Vegetable trade flows between the European Union and its Mediterranean partners: an analysis of the influence of preferences and competitiveness*

Víctor David MARTÍNEZ GÓMEZ**, José María GARCÍA ÁLVAREZ-COQUE**

1. Introduction

Since the mid-1990s, the European Union (EU) has strengthened its relationships with the Southern and Eastern Mediterranean Countries (SEMC) by means of the Euro-Mediterranean Partnership launched at the Barcelona Conference (held in November 1995). This partnership is based on two main policy instruments and its main goal in the economic field is to create a Mediterranean Free Trade Area.

The two instruments for achieving this goal are, first, financial cooperation through the MEDA programme, which is a single financial assistance package for all the countries within the Partnership and provides funds to address structural, environmental, social and adjustment-related issues. The second policy instrument involves the bilateral trade agreements that the EU has negotiated (and is still negotiating in the case of Syria) with several SEMC, the so-called Euro-Mediterranean Agreements (E-MA). These EMAs can be understood as a means to offset the Eastern Enlargement (May, 2004) and, perhaps more so as a means to improve the relatively poor results of the Mediterranean Cooperation Agreements signed during the

Abstract

The Euro-Mediterranean Partnership process utilizes Association Agreements as tools to enhance integration between the European Union (EU) and Southern and Eastern Mediterranean Countries (SEMC). As these arrangements have an agri-food protocol, an assessment of their actual consequences on trade flows is useful to determine the scope of preferences. By using the "constant market share" methodology, it is possible to break down the observed variations in trade flows between two periods among several sources of change. These sources include the improved access to the destination market, the advances in competitiveness, and the increase in imports from the destination country. Our study focuses on the export of vegetables and tomatoes from eight countries or groups of countries to the EU-15. The findings show that the preference effect becomes essential to maintain market shares for EU producer members, whereas for SEMC this effect has not led to any widespread increase in exports. Moreover, the other two sources mentioned remain key to the configuration and variations in trade flows.

Résumé

Le processus de partenariat Euro-Méditerranéen utilise les accords d'association comme instrument pour l'intégration régionale entre l'UE et les pays du Sud et de l'Est de la Méditerranée. Comme tous ces accords reposent sur un protocole agroalimentaire, il est utile d'analyser leurs conséquences sur les flux commerciaux afin de déterminer les préférences. En employant la méthode « constant market share », il est possible d'identifier l'origine des changements du volume du commerce entre deux périodes. Ces sources de changement peuvent être : l'amélioration de l'accès au marché de destination, les progrès de la compétitivité et l'augmentation des importations du pays de destination. Notre analyse a été réalisée sur les exportations de légumes et tomates de huit pays ou groupes de pays vers l'Europe à 15. Les résultats montrent l'importance des préférences pour conserver les parts de marché dans les pays producteurs de l'UE, alors que pour les pays tiers cet effet ne s'est pas traduit par une expansion des exportations. De plus, les deux autres sources citées sont des éléments-clés dans la définition et dans les variations des flux commerciaux.

1970s. This study focuses on the agricultural aspects of the EMA, which receive special treatment under these Agreements. Indeed, as with most trade agreements, agricultural becomes one of the exceptions to the full liberalisation trend being market access to agricultural products incomplete. This limited scope of the access is mutually provided through preferential provisions.

In this paper, we make a quantitative assessment of the relevance that the preferences given to two agricultural products - vegetables and fresh tomatoes- have had in the EU imports from certain countries, including three SEMC (Morocco, Egypt and Turkey) and one group of them (Algeria, Tunisia, Syria and Lebanon) and compare this relevance with other factors that might affect trade. After reviewing briefly the preferences given to agricultural products, we shall explain the methodology used in our assessment and describe the data gathered, the countries and products involved. The results of our assessment are followed by the main conclusions drawn from our analysis.

2. Agricultural preferences

Agricultural products are included in the different EMAs through separate Protocols that identify the products included and the scope of the special treatment. As mentioned earlier, the degree of liberalisation achieved tends to be

** Department of Economics and Social Sciences, Universidad Politécnica de Valencia (Spain)

lower than the one accepted for other kinds of products such as manufactured goods. Generally speaking, certain products are given special treatment through particular preferences related to the Most Favoured Nation (MFN) conditions. With regards to the preferences given by the EU to SEMC in current EMA, they are mostly based on the concept of "historical trade flows" and on past agreements[1].

