EC Enlargement and Trade Liberalization in the Vegetable Oils Market

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Abstract: The third EC enlargement to include Spain and Portugal raised substantial problems in the international olive oil market, where the EC–10 accounted for 48 percent of production and 52 percent of consumption and the new EC members for 30 percent and 24 percent, respectively. Olive oil was highly supported in the EC–10, where producer prices were more than twice the international prices. Extending (from 1986 to 1991) the EC–10 price support to Spanish and Portuguese producers would have meant huge EC–12 budgetary costs and a complete price collapse of the tiny world market.

     This paper presents three simulations of the world market by means of a multi-product and multi-regional price equilibrium model of the oils and fats sector: (1) the impact of the EC enlargement to include Spain and Portugal without CAP changes; (2) the impact of the EC–12 offer in the GATT negotiations implying a 30-percent decrease in domestic support for olive oil, butter, animal fats, and a 6-percent import tariff for oilseeds and other vegetable oils; and (3) the decrease in the producer price support of olive oil that would be needed to offset the impact of enlargement on the EC–12 trade balance.

Introduction

The relatively high degree of substitutability among oils and fats at the consumer level compels the policy maker to develop coordinated policy measures for this sector of agricultural production. The differences in price policies concerning vegetable oils between the EC–10 and Spain and Portugal created considerable problems in the third EC enlargement. Though Spain and Portugal joined the EC in 1986, a transitional period was established to delay the consequences of a unified market for oils and fats until 1991.

In order to assess in quantitative terms the impacts of the existing policy measures, a non-linear price equilibrium model was used for the analysis of international trade in oils and fats.[2] The world market was divided into five regional aggregates: the EC before its third enlargement (EC–10), Spain and Portugal grouped as the Iberian countries (ICs), the USA, Centrally Planned Economies (CPEs), and the Rest of the World (RoW). The oils and fats sector was divided into four sub-sectors: olive oil, other vegetable oils, butter, and other animal fats, reflecting the existing major differences in production, substitutability at the consumer level, and different policy measures implemented in the EC.

We chose 1986, when GATT negotiations started in Punta del Este, as a reference point, and the statistical information used was based largely on FAO estimates of production, utilization, and prices (FAO, 1986a, 1986b, and various years). Since olive oil supply is characterized by very high variability from year to year, production and consumption figures for this commodity were estimated on their long-term trends.

The quantitative analysis was carried out with reference to agricultural markets at the producer level. The policy analysis examined in the following pages refers to the world situation in 1986. As in most comparative static analyses, the model does not take into consideration time trends or productivity developments, but focuses on the likely impacts of the envisaged changes due to price policies.

Economic Policy Measures in the Olive Oil Market

The common policy for the vegetable oils sector was laid down in 1966 when the EC–6 self-sufficiency ratio for these products was very low. Under the GATT agreement, no tariffs could be levied on oilseeds or seed oils at the EC border. Given the remarkable degree of substitutability between olive oil and other vegetable oils, the domestic market price for olive oil could thus not be raised as high as the target producer price without reducing consumption too much. Consequently, the support system had to be organized on the basis of a scheme of deficiency payments.

For each marketing year, the EC Council of Ministers sets a representative market price (RMP) at a level "permitting normal marketing of olive oil, account being taken of likely price trends of competing products" (European Communities, 1988). The domestic price level is prevented from downward movements by a threshold price (TP) for olive oil imported from third countries, which is "fixed in such a way that at the Community frontier crossing point the selling price will be the same as the representative market price" (*op. cit.*). The threshold price follows any adjustment in the representative market price during the marketing year.

A c.i.f. price is fixed with reference to the most favourable purchasing possibilities on the world market. The import levy makes up the difference between the threshold price and the c.i.f. price when the world market price is below the representative market price. The European Commission sets its amount periodically, roughly equivalent in principle to export refunds to allow EC traders to export on the world market.

The Council of Ministers establishes a target producer price (TPP), which "is fixed at a level which is fair to producers, account being taken of the need to keep Community production at the required level" (*op. cit.*) to provide olive oil producers with what it considers a fair income and retain the number of trees and the existing level of production. The target producer price is attained by providing the olive oil producer with a direct producer subsidy (PS), limited to the production of oil originating from trees planted before October 31, 1978, in the EC–9, before 1981 in Greece, and before 1984 in Spain and Portugal.

