 November 2001.

[97] Official Journal of European Communities 2003/C 98/01 of 24 April 2003.

With regard to information flows, it is important to underline those regarding communications on the part of MSs to the EC on the quantity of refunds requested, after administrative controls, according to Commission Regulation No 1691/2001. For the A3 system, admissible tenders are forwarded to the EC without the tenderers being mentioned by name by no later than midday (Brussels time) of the first working day following the final date for the submission of tenders. For the B system, MSs inform the EC twice a week (Monday and Thursday no later than midday (Brussels time)) on the quantities covered by licence applications, broken down by date of submission, any quantities for which licence applications have been withdrawn during the current export period and quantities not used during the current export period. None of the interviewees noted criticalities in information flows, which are always correct and on time.

B2 - Administrative requirements are or not proportionate to the objectives of the ERS

Cases of lacks in the procedures system and cases of excessive or redundant procedures with respect to objectives and opinions on the "administrative proportionality to the objectives" expressed by interviewed stakeholders

According to most of the exporters interviewed on the administration side, (i) procedural costs, in terms of the number of documents to be presented, and (ii) monetary costs to be met to load and unload goods and (iii) the large number of customs controls, are greater than the benefits of ER. Administrative proportionality to objectives was analysed for each of the main procedures identified on the basis of regulations and information collected through deep interviews, in terms of shortcomings and excesses.

Procedure 1 - "Operator's choice among different systems (A3 and B)":

- Procedure 1.1 - "A3 system, with advance fixing refunds". The security to be paid in order to be able to participate in the tender to gain access to the A3 system was considered excessive by 71% of interviewees. The security of 20 Euro/ton is a too high risk, and represents a barrier that may discriminate between large and small-sized operators. Therefore in our opinion the A3 system does not seem to be sufficiently proportionate to the ERS goal of "ensuring the administratively least cumbersome method for operators, without creating discrimination between operators".
- Procedure 1.2 - "B system, without advance fixing refunds". Procedures for the B system are considered as being proportionate by 54% of interviewees and not proportionate by about 40%. The former group view the procedure as being proportionate since they did not note specific criticalities, nor excesses or procedural shortcomings. The second group, on the other hand, deemed the B system not to be proportionate since the quota established by the Commission is insufficient in relation to exporters' actual needs. According to this group of operators, indeed, the entire volume established for the B quota, for each quarter, is completed within the first 8-15 days of its opening. This would prove that the quota for the B system is too low, caused, according to this group of operators, by the introduction of the A3 system, taking away some of the resources allocated to the B quota. Therefore we can conclude, from the analysis of these opinions that, except for the limited quota levels, the B system procedures may be considered proportionate to the ERS objective of "Maintaining the flexibility of the scheme, taking into account the perishable nature of F&V".

Procedure 2 - "Publishing of EC regulations". With regard to this procedure, based on a constant monitoring of ER applied for and granted at the national level, no particular shortcomings and excesses emerged from stakeholders' opinions, accordingly it can be considered as proportionate to the specific objectives of ERS.

Procedure 3 - "Customs controls". This procedure is considered excessive in relation to its goals by about 68% of interviewees, because of the large number of documents that have to be presented for both the customs office and the paying agency. All documents must be adequately checked by different customs offices (local customs office and customs office for goods leaving the EC). The whole procedure is therefore perceived as being long-winded and muddled. Furthermore from the interviews it emerged that, for exports benefiting from ER, physical checks are carried out on 100% of goods and are often more rigid and detailed, if compared with checks carried out on exports not benefiting from subsidies. Furthermore, for every physical check the exporter must meet some costs (i.e. payment of the terminal operator for the loading and unloading of goods). Considering moreover that physical checks on goods can often be repeated (once in the customs office of departure and a second time in the final Community border customs office), costs for the exporter rise considerably. Sometimes, according to exporters interviewed, customs offices decide to carry

out physical checks on goods even when the seal on the container, affixed by the first customs office, is perfectly intact. The customs offices themselves complain about the amount of work needed for checks and the excessive deployment of human resources for all administrative obligations. On the other hand, according to National bodies interviewed, in particular customs offices (about 32% of interviewees), all checks required by procedures are strictly necessary to ascertain the validity of documents. It should be considered, thanks to the customs procedure implemented, that there is little room for irregularities and fraudulent behaviour, and indeed such cases are very rare.

Considering the high number of checks and required documents, in our opinion this procedure is not proportionate to the ERS objective of "ensuring the method: (i) with the most efficient possible use of the resources available (ii) efficient for community export structure; (iii) least cumbersome administratively for operators".

Procedure 4 - "ER payments". About 52% of interviewees believe that payments procedures are excessive vis-à-vis the system's goals, because of the large number of documents to be given to both customs offices and the paying agency. On the other hand, 43% of actors interviewed declared that there were no particular criticalities, deeming this procedure to be proportionate.

The paying agency has to pay the ER within 3 months, starting from the day of receipt of all necessary documents and data required for processing the application. Nevertheless, from information received from interviewees, confirmed by our analysis on the homogeneity of procedures implemented in various MSs (for details see paragraph above), the situation appears to differ considerably from country to country: in France, payments are regular, and are normally effected about 1 month after the reception of documentation for ER, while in Spain and in Italy 3-4 months are needed, and sometimes 7-8 months.

In conclusion, considering all the aforementioned differences among MSs and payments delays, ER payments procedures may be considered as being proportionate to the system's goals only for few MSs.

As regards ER for processed products, we have been reported by interviewed stakeholders of criticalities in terms of large workloads for human resources for all administrative obligations for both customs and paying agencies, the number of documents to provide and check, difficulties regarding checks (risks of falsification of proof on product destination; management of securities for prefinancing; complications regarding physical checks on sugar quantities). Therefore, as for the case of ER for fresh products, in this case too we can conclude that procedures are not sufficiently proportionate vis-à-vis the specific objectives of ER for processed products of "ensuring the method: (i) with the most efficient possible use of the resources available; (ii) efficient for community export structure; (iii) least cumbersome administratively for operators".

Analysis of procedures framework considering up-to-dating with respect to regulatory modifications over time

The most important updating of regulations and procedures is represented by the introduction of the A3 System in 2001 by Commission Regulation No 1961/01 in order to simplify the procedure of fixing the ER rate and generally lowering these rates[98].

The introduction of the A3 system has led to a reduction in the global budget planned for the B system. Since the B system continues to be the system most commonly used by numerous small-scale exporters, the introduction of the A3 system has been perceived by many operators as a further reduction in the possibility of gaining access to the ERS.

Another important change to the system has come from the enlargement of the EU and the entry of CEEC countries in 2004. For some MSs, especially Spain, Italy and France, CEEC countries were the main recipients of exports for which refunds were requested. Since these countries joined the EU, ER payments have dried up considerably for Spain, Italy and France.

[98] As specified in the Report from the Commission to the Council and the European Parliament on the simplification of the CMO in F&V (Brussels, 10.8.2004 COM(2004) 549 final), "Simplification in the management of export refunds and reduction of expenses".

4.4.1.6 Conclusions

Conclusions on the Entry prices scheme

The evaluation analysis was concerned with the organisation of procedures for the functioning of the EPS looking at two main aspects: simplicity and proportionality in relation to the system's objectives.

The main procedures were first identified through a desk analysis on existing Community regulations:

1 - Data collection at a national level in representative markets,
2 - SIV calculation,
3 - EP data publishing,
4 - Implementation of TARIC data at the national level,
5 - Operator's choice of method for EP declaration,
6 - Customs clearance, controls and duty payments.

In addition to EU regulations and national guidelines on procedural implementation, the major sources used for this analysis were the Commission Audit and the information gathered from interviewed stakeholders. Moreover, the frequency of answers obtained was analysed, in terms of simplicity and the proportionality of procedures, from a sample of 55 organisations interviewed (consisting of 13 operators, 16 professional circles of importers and exporters, 7 customs offices, 7 paying agencies, 7 ministries of agriculture, 3 ministries of finance and 2 ministries of international trade) in 7 MSs (France, Germany, Greece, Italy, Netherlands, Spain and United Kingdom), also looking at the biggest criticalities emerging from the analysis for each phase of the procedure.

In order to gauge the simplicity level perceived by stakeholders for each procedure, a grid was constructed cross-referencing on the one hand the identified procedures and on the other the opinions given by the various actors interviewed, classified by criteria chosen to measure the simplicity of procedures (1 - *Clearness and transparency*, 2 - *Accessibility of operators to the scheme*, 3 - *Level of "non-bureaucracy"*, 4 - *Procedure's adequacy for the correct functioning of the scheme*). The analysis highlighted the fact that the six procedures analysed were sufficiently simple. The only exception was, as part of procedure 5 – "Operator's choice of the method for the EP declaration", the "Deductive method", considered to be too risky and complex by operators and not sufficiently transparent by customs offices.

The final judgement on the simplification of procedures took into account different aspects analyzed: the level of simplicity perceived by interviewed actors; the main criticalities to emerge from the study of the entire functioning of the system; the homogeneity among the 7 MSs in terms of the implementation of procedures.

With regard to the proportionality of procedures, the analysis was based chiefly on the shortcomings and excesses that came to light for each of the six procedures. It emerged from the analysis that the 6 procedures are considered as adequately proportionate to the goals of the EPS, nevertheless the criticalities that emerged during interviews, in terms of shortcomings and excesses, may be an important stimulus to improve existing procedures. The main results of the analysis are as follows:

- Procedure 1- *"Data collection at the national level on the representative markets"*. Some proposals were put forward to improve the actual system, introducing a common methodology for all MSs through the implementation of a standard procedure for collecting data in representative markets and capable of eliminating the lack of homogeneity among MSs.
- Procedure 2- "*SIV calculation*". SIV calculation method and parameters used have not been updated since 1994 (i.e. deductions for transport and insurance costs) to address the structural and context changes over time of the F&V market, thus resulting in the risk that SIVs levels could be considerably lower than the actual market price.
- Procedure 3- "*EP data publishing*" and 4- "*Implementation of TARIC data at the national level*" are simple and proportionate to the objectives. However, there emerged the need to replace daily SIVs with the calculation of an average for SIVs every 3 or 6 days and their publication once or twice a week, in order to guarantee the stability of domestic prices and remedy the unpredictability of daily SIVs fluctuations.

- Procedure 5- *"Methods of EP declaration"*. With reference to the "Deductive method", customs offices have noted that the implementation of this procedure, based on the importer's free choice of the method, in accordance with Commission Regulation No 3223/94, is at odds with the Community Customs Code, which does not allow this free choice. Accordingly, a single and clarifying interpretation from the EC on this issue is needed in compliance with priorities established by the Community Customs Code.
- Procedure 6- *"Customs clearance, controls and duties payments"* is perceived as being very clear, standardized and sufficiently simple.

Conclusions on the Export refunds scheme

The evaluation of the organisation of procedures as part of the functioning of the ERS was also based on gauging the simplicity and proportionality of procedures in relation to the system's objectives. The analysis methodology was the same as that adopted for the EPS evaluation except for the reference sample: instead of the 55 organisations interviewed, only 28 were considered. The remaining actors did not take part since they had little or no knowledge on which to pass judgement on the issue (some National bodies managing EP data collection, some operators that were importers only, most interviewees from the Netherlands and all interviewees from the UK, where ERs are not used.). The main procedures, identified through the desk analysis on Community regulations and the deep interviews, were as follows:

1 - Operator's choice among different systems (A3 and B):

1.1 - "A3 system, with advance fixing of the refunds".

1.2 - "B system, without advance fixing refunds".

2 - "Publishing of EC regulations".

3 - "Customs controls".

4 - "ER payments".

The major sources used for this analysis were EU regulations and national guidelines on procedural implementation, the Court of Auditors special reports and information gathered from deep interviews. As regards the evaluation of the simplicity of procedures perceived by interviewed stakeholders, a grid was constructed, like for the EPS, cross-referencing on the one hand the identified procedures and on the other the opinions given by the various actors interviewed, classified by criteria chosen to measure the simplicity of procedures (1 - *Clearness and transparency*, 2 - *Accessibility of operators to the scheme*, 3 - *Level of "non-bureaucracy"*, 4 - *Procedure's adequacy to the correct functioning of the scheme*). The analysis gave the following results: the procedures analysed were sufficiently simple with the exception of procedure 3 – customs controls. Finally, the general evaluation on the simplification of procedures took into account different aspects analyzed, in terms of the level of simplicity perceived by interviewed actors, the main criticalities to emerge in the whole functioning of the system and the homogeneity of procedures implemented among the 7 MSs.

Analysis of the proportionality of procedures to ERS goals took also into account the frequency of answers obtained from different operators, professional circles, paying agencies and customs offices in different MSs for each of the above procedures. The results of this analysis show that the different procedures analysed were perceived as sufficiently proportionate to the system's objectives by the main stakeholders, although in this case too with some differences:

- Procedure 1 "A3 Application system with advance fixing of the refunds" is considered to be clear, standardised and sufficiently simple. Among the systems "with advance fixing of the refunds" only this procedure is analysed, because the A2 system has not been in use since 2002 and A1 is utilised only for nut fruits. The most relevant criticality observed about this procedure concerns the payment of a 20 euro/ton security, which is considered a constraint for medium and small-sized exporting firms. Also the bureaucracy level is considered as high, due to the excessive documentation needed to obtain the ER. This also impacts directly on the perception of no longer being proportionate to the level of obtainable ER (which has been declining in recent years).

- Procedure 1 “B Application system without advance fixing refunds” is considered very clear, standardised and sufficiently simple and not excessively bureaucratic. This is the most widely used system by medium and small exporting firms and, if considered convenient, also by major exporting companies on a case-by-case basis. The most relevant criticality, mainly observed by operators, refers to the unpredictable concrete availability of the ER subsidy (there is no alert when the closure of the “first in first served” system draws near). Connected to this is also the fact that operators, noticing that each periodical allotment of ER subsidies by product is exhausted very frequently in the first 8 to 15 days, consider this procedure as not being proportionate to their export support needs.
- Procedure 2- “EC publishing of Regulations on the amount of ER by product and export period” is perceived as being very clear, accessible by operators and sufficiently simple and proportionate to objectives.
- Procedure 3- “Customs controls” is considered clear and transparent, although very long-winded, complicated and not proportionate to objectives. 90% of witnesses consider this procedure as being excessively bureaucratic, while 68% considered the quantity of Customs checks as excessive. For this procedure we have recorded two major criticalities. The first one concerns the “T5 exporting document”, which contains all major information on the export of the goods, and is therefore required for the payment of the ER subsidies. It is quite frequently lost by operators or by the various Customs offices involved, thus causing an abnormal extension of ER payment times. A second criticality, reported only in Italy, concerns the ex-post control system. It starts after about 1 year after the ER payment and frequently after 2 years from the original export activity, causing difficulties in reconstructing the entire export history after such a long time.
- Procedure 4 - “ER payments” - is also considered clear and transparent, but the high number of documents requested and checked bring about a general perception of it not being proportionate to the objectives.

As regards ERS for processed products, since the analysis was considerably hampered by the difficulty in finding export firms benefiting from these subsidies willing to take part in deep interviews, the study was mainly based on other sources, such as Community regulations and the aforementioned Court of Auditors Special Reports.

The main criticalities detected in terms of procedural simplicity refer to the control system, as follows:

- risk of falsification of proof of product destination;
- difficult management of securities for prefinancing;
- complications regarding physical checks on declared sugar and glucose content in processed products, requiring greater ex ante controls;
- large number of documents to be supplied by exporters and checked by customs agents;
- a large workload in terms of time and human resources for all administrative obligations for both customs and paying agencies.

As regards procedural proportionality, considering the results of the analysis in terms of criticalities and weaknesses detected, we can reasonably conclude that procedures for ERS for processed products are not sufficiently proportionate in relation to the specific objectives of “ensuring the method: (i) with the most efficient possible use of the resources available; (ii) efficient for Community export structure; (iii) least cumbersome administratively for operators”.

4.4.2 To what extent are the export refunds and the entry price schemes efficient instruments to achieving their specific, intermediate and global objectives? - EQ.6

4.4.2.1 Interpretation of the question and methodological approach

The evaluation question invites an assessment of the efficiency of the schemes (ER and EP) in relation to the aim of supporting the production of fresh and processed F&V and in particular of stabilising market prices and supporting the competitiveness of EU F&V products, taking into account their evolution over time.

As regards the export refunds scheme, the evaluation judgement was formulated as the synthesis of specific analysis paths that deal with the following themes:

- the efficiency of the instrument relative to set goals (see Intervention Logic Diagrams);
- financial sustainability;

By "efficiency" we mean the relationship between the operating cost of the instruments compared to the results observed relative to the specific, intermediate and global objectives of the Regulation[99]: the question thus introduces the notion of cost and places the cost of ER in relation to the results observed in the responses to the previous questions.

As far as efficiency is concerned, the actual costs of the instrument (ER) have been reviewed, as far as possible, relative to the various levels of application, and are related to specific ratios/indicators linked to the results emerging from responses to the other evaluation questions (EQ 1, 2, 3). Therefore we use the specific results as follows:

- "price stabilisation",
- "internal market stability"; "relationships between the crises identified previously and the amount of export subsidies granted to EU F&V producers" as well as "the effect of ER in boosting exports" for export refunds,

The cross-analysis of data is necessarily qualitative in nature, consisting of searching for and matching patterns across the data produced during the preparatory analysis and the first evaluation theme, namely market stability. Although it is difficult to assess ER in terms of the stabilisation of the internal market, because of the constraints introduced after the URAA, the efficiency of ER instruments for both fresh and processed F&V products was assessed by comparing the cost of support instruments with results obtained in terms of price stabilisation as well as in supporting EU F&V products' competitiveness (comparison between the costs of refunds and results achieved).