The concept of historical trade flows implies that the EU concentrates its preferential treatment in specified agricultural products, the ones that the SEMC traditionally export to European countries. Obviously, the so-called Mediterranean products -namely, olive oil, fruits and vegetables- are the ones receiving better access conditions, due to the fact that SEMC have tended to exploit their comparative advantages in the production and trade of these products in the past. As García Álvarez-Coque (2004) indicates, this situation tends to aggravate the North-South conflict of interests within the EU. In a recent paper, Dell'Aquila and Velázquez calculate an index of similarity in SEMC-EU trade and affirm that "…competition among the EU and the SEMC seems to be concentrated in Mediterranean products and to involve EU Southern countries." (2004: 45).

In the present study, we shall examine the full scope and empirical consequences of preferences in the trade of certain Mediterranean products from the SEMC in order to enlighten part of the North-South discussion and to analyse SEMC export performance. Before initiating these tasks, it may be worthwhile to review how preferential treatment is given to SEMC exports[2].

Since the Uruguay Round Agreement, signed on the 15th of April 1994, the EU has used the entry prices mechanism to protect its domestic market of fruits and vegetables. The entry prices mechanism represents, as discussed by Swinbank and Ritson (1995), a virtual exception to the general tariffication compromise. This mechanism may be changed as a result of the current World Trade Organisation (WTO) negotiations under the Doha Development Agenda, which sets January 2005 as the date for finalising negotiations. Unlike other agricultural products, fruits and vegetables from non-EU countries face a border tariff whose amount depends on the CIF price at customs. The lower the CIF price is, the higher the border tariff to be paid. This mechanism aims to prevent the entry of "very low priced" imports that could destabilise EU markets, but, as we discuss in a report prepared for the Spanish Ministry of Agriculture, Fisheries and Foods (MAPA, 2003), this mechanism does not completely isolate the EU market from world price

changes, unlike the pre-Uruguay Round "reference prices" border regime. For another key Mediterranean product such as olive oil, the MFN import regime consists of a specific tariff; thus, it is not an exception to the market access compromise as described for fruits and vegetables.

Within this framework, the agricultural Protocols generally give preferences through different -and not necessarily exclusive- means. On the one hand, for most products, a tariff rate quota (TRQ) or a reference quantity (RQ) is conceded. For exports within the quota, the MFN tariff is reduced or eliminated for the SEMC product. For the quantities that exceed the quota, tariff reductions are granted for some products and countries, while the full MFN tariff must be paid in other cases. While this quota is calculated using the "historical trade flows" referred to earlier, it is debatable as to whether or not the quantitative limits of the quota act as an actual barrier for the SEMC exports[3].

On the other hand, a second type of concession reduces the entry price for certain products. If this country-specific entry price is accompanied by a TRQ or a RQ, it generates a quota-rent or potential transfer to exporting countries. Whether it becomes an actual transfer or not depends mainly on the way in which in-quota import licenses are awarded.

One point to highlight is that the two aforementioned concessions are most often given on a seasonal or monthly basis during the commercialisation campaign. Usually, they tend to be more generous when European production is not enough to satisfy domestic demand. But, again, the North-South conflict arises. Indeed, EU Southern producers complain that the preferences act as "open windows" to the EU market when the Northern countries are not able to produce due to climatic constraints (i.e. from October to March or April), while becoming "closed windows" during productive campaigns in the North (mainly from May to September). Following this argument, the national preference is eroded only for Southern producers, who produce during the same seasons as SEMC countries because they belong to the same agro-climatic region. The counter argument is that for most produce, the "worst" case for EU products is to maintain about three-quarters of the market share in winter months (from November to February)[4].