The production subsidy was the difference between the target producer price and the representative market price *(PS=TPP–RMP)* until April 1979, when the representative market price was lowered while the producer subsidy was not increased. An equivalent drop in the producer price was prevented by the institution of the so-called consumer subsidy (CS), covering the difference between the target price minus the producer subsidy and the representative market price *(CS=TPP–PS–RMP)*. Imported oil cannot benefit from the consumer subsidy, and, in order to avoid frauds, it must either be sold directly to consumers or be subject to an extra duty equivalent to the consumer subsidy granted to domestic production. Therefore, benefits of the so-called consumer subsidy accrue only to domestic producers. In practice, the difference between the producer target price and the representative market price (i.e., the sum of the producer subsidy and of the so-called consumer subsidy) is equivalent to a traditional deficiency payment.

Oilseed production is supported by deficiency payments measures as well, in order to guarantee producer prices and increase the EC–10 self-sufficiency level.

Impact of EC Enlargement

Although the enlargement of the EC–10 to include Spain and Portugal for oils and fats is not yet fully effective, it is important to foresee the impacts that a unified market will have on supply, demand, and trade balance, as well as on EC budgetary expenditures, in order to implement appropriate countermeasures aimed at offsetting some undesired effects of economic integration between the EC–10 and the Iberian countries.

The unification of EC–10 and Iberian markets for oils and fats will not, under present CAP regulations, cause relevant changes in the EC–10 market where prices at both the producer and market levels will not change. The impact of EC enlargement will be mainly felt in the Iberian and third countries, while EC–10 countries will be concerned with the budgetary expenditure they will have to share with the newcomers. Table 1 summarizes the main results of the model.

In the Iberian countries, the enforcement of present CAP rules will mean much higher producer (109 percent) and market (31 percent) prices for olive oil together with higher producer prices (47 percent) and lower market prices (–56 percent) for other vegetable oils. The price of butter will be reduced, and the price of other animal fats will show minor changes.

The Iberian supply response to olive oil price changes will depend on how CAP policies are used to implement producer price increases. If the producer subsidy is limited to existing

olive trees and strictly controlled, supply response will be much lower than in the case where increases in producer price are granted to all producers by means of a generalized consumer subsidy. The likely range of the Iberian supply response was examined by assuming a supply elasticity of 0.5.

According to this hypothesis, Iberian olive oil supply will expand by 210,000 t, while the converging effect of higher market prices for olive oil and lower market prices for other vegetable oils will reduce olive oil demand by 104,000 t. The result will be a huge increase in the exportable surplus (314,000 t), which, if dumped on the thin world market, would depress the world price for olive oil by as much as 50 percent. However, the effects are likely to be catastrophic for olive oil producers in third countries under all reasonable assumptions of Iberian supply response.

Taking into account that Tunisia, Turkey, and other relatively poor Mediterranean countries will face the most unpleasant consequences of this policy, severe political problems are likely to emerge. The EC Council of Ministers could develop some new and ingenious uses for olive oil extra surpluses, as it has done for butter. However, it will not be an easy task under present budgetary constraints.

The impact of EC prices on the Iberian market for other vegetable oils will have the opposite effect on the Iberian trade balance. The increase in demand due to lowered consumer prices will offset the increase in supply due to higher producer prices and expand by one third the present Iberian deficit in other vegetable oils.

Iberian olive oil producers will benefit most from a unified market for oils and fats under CAP regulations. Their economic surplus will increase by 1,000 million ECU, much more than the gain enjoyed by oilseed producers (136 million ECU).

The EC budget, on the other hand, will bear the largest burden due to the converging effects of new producer subsidies paid to the Iberian producers and higher export restitutions for the increased EC–12 exports to a world market where prices have dropped dramatically. The increase in EC–12 budget expenditures would be 1,338 million ECU in the olive oil sector.

In the Iberian countries, the impact on consumer surplus of lower prices for other vegetable oils (374 million ECU) and for butter will more than offset the effect of higher market prices for olive oil (–157 million ECU). The net consumer benefit for the whole oils and fats sector will be 224 million ECU.

The overall economic welfare impact of the unification of the EC–10 and Iberian oils and fats markets will be substantially negative (–479 million ECU), mainly as a consequence of increased distortions in the Iberian olive oil sector. In the other vegetable oils sector, the negative impact on overall economic welfare of higher producer prices is completely offset by the positive effect of lower market prices.