The efficiency of ER instruments in achieving their objectives was also assessed by comparing the expenditure for ER with a measure having similar market stabilization objectives: F&V withdrawals.

As regards the EPS, the evaluation judgement derives from the analysis of the efficiency of the instrument, in terms of management costs, relative to the objectives defined in the Intervention Logic Diagrams, and in this case the assessment has been based on the collection and analysis of both quantitative and qualitative data.

Analysis of the actual costs of the EPS could refer to the operating costs borne by the Commission and by member States at the various levels of application. There are no costs generated by intervention policy, indeed the policy generated revenue for the Community budget.

The analysis of operating costs for the management of EPS could undoubtedly provide interesting elements, especially in light of the numerous opinions of stakeholders indicating procedures for recording daily prices as "burdensome" in both organisational and economic terms. Nevertheless, beyond the qualitative representation of the phenomenon, the evaluator does not have more detailed information at its disposal.

The response to the evaluation question entails the adoption of quantitative indicators sourced partially from the statistical data used to respond to previous EQs, and partially from the Commission.

[99] As defined in Council Regulation No 1605/2002 art.27 (2).

4.4.2.2 Judgment criteria and indicators

The proposed method for answering the evaluation question 6 is based on the following criteria, indicators and data sources:

A - Entry price scheme:

Judgement criteria	Indicators	Data sources
A1. The Entry Price regime is justified (or not) respect to results achieved in terms of: domestic market stabilization, monitoring prices of specific F&V products entering in the Common market.	A1.1 Comparison between the EPS and other existing border measures/ instruments : - the EU import regime applied for F&V products outside the EPS; - the new simplified system for the valuation of certain fresh F&V imported on consignment.	Commission statistics Elaboration of the EQ of theme 1 – 2 EC Regulations
A2. EPS is (or is not) an efficient tool to achieve its relative results in terms of price stabilization and products' competitiveness	A2.1 Opinion of stakeholders expressing a positive/negative perception of "results achievement" of the instrument	Deep Interviews

B – Export refunds scheme:

Judgement criteria	Indicators	Data sources
B1. The cost of Export refunds (for fresh and processed products) to the public is justified (or not) relative to the results achieved in terms of price stabilization and products competitiveness	B1.1 Export refunds Budgets	Commission statistics
	B1.2 Ratio: Exports volume/ Export refunds budget	EC statistics
	B1.3 Ratio: expenditure for Export refunds by point of reduction of the: - index of variability of the domestic price	EC statistics, Elaboration of the EQ of theme 1 - 2
	B1.4 Correlation of Export refunds and production surplus crises	EC statistics, Elaboration of the EQ of theme 1 and evaluation on Withdrawal Deep Interviews
B2. The cost of Export refunds (for fresh and processed products) to the public with the cost of measures adopted in the same sector and having similar stabilizing objectives (Withdrawals), is or is not efficient	B2.1 Comparison of: - Budget for ER and stabilisation effect of ER - Budget of withdrawal and stabilisation effect of withdrawal	EC statistics, DG Agri Deep Interviews
B3. ER is (or is not) an efficient tool to achieve its relative results in terms of price stabilization and products' competitiveness	B3.1 Opinion of stakeholders expressing a positive/negative perception of "results achievement" of the instrument	Deep Interviews

4.4.2.3 Data sources and limits

Data on ERS come from the "Comptabilité Année GATT" source of DG Agri. For fresh fruits it was possible to calculate the value and quantity of Export refunds during a calendar year for each product. It was not possible to perform the same thing for processed products, for which we referred to the fiscal year. For both categories of products, fresh and processed F&V, we used the same database that has some provisional figures for some years due to the lack of data about "*exportations sans certificat*".

Data on the withdrawal budget and the stabilisation effect of withdrawals come from the previous Agrosynergie evaluation "Evaluation of withdrawals and crisis management in fruit and vegetables"[100] with appropriate updates.

Moreover, we gathered qualitative information from the deep interviews, namely considering the strengths and weaknesses of both systems.

The comparison between EPS and ERS and the variability of prices came directly from the processing of Commission statistics within the EQ of themes 1 - 2. The limits illustrated above are consequently also reflected within this specific EQ.

For the reasons that we have already defined in the paragraph 3.2.1 "Analysis limits on Export refunds for processed products", the analysis carried out within the EQ6 does not consider the efficiency of ER for processed F&V products.

4.4.2.4 Entry Prices scheme analysis

A1 - The Entry Price regime is justified (or not) with respect to results achieved in terms of: domestic market stabilization, price stabilization and products' competitiveness

As already mentioned, although the analysis on the EPS procedures (see the previous EQ5) shows how the functioning and management of the scheme involves plenty of human resources at national and Community level, there is no quantitative information on specific or overall costs for the management of the EP scheme. The lack of specific data on costs determines a first reason for which an assessment on the efficiency of the EPS has to be tackled with an alternative methodology than that of a "formal quantitative analysis of efficiency".

With regard to the effectiveness of the scheme, the analyses conducted for previous evaluation questions reveal in short that:

- Very often F&V variations in exports to the EU were larger than variations in internal production observed in the main partner countries, and there is no relevant difference as regards whether products are covered by the EPS or not.
- Also the analysis on price variability does not provide a firm answer with regard to the effect of the EPS.
- The role of the EPS as a monitoring tool should not be neglected. Namely the recording of SIVs enables to detect those cases when the imports could cause or contribute to the crisis on the EU market and, on the other hand the SIVs publishing is an effective way of signalling market perturbations.
- As a general conclusion, although a contribution of the EPS to preventing crises due to abnormally low prices cannot be ruled out, available objective information does not allow us to reach a firm conclusion.
- A counterfactual analysis showed that prices of products either imported out of the EU production season or from faraway countries are generally higher than EU farm prices, while the prices of products competing directly with EU domestic production are often lower. However, the effect of the EPS is not clearly identifiable and therefore it is not possible to firmly conclude that the EPS is able to affect prices and the market orientation of EU farmers.
- A partial equilibrium trade model helped to simulate the impact on monthly import flows, for 4 major products, that would result from the simulated phasing out of the EPS. Results show a negligible impact. Consequently, as efficiency is concerned, the maintenance of the system could therefore be restricted to those periods of the marketing year when occurrences of SIVs below the trigger EP are most recurrent.

[100] http://ec.europa.eu/agriculture/eval/reports/withdrawals/index_en.htm

- The EU F&V sector's competitiveness does not seem to be related to the kind of external protection measures characterising different products.

These results highlight that a firm conclusion on the EPS effectiveness cannot be depicted, further hindering a "formal quantitative analysis on efficiency" of the EPS.

On the other hand if the concept of efficiency also includes the improvement of market transparency conditions, for the purposes of its stabilisation, one must recognise the contribution of the EPS in this sense, thanks to the publication of the prices of products (SIVs publication) entering Community borders. The price recording system thus makes it possible to have daily updates that can be consulted by all operators in order to support their business strategies. This daily updated information system does not have available alternatives at present and the degree of its efficiency, as well as the actual impact this has on the whole system, cannot be quantitatively estimated with the data in our possession.

A possible alternative methodology to assess whether the EPS is justified (or not) with respect to the results it achieves, is to compare it with other border measures/instruments and to analyse to what extent these alternative measures can achieve similar results of the EPS, and if a possible estimate on managing costs can be performed for them. The effects and results chosen for the present analysis are:

a. effects of the EPS as concerns the protection from disturbances on the Common market arising from offers at abnormal prices from third countries,

b. role of the EPS for monitoring prices of specific F&V products entering in the Common market.

In this case two comparison options, among existing border measures/instruments, propose themselves and namely: 1) the EU import regime applied for F&V products outside the EPS; 2) the new simplified system for the valuation of certain fresh F&V imported on consignment.

1) The EU import regime applied for F&V products outside the EPS

As already detailed in Chap. 2.1.1 all products covered by the F&V CMO[101] are subjected to the Common Customs Tariff (CCT) and, within the CCT and for a certain group of products, in certain periods the EPS is applied.

The CCT is based on the "normal" ad valorem duty which is charged on imports of all the products within and out of the EPS. *Ad valorem* customs duty is fixed as a variable percentage of the value of the goods. The percentage can vary for periods during the year, but it remains fixed, regardless of the value of import goods. On the other hand the products within the EPS, depending on their entry price as declared at the entrance in the Community border (if lower or greater than the 92% of the trigger EP) are charged for the *Ad valorem* customs duty plus the Maximum Tariff Equivalent (MTE) or the specific duty[102]. Obviously for these products within the EPS if their entry price is equal or higher to the trigger EP, only the *Ad valorem* customs duty is charged.

As it can be easily understood the capability of this instrument in achieving any of both the aforementioned results/effects is strongly constrained by its functioning mechanism (namely: *fixed duty, regardless of the value of import goods; no price monitoring is requested)* and therefore we can conclude that the EPS is justified with respect to the results it can achieve, if compared to the EU import regime applied for F&V products outside the EPS, also if the functioning and management of this measure entails a notable lower need of human resources than the EPS.

2) The new simplified system for the valuation of certain fresh F&V imported on consignment

On 8 February 2006, the Commission has adopted regulation No 215/2006, amending regulation No 2454/93. This regulation introduces a new simplified system for the valuation of certain fresh fruit and vegetables imported on consignment, facilitating thus the custom clearing operations, including the

[101] As listed in Article 1(2) of Council Regulation No 2200/96
[102] For further details on the functioning mechanism of the EPS see Chap. 2.1.3

publication of "unit prices" by means of TARIC. For the purpose a unit price per 100 kg net, for each category, is established by the Commission each 14 days.

The unit price may be used by the declarant as the basis for the determination of the customs value of F&V products, of a single kind, imported on consignment only. In such a case, the customs declaration is definitive.

As for SIVs, also the unit prices are based on the prices provided by MS "on the basis of the gross proceeds of sales recorded at the first commercial level after importation", and from these figures are deducted: marketing margins, costs of transport, insurance and import duties. Following the receipt of the unit prices by the Commission, these figures are reviewed and monitored by the Commission and are subsequently disseminated via TARIC each 14 days.

If we compare this system to the EPS we can note specific differences:

- This system applies to "certain fresh F&V products" as listed in Annex 1 of Commission Regulation No 215/2006, and this list is notably more extensive than that of the EPS.
- The application of this system is limited to the "imports made on a consignment basis", while the EPS applies to any kind of imports.
- The unit price may be used by the declarant as the "basis for the determination of the customs value of F&V products", regardless of the actual value of imports, while the EPS acts as a possible protection from disturbances on the Common market arising from "offers at abnormal prices from third countries".
- The most relevant difference in terms of price monitoring of imports is that this system is updated every 14 days while the EPS has a daily updating. This resulting in a less costly monitoring system than the one provided by the EPS.

By these findings we can deduce that, although this new system applies to a wider range of F&V products than the EPS, and even if its functioning and management entails a notable lower need of human resources than the EPS, this new system can achieve only one of the two specific results/effects of the EPS we are analysing and namely the prices monitoring (although with a different frequency) of specific F&V products entering in the Common market. Therefore in this case too we can conclude that the EPS is justified with respect to the overall results it can achieve.

A2 - The opinions of stakeholders

The "perception of the EPS efficiency" results strongly tied up to the productive or trading character represented by the stakeholders we interviewed.

Namely countries in Southern Europe, such as France, Spain, Italy and Greece, are both F&V producers and traders, while countries in the north, such as Belgium, Holland, UK, are mainly dealers.

The overall very positive perception of efficiency, effectiveness as a safety net for the EU products as well as market monitoring instrument, gathered through the interviews in Southern countries, at a first glance results as overestimated by the stakeholders if we match it with the overall analysis results we reported in Theme 1 on actual effectiveness of the EPS, but if we then consider its nature of "perception" (general memberships of market crisis much wider than actual occurrences) and the productive context where stakeholders operate, this overall positive perception appears justified. The perishable nature of most F&V products and the limited profit margin of producers concur to the result that limited price drops (also even to the 20% of its normal level) can determine very strong market crisis.

On the other hand the general negative perception, gathered in Northern countries, is mainly determined by their perception of the EPS as a measure interfering with the free functioning of markets, regardless in this case too with the overall analysis results we reported in Theme 1 on actual effects on EU market prices of the EPS. Also in this case we have to consider the trading context where stakeholders operate to understand such a different perception than that of their colleagues in producing countries.

A general perception emerged as concerns the system efficiency, namely that the possibility of choosing from alternative custom clearance calculation methods hinders the efficiency of the EPS. Competition is not however distorted, since the various methods of calculation are not reserved for some but are available to all operators that seek to pay the lowest duties possible.

The factors that undermine the efficiency of the EPS are thus to be found, as was seen in EQ5, in operating costs incurred to carry out the numerous checks and, with reference to the deductive method, in the extra documentation to be supplied compared with the other two methods.

4.4.2.5 Export refunds scheme analysis

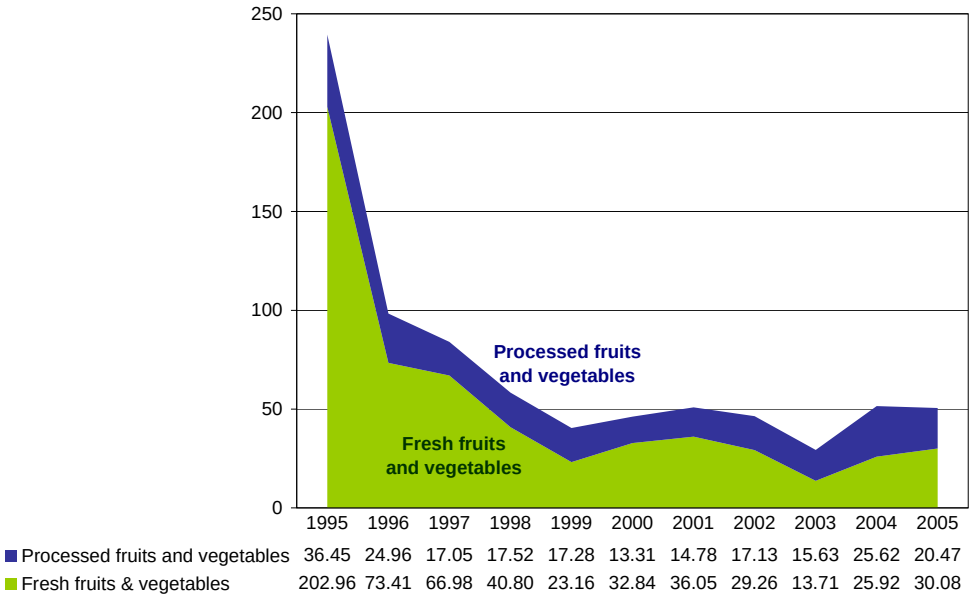
B1 - The cost of Export refunds (for fresh and processed products) to the public is justified (or not) relative to the results achieved in terms of price stabilization and products competitiveness

It was noted that since 1998 there has been a long-term fall in global payments effected by the EU over the years. As the figure below shows, average ERs are around 46 million Euro a year. This total is the result, following similar trends, especially in the last three years analysed, of payments for processed products and payments for fresh products which had previously benefited from much larger payments.

Clearly, after a period in which considerable resources were allocated in favour of exports, especially between 1993 and 1995, when the average value of ERs was 190 million ECU/Euro per year, the system began to shrink, gradually reaching its current phase of stability.

The products most affected by this downsizing have been tomatoes, refunds for which have gone down considerably, from about 105,000 tons and 3.7 million Euro in 1996 to about 28,000 tons and 726,000 Euro in 2005, and oranges, from about 422,000 tons and 38.5 million Euro in 1996 to about 240,000 tons and just 6 million Euro in 2005. Refunds granted for the export of other products forming part of the ERS have been up and down.