3. Methodology: the import growth decomposition approach

There are several methods to assess the consequences of trade liberalisation and/or to measure the scope and impact

---

[1] See Grethe and Tangermann (1998) and the reference quoted there.
[2] The "other side of the coin" is that the SEMCs also give preferential accession conditions to a number of agricultural exports from the EU. Usually, they cover "continental" products such as cereals, dairy products, sugar and beef instead of Mediterranean products. As we are not dealing with this direction of the trade flows, this point remains open for future investigation. In any event, a list of these products can be found in Dell'Aquila and Velázquez (2004).
[3] In another paper (Martínez Gómez and García Álvarez-Coque, 2004), we elaborate on this issue. Among other points, we conclude that for most countries, the existing TRQs do not limit exports from SEMC (Moroccan tomatoes being the main -and quite relevant- exception).
[4] In other cases, such as oranges in the summer, the lowest market share for European production is below 50%. In this case, the relatively low market share is due to the fact that the "open window" months are counter-seasonal periods, when SEMC cannot produce and take full advantage of the preference obtained. Hence, EU imports have origins other than Mediterranean countries.

of trade preferences. When explaining "the current situation", one interesting approach addresses the value of trade preferences by means of the preference margin. The preference margin, while not implying a direct transfer to the SEMC (but a potential one), is a useful indicator of the degree of preference in quantitative terms. This methodology has been used by Grethe and Tangermann (1998) to assess preferential trade conditions granted by the EU to the SEMC after the Uruguay Round but before the current E-MA (as well as other preferential trade regimes in other papers). They measured this preference margin and their calculations showed that it is of a significant value in most cases. If it is measured as a share of the value of agricultural exports to the EU, the preference margin reaches an average value of 6.7%, with maximum shares of 11.4% received by Tunisia and 9.0% by Morocco. In monetary terms, the total value of the margin is 170 million Euros for SEMC countries, with about 90 million Euros assigned to Morocco and 40 million Euros to Tunisia.

In MAPA (2003) and Martínez Gómez and García Álvarez-Coque (2004), we used the preference margin approach to assess the Moroccan EMA. In these studies, the methodology was adjusted to properly evaluate the complexity of the preferences given simultaneously (TRQ, seasonality and reduction of entry prices). The calculations yielded a value of 157 million Euros to the Moroccan preference margin and, hence, highlighted the fact that the agricultural Protocols of the EMA can be understood nowadays as a fundamental source of trade gains for SEMC, gains that these countries aim to increase by re-negotiating the Protocols.

That being said, we chose a different approach for the present examination, aiming at the comparison of the effect of preferences in trade flows with the effects of other circumstances that might affect also trade performance. By using a methodology developed by García Álvarez-Coque and Bautista (1994),[5] we aim to "explain the past". As this is a common behaviour of economists, let us explain the way we proceeded and why this approach might be useful to clarify the role of preferences in trade variation.

A comparison between the trade flow of a product in different time periods may indeed provide insight into the actual effects of changes in the factors influencing trade conditions. Having these different values of trade flows, it is possible to identify the "sources" of such a variation of trade flows. In the present analysis, we assume that these sources are three: 1) changes in competitiveness of the exporting countries; 2) changes in countries' abilities to enter into the destination market; and 3) changes in the demand of the destination market. Naturally, these three sources emerge simultaneously in a given period, and we may observe the result of their combined effect. This methodology provides us with a distribution of the changes occurring in the import flows into each source. Further, it allows for the assessment of the relative importance deriving from each source of change. To make this distribution and assessment, we proceeded as follows.

First of all, we must determine the monetary values of the exports from country "i" to the destination market in two different periods. Concerning the "k" product, let us denote each one of these values as M_{ik}. The total amount of exports of that product to the destination market -or the total amount of imports from the destination market- is referred to as M_k. As the destination market has several suppliers, it is possible therefore to calculate the market share of "i" country for the two periods chosen (m_{ik}). Afterwards, that market share can be split into two different elements by comparing it with the country's market share in total world trade of the product (noted s_{ik}). Hence, we can isolate the three different sources of export growth from country "i". For each one of the two periods, we have:

$$M_{ik} = (m_{ik}/s_{ik}) \times s_{ik} \times M_k$$

The first factor ($m_{ik}//s_{ik}$)- in the remainder, that rate will be called (p_{ik})- compares the market share in the destination market that the "i" country maintains with its actual world market share. Once established this value, we can indicate whether or not the country is presenting a relative specialisation in the destination market. There are several reasons that can explain such specialisation.