The EC–12 Proposal in the GATT Negotiations

GATT negotiations focused on agriculture for the first time in 1986, which turned out to be a major obstacle in the effort to reach an agreement. In 1988, the mid-term review in Montreal failed to envisage a compromise on the most thorny issues, among which the agricultural sector was still outstanding. On the eve of the conclusion of the negotiations, the EC proposed a 30-percent cut in protection for most agricultural products (including oilseeds, olive oil, as well as livestock products), with reference to support levels existing in 1986. Scenario B in Table 1 shows how this proposal would affect the oils and fats sector. The results show that major changes are likely to occur *vis-à-vis* the situation existing in 1986, before Spain and Portugal joined the EC (reference scenario).

In the EC–10, prices for all oils and fats will drop, with the exception of the demand price for other vegetable oils, where the EC proposal suggests the introduction of a 6-percent tariff on imports in order to rebalance the price support system. While domestic supply shrinks for all goods, domestic demand shows an increase for both olive oil and butter to the detriment

Table 1—Impact of Alternative Policies

	Reference Scenario				New Scenario				Change vs. Reference				Percent Change vs. Ref.			
	EC–10	Iberia	USA	RoW	EC–10	Iberia	USA	RoW	EC–10	Iberia	USA	RoW	EC–10	Iberia	USA	RoW
	Scenario A: EC Enlargement without Change in the CAP															
Olive Oil:																
Supply price (ECU/t)	3226	1544	1387	1387	3226	3226	688	688	0	1682	−699	−699	0	109	−50	−50
Demand price (ECU/t)	1986	1520	1387	1387	1986	1986	688	688	0	466	−699	−699	0	31	−50	−50
Supply protection rate (%)	133	11	0	base	369	369	0	base	236	358	0	0	178	3158		
Demand protection rate (%)	43	105	0	base	189	189	0	base	145	179	0	0	337	1865		
Supply ('000 t)	800	490	1	359	800	700	1	205	0	210	−0	−154	0	43	−43	−43
Demand ('000 t)	860	390	40	340	860	286	57	483	−0	−104	17	143	−0	−27	42	42
Trade balance ('000 t)	−60	100	−39	19	−60	414	−56	−278	0	314	−17	−297	−0	3145	44	
Budget impact (million ECU)	956	25	0	0	914	1405	0	0	−42	1380	0	0	−4	5510		
Producer surplus (million ECU)									0	1000	−1	−197				
Consumer surplus (million ECU)									0	−157	34	298				
Economic welfare (million ECU)									42	−537	33	91				
Other Vegetable Oils:																
Supply price (ECU/t)	1280	872	366	366	1280	1280	366	366	0	408	0	0	0	47	0	0
Demand price (ECU/t)	366	831	366	366	366	366	366	366	0	−465	0	0	0	−56	0	0
Supply protection rate (%)	250	138	0	base	249	249	0	base	−0	111	0	0	−0	80		
Demand protection rate (%)	0	127	0	base	0	0	0	base	0	−127	0	0		−100		
Supply ('000 t)	2416	318	11982	26427	2416	349	11991	26472	0	31	9	45	0	10	0	0
Demand ('000 t)	5449	724	6532	28283	5446	887	6523	28216	−3	163	−9	−67	−0	23	−0	−0
Trade balance ('000 t)	−3033	−406	5450	−1856	−3030	−539	5468	−1744	3	−133	18	112	−0	33	0	−6
Budget impact (million ECU)	2208	−176	0	0	2207	318	0	0	−1	494	0	0	−0	−281		
Producer surplus (million ECU)									0	136	4	10				
Consumer surplus (million ECU)									−2	374	−2	−10				
Economic welfare (million ECU)									−1	16	2	−1				