Fig. 39 - Export refunds budget 1995 – 2005 (millions of Euro)



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Processed fruits and vegetables	36.45	24.96	17.05	17.52	17.28	13.31	14.78	17.13	15.63	25.62	20.47
Fresh fruits & vegetables	202.96	73.41	66.98	40.80	23.16	32.84	36.05	29.26	13.71	25.92	30.08

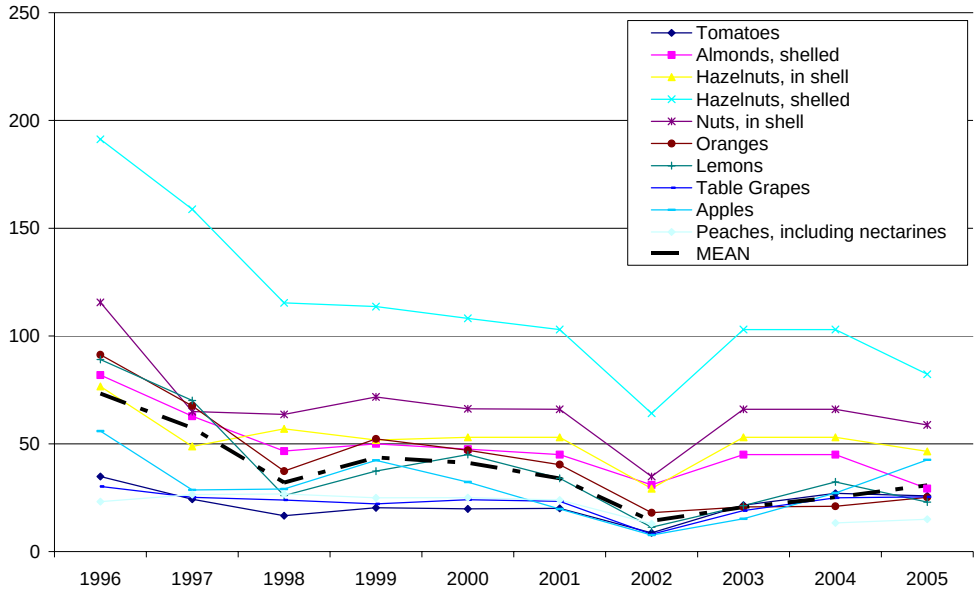
Source: DG AGRI

If we analyse ERs disbursed by unit of fresh product (Euro/Ton) it can be seen (Fig. 40) that the initial gap between products benefiting from greater ER (shelled hazelnuts, nuts in shell, hazelnuts in shell, almonds in shell) and those benefiting from ER to a lesser degree has narrowed. Currently below the annual average in terms of the unit value (31 €/ton in 2005) are those products benefiting from greater subsidy levels in terms

of ER quantities, such as oranges, whose unit value for export refunds was 25 €/ton in 2005. An exception is apples, the product most supported (7.5 million Euro) and which in 2005 received a contribution of 43 €/ton.

The unit ER value of products most heavily supported has thus gone down over time. For some products in particular strategic choices have altered considerably. Citrus fruits for instance have fallen from 90 €/ton in 1996 to 24 €/ton in 2005.

Fig. 40 - Export refunds: unit value for fresh F&V: 1996 – 2005 (Euro/tons)

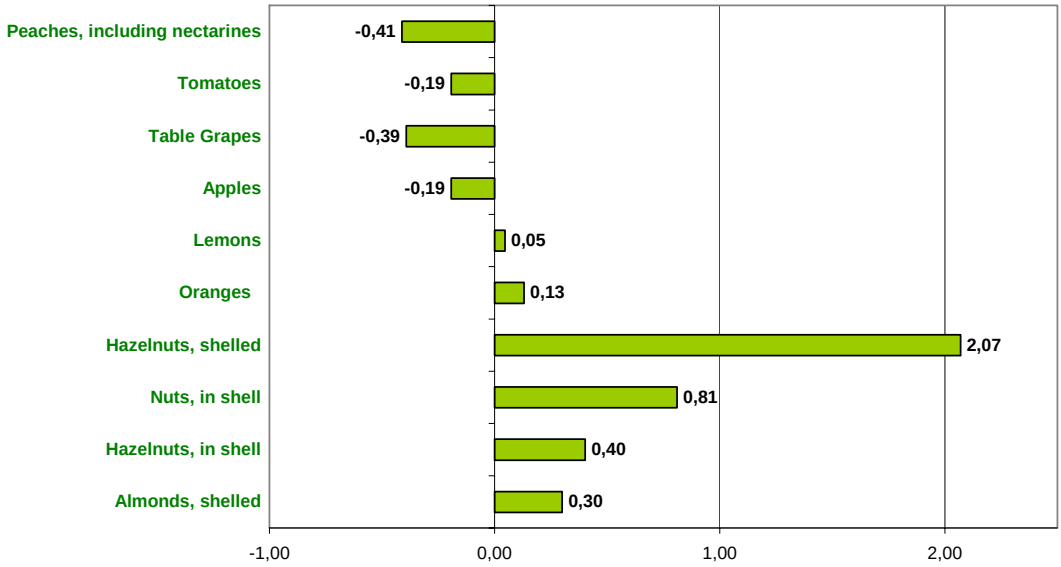


Source: DG AGRI, Comptabilité année GATT

The graph in Fig. 41 shows the absolute deviation in the average unit value of ER for each product from the ten-year average of all ER payments per ton (again in Euro/ton). With the ten-year average for all ERs set at a value of 0 (37 €/ton), in the ten years from 1996 to 2005 dried fruits and citrus fruits have received most refunds per ton. For oranges and lemons the absolute deviation from the ten-year mean was 0.05 and 0.13 respectively, i.e. they have received an ER/ton equivalent of 37 €/ton and 42 €/ton respectively. In other words, in the ten-year period considered, the ER/ton was on average 5% greater for lemons and 13% greater for oranges compared with the overall average. Dried fruit is the type of product that on average has received the most ER/ton, but the quantities and total values paid are much less than the 17.2 million Euro per year spent on average for oranges and 5.1 million Euro for lemons. This is an important fact, especially for oranges which, despite the reduction mentioned above, proved to be the biggest priority product.

Also significant are dessert fruits and tomatoes, which in the ten-year period considered received on average 30% less ER/ton, despite being among those products most exposed to competition, especially following the large growth in the world trade of fruit, as shown in Para. 3.2.2 “Overall evolution of the fresh F&V sector, to be considered in assessing the effects of EPS and ERS”.

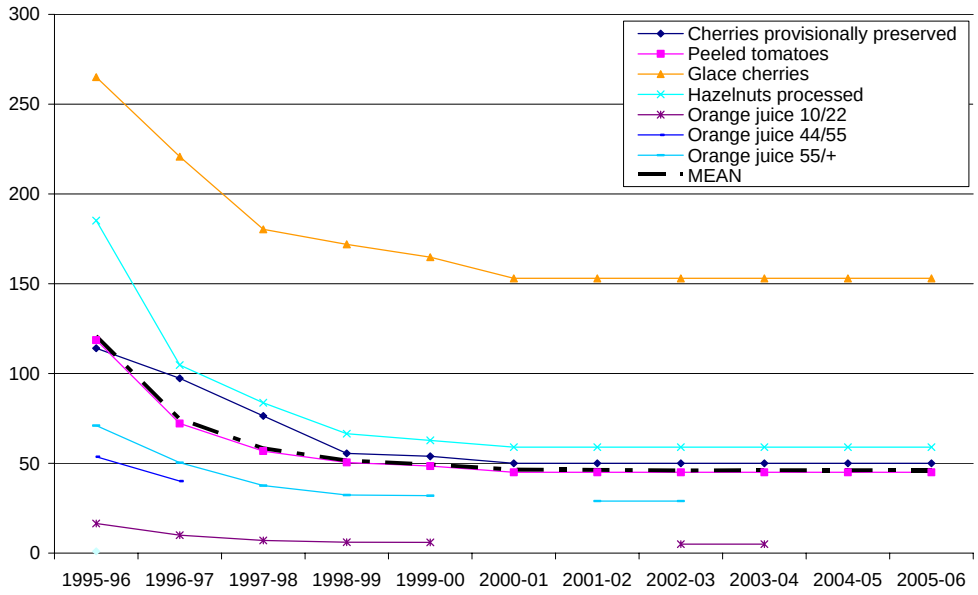
Fig. 41 - Export refunds for fresh F&V: absolute deviation from average 1996-2005 (average=0)



Source: DG AGRI, Comptabilité année GATT, processed by Agrosynergie

Going on to processed F&V, the value per ton of ER granted to this category has been stable for the past few years. This means that quantities and the value of refunds have moved in step over time, and have gone down significantly for almost all products.

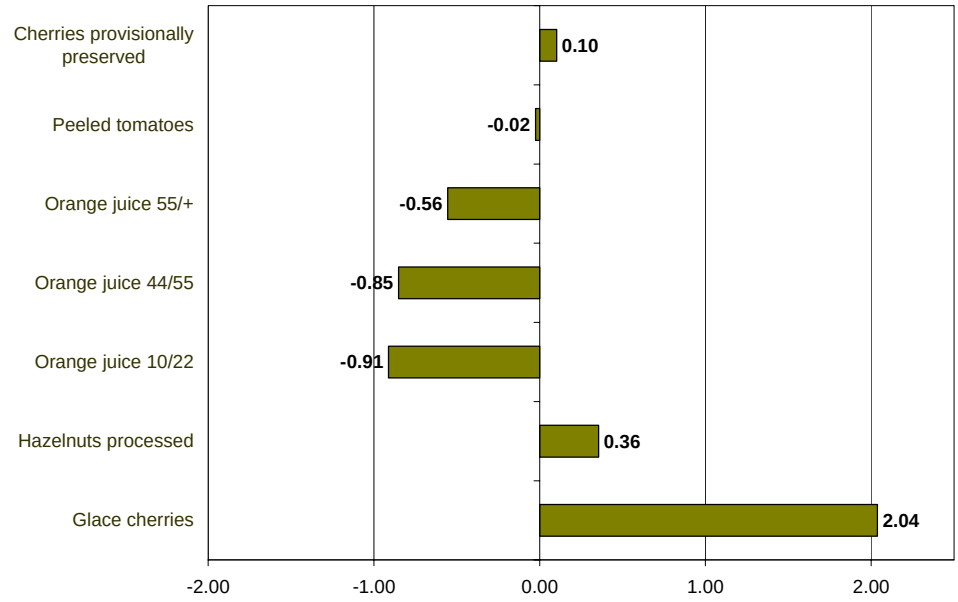
Fig. 42 - Export refunds for processed F&V: unit value Euro/ton (1995/06 – 2005/06)



Source: DG AGRI, Comptabilité année GATT, processed by Agrosynergie

Finally, with reference to the absolute deviation from the ten-year average of processed F&V, just as for fresh products, the products that are less important by volume of ER received have obtained greater refunds than products that are much more important in terms of volume and expenditure, such as peeled tomatoes, which are slightly below the ten-year average (57.5 €/ton).

Fig. 43 - Export refunds for processed F&V: absolute deviation from average 1995-96/2005-06 (average=0)



Source: DG AGRI, Comptabilité année GATT, processed by Agrosynergie

To conclude the analysis of budget data, the examination of data for each product also confirmed, for almost all F&V in both categories (fresh and processed) what had been observed for data on general trends for all ERs. On the one hand ERs went down over the period under review, reducing expenditure differences among products, on the other expenditure was "homogenized" by unit of product.

Moving on to the financial sustainability of ER, the analysis focused on the relationship between policy costs and impact results, which became available through the appraisals conducted in previous EQs. Namely it has to be recalled that, how detailed in EQ1, we found that unreasonably low absolute values of the price elasticity of demand would be needed for the ERS to have produced sizeable effects in terms of overall EU price variability.

In the answer to EQ1 the results of a sensitivity analysis were given, performed by modifying the indexes of prices for the products receiving export refunds. It is possible to compare the results with costs relating to expenses incurred for refunds for specific products. Below are costs incurred or potentially sustainable by the Commission budget to reduce by one percentage point the variability index of production prices in the Community market.

The value is expressed in Euro/ton within a range covering the hypothetical interval of elasticity of demand (-2 / -0.2).

Tab. 52 - Export refunds: relationship between expenditure by unit of product and change in one point % in price variability potentially induced by the ERS (average 1996 – 2005)

Product	Elasticity - 2	Elasticity – 0,2
Tomatoes	50.94	4.76
Oranges	12.49	0.5
Lemons	6.27	0.2
Apples	1 501.89	30.34

Source: DG AGRI, Eurostat data, processed by Agrosynergie

Without the information to gauge the efficiency of the scheme in absolute terms, an evaluation is however possible in comparative terms. Tab. 52 shows that efficiency levels of Export Refunds vary according to the different types of product. The differences are so evident that they also exceed the limit of the difference in absolute values of various products. A particularly surprising example is that of apples whose reduction of one percentage point, in the variability of domestic prices, is achieved with investments that are far greater than those of other products considered.

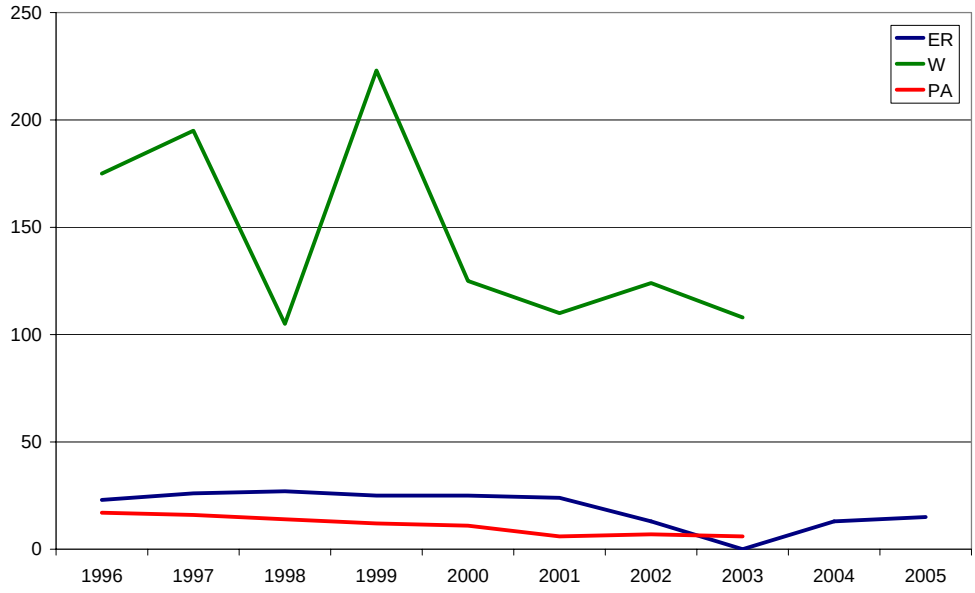
B2 - The cost of Export refunds (for fresh and processed products) to the public with the cost of measures adopted in the same sector and having similar stabilizing objectives (Withdrawals) is or is not efficient

The efficiency of ER instruments in achieving their objectives was also assessed by comparing the expenditure for ER with a measure having similar market stabilization objectives: withdrawals.

The figures below compare the incidence of the cost of instruments within the F&V OCM in the case of citrus fruit and peaches.

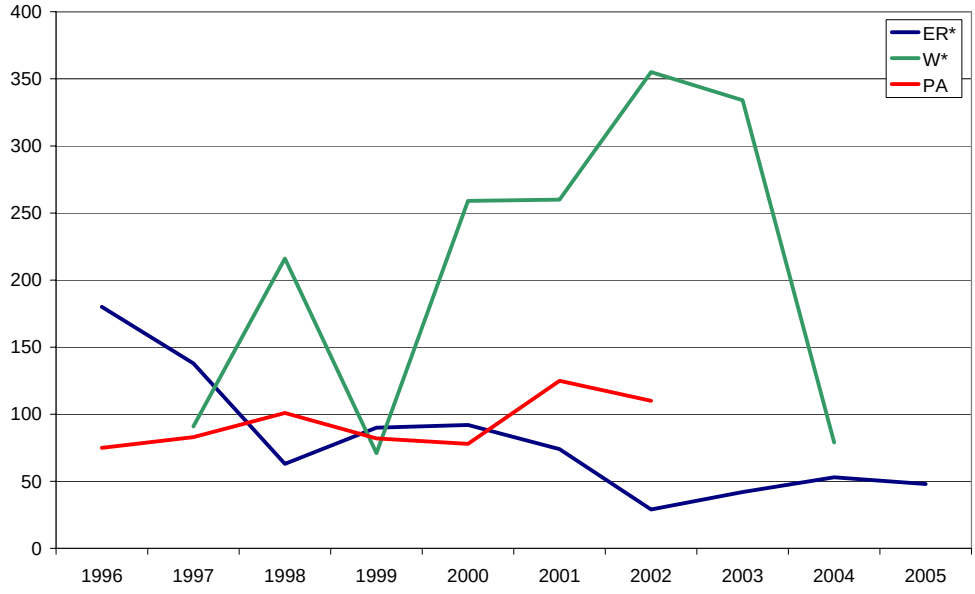
As the figures show, although the expenditure incurred by unit of product (Euro/ton) in the case of withdrawals was not constant in both cases (peaches and citrus fruits), values were considerably greater than for other instruments.

Fig. 44 - Peaches: Comparison of unit expenditure for Export refunds (ER), withdrawals (W) and processing aid (PA), 1996-2005



Source: DG AGRI, Eurostat data, processed by Agrosynergie

Fig. 45 - Citrus fruits: Comparison of unit expenditure for Export refunds (ER), withdrawals (W) and processing aid (PA), 1996-2005

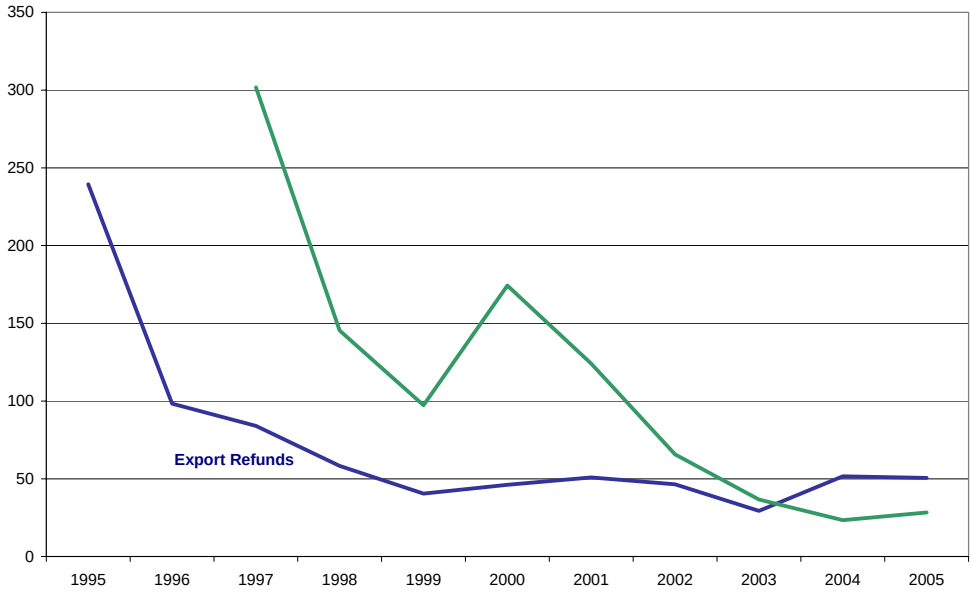


Source: DG AGRI, Eurostat data, processed by Agrosynergie

Note: *oranges and lemons

The comparison between total expenditure for Export refunds and total expenditure for withdrawals shows a more uniform trend than unit expenditure and a general downward tendency. Also noticeable is that the considerable difference narrowed considerably in the last four years analysed, and actually disappeared when total Export refunds expenditure overtook withdrawals, i.e. in 2004.