One can think about the distance of "i" country from its preferred destination compared with its average distance from the "world market". Additionally, reasons such the "historical trade flows" could influence the degree of specialisation. But if we choose two periods closely related in time, the effect of both factors (distance and historical trade flows) may be overlooked. However, there is another reason at play in regards to market specialisation: if the market access conditions are different in the two periods, the rate p_{ik} must somehow reflect that difference.

The second factor (s_{ik}) indicates the ranking of the country in the world market for the product. It can be seen as a proxy of its competitiveness, because if this factor changes in the time period covered, it can be assumed that certain internal variations within the country -or competing exporter countries- are responsible for the changes in the world market share. The nature of such variations can range from the changes in the relative prices for exports to other elements -different of price- that influence more in trade from year to year: product differentiation, the improvement of post-harvest, transport and commercialisation structures, the degree of fulfilling retailers' requirements, internal policies of exporting countries, and the like. In brief, we can combine all these elements under the "competitiveness" label, taking into account internal supply features.

The last factor (M_k) represents all the aspects related to the demand in the destination market that are likely to change due to variations in consumers' incomes and preferences.

---

[5] Fioravanço (2000) also uses this methodology to analyse Brazilian exports of tropical fruits during the 1990s.

Once this decomposition into factors is made for the base and the end-of-period years, the next step is to calculate the total variation in exports from "i" country to the destination market between the two years (ΔM_{ik}). This increment will be also a function of the three factors mentioned above. In economic terms, by using the Ceteris paribus approach, we assume that one of the three factors changes while the other two remain unchanged. Hence, the observed changes in the trade flows will only be due to that factor which varies. If this procedure is used alternatively, we can obtain the entire decomposition of the variation in trade flows as the addition of the changes in the three factors. In mathematical terms, we obtain the following equation:

$$\Delta M_{ik} = [\Delta p_{ik} \times s^0_{ik} \times M^0_k] + [\Delta s_{ik} \times p^0_{ik} \times M^0_k]$$
$$+ [\Delta M_k \times p^0_{ik} \times s^0_{ik}] + [\text{ residual factor}]$$

where ΔM_i represents the variation in exports from "i" country to the destination market between the end-of-period and the base year, the superscripts ^{0} indicating the value in the base year, while î is the calculation of the difference between the value of the factor in the end-of-period and the base year. Notice that the residual term encompasses all the cross-relationships or interactions between the terms (double and triple partial derivatives)[6]. The other three terms between brackets indicate (in order):

$$[\Delta p_{ik} \times s^0_{ik} \times M^0_k]$$

• The effect of the changes in market access on the total trade flow that the "i" country faced in the time span considered, or country preference effect, namely, the variation of the total trade flow only if the market access conditions or preferences had changed, with no variations either in the country's competitiveness or in the demand of the destination market.

$$[\Delta s_{ik} \times p^0_{ik} \times M^0_k]$$

• The effect on the total trade flow arising from the changes in the destination market conditions, called import growth effect, illustrating the variations in the exports from country "i" if no changes had occurred either in the market access conditions or in the competitiveness of the supplier and only the demand had changed in the destination market.

$$[\Delta M_k \times p^0_{ik} \times s^0_{ik}]$$

• The effect on the total trade flow arising from the changes in the destination market conditions, called import growth effect, illustrating the variations in the exports from country "i" if no changes had occurred either in the market access conditions or in the competitiveness of the supplier and only the demand had changed in the destination market.

This methodology has been applied to the trade of the main exporting products from the SEMC: fresh vegetables, products for which the export specialisation indexes for the SEMC as a whole are among the highest ones[7]. Additionally, we have isolated the case of fresh tomatoes, given that in value the tomato is the most important agricultural product exported to the EU by SEMC.

We have chosen the whole EU-15 as the destination market, while for supplier countries the selection takes into account all the main exporters to that market, including some EU Member States. The distinction maintained between Northern and Southern European countries can be useful to highlight any differences that may exist in the effect of preferences among them and also compared to the ones received by SEMC.

Thus, the eight suppliers are Spain, the Netherlands, the rest of EU-15, Morocco, Egypt, Turkey, the other SEMC (Algeria, Tunisia, Syria and Lebanon) as well as the rest of the world. Despite the fact that this list does not match completely with the main suppliers for every fresh vegetable, it can be understood as a reasonable generalisation that can be modified for a different product-specific evaluation.