	Reference Scenario				New Scenario				Change vs. Reference				Percent Change vs. Ref.			
	EC–10	Iberia	USA	RoW	EC–10	Iberia	USA	RoW	EC–10	Iberia	USA	RoW	EC–10	Iberia	USA	RoW
Scenario B: EC–12 Reduction in Support and Rebalancing																
Olive Oil:																
Supply price (ECU/t)	3226	1544	1387	1387	2678	2678	1126	1126	–548	1134	–261	–261	–17	73	–19	–19
Demand price (ECU/t)	1986	1520	1387	1387	1805	1805	1126	1126	–181	285	–261	–261	–9	19	–19	–19
Supply protection rate (%)	133	11	0	base	138	138	0	base	0	1	0	0	4	1118		
Demand protection rate (%)	43	105	0	base	60	60	0	base	0	1	0	0	40	529		
Supply ('000 t)	800	490	1	359	708	643	1	303	–92	153	–0	–56	–12	31	–15	–16
Demand ('000 t)	860	390	40	340	906	304	44	379	46	–86	5	39	5	–22	11	12
Trade balance ('000 t)	–60	100	–39	19	–199	339	–44	–76	–139	239	–5	–95	231	239	12	
Budget impact (million ECU)	956	25	0	0	483	791	0	0	–473	766	0	0	–49	3060		
Producer surplus (million ECU)									–413	642	–0	–86				
Consumer surplus (million ECU)									160	–99	11	94				
Economic welfare (million ECU)									220	–223	11	7				
Scenario C: Offset of Enlargement on External Trade																
Olive Oil:																
Supply price (ECU/t)	3226	1544	1387	1387	2360	2360	1392	1392	–866	816	5	5	–27	53	0	0
Demand price (ECU/t)	1986	1520	1387	1387	1805	1805	1392	1392	–181	285	5	5	–9	19	0	0
Supply protection rate (%)	133	11	0	base	70	70	0	base	–1	1	0	0	–48	514		
Demand protection rate (%)	43	105	0	base	30	30	0	base	–0	0	0	0	–31	209		
Supply ('000 t)	800	490	1	359	648	603	1	359	–152	113	0	0	–19	23	0	0
Demand ('000 t)	860	390	40	340	907	304	40	341	47	–86	0	1	5	–22	0	0
Trade balance ('000 t)	–60	100	–39	19	–259	299	–39	18	–199	199	–0	–1	332	199	0	
Budget impact (million ECU)	956	25	0	0	253	458	0	0	–703	433	0	0	–74	1731		
Producer surplus (million ECU)									–627	445	0	2				
Consumer surplus (million ECU)									160	–99	–0	–2				
Economic welfare (million ECU)									236	–86	–0	0				

of other vegetable oils, while other animal fats record minor variations in prices as well as in quantities.

The enforcement of the EC proposals in Spain and Portugal, which will coincide with the end of their transitional period, is likely to mean less dramatic changes as compared to the former scenario (i.e., extension of CAP regulations to the Iberian countries without policy changes). Still, producer prices will show a considerable increase (73 percent) for olive oil, not so striking for other vegetable oils (20 percent), matched by a decrease in price for butter and for other animal fats.

Under this hypothesis the third enlargement will still mean an increase in the olive oil protection rate in the entire EC–12 and will depress the world market price (–19 percent) though to a lesser extent than in the previous scenario (–50 percent). This implies a net increase in budgetary expenditures needed to support producers, as the savings in the EC–10 are more than offset by the additional funds needed for Spain and Portugal.

While consumers in EC–10 will face price adjustments less than 10 percent in both directions (–9 percent for olive oil and 7 percent for other vegetable oils) that will not greatly affect their demand, consumers in Iberian countries will experience higher prices for olive oil (in the range of 20 percent) and lower prices for other vegetable oils (by more than 50 percent). *Ceteris paribus*, this is likely to considerably modify their consumption patterns.

In order to limit EC budget expenditures, a maximum guaranteed quantity of olive oil for which production aid is payable was set in 1987 at 1.35 Mt per year. If actual production exceeds it, the unit producer subsidy should be reduced in proportion to the excess. With reference to a four-year average, according to the model, the impact of such a policy on supply would be approximately equivalent to the 30-percent cut in support proposed by the EC–12 at the GATT negotiations; i.e., a reduction of EC–12 supply to 1.35 Mt.

Impact on Third Countries

One of the most disturbing effects of EC–10 enlargement to Spain and Portugal, as far as the olive oil market is concerned, is the disruption of the international market, where a few Mediterranean countries offer one of their most typical products from which a notable share of their farmers earn a living. The EC always avoided damaging these less-developed countries, some of which have applied for accession and others of which have special trade arrangements with the EC–12.

Taking into account these political relationships, a world market situation was simulated in which the impact of accession of the Iberian countries would be absorbed by internal adjustment of the EC–12, without affecting the external trade with third countries.

In the scenario B just described, the drop in producer price was 17 percent of the 1986 target price. In order to offset the increased Iberian supply by a reduction in EC–10 supply (scenario C), the olive oil production target price should be further decreased by 10 percent of the 1986 level. The resulting rate of protection with respect to the thin international market would then be 70 percent for the supply price and 30 percent for the demand price. Overall EC–12 welfare would then increase by 150 million ECU, as the welfare loss due to increased protection in the Iberian countries would be more than compensated by the welfare gain of reduced protection in EC–10 countries.