Fig. 46 - Correlation of Export refunds and withdrawals, 1995 -2005 (millions of Euro)



Source: DG AGRI processed by Agrosynergie

(2005: provisional data)

At this point of the analysis, it is difficult to assess the results of the two instruments in terms of effects to stabilise prices in the domestic market since, for withdrawals, prices were surveyed in specific wholesaler

markets (in France, Spain and Italy), while in the case of ER data are global and do not refer to specific quantities sold in precise markets.

In qualitative terms, however, in the case of withdrawals, the predicted effects of the hypothetical absence of withdrawals on prices shows that withdrawals can have a more than marginal effect on price stabilisation for some products, even if product differences in different countries can fluctuate considerably. Under the assumption made in the specific evaluation, withdrawals would have brought about reductions of mean prices ranging from -1.6% for tomatoes in France to about -46% for peaches in France.

In this comparison on efficiency of the two instruments, withdrawals and the ERS, it has to be stressed that the analysis conducted on ER (EQ1) and in particular the projected impact of the absence of ER for fresh F&V on average prices highlight the fact that unreasonably low absolute values of the price elasticity of demand would be needed for the ERS to have produced sizeable effects in terms of overall EU price variability. Moreover the analysis of correlations between changes in export refunds and changes in total exports and in total production, as reported in EQ1, shows no clear sign of a potential incentive of the presence of the ERS. Although the result should be handled with due caution, given the limited number of years on which the analysis was conducted, the presence of the ERS might have generated non negligible deadweight effects, in the sense that observed exports could also have been realized without the granting of export refunds, with no significant impact on quantities and prices at the EU level.

In conclusion, if one compares budget levels pledged by the Commission in the two instruments set in place by the F&V OCM, it emerges that expenditure for withdrawals generated concrete effects in particular on price stabilisation. Although these effects have been felt to varying degrees depending on the markets and products observed, it was possible to give a positive judgement in terms of spending efficiency. The same cannot be said for export refunds, whose actual contribution, in terms of efficiency, may only be attributed to isolated cases, such as that of oranges and lemons, under conditions of unreasonably low price elasticity. It must be noted, once again, that these results are likely to be overestimated, given the simplified hypothesis according to which no other mechanism would be used to prevent the price drop caused by increased sales on the domestic market.

It is thus no coincidence that the withdrawals instrument has been used far more than ER to support the level of prices in the internal market.

Some further elements for comparison analysis, besides the measures included in the F&V OCM, can be obtained from the results of promotion actions performed in Third Countries.

In this case the global objectives of the regulation that currently governs actions to promote European agricultural products outside the Union, Council regulation No 2702/1999 of 14 December 1999 and subsequent amendments, are complementary to those of the ERS:

- to improve the market positioning of products being promoted,
- to open new markets
- to inform about the existence and advantages of Europe's quality enhancement systems.

The Commission Regulation No 1346/2005 of 16 August 2005, detailed the rules for the application of Council Regulation No 2702/1999 on measures to provide information on, and to promote, agricultural products in third countries. These measures entail a coherent set of operations aiming to contribute towards improving information about, and sales of, the products concerned. All information and/or promotion messages passed on to consumers and other target groups under these measures shall be based on the intrinsic qualities of the product concerned or its characteristics. Clearly, promotional measures consist of much more specific actions than the ERS: actions are "institutional" in nature and do not contemplate direct commercial benefits for private operators (they may be advertising, promotion, information and PR actions or market studies).

In recent years the declining role of export refunds and the parallel acceleration of international competitive trends, in part due to the progressive opening of markets, has demonstrated the growing importance of policies to promote Community products in Third Countries. The evolution of Community budgets with regard to the ERS and promotion policies in recent years has led us to a comparison of these instruments also in terms of available budget.

A report evaluating promotion policies was drafted in 2002, bringing together any specific evaluations conducted in the past concerning single campaigns. Judgements are basically qualitative, but the only budget analysis co-financed by the Commission bears witness to the interest of producer categories in activating this instrument. Results are not available on the impact of new promotional programmes, but the first results achieved by Commission services ("Report from the Commission to the Council and the European Parliament", SEC - 2006 - 1785) showed that "*professional organisations and the Member States have expressed great interest in launching programmes on the internal market rather than in third countries*". Therefore we can conclude that this instrument cannot be considered at present as an efficient alternative to the ERS in "ensuring export sales at world market prices".

B3 - ER is (or is not) an efficient tool to achieve relative results in terms of price stabilization and products' competitiveness

Also the "perception of the ERS efficiency" in terms of price stabilization and products' competitiveness results, as we reported for EPS, strongly tied up to the productive or trading character represented by the stakeholders we interviewed. The overall positive perception of effectiveness of the ERS for the price stabilization and competitiveness of EU exports, gathered through the interviews in Southern countries (MS greatly involved in both production and trading of F&V products), at a first glance results as overestimated by the stakeholders if we match it with the overall analysis results we reported in the previous evaluation themes on actual effectiveness of the EPS.

Furthermore, as highlighted in the preparatory analysis, some relevant elements of the world F&V scenario have to be considered in assessing the ERS efficiency. In this we have to consider not only the figures of the growth in production and in trading of F&V at a world level but also the main factors that have led many other countries to compete with the EU and these are, in brief: (i) changes in consumption patterns worldwide and, above all, the condition of market access to imports of fresh F&V and changes in the organisation of the supply chain; (ii) producers of fresh F&V in developing countries are increasingly integrated in a global supply chain managed by multinationals of the retailing industry, which is reshaping the availability of fresh F&V to consumers all over the world, thus also in the European market; (iii) the worldwide opening of markets following the implementation of the URAA; (iv) the many regional free trade area agreements signed around the world; (v) the lowering of transportation costs and the wider adoption of information and communication technologies for the management of logistics operations.

All of these factors have made a large contribution to the development of trade of many products and thus of competitors for European producers and, for all of these reasons, it is easily understandable how a significant percentage of interviewees in Southern countries report the need for a concrete support to maintain the competitiveness of EU products in international markets, and why it is perceived as essential for producers and for exporters that would otherwise be at a considerable disadvantage in relation to non-EU countries.

There were however some negative opinions about the ERS and relative costs, which can be summed up as follows:

- Very high level of bureaucracy;
- High cost of procedure;
- ER unit rates too low.

As regards the first point, people who appreciate the system also criticise the excessive bureaucracy of required documentation. The procedure requires a long list of documents which have to be provided by operators during the whole "path" of the export product (customs and relevant offices). In particular this rigidity and complex collection of documents is out of proportion to the amount of refunds received, especially if the exporter is a medium/small-sized exporter/producer. The result of this situation is that of discouraging exporters and reducing allocated ER. The system could be improved for the documentation part of the procedure, which might be weighty for exporters. Moving on to the second weakness of the instrument, there was a widespread belief among interviewees that the procedures to be implemented were very complex and very costly. In fact, customs offices have to set in motion many internal procedures, after refund payments, such as validation of the analysis, operational risks analysis and validation, analysis of the reporting of suspicious cases from regional customs offices.

Furthermore, exporters have to meet all ancillary costs, e.g. for physical controls, the translation of documents in other countries, etc. As the answers to EQ5 showed, the need to have a large number of employees in customs offices and paying agencies, together with the large amount of documentation to be provided, the consequent long time frames and inevitable delays are all factors that impair the efficiency of the ERS, and which are confirmed in the personal experiences of the various stakeholders contacted.

Finally, the interviews pointed out the fact that net benefits of the ER (low unit rates of the refunds and high administrative costs to obtain them) are too low to concretely support the promotion of EU exports affecting thus also the efficiency of the ER scheme. A clear example is given by Spain situation: most of Spain's F&V partners are now in EU27, so Spanish producers have lost the possibility to apply for ER, and at the same time they would need a more intense financial support to concretely benefit of ERS effectiveness in exports to non-EU countries. Another problem raised by exporters is that often importers from Russia and other countries claim a part of the refunds of the exporter and a big discount on the sale price. As a result, with rates being considered too low, exporters complain about the loss of a further part of ER benefits.

4.4.2.6 Conclusions

Conclusions on the Entry prices scheme

The results illustrated in the previous EQs could not isolate the contribution actually made by EP in terms of price stabilization and product's competitiveness, due to both different results acquired in terms of origin and product (conditions being the same), and the large number of variables that come into play in international trading. Furthermore our analyses showed that the maintenance of the system could be restricted to those periods of the marketing year when occurrences of SIVs below the trigger EP are most recurrent. In case such a scheme functioning modification is taken into account the possible changes in third countries producers orientation, deriving from this rescheduling, should be prudently evaluated.

On the other hand if the concept of efficiency also includes the improvement of market transparency conditions, for the purposes of its stabilisation, one must recognise the contribution of the EPS in this sense, thanks to the publication of the prices of products (daily SIVs publication) entering Community borders.

Although a formal "quantitative analysis on efficiency" of the EPS cannot be performed, due to both: the lack of data on management and functioning costs of the scheme, the impossibility of drawing a firm conclusion on the EPS effectiveness; we adopted a possible alternative methodology to assess whether the EPS is justified (or not) with respect to the results it could achieve, by comparing it with other border measures/instruments namely : 1) the EU import regime applied for F&V products outside the EPS; 2) the new simplified system for the valuation of certain fresh F&V imported on consignment; and by analysing to what extent these alternative measures can achieve the same EPS results/effects, and if a possible estimate on managing costs can be performed for them. The analysis shows that the EPS can achieve a broader range of results, if compared to these two border measures, although the functioning and management of these alternative measure entails a notably smaller amount of human resources than the EPS.

As far as the "opinion of stakeholders on the EPS efficiency" is concerned, it resulted strongly tied up to the productive or trading character represented by the stakeholders we interviewed, and the overall positive or negative perception resulted as overestimated by the stakeholders if we match it with the overall analysis results we reported on actual effectiveness of the EPS.

The factors that undermine the efficiency of the EPS are thus to be found, as was seen in EQ5, in operating costs incurred to carry out the numerous checks and, with reference to the deductive method, in the extra documentation to be supplied compared with the other two custom clearing methods.

Conclusions on the Export refunds scheme

With regard to ER trends for the global and unit value of expenditure, there was a narrowing of the interval of values (between the minimum and the maximum) that had marked the instrument in the second half of the 1990s (with special reference to fresh products).

In terms of estimates of the benefit of having diverted volumes of Community production from the domestic market, a positive impact was noted in terms of less price variability, the cost of which fluctuated however, depending on the product type (modest for citrus fruits, high for apples). Although it was not possible to accurately compare the ratio "costs incurred/benefit obtained", export refunds did not have a net positive impact in the same way as that recorded for withdrawals.

As far as the ERS objectives of "ensuring export sales at world market prices" and of "protecting Community participation in international trade in F&V" are concerned, the quantitative analyses we conducted in Themes 1-2-3 show that no clear result has been achieved by the ERS in terms of effectiveness, and this reflects consequently on the efficiency of the scheme in achieving its expected results.

Comparing the views of operators with results actually recorded, the general appreciation for the instrument appeared to be overestimated although it is to be stressed that some relevant elements of the world F&V scenario as: *(i) the growth in production and in trading of F&V at a world level; (ii) changes in consumption patterns worldwide; (iii) changes in the organisation of the supply chain; (iv) lowering of transportation costs,* have to be considered in evaluating operators perceiving on the ERS efficiency . There were however some negative opinions about the ERS caused by specific procedural problems confirming the findings we already reported (See EQ5).

An alternative comparable system in terms of impact with ERS is the set of measures to promote Community production in foreign markets. In terms of cost the policies are running on the same levels, but in terms of impact, pending a specific appraisal of efficiency, it has been ascertained from mid-term analyses that stakeholders have expressed great interest in promotional programmes focused on the internal market rather than in third countries. Therefore we can conclude that this instrument cannot be considered at present as an efficient alternative to the ERS in "ensuring export sales at world market prices".

4.5 Theme 5: Coherence

The question seeks to know the extent to which the current instrument is coherent (or not at odds) with objectives (and possible instruments) of the F&V CMO, and of the CAP after the 2003 reform and other Community policies, namely the Common Commercial Policy and the Development Policy. In short, the question seeks an evaluation of the internal and external coherence of the instrument.

4.5.1 To what extent have the entry price and export refunds schemes been coherent with other trade measures in the CMO for fruits and vegetables, with the overall objectives of the reformed Common Agricultural Policy, with the objectives of the Common Commercial Policy, and the EU Development policy? - EQ.7

4.5.1.1 Interpretation of the question and methodological approach

The analysis of the various aspects of this issue requires an appropriate methodological clarification concerning the criterion of "coherence" applied to the specific policies and relatives instruments involved in this evaluation theme.

A policy is an overarching strategy of goals addressed by a number of different policy instruments. Policy instruments are a set of techniques by which public authorities attempt to ensure support and influence or prevent economic and/or social change. Addition to, withdrawal or redesign of an individual policy instrument produces a relevant effect on the dynamic and evolving nature of a policy. The nature of policy instruments can differ significantly in the way in which the instruments bring about results and impacts and the "timescales" (chronological sequence of establishing or modifying regulations) over which these instruments can be expected to occur. For the purposes of the present evaluation, therefore, we take "the extent of coherence" to mean the existing degree of synergy, complementarity or contradiction between the objectives of the two different schemes, the Entry Price Scheme (EPS) and Export Refunds Scheme (ERS), vis-à-vis the objectives of the various policies and measures analysed.

Moreover we have defined as *"internal coherence"* the existing interactions between these schemes and:

- the objectives of F&V CMO trade measures, as defined under Title V of Council Regulation No 2200/96 "Regime for exchange with third countries" (Articles 31-37) and under Title II of Council Regulation No 2201/96 "Exchanges with third countries" (Articles 11-22) preceding the OCM reform of September 2007;
- the overall objectives of the CAP, as reformed by the Council of Ministers in the Luxembourg Agreement of June 2003.

On the other side *"External coherence"* relates to the relationships between these schemes and:

- the objectives laid down in Title IX of the Treaty (Common Commercial Policy), with special reference to the gradual elimination of international trading restrictions and the reduction of customs barriers.
- the objectives expressed in Title XX of the Treaty (Development Policy), which seeks to foster: (i) the sustainable economic and social development of developing countries, in particular those most at a disadvantage, (ii) the harmonious and progressive inclusion of developing countries in the world economy, (iii) efforts to eradicate poverty in developing countries.

In framing this evaluation theme, which is focused on policies and instrument objectives, we also have to take into account the addressees of the two different schemes. The ER scheme is a spending intervention; as is the case of all these programs, addressees are usually the beneficiaries of such intervention. On the other hand, the EP scheme is a non-spending intervention. Non-spending interventions seek to create advantages and disadvantages (often additional costs) in various addressees, with the aim of attaining one or a number of

global objectives. Addressees are therefore not necessarily beneficiaries in this case. However the reason for any public intervention should always be to produce a net benefit for society (advantages should outweigh disadvantages). The coherence evaluation started with an analysis of texts on policies under review, and proceeded with the construction of matrices and diagrams to summarise and highlight complementarities, duplications and conflicts arising between EP and ER schemes and the other policies under review.

4.5.1.2 Judgment criteria and indicators

The proposed method for answering evaluation question 7 is based on the following criteria, indicators and data sources:

Judgement criteria	Indicators	Data sources
1 The EP and ER schemes are or are not coherent with other trade measures of the F&V CMO	Coherence matrix matching EP and ER schemes with other trade measures of the F&V CMO	EU Regulatory framework
2 The EP and ER schemes are or are not coherent with overall objectives of the reformed Common Agricultural Policy	Coherence matrix matching EP and ER schemes with the overall objectives of the reformed CAP	EU Regulatory framework
3. The EP and ER schemes are or are not coherent with the EU "Common Commercial Policy" and with the "sustainable economic and social development of developing countries" EU policy	3.1 Cross-matching logical analysis on intervention logic and or effects of EPS on both EU DP and of EU CCP	EU Regulatory framework
	3.2 Analysis on possible occurrences of exports from developing countries to EU market, frustrated by the functioning of EPS	Results of EQ1 concerning frequency of SIV levels below TEP
	3.3 Cross-matching logical analysis on intervention logic and or effects of ERS on both EU DP and of EU CCP	EU Regulatory framework
	3.4 Analysis on possible concrete occurrences and effects of ER subsiding F&V exports to developing countries where DP is effective	Results of EQ1 Literature

4.5.1.3 Internal coherence: coherence between trade measures of F&V CMO and with the overall objectives of the reformed Common Agricultural Policy

Evaluation analysis was used to examine the degree of coherence or contradiction of the various trade measures in the CMO for fruits and vegetables with reference to the objectives of the EPS and the ERS and the degree of complementarity or conflict between the objectives of these two schemes themselves and the objectives of the reformed CAP.