Regarding the separation of effects, the main question after making the calculations is whether the suppliers belonging to EU-15 are experiencing a reduction in their national preference in favour of suppliers from other countries having improvements in their accession, be it through EMA or the Uruguay Round Agreement. Furthermore, if there are indeed any differences within EU producers or within SEMC, they will be brought to light by the separation of effects. For this purpose, a proper selection of the periods covered is crucial.

Hence, with regards to the periods considered, as the base year we have calculated the average values of trade in the period 1995/1996, before the first EMA came into effect. For the end-of-period year, the latest data available corresponded to 2001; thus, we have calculated the average values of trade in the period 2000/2001[8]. It is worth pointing out that the Egyptian, Tunisian, Israeli and Moroccan EMA were in force by 2001. Further, the implementation of the Agreement on Agriculture of the Uruguay Round covered the period 1995-2000. Thus, the time periods examined have allowed us to consider (at least partially) the changes in the accession regime for these countries, illustrating the country preference effect.

We have used two databases: COMEXT from Eurostat, which allowed us to obtain trade figures for the EU and to distinguish between extra and intra EU trade, the former being the exports of the EU and the latter including as well

---

[6] Usually these cross-relationships are of slight numerical relevance and only tend to have numerical relevance in situations where trade flows are small in value.

[7] See figures in Dell'Aquila and Velázquez (2004). There are several cases of combinations of individual product and country that can be stated as well of special relevance, mainly olive oil for Tunisia, flowers for Israel, etc. But if taking into account the value of exports from SEMC to the EU, these products are less important than vegetables and tomato, and a further and more specific assessment would be pertinent.

[8] The present research was conducted between November 2003 and February 2004. As new data have been made available since then, they will be useful for further studies.

trade within EU countries. Thus, we have compiled intra and extra EU trade figures. To this end, in the remaining discussion, the expressions imports from and exports to the EU will also incorporate intra-EU trade. Further, to calculate the world market share of suppliers, we have used the FAOSTAT database, since COMEXT does not provide such information.[9]

4. Results

The results of our calculations are presented in terms of the percentage and the absolute decomposition of trade flows as shown in the adjacent tables 2,3, 5 and 6. Also, tables 1 and 4 illustrate the market situation in the two periods for the two products analysed.

4.1. Fresh vegetables

As table 1 shows, the fresh vegetable market is expanding in the EU. From 1995/1996 to 2000/2001, the value of im-

Table 1. *EU vegetable imports (000€) and importers' market share (%) in 1995/1996 and 2000/2001*

	Variation 00/01-95/96	Value of EU-15 imports 2000/2001	Country market share (m_{ik}) 1995/1996	Country market share (m_{ik}) 2000/2001
Spain	1,892,445	2,410,661.19	0.27	0.30
Morocco	158,179	189,253.42	0.02	0.02
Egypt	106,845	62,500.91	0.02	0.01
Turkey	54,215	60,305.48	0.01	0.01
The Netherlands	2,074,874	2,149,871.23	0.30	0.27
Rest EU-15	1,745,327	2,312,563	0.25	0.29
Rest SEMC	2,871	7,131	0.00	0.00
Rest of the world	869,380	729,791	0.13	0.09
EU-15 imports	6,904,134	7,922,076.71	-	-

Source: COMEXT

Table 2. *Decomposition of EU vegetable imports between 1995/1996 and 2000/2001 (000€)*

	Variation 00/01-95/96	Country preference effect	Competitiveness effect	Import growth effect	Residual term
Spain	518,217	176,996	28,773	279,021	33,426
Morocco	31,075	-900	7,700	23,322	952
Egypt	-44,344	19,441	-60,760	15,753	-18,778
Turkey	6,090	10,260	-10,022	7,993	-2,141
The Netherlands	74,998	535,509	-585,615	305,919	-180,815
Rest EU-15	567,236	419,316	-156,377	257,330	46,966
Rest SEMC	4,260	2,470	157	423	1,210
Rest of the world	-139,589	-1,163,093	776,144	128,181	119,180
EU-15 imports	1,017,943	-	-	-	-

Source: Authors' calculations from FAOSTAT and COMEXT raw dat

bles 2 and 3, the final result indicates that the net result of the changes during the period are positive for Spain, the rest of EU-15, the rest of SEMC, Turkey and Morocco, thus being the main beneficiaries among the suppliers, while losses were clearly sustained by the rest of the world group and Egypt, whose net result was a diminution in the value of trade flows.