Concluding Remarks

The EC oils and fats sector will necessarily undergo a strong adjustment process due to the EC enlargement to include Spain and Portugal. In particular, the olive oil market will be upset by the merging of the Iberian countries, which account for one quarter of the world market and where producer prices were about 50 percent lower than in the EC.

The impact of such a merger will be disruptive both in terms of world market prices for olive oil and of EC budgetary outlays. The negative effects of present EC agricultural policy, due to wide inter-commodity price distortions and to inconsistencies among policy measures within the oils and fats sector, will become fully apparent.

Harmonization of price policy alone is not likely to be the answer in a situation that is very uneven in many respects. With reference to the olive oil sector, producer incomes would be less affected by inevitable price reductions if appropriate structural policies were implemented, reducing present production costs in traditional and inefficient olive groves.

A differential treatment could be given to disadvantaged areas where olive production cannot be substituted by other economic activities. The rate of producer subsidy could be related to the positive externalities developed by agriculture in these areas, especially if it is granted according to existing olive trees in order to ease administrative controls.

Notes

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[2]For more details on this model, see Tarditi and Croci-Angelini, 1988.

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Discussion Opening—*Hyunok Lee* (US Department of Agriculture)

This paper assesses the impacts of the third EC enlargement on vegetable oil markets. Particular attention is given to the olive oil markets in Spain and Portugal. Trade liberalization of the vegetable oil sector is especially important to Spain and Portugal because these two countries account for 30 percent of world olive oil production. The study's innovation is to assess the impacts on the international as well as EC–10 and Spanish/Portuguese olive oil markets of extending EC price supports to Spanish/Portuguese vegetable oil and fat producers. A simulation model is used.

This study provides some insight for policy makers on the magnitude of market changes and resulting budgetary outlays. With this information, it may be possible to design some policy options to minimize budgetary outlays. While this study is relevant and potentially important to the world olive oil sector, I have some reservations.

While empirical results are presented in an unequivocal manner, the underlying assumptions of the model are not clear. It suffices to say that model assumptions can dictate simulation results. However, the paper does not provide information on any of its hypotheses. The authors refer to a mimeo report of theirs to which readers do not generally have easy access. For example, the authors only give one value for the supply elasticity of the Iberian countries (0.5). Aside from the question of the reasonableness of this value (I understand it

takes years to grow an olive tree), the supply elasticities of other vegetable oils and demand elasticities determine the magnitude of the shift of the supply and demand curves as described for scenario A. For the reader to judge the reasonableness of these results, he or she needs to know the relevant elasticities.

Finally, since olive oil and other vegetable oils are close substitutes, what is going to happen to the olive oil markets after the third enlargement critically depends on the relative rate at which the EC supports olive oil producers compared to other vegetable oil producers. Nominal supports are much less important.

My recommendation to the authors is to incorporate into the paper more information on the model. Furthermore, to check the stability of the results, I suggest the authors reproduce the runs with alternative parameter values.

[Other discussion of this paper and the authors' reply appear on the following page.]

General Discussion—*Zhang Cheng-Liang, Rapporteur* (Beijing Agricultural Engineering University)

In reply to Deaton's comment that the concept of justice in his paper is not clear and that there would be different understandings of it, Rabinowicz argued that it is not necessary for everyone to agree equally on the content of justice. She was also asked if she had considered using the theory of cooperative games as a basis for her analysis. She replied that the percent problem would make the theory of cooperative games difficult to apply in the paper. Doubts were also expressed about whether the information provided in the paper would have any impact on policy decisions.

In reply to Gordon's comment on welfare changes resulting from the EC's rebalancing strategy, Schmitz replied that welfare changes would involve measurement. Another question from the floor related to differences between the authors' results and those of Mahé and Tavéra in analysing the rebalancing issue. In reply, Hartmann pointed out two main differences: (1) their paper emphasizes developing countries, while Mahé *et al.* focus on the USA, and (2) the paper stresses unilateral policy change.

Replying to a question about whether the elasticity of demand would rise as the price drops in response to a rise in production, Tarditi indicated that there are possibilities of changing to a lower price level.

Participants in the discussion included G. Jones (University of Oxford), U. Koester (Universität Kiel), and A. Oskam (Agricultural University of Wageningen).