A1 - Coherence between trade measures of F&V CMO

The trade measures in the CMO for Fruits and vegetables have been defined in Title V of Council Regulation No 2200/96 "Regime for exchange with third countries" (Articles 31-37) and under Title II of Council Regulation No 2201/96 "Exchanges with third countries" (Articles 11-22) preceding the OCM reform of September 2007. Reference has been made to the following:

- EPS - entry prices system, on the basis of which common duty tariffs are applied, including calculation mechanisms based on a flat-rate import value as well as the lodging of a security (Art. 32 of Council Regulation No 2200/96);
- ERS - export refunds system, on the basis of which the EU pays refunds to all Community producers who export to the rest of the world so that their prices are brought to the level of world prices, including the method for quantity allocation and for refund fixing (Art. 35 of Council Regulation No 2200/96);

- TRQs - tariff rate quotas deriving from agreements reached during the Uruguay Round negotiations and systems for managing them (Art. 34 of Council Regulation No 2200/96, Art. 15 of Council Regulation No 2201/96);
- SSP - special safeguard provisions and resulting duties on additional quantities, according to conditions established in Art. 5 of the Agricultural Agreement reached during the Uruguay Round (Art. 33 of Council Regulation No 2200/96, Art. 14 of Council Regulation No 2201/96);
- urgent measures which can be undertaken by the Council at the proposal of the CE when the import or export of some products can cause serious disturbances to the Community market (Art. 37 of Council Regulation No 2200/96, Art. 22 of Council Regulation No 2201/96).

Besides these measures, as already indicated several times, the regulations deal with the system of import and export licenses (Art. 31 of Council Regulation No 2200/96 and Art. 11 of Council Regulation No 2201/96). The coherence analysis does not take this licences system into consideration because it is functional to the operating of both EP and ER systems. For the same reason we do not take into consideration the provisions related to the prohibition of any charge or any quantitative measure having an equivalent effect to customs duty or any measure with equivalent effect, as established by Art. 36 of Council Regulation No 2200/96.

With regard to the regulations regarding the principal trade measures aforementioned and the reconstruction of the specific, intermediate and global objectives of the schemes being analysed, reference is made to previous chapter 2.

On this basis, the construction of matrices was carried out, relating trade measures to the objectives of both schemes, to analyse their degree of coherence, contradiction or indifference:

- interventions regarding the same policy (or different policies), if mutually supportive or leading to the same objectives, are considered coherent,
- interventions regarding the same policy (or different policies), which block the attainment of an objective, are considered contradictory and thus incoherent,
- indifference is understood to be the absence of interaction.

Fig. 47 - Coherence matrix between ER scheme and other trade measures of F&V CMO

	Objectives of ER scheme for fruits and vegetable (fresh and processed)	Other trade measures CMO Fruits and Vegetables			
		Tariff Rate Quotas	Special Safeguard provision	Entry Prices System	Appropriate measures against serious disturbances
Specific	Ensuring proper implementation of the scheme and preventing speculation	/	/	/	C
	Maintaining the flexibility of the scheme taking into account the perishable characteristic of F&V	/	/	/	C
	Ensuring possibility to revise rates and max quantities in the light of economic circumstances	/	/	/	C
	Improving the system in accordance with the economic aspect	/	/	/	C
	Preventing significant overruns of indicative quantities and refunds budget	/	/	/	C
	Managing very precisely quantities of exports	/	/	/	C
	Ensuring possibility to revise quantities and rates on the basis of trends in Community production and outlook of experts	/	/	/	C
	Ensuring prices which are most favourable from the point of view of exportation	/	/	/	C
	Ensuring the method most suited to the product and market situation, most efficient use of resources, efficient for Community export structure, least cumbersome administratively for operators without creating discrimination between operators	/	/	/	C
Intermediary	Protecting Community participation in international trade in F&V	/	/	/	C
	Ensuring export sales at world market prices	/	/	/	C
	Complying annual quantity limits under EU's commitments in the WTO	/	/	/	C
	Complying EU annual budget limits	/	/	/	C
Global	Ensuring a fair income	C	C	C	C
	Stabilising Community markets	C	C	C	C

Legend: C = Coherent; CD = contradictory; *I* = Indifferent

As far as the ERS is concerned, the matrix shows the absence of contradiction with other trade measures of the F&V CMO. In the same way, the existence of a general convergence of the trade measures solely in the direction of global objectives can be noted, while at the level of intermediate and specific objectives, the only measure that gives a picture of positive relationships is the possibility of introducing protective measures against serious disturbances.

In greater detail:

- Because of their nature as import measures, TRQs and SSPs are essentially indifferent to the specific and intermediate objectives of the ER scheme. However, both the TRQ and SSP measures are synergic, thus coherent, with the global objective of market stabilization, as they act on the commercial balance of products present on the Community market. Consequently, they too contribute to the attainment of the objective of ensuring a fair income for agricultural populations.
- ERS and EPS both contribute to guaranteeing producers for reasonable sale prices as well as keeping in check the prices variability. In terms of global goals, the two schemes are thus coherent, even though, as the matrix shows, there is no interaction ("indifference" judgement) between the EPS and the specific and intermediate aims of the ERS.
- The measure introduced by Art. 37 of Council Regulation No 2200/96 and Art. 11 of Council Regulation No 2201/96 concerns the possibility of putting protective measures into action in trade with third countries if, by reason of imports or exports, the Community market is affected by serious disturbances which can endanger the achievement of the objectives set out in Article 39 of the Treaty[103]. This shows a strong synergy with ERS, and in exceptional cases can act to bring market conditions back to normality, while at the same time guaranteeing participation in the international market according to rules defined by the WTO.

[103] To increase agricultural productivity, to ensure a fair standard of living for the agricultural community, to stabilize markets; to ensure the availability of supplies; to ensure that supplies reach consumers at reasonable prices.

With regard to the EPS, a system with a greater number of positive relationships can be seen, and as in the case of the ERS, contradictions with the F&V CMO trade measures are absent.

Fig. 48 - Coherence matrix between the EP scheme and other trade measures of F&V CMO

	Objectives of EP scheme	Other trade measures CMO Fruits and Vegetables			
		Tariff Rate Quotas	Special Safeguard provision	Export Refunds System	Appropriate measures against serious disturbances
Specific	Protection of internal price from world market fluctuations	/	C	C	C
	Avoiding disturbances on the Community market arising from offers at abnormal prices from third countries	C	C	/	C
	Preventing or counteracting adverse effects on the market in the Community which may result from imports	/	C	/	C
	Achievement of a balance between supply and demand at fair prices	C	C	C	C
Intermediary	Preventing repercussions on actual prices within Community from non-EU countries price level and fluctuations	C	C	/	C
	Ensuring produces' price at reasonables level	C	C	C	C
Global	Ensuring a fair income	C	C	C	C
	Stabilising Community markets	C	C	C	C

Legend: **C** = Coherent; **CD** = contradictory; */* = Indifferent

In particular:

- The TRQ measures reflect the EU's international commitments in the WTO (or its relations with non-member countries or groups of countries), and determine that imports of certain products may be subject to quotas, or that preferential tariffs may be granted on imports. Imported products are partially or completely exempted from all customs duties. The TRQ is therefore a system of rules to manage some imports (defined in relation to the period, quantities and type of importers), which basically operates outside the EPS but whose objective is to strike a balance between demand and supply in the Community market. The measure is therefore related to EPS market objectives (quantities and prices) and to agricultural populations' income.
- The SSP measure is strongly related to EPS objectives. This addresses the possibility of introducing measures if there is a danger that the Community market will be seriously disturbed by imports, and is portrayed as a (possible) measure through which to the EC can act on import duties for products subject to the EPS.
- The matrix also shows a good level of interaction between the ERS and the objectives of the EPS, especially relating to producer price stabilization and the maintenance of adequate income for agricultural populations.
- The measure introduced in Art. 37 of Council Regulation No 2200/96 is synergic with respect to all objectives whose purpose is to protect the internal market from price fluctuation, contributing to market stabilization and guaranteeing agricultural income. This measure indeed aims to hinder the effects of a possibly serious disturbance of the EU market (or threat of disturbance) caused by abnormal events.

Evaluation analysis thus allows us to conclude that within the F&V OCM, the trade measures work coherently when taken together towards the attainment of the global objectives of the EP and ER schemes. The analysis also makes it possible to state that there are no inconsistencies between the aims (at various levels) of the two schemes and the set of trade measures within the CMO.

A2 - Coherence with the overall objectives of the reformed CAP

The 2003 reform, as defined by Council Regulation No 1782/2003, introduces a radical change in the intervention logic of the CAP. The objectives of the reformed CAP include:

- ensuring a fair standard of living for the agricultural community,
- increasing market orientation,
- not distorting markets and liberalizing international agricultural exchanges,
- responding to customer demand with regard to price, quality and health,
- promoting rural development,
- promoting sustainable agriculture,
- protecting the environment,
- making support policies more efficient and improving their control,
- respecting budgetary framework.

These objectives have been incorporated into the first part (preamble) of Council Regulation No 1782/2003 of 29 September 2003 "establishing common rules for direct support schemes under the common agricultural policy and establishing certain support schemes for agricultural populations", introducing a number of adjustments to agricultural support, with the primary aim of promoting a more market orientated, sustainable agriculture.

The main change introduced by the 2003 reform is related to the instruments used in order to achieve the above objectives: the free functioning of the market is the instrument determining the quantity and quality level, as well as the agricultural production choices .

At the same time, the reform introduces specific measures to regulate circumstances in which market functioning would not lead to an optimal situation, in particular: (i) income distribution, (ii) non–commercial effects[104] (both positive and negative) of agricultural activities.

The founding principle of the single payment scheme, introduced in Council Regulation No 1782/2003, is to put mechanisms in place to support the income of agricultural producers without interfering with production and exchanges. This has led to a radical change in income support instruments: those used in the past (price support, payments per hectare, payment per head of cattle) have been progressively substituted with a single lump sum payment, as a function of the previous level of assistance.

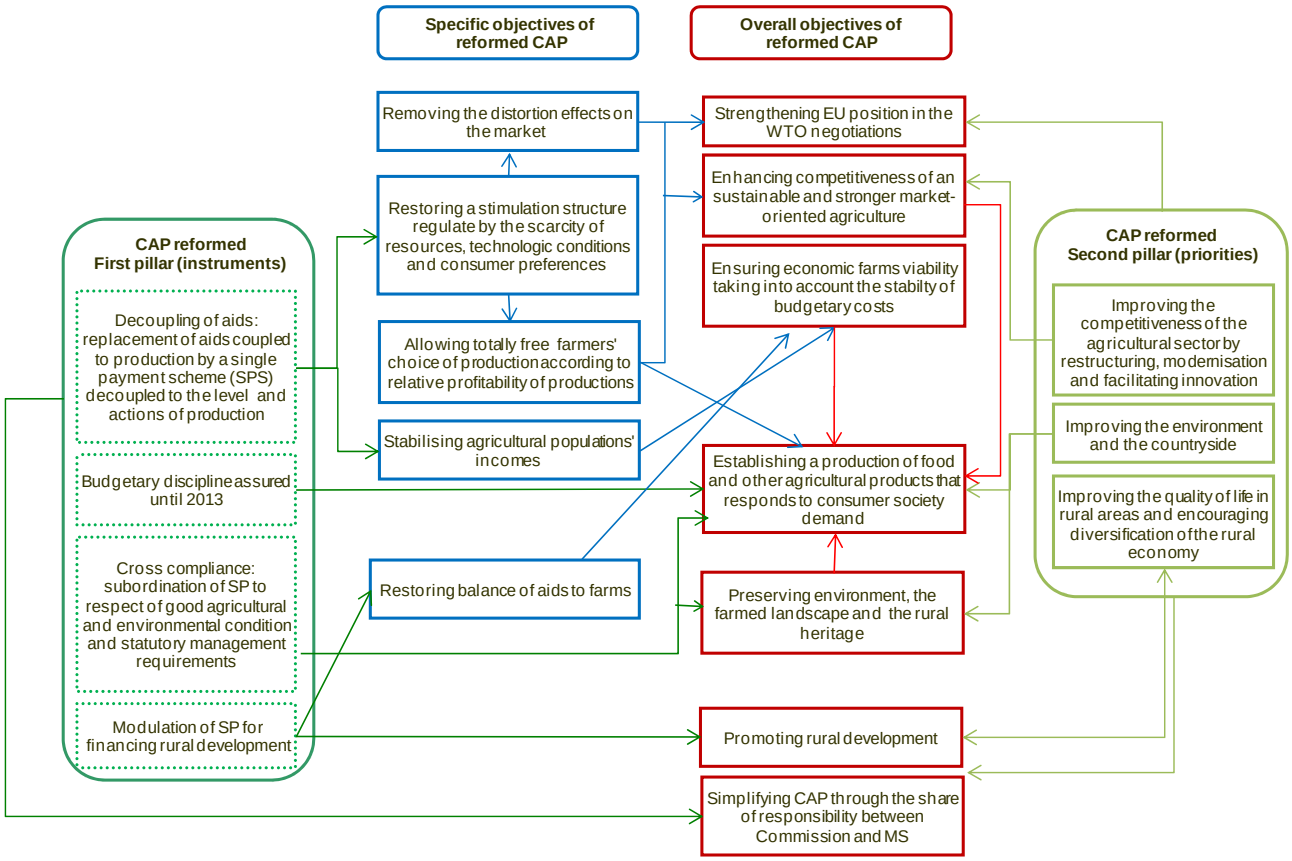
The assistance defined by Council Regulation No 1782/2003 is also subject to cross compliance and modulation:

- "cross compliance" is a system for reducing the total sum of direct payments in case of a lack of compliance with rules regarding the food security, animal welfare as well as good agricultural and environmental conditions.
- "modulation" is a system by which a percentage of all the amounts above a *plafond* fixed by regulations is used to finance rural development.

The 2003 reform should therefore be considered as having been based on two « pillars »: on the one hand the first pillar of the CAP regarding market policy, whose principal instrument is the single payment scheme, and on the other a second pillar, which involves rural development. All this is illustrated in the following diagram, which highlights the functional and interactive connection between the instruments.

[104] Protecting the natural environment, public health, etc.

Fig. 49 - Diagram of the objectives of the 2003 CAP reform



An analysis of internal coherence was carried out using the diagram of the objectives of the reformed CAP, constructing a matrix through which the specific objectives of the CAP after 2003 were compared with the intermediate objectives of the EPS and the ERS. No comparison is represented in the matrix regarding the internal coherence between global objectives of the reformed CAP and global objectives of both EP and ER schemes, as all of these global objectives are deriving from those set out in Article 39 of the Treaty.

It should be emphasised that the matrix considers the two schemes as regulated by Council Regulation No 2200/96 and No 2201/96 and does not take into account the F&V CMO reform of September 2007, established with Council Regulation No 1182/2007 of 26 September 2007, which lays down specific rules regarding the fruit and vegetable sector. This reform amends both Council Regulation No 2200/96 and No 2201/96 and abolishes export subsidies for fruit and vegetables. The reform has come into force in 2008.

Fig. 50 - Coherence matrix between ER and EP schemes and objectives of the reformed CAP

		Intermediary objectives of EP		Intermediary objectives of ER			
		Preventing repercussions on actual prices within EU from non-EU price level and fluctuations	Ensuring producers' price at reasonable level	Protecting community participation in international trade in F&V	Ensuring export sales at world market prices (only ER for fresh F&V)	Complying annual quantity limits under EU's commitments in the WTO	Complying EU annual budget limits
Overall objectives of reformed PAC	Strengthening EU position in the WTO negotiations	/	/	/	/	/	/
	Enhancing competitiveness of an sustainable and stronger market-oriented agriculture	CD	CD	CD	CD	/	/
	Ensuring economic farms viability taking into account the stabilty of budgetary costs	C	C	C	C	/	/
	Establishing a production of food and other agricultural products that responds to consumer society demand	/	/	/	/	/	/
	Preserving environment, the farmed landscape and the rural heritage	/	/	/	/	/	/
	Promoting rural development	/	/	/	/	/	/
	Simplifying CAP through the share of responsibility between Commission and MS	/	/	/	/	/	/

Legend: **C** = Coherent; **CD** = contradictory; ***I*** = Indifferent

It can be seen that there is no relationship between the two schemes being analysed and the global objectives, which are more closely linked to the second pillar (rural development) of the CAP: preserving the environment, farmed landscape and rural heritage and promoting rural development. At the same time one should note the absence of a relationship with the goal of "simplifying CAP through the share of responsibility between Commission and MS".