The most relevant results concerning the influence of market access show that European countries have increased their preference effect. Hence, it cannot be argued in this analysis that the national preference was eroded by the EMA or other market access agreements. Contrariwise, the rest of the world experi-

ports from the EU increased to 20%, totalling 6,900 million Euros in the 2000/2001 average. The intra-EU trade represented nearly 82% in the base period and increased to 86% in the 2000/2001 period, with Spain, the Netherlands and the rest of the EU representing about 30% each. The rest of the world accounts for 13% in the base period and 9% in the 2000/2001 end-of-period year, while the SEMC maintain low market shares in the two periods (2% or less for each one of the countries or groups).

As noted in the Variation column of ta-

Table 3. *Decomposition of EU vegetable imports between 1995/1996 and 2000/2001 (% over the trade flow in the base year)*

	Variation 00/01-95/96	Country preference effect	Competitiveness effect	Import growth effect	Residual term
Spain	27.38%	9.35%	1.52%	14.74%	1.77%
Morocco	19.65%	-0.57%	4.87%	14.74%	0.60%
Egypt	-41.50%	18.20%	-56.87%	14.74%	-17.58%
Turkey	11.23%	18.93%	-18.49%	14.74%	-3.95%
The Netherlands	3.61%	25.81%	-28.22%	14.74%	-8.71%
Rest EU-15	32.50%	24.03%	-8.96%	14.74%	2.69%
Rest SEMC	148.38%	86.05%	5.46%	14.74%	42.13%
Rest of the world	-16.06%	-133.78%	89.28%	14.74%	13.71%
EU-15 imports	14.74%	-	-	-	-

Source: Authors' calculations from FAOSTAT and COMEXT raw data

[9] Three adjustments have been necessary to complement the two databases. First is the currency transformation from $USA to Euros in FAOSTAT as well as that from 2000/2001 values to 1995 Euros (ECU). The second necessary adjustment was the addition of the Canary Islands to Spain's data for the base campaigns in COMEXT. Thirdly, the two databases apply different nomenclature and a precise definition for "vegetables" was required (for FAOSTAT mainly) to aggregate export values.

[10] Intermediate calculations were not included for reasons of space and are available from the authors by request.

enced a considerable worsening in their market access conditions. For Morocco, a very slight reduction in those conditions is noted, despite the EMA signed in 1996. This reduction might be understood as an actual minor improvement in market access compared to the improvement of other suppliers. However, more recent data covering two years of full effect of the Moroccan EMA would be necessary to clarify this question.

With regards to the competitiveness effect, most remarkable are the sharp losses calculated for the Netherlands (-28.2%), Turkey (-18.5%) and Egypt (-56.9%). Additionally, the rest of EU-15 exporters lost competitiveness, while the rest of the world group gained an outstanding +89.3%, followed by the rest of SEMC, Morocco and Spain, whose percentage of competitiveness effects are of less importance.

4.2. Fresh tomatoes

The fresh tomato is another expanding market, as table 4 reflects. The EU-15 imports rose a notable 23% in value during the time span considered. As in the case of fresh vegetables, intra EU-15 sales reflect the majority of the total imports (92% in the two periods), while Morocco's share accounts for almost all the rest of the market participation, which diminished from 7% to 6% between the two periods. The contribution of the other exporters remained of little significance in both periods. Among the main exporters, Spain accounts for 41% and the Netherlands accounts for 33% in both periods.

As in the case of vegetables overall, the preference effect tended to favour

EU countries while Morocco's participation was diminished with this effect (-17%). For the other SEMC, the group "rest of SEMC" lost as well (-45,3%), whereas Egypt and Turkey showed outstanding gains. The rest of the world group was also a beneficiary, implying better access conditions to the EU.

Considering the other key effect, the competitiveness analysis shows a remarkable gain for the rest of SEMC, the gains for the rest of the world and Turkey being less significant. It is interesting to point out that calculations reflect losses due to this effect for all the main suppliers. The worst result was sustained by the Netherlands, while Spain and the rest of EU-15 also lost competitiveness (-33.17%, -8.08% and -6.18% respectively). Morocco showed a slight decrease (-1.03%).

In brief, if the market had not expanded, Morocco would have had to reduce its exports to the EU, while in fact it has hardly maintained them. For EU countries, the market expansion together with the preferential accession have disguised their losses in market competitiveness. This point leads to the question of their future performance if this market alters its growing

Table 4. EU tomato imports (000€) and importers' market share (%) in 1995/1996 and 2000/2001

	Value of EU-15 imports 1995/1996	Value of EU-15 imports 2000/2001	Country market share (m_{ik}) 1995/1996	Country market share (m_{ik}) 2000/2001
Spain	597,971	742,576.71	0.41	0.41
Morocco	104,009	105,018.72	0.07	0.06
Egypt	111	371.69	0.00	0.00
Turkey	2,744	10,096.35	0.00	0.01
The Netherlands	501,337	595,838.36	0.34	0.33
Rest EU-15	248,528	325,447.03	0.17	0.18
Rest SEMC	463	1,982.19	0.00	0.00
Rest of the world	11,600	22,105.02	0.01	0.01
EU-15 imports	1,466,762	1,803,436.07	-	-

Source: COMEXT

Table 5. Decomposition of EU tomato imports between 1995/1996 and 2000/2001 (000)

	Variation 00/01 -95/96	Country preference effect	Competitiveness effect	Import growth effect	Residual term
Spain	144,606	59,063	-48,313	137,256	-3,400
Morocco	1,010	-17,711	-1,066	23,874	-4,087
Egypt	261	597	-64	25	-298
Turkey	7,353	5,075	138	630	1,510
The Netherlands	94,501	223,812	-166,302	115,075	-78,083
Rest EU-15	76,919	33,605	-15,364	57,046	1,633
Rest SEMC	1,520	-210	2,487	106	-864
Rest of the world	10,505	4,607	1,268	2,663	1,968
EU-15 imports	336,674	-	-	-	-

Source: Authors' calculations from FAOSTAT and COMEXT raw data

Table 6. Decomposition of EU tomato imports between 1995/1996 and 2000/2001 (% over the trade flow in the base year)

	Variation 00/01 -95/96	Country preference effect	Competitiveness effect	Import growth effect	Residual term
Spain	24.18%	9.88%	-8.08%	22.95%	-0.57%
Morocco	0.97%	-17.03%	-1.03%	22.95%	-3.93%
Egypt	234.86%	537.46%	-57.28%	22.95%	-268.29%
Turkey	268.01%	185.00%	5.02%	22.95%	55.04%
The Netherlands	18.85%	44.64%	-33.17%	22.95%	-15.57%
Rest EU-15	30.95%	13.52%	-6.18%	22.95%	0.66%
Rest SEMC	328.58%	-45.34%	537.68%	22.95%	-186.72%
Rest of the world	90.56%	39.72%	10.93%	22.95%	16.96%
EU-15 imports	22.95%	-	-	-	-

Source: Authors' calculations from FAOSTAT and COMEXT raw data

pattern and the preferential accession given to other countries improves as result of the Doha Development Round or reviews of the EMA.[11]

5. Conclusions

In this study, we applied a methodology that allows for the breakdown of the observed variation of trade flows among three sources, namely the variations in the access conditions to the destination market, the ability of suppliers to compete with other exporting countries, and the changes in demand conditions that modify imports in the destination market. After using this methodology for the analysis of the trade flows between the EU and several trading partners in vegetables as a whole and tomato as a single product, covering the period between the mid 1990s and the years 2000/2001, we may draw the following conclusions.

1) While EU suppliers continue to hold the greater share of EU markets, a considerable part of this dominance is due to the consolidation of the European preference. Indeed, there is no case among EU countries in which this factor has a negative effect, which would indicate a certain erosion of EU preference.

2) Conversely, in some cases specific SEMC may consider their preference as eroded. This erosion is clearly seen in terms of Morocco's preferences for the two products considered. On the other hand, Turkey and Egypt have increased their percentage of preferences in the two cases. For the rest of SEMC, the empirical evidence is mixed, showing an increase of exports through preferences in vegetables as a whole and a reduction of tomato exports if only preferences were taken into account.