The matrix also shows that both EP and ER introduce elements of distortion in the F&V sector, and are consequently *theoretically* incoherent with the principle underpinning the reform:

- Through the ERS, the intervention of the Community tends to remunerate fruit and vegetable producers in some measure, and this takes the form of support that *could* operates as an incentive systems offering encouragement to produce, with a direct effect on the behaviour of producers. The scheme is therefore a *theoretical* potential distortion of trade and of the market, because *it could encourage* production choices which do not fully correspond to the logic of competition and the free market promoted by the reformed CAP, thus favouring the preservation of less competitive sectors/production.
- With reference to the EPS, the existence of the system adopted only for some types of F&V makes it *theoretically* possible to keep internal prices for these products higher than would be possible without the scheme, thus it influences the productive behaviour of F&V enterprises when choosing what to produce. In this sense, it may thus be said that the existence of the EPS is *a priori* an element of distortion with regard to production choices made by F&V producers, and is at odds with the specific goals of the CAP, namely those of removing the distortion effects of the market and allowing totally free farmers' choice of production, and consequently the related aim of restoring a stimulation structure regulated by the scarcity of resources, technological conditions and consumer preferences.

This first conclusion of an existing contradictory relationship between both the ERS and EPS with the reformed CAP has to be carefully considered taking into account relevant contextualization elements of the actual functioning of the ER and of the EP schemes in these last years. As quantitative analyses we conducted in Themes 1-2-3 show:

- no clear result has been achieved by the ERS in terms of effectiveness in achieving its specific objectives,
- a firm conclusion on the EPS effectiveness cannot be depicted, as concerns price variability , as well as a counterfactual analysis showed that prices of products either imported out of the EU production season or from faraway countries are generally higher than EU farm prices, while the prices of products competing directly with EU domestic production are often lower. However, the effect of

the EPS is not clearly identifiable and therefore it is not possible to firmly conclude that the EPS is able to affect prices and the market orientation of EU farmers.

Therefore although at a first glance we can deduct a theoretical contradictory relationship between both the ERS and EPS with the reformed CAP, the quantitative results we achieved lead us to conclude that *the actual functioning of both schemes did not result in an concrete distortion of the free functioning* of EU market.

With regard to the objective of reinforcing the negotiating position of the European Union within the WTO, the diagram of the objectives of the 2003 CAP reform (Fig. 49) shows that this is basically tied up with the introduction of decoupling and consequently the removal of the effects of market distortion caused by coupled aid. All of this relates to the third pillar of the Uruguay Round (domestic support), whilst, the EPS is part of the first pillar (market access), and the ERS forms part of the second pillar (export subsidies), therefore a coherence analysis between ERS, EPS and this objective of the reformed CAP is not relevant.

4.5.1.4 B) External coherence: coherence of EP and ER schemes objectives with the Common Commercial Policy, and the EU Development policy

In this case too evaluation analysis was used to examine the degree of coherence or contradiction of the objectives of the EPS and the ERS with the objectives of the Common Commercial Policy (CCP) and of EU Development Policy (DP).

The Common Commercial Policy features

The EU has evolved during the process of globalisation by aiming for the harmonious development of world trade and fostering fairness and sustainability. It actively encourages the opening of markets and development of trade within the multilateral framework of the World Trade Organisation (WTO). At the same time, it supports developing countries and regions through bilateral relations with a view to involving them in world trade by using preferential measures. These aims derive from art. 133 of the Treaty establishing the European Community which represents a common legal base for commercial and development (trade) policies, as part of the external relations common framework.

The common commercial policy is based on a set of uniform rules under the Customs Union and the Common Customs Tariff and governs the commercial relations of Member States with third countries. Its aim is "to contribute, in the common interest, to the harmonious development of world trade, the progressive abolition of restrictions on international trade and the lowering of customs barriers". Furthermore the Community's common commercial policy has to comply with WTO requirements, and in particular with the GATT Enabling clause of 1979, and is to be consistent with and consolidate the objectives of EU Development Policy, in particular the eradication of poverty and the promotion of sustainable development and good governance in developing countries. In this context, it is to be stressed that since 1971, and so even before the Enabling clause was inserted into GATT rules, the European Community has granted trade preferences to developing countries, within the framework of its scheme of generalised tariff preferences (generalised system of preferences, GSP).

At present the preferential agreements, all of them providing for preferential duty rates for imports into the EU (as already analyzed in detail in Chap. 2, Para. 2.1.6) can be grouped into two clusters[105]:

Preferential Agreements:

- EFTA countries
- Western Balkan countries (the former Yugoslav Republic of Macedonia and Croatia)
- Mediterranean Countries
- Other countries and territories (Africa, the Caribbean and the Pacific "ACP countries", South Africa, Mexico, Chile, Andorra, Faroe Islands/Denmark).

Autonomous preferential concessions:

[105] In Chapter 2 we gave a specific description of the functioning of preferential duty rates for the most relevant arrangements.

- Overseas Countries and Territories
- Generalised System of Preferences, GSP
- Western Balkan countries (Albania, Bosnia and Herzegovina, Serbia and Montenegro)
- Ceuta and Melilla.

As can be seen, these two clusters include most developing countries.

EU Development Policy features

Development cooperation has had a specific legal basis (Title XX - Articles 177 to 181 of the Treaty) only since the European Union Treaty came into force in 1993. The EU's Development Policy is implemented by a wide range of legal and financial instruments, as widely diversified as the needs of the countries concerned.

The objectives expressed in Title XX of the Treaty, are aimed at fostering:

- the sustainable economic and social development of developing countries, in particular those most at a disadvantage,
- the harmonious and progressive inclusion of developing countries in the world economy,
- efforts to eradicate poverty in developing countries.

In addition to these economic and social objectives, there is a political plan: to help reinforce democracy and the rule of law, whilst promoting respect for human rights and basic freedoms.

The legal instruments of the Development Policy (DP) are *convention-based* or *unilateral*.

The *convention-based system* relates to the reaching of international agreements, in particular the association agreements referred to in Article 310. These agreements are either multilateral, associating the Community with a large number of partners (e.g. the Lomé Conventions), or bilateral, governing relations between the Community and a single country.

The *unilateral system* is based on Article 133, which governs the Common Commercial Policy, the basis of the Generalised System of Preferences (GSP), designed as a way to facilitate access to the Community market for products from developing countries. Also Art. 308 allows the Community to develop financial and technical aid for Asian, African and Latin American countries, and thematic actions in areas such as food aid, humanitarian aid or the fight against diseases.

The financial appropriations for development cooperation are granted by:

- the Community budget according to a geographical aid approach focused on three zones (Mediterranean basin, Asia and Latin America, southern Africa granted in the form of donations, is mainly for financial, technical and economic cooperation) and a thematic or sectoral approach, using specific budget headings (beneficiaries are all around the world, including the African, Caribbean and Pacific countries, the most important aspects are food aid, humanitarian aid and cooperation with NGOs);
- the European Development Fund (EDF), which receives contributions from Member States, calculated according to a specific distribution key. A specific five-year fund has been allocated to each convention. This funding for ACP countries has been almost exclusively made up of donations since Lomé IV;
- the European Investment Bank (EIB), which grants loans as part of its external activities.

Development Policy, as mentioned above, allows the Community to develop financial and technical aid in developing countries aimed at fostering their production sectors. Agriculture development in those countries therefore benefits directly from the EU DP.

B1 – External coherence of the Entry Price scheme

If we first analyze the intervention logic and or effects of EPS separately on both EU DP and of EU CCP we can observe the following:

Cross-matching the EP scheme instruments and functioning, as reported in details in Chapter 2, with the aforementioned EU DP features, we can first notice that EPS functioning, as implemented within the CAP,

may appear as contradictory with the implementing actions of EU DP. EPS functioning indeed, as detailed in Chap. 2.1.3, is based on a differentiated system of duties applicable to specific F&V products and therefore could represent a barrier to the EU imports of those F&V productions which could possibly have been supported, in developing countries, also with Community DP financial and technical aid. It is to be highlighted that this deduction is only valid for northern hemisphere F&V productions: (i) included in the EP scheme, (ii) that due to their nature (not highly perishable products as oranges, lemons, apples and pears) or to limited transport costs (such as tomatoes from Morocco to the Spanish market) can access EU markets at a competitive price.

On the other hand the existence and functioning of Preferential Duty Rates settled by CCP implementation (as mentioned above) results in strong reductions[106] of import duties. Therefore also for the EU CCP we can notice how its functioning may appear to have a negative impact on the effectiveness of the EP instrument, thus determining a possible contradiction with the EPS.

By proceeding with this deductive analysis to the observation of the simultaneous interaction of the three different policies, CAP, DP and CCP, we can notice that the first two results of a separate analysis are overturned: it is indeed the simultaneous interaction of the three different policies that provides "system coherence". Preferential Duty rates indeed, which result as being granted to all developing countries where DP provides financial and technical aid, rebalance the possible existing incoherence between EPS and DP, and at the same time avoids the possible existing contradiction between EPS and CCP.

Unfortunately a quantitative analysis on the actual functioning of Preferential Duty Rates, as well as on the actual payment of the MTE, cannot be performed due to the lack of data by product and by origin country for the different duty levels (normal duty – specific duty – MTE) levied at the Community entering border.

Therefore we tackled the EPS external coherence analysis using another approach. Taking the results seen by the analysis we conducted in Theme 1 EQ1, about how often the SIVs have fallen below the trigger Entry Price (thus determining a concrete barrier for EU imports from third countries), we can evaluate whether the possible export of F&V products of developing countries to the EU market can be frustrated by the functioning of the EPS. The results are as follows:

- In the case of imports from the northern hemisphere, we observed occurrences of SIVs below the trigger EP for countries closer to the EU border; the situation varies according to the product involved.
- In the case of imports from the southern hemisphere, occurrences of SIVs below the trigger entry price are relatively few, and they are mostly observed in periods when there are few imports.

Both results point to the fact that specific structural elements in developing countries (such as farm specialization, transportation costs and climate conditions), contribute in avoiding that their possible production and exports to the EU market of F&V products within the EP scheme is frustrated by the EP scheme.

B2 – External coherence of the Export Refunds scheme for fresh and processed products

In this case too we first approached the question via a logical analysis on the possible interactions and/or theoretical effects of the ERS vis-à-vis DP and CCP. A preliminary observation is that the ER scheme is fully coherent with the CCP, the latter implying uniform conduct of trade relations with third countries, in particular by means of a common customs tariff and common import and export regimes.

On the other hand, we can observe that ERS can impact on actions implemented in developing countries by DP, namely financial and technical aid aimed at developing their Agricultural sector. As we have reported in Para. 2.2.2 (functioning of the ER scheme), EU operators may benefit indeed from ER subsidies for the export of specific F&V products, and no limitations or differentiations on subsidy levels are defined in EC Regulations with regard to the destination country of exports. Therefore we can assume the theoretical possibility of ER subsidising specific F&V exports to developing countries.

[106] As reported in details in Chapter 2.

We then explored the possible concrete existence of specific occurrences of ER subsidising F&V exports to developing countries where DP is in place. As we already discussed in EQ1, ER subsidies have been in decline in recent years, and their evolution over time by destination country was shown in Fig. 10 "*Export refunds for fruits and vegetables (fresh and processed) by destination. FY 2000-2006"*. What is interesting to observe as regards the present discussion is that, as summarized in Fig. 10, the share of "Rest of the world" is almost 38% of total ER in the period 2004-2006, and in these last three years this share appears to be slightly increasing. Furthermore, we have observed that in the same observed period (2004-2006) there have been occurrences of exports granted by ER subsidies also in developing countries where DP is in place. In the following Tab. 53 are reported the first 10 countries, listed among the developing countries recipients of DP aids, and the total ER expenditure for 34 of the Least Developed Countries (LDCs) recipients[107] of DP aids in the period 2004-2006.

Tab. 53 - Export refunds for fresh and processed F&V: expenditure by destination country – first 10 developing countries – and country share out of total ER expenditure (2004-2006)

	Country Name	Export refunds expenditure 2004-05-06 (euro)	Country share on total ER expenditure (%)
1	SAUDI ARABIA	2 362 656	3.1%
2	CROATIA	2 120 375	2.7%
3	ALGERIA	1 586 565	2.0%
4	SERBIA AND MONTENEGRO	1 031 444	1.3%
5	MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF	933 507	1.2%
6	BOSNIA AND HERZEGOVINA	825 224	1.1%
7	KOREA, REPUBLIC OF	790 446	1.0%
8	ALBANIA	616 123	0.8%
9	MALAYSIA	581 655	0.8%
10	SOUTH AFRICA	545 027	0.7%
	First 10 Developing countries	*11 393 022*	*14.7%*
	Total for 34 Least Developed Countries (LDCs)	*1 100 350*	*1.4%*
	Total ER expenditure for fresh and processed F&V (2004-05-06)	**77 395 226**	**100.0%**

Source: DG AGRI data, processed by Agrosynergie

Unfortunately the only financial data available do not allow us to offer a quantitative analysis by product or even the possibility of estimating specific product quantities. Their actual share of specific production or of EU exports in each of the developing countries is not however relevant for the present "logical analysis" on coherence, what is significant is the theoretical and actual occurrences that we assessed. Therefore from the logical analysis it initially appears that the functioning of the ER scheme may directly or indirectly interfere with DP objectives[108], distinguishing between:

- *direct effect:* the loss of domestic market shares of domestic production in developing countries, caused by access to those markets of products granted EU subsidies;
- *indirect effect:* the loss of possible international market shares of developing countries' production, caused by competitive EU exports granted EU subsidies.

Because of the impossibility of performing a quantitative analysis on F&V products included in the ER scheme, as mentioned above, we then explored the results of a recent study (published in October 2006)

[107] Developing countries and LCDs recipients of DP aids, included in our analysis, are listed in: DAC List of Aid Recipients – Part I: Developing Countries and Territories (Official Development Assistance)

[108] As expressed in Title XX of the Treaty, Development Policy is aimed at fostering:
- the sustainable economic and social development of developing countries, in particular those most at a disadvantage,
- the harmonious and progressive inclusion of developing countries in the world economy,
- efforts to eradicate poverty in developing countries.

carried out by GRET[109] on the impact of Export Support Measures and Food Aid on Food Security, on some major agricultural worldwide exported products such as: wheat, sugar, rice, soya, dairy products, bovine meat and poultry meat. Although this study was not focused on F&V products (and in addition, most of products examined by GRET are storable), and although it assessed the possible impacts of abolishement of all export subsidies and similar measures by major world providers of these measures, some macro-economical findings of the results, concerning the Export Support Measures for "major agricultural products" (to which some of the F&V products we are analysing, as apples, oranges and tomatoes can be assimilated), are useful for contextualizing and deep our discussion of the external coherence of the ERS.

A first general result reported by the study highlights as a determining factor the different socio-economic context of analysed export destination countries: *"It is difficult, on the strength of the analyses performed on the "product/recipient country" pairings selected, to draw general conclusions as to the nature of the impact of export support measures and food aid in the recipient countries. This is because the socio-economic context in which the imports arrive is a determining factor."* Thus representing a first limitation to the possible nature of actual distorting effects of ER in developing countries. This also leads us to deduce that the possible concrete non-coherence between ERS and DP can widely differ by developing country, depending on factors (socio-economic) that may be considered exogenous to the functioning of both ERS and DP.

A second study result concerns imported volumes as well as infrastructural elements of the destination developing countries: *"The impact of food aid and supported exports on recipient countries, as seen through the products and countries selected in this study, stretches all the way from "no impact" up to "strong competition", placing local production in jeopardy. There is usually "no impact" when the volumes concerned are small: the isolated situation of a country, market dysfunctions and/or weaknesses in the internal transport system, solvency of demand (wheat or rice in Bangladesh and Mali, wheat in Tajikistan, maize in Malawi). There is a strong and unfavourable impact in the case of large volumes which are inconsistent with local production (wheat in Ethiopia, maize in Guatemala)."* Thus again resulting in a highly differentiated picture. In any case, this result allows us to deduce, considering the specific nature of both categories of F&V products granted by ER, that: (i) as regards most fresh F&V, their perishability does not allow for high exporting volumes to developing countries, thus resulting in a further limiting element to the actual possibility of ER frustrating destination countries' production, (ii) on the other hand, for processed F&V or for storable products such as apples or oranges, and for those cases where there are small quantities of competing productions in that specific destination country, there could even be a high impact of ERS on local production, causing in that specific situation a possible concrete non-coherence of ERS with DP (under the assumption of specific production aid provided by DP and the simultaneous occurrence of a competing imported product granted ER).

These results are clearly pointing to the conclusion that, in practice, the ERS does not necessarily interfere with developing countries' production, thus limiting the general and theoretical non-coherence judgement about ERS vis-à-vis EU DP, which may result from an initial appraisal.

4.5.1.5 Conclusions

Evaluation analysis examined the degree of coherence of the EP and ER schemes with other trade measures in the CMO for fruits and vegetables, with the reformed CAP (internal coherence) and the objectives of CCP and EU Development policy (external coherence).

Conclusions on internal coherence of the EP and ER schemes

First, the internal coherence analysis specifically studied the coherence of different trade measures in the CMO and the objectives of the EPS and the ERS. It proceeded by analysing the coherence between the objectives of the two schemes being evaluated and the objectives of the reformed CAP. This was done by constructing specific matrices.

[109] http://ec.europa.eu/agriculture/eval/reports/food_security/index_fr.htm

The matrix showing internal coherence among trade measures of the F&L CMO clearly shows the absence of negative relations, in other words measures which impede the attainment of one of the objectives of the two schemes analysed. Furthermore, a general convergence of trade measures towards the global objectives of the two schemes was found: stabilising community markets and ensuring a fair income to the rural population. In particular:

- The ERS and the EPS both contribute to guaranteeing farm producers a reasonable level of sale prices and to limiting relative variations. In terms of global objectives, the two schemes are thus coherent, even though, as the matrix highlights, there are no relations ("indifference") between the EPS and the specific and intermediate objectives of the ERS.
- The TRQ is a system of rules to manage some imports whose objective is the balance between demand and supply in the Community market. The SSP measure is a (possible) through which the EC can act on import duties for products subject to the EPS. Both TRQ and SSP measures are therefore strongly related to EPS market objectives and to rural populations' incomes.
- TRQ and SSP measures are essentially indifferent to the specific and intermediate objectives of the ER scheme, but as they act on the commercial balance of products present in the internal market they are synergic, and thus coherent with the global objective of market stabilisation.

A matrix was built using a diagram illustrating the objectives of Council Regulation No 1782/2003 to compare these objectives with the intermediate objectives of the two schemes provided for in the F&V CMO (as designed in the Council Regulation No 2200/96 and No 2201/96), with reference to the internal coherence analysis between EPS and ERS and the reformed CAP.

The analysis highlighted the fact that the two schemes, introducing elements of distortion within the F&V sector, appear as being *theoretically* not coherent with the principle underpinning the reform: stronger market orientation. The ERS remunerates fruit and vegetable producers and operates using incentive systems, such as the encouragement to produce: this *theoretically* encourages production choices that do not fully correspond to the logic of competition promoted by the reformed CAP. With reference to the EPS, the existence of the system adopted only for some types of F&V makes it *theoretically* possible to keep internal prices (for these products) higher than would have been obtained in the absence of the scheme, thus the scheme *theoretically* influences the productive behaviour of F&V firms when deciding what to produce. This first conclusion of an existing contradictory relationship between both the ERS and EPS with the reformed CAP has to be carefully considered taking into account relevant contextualization elements of the actual functioning of the ER and of the EP schemes. The results of quantitative analyses we have previously reported show that no clear result has been achieved by the ERS in terms of effectiveness in achieving its specific objectives, as well as it is not possible to firmly conclude that the EPS is able to affect prices and the market orientation of EU farmers. Therefore although at a first glance we can deduct a theoretical contradictory relationship between both the ERS and EPS with the reformed CAP, the quantitative results we achieved lead us to conclude that *the actual functioning of both schemes did not result in an concrete distortion of the free functioning* of EU market.

Conclusions on external coherence

Our analysis started with the identification of the main features, related to this specific discussion, of both Common Commercial Policy (CCP) and of EU Development Policy (DP).

By means of a logical analysis on the theoretical effects of the EPS, DP and CCP, it appeared that the simultaneous interaction of the three different policies, CAP, DP and CCP, provides for "system coherence". Preferential Duty rates indeed, granted through the implementation of CCP preferential agreements, to all of the developing countries where DP provides for financial and technical aid, rebalance the possible existing incoherence between the EPS (based on a differentiated system of import duties which could represent a barrier to developing countries' exports to EU) and Development policy measures.

A second approach to evaluating the external coherence of the EPS was that of considering the results of the analysis we conducted in Theme 1 - EQ1 on how often SIVs have fallen below the trigger Entry Price (determining a concrete barrier for EU imports from third countries). In this case too it emerged that farm

specialization, as well as climate conditions in developing countries, determine that their production and exports to EU market of F&V products within the EP scheme are not actually frustrated by the EP scheme.

For the ERS external coherence too we first conducted a logical analysis on the possible interactions and/or theoretical effects of the ERS, DP and CCP.

It emerged that the ER scheme is fully coherent with the CCP, the latter implying uniform conduct of trade relations with third countries, in particular by means of a common customs tariff and common import and export regimes.On the other hand, we detected the existence of a theoretically contradictory relationship between the ER and DP schemes. Namely, the absence in EC Regulations of limitations or differentiations on ER subsidy levels, depending on the destination country of exports, may directly or indirectly interfere with DP objectives. distinguishing between:

- *direct effect:* the loss of domestic market shares of domestic production in developing countries caused by access to those markets of products granted by EU subsides;
- *indirect effect:* the loss of possible international market shares of developing countries' production, caused by competitive EU exports granted by EU subsides.

Furthermore the actual occurrence of cases of EU exports granted by ER, also in developing countries where DP is in place, lead us to conclude there could be a contradictory relationship between ER effects and Development policy objectives. These initial conclusions have to be carefully weighed up, taking into account the following relevant contextualization elements about the actual functioning of the ER and DP schemes:

- the possible concrete incoherence between the ERS and DP can widely differ by developing country, depending greatly on factors exogenous to the functioning of both schemes: the specific socio-economic situation of the country.
- the impact of supported exports on recipient countries' productions can differ all the way from "no impact" up to "strong competition", depending on product volumes. Considering the specific nature of both categories of F&V products granted by ER, we can conclude that: (i) as regards most fresh F&V, their perishability does not allow for high exporting volumes to developing countries, thus resulting in a limited concrete possibility that ER will frustrate destination countries' production, (ii) on the other hand, for processed F&V or for storable products such as apples or oranges, and for those cases where there are small quantities of competing productions in that specific destination country, there could even be a high impact of the ERS on local production, causing in that specific situation a possible concrete non-coherence of the ERS with DP (under the assumption of specific production aid provided by DP, and the simultaneous occurrence of large quantities of a competing imported product granted by the ERS).

These contextualizing elements of the actual functioning of ER and DP schemes are clearly pointing to the general conclusion that the ERS does not necessarily interfere with developing countries' production, thus limiting the general and theoretical incoherence judgement about ERS vis-à-vis EU DP, which may result from an initial appraisal.

5. CONCLUSIONS AND RECOMMENDATIONS

This section of the report summarizes the main findings and conclusions of the evaluation exercise and puts forward some recommendations for changes that should be introduced in the policy, based on the results of the analyses discussed in this study. The main findings and conclusions are organised around the five themes on which the study is structured: (i) stability of the EU market; (ii) development of EU trade; (iii) competitiveness of the EU fruit and vegetables sector; (iv) management, administration and efficiency of the entry price and export refunds schemes; (v) coherence.

The study developed an ex-post evaluation of two measures regulating the EU trade of F&V: the entry prices and the export refunds schemes. The analysis has been carried out through a counterfactual approach comparing the performances posted by products included in each scheme with the products not included. The evaluation also used other analytical tools, such as:

- an econometric gravity model to assess the factors behind bilateral trade flows of different products;
- price elasticities of demand, to evaluate the stabilisation effects of the ER scheme;
- trade models based on a static partial equilibrium approach to simulate the effects of the phasing out of the two schemes
- deep interviews.

The main limitation of the counterfactual approach is its unfitness to identify the role played by factors specific to each product. Moreover the analysis is not able to take into account the impact that particularly the EPS may have on the behaviour of economic agents involved in it. A further limitation arises from the fact that no information and data on the payment of the Maximum Tariff Equivalent (MTE) was available. Therefore in carrying out the analysis we could not assess whether in cases in which MTE was chargeable it was actually charged or not, and consequently could not evaluate EPS effects on its actual functioning.

Theme 1: Stability of the EU market

The analysis conducted within Theme 1 was aimed at assessing the possible effects played by the EP and ER schemes on the stabilisation of EU F&V markets and in avoiding market crises. We assumed that these effects could be the result of:

- sheltering EU markets from external shocks in world supply/demand in the case of EPS;
- reducing the instability of the internal market by transferring internal shocks to world markets in the case of ERS.

The effects of the EP scheme on the stability of EU market

The analysis performed on the EP scheme has identified the following points:

- the pressure of imports on the EP system, identifying the time distribution of SIVs lower than the trigger EP and their relationships with imports flows of different products covered by the EP scheme;
- relationships between changes in the quantity of exports to the EU and the variation of production of the main partner country through the counterfactual approach of the EPS;
- the effects of the EP scheme on domestic price variability;
- the effects of the EPS on the price variability of products exported by main partner countries to the EU and to other countries;
- relationships between the EPS and withdrawals from the EU internal market.

These points have been analysed from different perspectives and with a wide range of indicators. The comparison of daily SIVs with the trigger EP identified the conditions under which the MTE should be applied, showing very different situations. In general, for a large number of products and origin countries, **the relative difference between the SIVs and trigger EP has been constant or increasing, and only a relatively small number of SIVs were below the trigger EP**. In these cases, the price structure seems linked to the geographic origin of imported products, with transportation costs playing a key role. However there are some products, such as tomatoes, lemons and plums that show a very different picture, particularly in the case of some origin countries, often close to EU borders.

The analysis on the stabilization effects of the EPS showed that **very often F&V exhibit variations in exports to the EU that are larger than variations in internal production observed in the main partner country, and that there is no difference whether products are covered by the EPS or not**. This is not surprising, taking into account, on the one hand, the marketing strategies of large retailers chains, aimed at increasing the array of fresh F&V offered to their customers with products imported off season from southern hemisphere countries and, on the other, the way in which the retail chains organize their supply of fresh perishable foods.

Also, the analysis of price variability at different market levels **does not provide a firm answer as regards the stabilization effect of the EP scheme**. However, a deeper analysis carried out on daily imports of tomatoes from Morocco highlighted that they are not linked to the SIVs, whose level is dependent on the prices of Spanish tomatoes. Although the analysis was based on data referring to a short period of time, it is possible to affirm that in this case the EP system had no effect on the daily imports of tomatoes from Morocco even in periods in which the SIVs were below the trigger EP.

Withdrawals are the main tool of the F&V CMO in managing possible surplus crises of the EU internal market. The study analysed possible relationships between imports and withdrawals, excluding the concurrence of high imports and recourse to withdrawals**. The analysis did not show** relationships between SIVs below the trigger entry price and withdrawals. In this case too it was difficult to ascertain whether additional imports might have entered the EU if the EPS had not been in place.

Although the analyses do not prove the existence of a clear stabilisation effect of the EPS, it must be kept in mind that, given the large number of preferential agreements granting zero tariff access to the EU market to F&V imports, the EPS is an instrument that adds to the safety net provided by the CMO.

The effects of the ER scheme on the stability of EU market

The analysis performed on the contribution of the ER scheme to stabilisation and to avoiding market crises attempted to identify the following points:

- distribution and timing of ER;
- effects of the variability of EU domestic production on the granting of ER to products benefiting from the subsidy;
- the impact of ER on domestic price variability;
- effects of ER on price variability of products exported;
- timing of withdrawal of a product and of ER granted to that product.

The analysis started with the assessment of the overall relevance of the scheme over the period 1995-2006. Since the quantities of products benefiting from ER represented relevant shares only for oranges and lemons, the potential impact on the stability of the EU market has been assessed for these two products in particular. The assessment of the impact of ER on EU domestic price stabilisation was conducted under the assumption that if the scheme had not been in place the quantities of product benefiting from it would have been sold on the internal market. The potential impact of this assumption was explored considering various possible values of the relevant demand elasticity. We showed that **to obtain significant effects in terms of price stabilization from the quantity of product admitted for the ER subsidy, a very high price sensitivity to the variation in internal supply would be needed,** implying very low absolute values for the elasticity of

demand, lower than those estimated in the previous evaluation on withdrawals, for the recorded ER to have a significant effect.

The analysis of correlations between changes in export refunds and changes in total exports and in total production showed that **there is no clear relationship among these variables**, and that ERs do not respond to changes in domestic production. The ER scheme might have had an effect in terms of the distribution of exports by destination, by increasing the amount of F&V reaching neighbouring countries, such as some Central and Eastern European Countries, at reasonably low prices.

The other road taken in the analysis was that of indirectly revealing a possible systematic impact of the ER scheme, based on the comparison of products whose exports are entitled to refunds and products that are excluded from the scheme. We compared quantities exported, prices and their variations for the set of products chosen for the counterfactual analysis, and did not find a clear distinction that could be led back to the presence of export refunds. The evidence taken all together suggests that, **even if a stabilizing effect of the ERS on EU domestic prices cannot be ruled out, the analysis does not allow us to identify it due to the effect of other factors outweighing it.**

For the export refund system, based on an objective analysis of available data, we conclude that it had negligible effects in stabilizing the EU Fruit and Vegetable market.

Theme 2: Development of EU trade

The objective of this evaluation theme is the assessment of the impact of the EP and ER schemes on the EU trade of F&V with third countries. Basic assumptions have been that the EP scheme, by drastically reducing the imports of low priced F&V, may have influenced EU market access to products imported from third countries, and the ER scheme, by subsidising exports of some F&V to third countries, may have favoured EU products in order to obtain a larger share of world markets.

As regards the EP scheme, the study combined the analysis of trade flows, calculation of protection levels on preferential and non preferential imports and assessment of the possible phasing out of EP by using a partial equilibrium model.

With regard to the ER scheme, the analysis looked at the dynamism of EU export flows, the extent to which export changes can be associated with changes in ER and the use of a partial equilibrium model to assess the possible phasing out of ER for selected products.

The effects of the EP scheme on the development of EU trade

The analysis considered 9 products within the EP scheme (tomatoes, artichokes, cucumbers, oranges, clementines, apples, pears, table grapes and courgettes) and 8 products outside the EP scheme (onions, beans, asparagus, sweet peppers, grapefruits, melons, strawberries, kiwifruit). **There is no evidence that the EP scheme has constrained import growth of the relative F&V products** in the period 2000-2002 to 2004-2006, at least in comparison with the post-URAA period (1995-97 to 2000-2002). A first explanation refers to the implementation of the URAA agreements that pointed to a significant reduction of the protection provided by the system during the period 1995-2001. A second explanation concerns the pricing policy of products to which EPs are applied, referring to (i) the role of EPs in avoiding disturbances in the Community market arising from offers at abnormal prices from third countries and (ii) the value upgrading caused by the increase in transport costs and quality demand from retailers. Nevertheless, the EP scheme functions when an import surge takes place, as happened for pear and apple products during the last seasons. **The EP system can also be relevant for certain seasons, products and suppliers, in particular products of a perishable nature and origins having lower transport costs to the EU market. We consider the EP system as a way of signalling market perturbations rather than a relevant trade restriction**.

Ad Valorem Equivalents were calculated to measure the protection level implied by the EPs, under different preferential partners and products. In short, except for the cases of tomatoes and cucumbers in certain seasons and surplus situations, **reduced EPs have had little influence on trade flows**. The value of the preference margin or tariff revenue forgone by the EU with the preferential schemes is in general of little

importance. There was only a significant relevance of the EP reduction in monetary terms in the case of Moroccan tomatoes and, to a lesser extent, Moroccan clementines.

A partial equilibrium trade model helped to simulate the impact on monthly import flows in the EU-25 from main sources that would result from the simulated phasing out of the EP scheme. The application of the trade model considered two vegetables (tomatoes and cucumbers) and two fruits (table grapes and clementines). For those four products the impact of removing the entry price seems negligible in several months. Vice-versa the model shows significant effects on EU imports only in given months by product (e.g. November for tomatoes). The maintenance of the system could therefore be restricted, by product, to those periods of the marketing year when occurrences of SIVs below the trigger EP are most recurrent.

The effects of the ER scheme on the development of EU trade

In the period 1995-97 to 2004-2006, the dynamism of EU exports of F&V products within the ER scheme was generally worse than that of products not benefiting from ERs. Nevertheless, it seems difficult to isolate the impact of the ER scheme from other effects that determine export competitiveness. In the case of fresh fruits such as oranges and apples, the increasing competition of a wider variety of fresh fruits, many of them exotic in nature, does not favour export growth. Because of non-price factors including the role of private standards, **we cannot come to firm conclusions about the reasons why products within the ER scheme performed worse than products outside the ER scheme**.

Total ER expenditure for total fresh F&V reached about 38% of the WTO ceiling in 2005-2006. In the last two seasons expenditure increased slightly for some products, in particular fresh apples, which is clearly related to EU Enlargement. The percentage of exported quantities eligible for ER also declined dramatically. For total fresh F&V this percentage decreased from 53% in 1995-1995 to 20% in 2005-2006. For processed F&V the decrease was even larger, from 31% in 1995-1996 to 14% in 2005-2006. Average expenditure figures are presently about 5% of the export price for products like oranges and lemons, with significantly lower rates for other products covered by the ER scheme. **These levels cast doubts as to the effectiveness of ER for export promotion strategy, unless the subsidies are concentrated on targeted shipments or destinations. There is no evidence of an association between ER expenditure and export changes**. This supports the hypothesis suggested by some trading experts, who see the ER instrument as a measure to alleviate the EU market in times of saturation rather than an export promotion strategy.

A partial equilibrium trade model was used to simulate the impact of a full removal of export subsidies on apples, table grapes, fresh tomatoes and oranges, products that account for 80% of export refunds for fresh F&V. **Only oranges appeared to be slightly affected by the phasing out of ER**. The phasing out of export refunds appears to be a welfare improving measure that would allow budgetary resources to be used more efficiently.

Theme 3: Competitiveness of the EU fruit and vegetable sector

The evaluation theme is aimed at understanding the effects caused by the EP and ER schemes on the ability of the EU F&V sector to compete both on the internal and on the world market, and in terms of market orientation, which can be considered as the ability of producers to react to changes in consumer preferences.

The analysis was carried out using descriptive indexes calculated for different products and origin/destination countries, according to the counterfactual analytical approach. The assessment focused on the following aspects:

- building indexes that measure the competitiveness of EU products in the period following the implementation of the new ERS and of EPS;
- estimating the effects of the EPS and ERS on producer prices.