3) The implications of these results of preference erosion for Morocco, the main stakeholder in these products among the SEMC, are worth highlighting. The agricultural Protocol of the EMA has not acted as an open window to EU markets. Moreover, the consolidation of the flows at the "historical level" has meant a stagnation in flows that prevented a significant improvement in its market share. The tomato TRQ is the noteworthy example, especially when this product is key among Morocco's exports to the EU. This situation explains Moroccan interest in widening the TRQ every new round of Protocol review -as seen in the September 2003 review.

4) The three previous conclusions may lead European producers to consider that EMA can represent a binding constraint for SEMC rather than the opportunity for marked improvement of the SEMC position: in the past, the European market share has not been reduced as a result of the E-MA. The negotiating approach taken by the Commission - being agriculture the least liberalised sector- acts as a future

"insurance" for EU producers to focus mainly on other market-related aspects, namely competitiveness.

5) Thus, the most noticeable result of our calculations is that European countries are losing competitiveness in favour of the rest of the SEMC group and the rest of the world. This may be interpreted as a general loss of competitiveness among the main stakeholders in the EU tomato market in favour of "minor" agents. Whereas this is the case for tomatoes, for vegetables as a whole, Spain and Morocco still hold a strong position -but with fewer improvements than those of the rest of SEMC and the rest of the world.

6) One may also conclude that a significant share of European performance in the markets depends also on the growth of demand, and public administration measures aimed at strengthening demand for vegetables are hence of utmost importance for European producers.

7) For SEMC, the quest for more preferences through renegotiations of the EMA is a necessary, but not sufficient, undertaking. Indeed, improving competitiveness should be a goal in itself for all the agents in the supply chain in these countries as well for their governments. The required measures include farmer training, export offices, supply concentration in order to adequately negotiate and meet distribution requirements, logistics improvement and the upgrading of infra-structure.

References

Dell'Aquila, C. and Velázquez, B. E., 2004. Euro-Med Agreements and Mediterranean Agri-Food Trade, New Medit, Vol. III - 1, 37-46.

Fioravanço, J.C., 2000. Comercio internacional de productos hortofrutícolas: estudio de la competitividad de Brasil, en el mercado de frutas tropicales de la UE. Ph. D Thesis, unpublished. Valencia: Universidad Politécnica de Valencia.

García Álvarez-Coque, J.M., 2004. EU Agriculture and Common Agricultural Policy: Prospects for the 21st Century and Implications for Mediterranean Countries. Chapter in A. Marquina (ed.), Environmental Challenges in the Mediterranean 2000-2050. Kluwer, 319-328. The Netherlands.

García Álvarez-Coque, J.M. and Bautista, R., 1994. Sources of EC horticultural import growth from developing countries, Agricultural Economics, 10, 125-141.

Grethe, H. and Tangermann, S., 1998. The New Euro-Mediterranean Agreements. An Analysis of Trade Preferences in Agriculture. Paper prepared for the Commodities and Trade Division, FAO Economic and Social Department, Göttingen.

MAPA, 2003. Impacto de los Acuerdos Euromediterráneos de Asociación sobre la Agricultura Mediterránea en España. Cooperation Agreement between the Sub-secretariat of Agriculture, Fisheries and Foods (Sub General Directorate for Coordination and Statistics and Economic Planning) and the Universidad Politécnica de Valencia (Department of Economics and Social Sciences).

Martínez Gómez, V. and García Álvarez-Coque, J.M., 2004. Estimación de las preferencias comerciales derivadas del Acuerdo de Asociación Euro-Mediterráneo con Marruecos. Paper presented at the 5th National Congress of Agricultural Economics, Santiago de Compostela, Spain. September 2004.

Swimbank, R. and Ritson, C., 1995. The impact of the GATT Agreement on EU fruit and vegetable policy, Food Policy, 20, 339-357.

---

[11] It is worth mentioning the September 2003 review of the agricultural Protocol between Morocco and the EU, which increases the volume of tomatoes under the TRQ for the period 2003/2004 to 2007, from the 168,657 tonnes in the 1996 AA (after the 2000 review) to 190,000 tonnes, and is to be increased annually by 10,000 tonnes, reaching 220,000 tonnes by 2007.