The effects of the EP scheme on the competitiveness of the EU F&V sector

The various indexes proposed to synthesise the competitiveness of the EU F&V sector have compared the performance of products covered by the EP with that of products outside the system. In general, the indexes show that **the ability of the EU F&V sector to compete in world markets is significantly affected by Euro exchange rate trends**.

The EU F&V **sector's competitiveness does not seem to be related to the kind of external protection measures characterising different products**, since both F&V under the EPS and products outside of it show the same evolution. In this situation it is difficult to isolate an effect generated by the EP system. What can be said, in keeping with the findings of the previous evaluation theme, is that **the EP scheme has not kept imports of F&V products out of the EU market, particularly those from southern hemisphere countries, in periods in which they do not compete directly with EU production**.

The counterfactual analysis showed that prices of products either imported out of the EU production season, or from faraway countries, are generally higher than EU farm prices, while the prices of products competing directly with EU domestic production are often lower. However, the effect of the EPS is not clearly separable, since what has been observed for farm prices is also true for F&V under the EP scheme and for products outside it. In this situation **it is not possible to conclude that the EPS is able to affect price signalling**, reducing the market orientation of EU farmers.

The effects of the ER scheme on the competitiveness of the EU F&V sector

During the period following the implementation of the new ERS, the competitiveness of EU exports of F&V in world markets showed an **improvement for some fruits not included in the ER scheme**. On the other hand, the competitiveness of EU exports of oranges, the product that benefited most from ER, was reduced. Given the large and continuous decrease of both the unit subsidy and the quantity of oranges that received ER, **it is possible that in the past, before the implementation of the URAA and immediately after, the ER helped the external competitiveness of that product.**.

The effects of ER on farm prices are more difficult to assess. The **analysis does not allow us to conclude that the ER scheme had effects on farm prices**. Therefore it has not been possible to ascertain if the ER had a distorting effect on farm market orientation.

We have already underlined that in the F&V sector price competition is becoming less important than in the past, while competition is increasingly linked to non-price factors like the ability to meet supply requirements requested by large retailer chains. These requirements are related both to the timing and articulation of supply and to the fulfilment of the private quality standards that have become compulsory when supplying large retailers. In this framework **it is quite understandable that the configuration given to the ERS was growingly unfitted to provide a support to external competitiveness of EU fresh F&V.**

Theme 4: Management, administration and efficiency of the entry price and export refunds schemes

The analysis conducted in this theme was aimed at assessing to what extent the management and administration of both schemes was adequate for the purpose, as well as the extent to which the whole system has been efficient in achieving the objective of stabilising prices and supporting the competitiveness of EU F&V producers, taking into account its evolution over time.

To evaluate the management and administration system our analysis focused on the assessment of the simplicity of procedures and their proportionality in achieving the specific objectives of the schemes. This analysis was carried out on the most relevant procedures of both EP and ER schemes, by means of:

- deep interviews with 55 organisations in seven MSs,
- analysis of regulatory frameworks and of procedure implementation at different levels (both EU Commission and MSs level),

- analysis of Commission Audit reports, as well as guidelines and other documentation published at national level.

The evaluation judgement on efficiency of the EP scheme was formulated by comparing to what extent existing alternative border measures/instruments can achieve same results of the EPS, and if a possible estimate on managing costs can be performed for them.

The efficiency of ER instruments in achieving their objectives was also assessed by comparing the expenditure for ER with a measure having similar market stabilization objectives - F&V withdrawals - and with measures having similar objectives of boosting exports: promotion measures for agricultural products, undertaken in third countries and regulated by Council Regulation No 2702/1999.

Management and administration of the EP scheme

It emerged that **procedures are generally perceived as sufficiently simple and proportionate, with the following major criticalities:**

- The need for a standard and homogeneous **procedure to collect market prices and quantities** (at present differentiated by MS with direct data surveys in the market and telephone-based data collection).
- **SIV calculation method and parameters** (i.e. deductions for transport and insurance costs) were not brought into line with F&V market structural and context changes over time, resulting in the risk that SIVs levels can be frequently and noticeably lower than actual market prices.
- The unpredictability of **daily SIV fluctuations**, which appeared to be relevant to operators' decision making.
- Of the three possible EP declaration methods the **"deductive method"** is considered quite complicated because it is more bureaucratic, risky and costly in administrative terms.
- Furthermore, the implementation in accordance with Commission Regulation No 3223/94 of the general Custom clearing procedure, which is based on the **importer's free choice among three different duty calculation methods**, appeared to be at odds with the Community Customs Code, which does not allow this free choice.

Efficiency of the EP scheme

The analysis of operating costs concerning Entry Price management might have given some interesting elements for the evaluation of the efficiency of the instrument. However, apart from a qualitative representation of the phenomenon, we do not have sufficiently detailed information. Moreover, the results described in the previous evaluation themes failed to isolate the actual contribution of the EPS in terms of price stabilization and producer's competitiveness. Therefore the analysis of efficiency is mainly based a comparison with other border measures/instruments namely : 1) the EU import regime applied for F&V products outside the EPS; 2) the new simplified system for the valuation of certain fresh F&V imported on consignment. The analysis shows that the EPS can achieve a broader range of results, if compared to these two border measures, although the functioning and management of these alternative measure entails a notably smaller amount of human resources than the EPS.

Furthermore, if the concept of efficiency also includes the improvement of market transparency conditions for the purposes of its stabilisation, one must recognise the **contribution of the EPS in this sense**, thanks to the publication of the prices of products (daily SIVs publication) entering Community borders.

Management and administration of the ER scheme for fresh and processed products

Our analysis focused on four most relevant procedures, and was based on opinions collected by means of deep interviews to only 28 of the 55 organisations interviewed because of the non-use of ER in some MSs or

because other organisations were not involved in the management of the ER scheme. It must be stressed that only a few operators benefiting from ER subsidies for processed products were available for our interviews.

It emerged that **procedures are generally perceived as being sufficiently simple but not always proportionate to the objectives**, although in this case too with some differences. **Major criticalities were:**

- The lodgement of a **20 euro/ton security** requested for "A3 Application system with advance fixing of the refunds", which is considered as a constraint for medium and small exporting firms.
- The **unpredictable availability of ER subsidy** in the "B Application system without advance fixing refunds ". Related to this is the fact that operators, noticing that each periodical allocation of ER subsidies by product is exhausted very frequently in the first 8 to 15 days, consider this procedure as not appropriate for their export support needs.
- The **"Customs controls" procedure** is considered as excessively bureaucratic and involving an excessive number of Customs checks.
- The excessively high number of documents requested and checked within the **"ER payments" procedure**, creating the general perception of it being not proportionate to the objectives.

Efficiency of the ER scheme

Although it is difficult to assess ER in terms of the stabilisation of the internal market, because of the constraints introduced after the URAA, the efficiency of ER instruments both for fresh and processed F&V products was assessed by comparing the cost of support instruments with results obtained in terms of price stabilisation as well as in supporting the EU F&V producers' competitiveness.

The efficiency of the ER instrument in achieving its goals was also assessed by comparing ER expenditure with that of a measure having similar market stabilisation objectives: F&V withdrawals.

For withdrawals, the predicted effects on prices in their hypothetical absence showed that they might have had a non-marginal effect on price stabilisation for some products, although differences by product for different countries resulted in a wide range of results. The analysis on ER conducted in Theme 1, and in particular the projected impact on average prices in case of a possible phasing out of ER for fresh F&V, highlighted that the presence of the ERS might have generated non negligible deadweight effects, in the sense that observed exports could also have been realized without the granting of export refunds, with no significant impact on quantities and prices at the EU level. In conclusion, if we compare the EC budget of the two instruments set up in the F&V CMO, it emerges that:

- **the expenditure for withdrawals generated concrete and identifiable effects on price stabilization**. Even if those effects resulted non homogeneous depending on the observed market and product, it has been possible to give a positive judgement in terms of expenditure efficiency.
- **we cannot say the same in the case of the ERS, whose actual contribution, in terms of efficiency, can only be linked to isolated cases**, like oranges and lemons, in conditions of unreasonably low price elasticity.

Looking at estimated results about the **benefits of withdrawing Community production from the internal market, it is possible to highlight a positive impact in terms of lesser price variability**. The related cost oscillates, however, widely by product (limited for citrus fruits, high for apples). Even if it is not possible to compare in a homogenous way the link between the actual cost and the registered benefit, **the ER scheme does not show net positive impacts such as those registered in the case of withdrawals**.

Comparing the views of operators with results actually recorded, the general appreciation for the instrument appeared to be overestimated although it is to be stressed that some relevant elements of the world F&V scenario as: *(i) the growth in production and in trading of F&V at a world level; (ii) changes in consumption patterns worldwide; (iii) changes in the organisation of the supply chain; (iv) lowering of transportation costs,* have to be considered in evaluating operators perceiving on the ERS efficiency. There were however

some negative opinions about the ERS caused by specific procedural problems confirming the findings we already reported.

The comparative analysis on efficiency we conducted between ERS and measures having similar objectives of boosting exports, as promotion measures for agricultural products in third countries, showed that in terms of cost these two policies are running on the same levels, but in terms of impact, pending a specific appraisal of efficiency, it has been ascertained from mid-term analyses that "*professional organisations and the Member States have expressed great interest in launching programmes on the internal market rather than in third countries*". Therefore we can conclude that **this instrument cannot be considered at present as an efficient alternative to the ERS** in "ensuring export sales at world market prices".

Theme 5: Coherence

The analysis conducted within Theme 5 was aimed at assessing the existing degree of coherence or contradiction between the objectives of the two different schemes, EPS and ERS vis-à-vis the objectives of a requested set of policies and measures. Considering the different measures and EU policies involved in the present evaluation theme we have defined as:

- *"internal coherence"* the existing interactions between both EPS and ERS and, on the one hand, the objectives of F&V CMO trade measures, and on the other the overall objectives of the CAP, as reformed by the Council of Ministers in June 2003.
- *"external coherence"* the relationships between both schemes (EPS an ERS) and the objectives of (i) Common Commercial Policy (CCP); (ii) Development Policy (DP).

Internal coherence of EP and ER schemes

The analysis specifically studied first the coherence of different trade measures in the CMO and the objectives of the EPS and the ERS. We then proceeded by analysing the coherence between the objectives of the two schemes being evaluated and the objectives of the reformed CAP. This was done by constructing specific matrices.

The coherence matrix between the trade measures of the F&L CMO (EPS; ERS; TRQs - *tariff rate quotas*; SSP - *special safeguard provisions and the resulting duties on additional quantities*) clearly shows the **absence of negative relations**. In other words the absence of measures which impede the attainment of one of the objectives of both EP an ER schemes analysed. Furthermore, a **general convergence of trade measures towards the global objectives of the two schemes** was found: "stabilising community markets" and "ensuring a fair income to the rural population".

A specific matrix was built to perform an internal coherence analysis between EPS and ERS and the reformed CAP, comparing Council Regulation No 1782/2003 objectives with the intermediate objectives of the two schemes (EPS and ERS) provided for in Council Regulation No 2200/96 and No 2201/96. This analysis revealed that **both schemes, by introducing some distortion factors in the F&V sector, appear to be *theoretically* not coherent with the basic principle of the reform: "stronger market orientation".** The ERS indeed remunerates F&V producers and operates as an encouragement for specific F&V products, this *theoretically* encourages production choices which do not fully correspond to the logic of competition promoted by the reformed CAP. On the other hand, the existence of the EPS allows *theoretically* to keep F&V products prices, in the domestic market, at a higher level than would have been possible in the absence of the scheme, thus influencing operators' production choices. **This theoretical conclusion has to be prudently evaluated in the light of analysis results, reported in the previous evaluation themes, on the actual functioning of the EP scheme**. The results of quantitative analyses we have previously reported show that no clear result has been achieved by the ERS in terms of effectiveness in achieving its specific objectives, as well as it is not possible to firmly conclude that the EPS is able to affect prices and the market orientation of EU farmers. Therefore although at a first glance we can deduct a theoretical contradictory relationship between both the ERS and EPS with the reformed CAP, the **quantitative results we achieved lead us to conclude that *the actual functioning of both schemes did not result in an concrete distortion of the free functioning* of EU market.**

External coherence of EP and ER schemes

Our analysis started with the identification of the main features, related to this specific discussion, of both EU policies: CCP and DP.

By means of a logical analysis of the theoretical effects of the EPS, DP and CCP, it appeared that the **simultaneous interaction of the three different policies - CAP, DP and CCP - provides for a "system coherence"**. The Preferential Duty Rates indeed, granted through the implementation of CCP preferential agreements to all of the developing countries where DP provides for financial and technical aid, rebalances the possible existing incoherence between the EPS (based on a differentiated system of import duties which could represent a barrier to developing countries' exports to the EU) and Development policy measures.

A second approach for evaluating the external coherence of the EPS was that of considering the results of the analysis we conducted in Theme 1 - EQ1 in terms of how often SIVs have fallen below the trigger Entry Price (thus producing a concrete barrier for EU imports from third countries). In this case too it emerged that **farm specialization, as well as climate conditions in developing countries, mean that the possible production and exports from these countries to the EU market of F&V products within the EP scheme are not actually frustrated by the EP scheme.**

For the ERS external coherence too our first approach was a logical analysis on the possible interactions and/or theoretical effects of the ERS, DP and CCP.

It first emerged that the ER scheme is fully coherent with the CCP, the latter implying uniform conduct of trade relations with third countries, in particular by means of a common customs tariff and common import and export regimes.

On the other hand, we established **the existence of a theoretically contradictory relationship between the ER and DP schemes**. Namely the absence in EC Regulations of limitations or differentiations on ER subsidy levels, depending on the destination country of exports, may directly or indirectly interfere with DP objectives due to: (i) a loss of domestic market shares of domestic production in developing countries, caused by the access to those markets of products granted by EU subsidies; (ii) a loss of possible international market shares of developing countries' production, caused by competitive EU exports granted by EU subsidies.

Furthermore actual occurrences of EU exports granted by ER subsidies also in developing countries where DP is effective led us to a first conclusion of a possible contradictory relationship between ERs effects and DP objectives. **These first conclusions have to be carefully considered taking into account relevant contextualization elements of the actual functioning of ER and DP schemes**, which are clearly pointing to the general conclusion that **the ERS does not necessarily interfere with developing countries' production, thus limiting the general and theoretical non-coherence judgement of ERS vis-à-vis EU DP**, which might appear at first glance.

Recommendations

In addition to providing the answers to specific evaluation questions, as stated in the previous paragraph, the analysis conducted led us to formulate recommendations aimed at making possible improvements to the Entry Price scheme.

After the start of the evaluation exercise, Council Regulation No 1182/2007 of 26 September 2007 reformed the CMO of the F&V sector, abolishing the granting of ER for F&V. Therefore we do not put forward recommendations on this scheme. With this premise, our main recommendations for possible ways of improving the current EP system, following the evaluation themes' order, are as follows:

1. A partial equilibrium trade model helped to simulate the impact on monthly import flows that would result from the simulated phasing out of the EPS. Results show a negligible impact in several months and significant effects only in given months by product. Consequently, as efficiency is concerned, we recommend the maintenance of a flexible system restricted, by product, to those periods of the marketing year when occurrences of SIVs below the trigger EP are most recurrent.

2. The daily SIV fluctuations, which can be very large, may have a destabilizing effect on operators' decision-making processes. In order to remedy the unpredictability of daily SIVs and to further simplify this procedure, it is therefore recommended that daily SIV publications be replaced with a weekly (or twice-weekly) publication of the average of daily SIVs. Therefore this should not modify the daily data collection of prices and volumes on representative markets which represents, at present, a useful market monitoring instrument.
3. This evaluation has highlighted the absence of a standard and homogeneous procedure to collect data on market prices and volumes (in some MSs it is carried out by direct data surveys in the market, in others it is performed by telephone data collection, in others still it is a mixed procedure of direct and telephone data collection). As a consequence, the quality of data supplied to the EC can differ widely from MS to MS. Therefore, we recommend the definition of a standardized procedure for collecting, at national level, and cross-checking or validating data on market prices and volumes.
4. The results of our analysis reveal that procedures to calculate SIVs do not take into account the changes that have occurred since the coming into force of the EP scheme for prevalent marketing channels of F&V. The increasing share of large retailer chains in the fresh food retailing sector has substantially modified the marketing channels of these products. Growing quantities of F&V are procured through long-term contracts between large suppliers and distribution platforms of large retailers; this reduces the relevance of traditional marketing channels, centred around wholesale markets located near production and consumption areas. The shortening of the supply chain leads us to recommend a study on how to revise the process of price data collection for a better assessment of the real relevance of imported fresh F&V.
5. One of the major criticisms detected by the present evaluation concerns methods and parameters for computing SIVs. We have reported that SIV levels are frequently noticeably lower than the actual market prices to which they refer. Possible causes of this distortion can be related to the fact that SIV calculation methods and parameters: (i) have not been adjusted to increasing transportation and insurance costs; (ii) are based on wholesale prices and not on the final prices of the large-scale retailers, who have the most weight on markets; (iii) still consider as reference the prices on representative markets as established by Commission Regulation No 3223/94, despite the fact that, over the years, some of those markets/entry points have lost their relevance and are now marginal. This leads us to recommend a possible updating of SIV computation methods and parameters.
6. The evaluation has highlighted an apparent contradiction between Commission Regulation No 3223/94, which introduced the three EP declaration methods from which to choose "at the discretion of the importer" and the Community Customs Code (CCC), which does not allow this free choice. Thus we recommend that a single interpretation be found by the EC to clear up this dispute.