Market Dynamics and Policy Reforms in the EU Olive Oil Industry: An Exploratory Assessment

Samir Mili

Senior Researcher, Department of Economics
Institute of Economics and Geography
Spanish Council for Scientific Research (CSIC)
C/ Pinar, 25 - 28006 Madrid, Spain
Tel: +34- 914111098 Fax: +34- 915625567
smili@ieg.csic.es

Paper prepared for presentation at the 98th EAAE Seminar 'Marketing Dynamics within the Global Trading System: New Perspectives', Chania, Crete, Greece as in: 29 June – 2 July, 2006

Market Dynamics and Policy Reforms in the EU Olive Oil Industry: An Exploratory Assessment

Samir Mili

Senior Researcher, Department of Economics
Institute of Economics and Geography
Spanish Council for Scientific Research (CSIC)
C/ Pinar, 25 - 28006 Madrid, Spain
Tel: +34- 914111098 Fax: +34- 915625567
smili@ieg.csic.es

Abstract: *Available information indicates that the future competitive scenario for EU olive oil will be shaped by the market dynamics and business strategies, and the ongoing agricultural and trade policy reforms (CAP reform, WTO Doha Round negotiations, regional and bilateral trade agreements). Based on this premise, the purpose of this contribution is to present an overall evaluation of the market change and policy reform processes affecting the EU olive oil sector, pointing out the main strengths, weaknesses, opportunities and threats (SWOT) that can be associated to their present and expected evolution. The analysis is performed with a systemic approach to market and policy changes, under the general hypothesis that these are governed by a series of economic and regulatory factors on which there is little empirical evidence or which still are subject of public debate whose outcomes are not clear. It is also assumed that while some of these factors act on a global level, others may vary across countries and even within countries amongst different players, which means that there is a wide spectrum of possible strategies and courses of action for the future. The information used is gathered through a combination of secondary sources and primary data from consultations with a representative group of key informants in olive oil policy and markets.*

Keywords *: Globalisation, market dynamics, business strategies, agricultural and trade policy reform, EU olive oil, SWOT analysis.*

Paper presented at the 98th EAAE Seminar
"Marketing Dynamics within the Global Trading System: New Perspectives"
29 June - 2 July 2006, Chania, Crete, Greece

Contribution supported by EU-MED-AGPOL Project, funded by the European Commission under contract SSPE-CT-2004-502457.

1. Introduction

The world olive oil market has experienced dramatic changes during the last decade which have resulted *inter alia* in a rapid quantitative and qualitative expansion of world supply and demand, and a significant intensification of horizontal and vertical competition along the product's marketing chain. The European Union (EU) is the major participant in the international olive oil market, accounting for 80% of world production, 70% of world consumption, and 50% of world trade (without including intra-EU trade) (International Olive Oil Council "IOOC", 2006). Besides the purely economic aspects, olive farming has a high social and environmental content which is always taken very much into consideration when drawing up any regional or territorial development policy.

Available information indicates that the future competitive scenario for EU olive oil will be shaped principally by two types of factors: 1) the market dynamics (supply, demand, trade issues) and business strategies (concentration, internationalisation, vertical arrangements, innovation, promotion), and 2) the ongoing agricultural and trade policy reform processes (Common Agricultural Policy "CAP" reform, World Trade Organisation (WTO) Doha Round negotiations, regional and bilateral trade agreements).

Based on these premises, the purpose of this contribution is to provide an overall evaluation of the market change and policy reform processes in the EU olive oil sector, pointing out the main strengths, weaknesses, opportunities and threats that can be associated to their present and expected evolution. This evaluation is carried out under the general hypothesis that the mentioned processes are conformed by a series of macroeconomic, microeconomic and regulatory factors on which there is little empirical evidence or which still are subject of public debate whose outcomes are uncertain, such as the ongoing trade negotiations. It was also assumed that although some of these factors act on a global level –such as the international regulatory framework– others may vary from country to country and even within countries amongst different chain agents. This means that there is a wide spectrum of possible strategies and courses of action for the future.

2. Methodology

This research uses the SWOT (Strengths-Weaknesses-Opportunities-Threats) technique which is a common tool for the evaluation of economic and policy processes. The method has enjoyed consistent popularity during the last three decades, and is a recommended framework to facilitate the understanding of the priorities between alternative actions and to improve strategy. By a systematic evaluation of both external/uncontrollable (opportunities and threats) and internal/controllable (strengths and weaknesses) environments, it provides options and guidance for businesses and policy-makers to optimise the fit between internal capabilities and external opportunities in order to achieve superior performance (Novicevic et al., 2004). The information was gathered from a combination of secondary sources and primary data issued from consultations to a representative

set of key informants in olive oil policy and markets, drawn from different professional backgrounds (industry, academy, public agencies in Spain).

Research has been carried out in two stages. The first stage has been to identify the key facts about the EU olive oil market and its macro and micro environments. This has included facts on the olive oil supply, demand, trade and business strategies in the EU and worldwide (internal factors), and on the international agricultural and trade policies related to the sector (external factors). These facts define the current situation of the sector as well as the main determinants of its performance and possible evolution in the future. The second stage has been to synthesize and to integrate information (primary and secondary), and to evaluate it to determine whether these facts constitute strengths, weaknesses, opportunities and threats for the sector in the EU. The SWOT analysis allows for drawing together all of the findings, reducing the large amount of information to a manageable number of key issues.

It is necessary to clarify that this analysis is performed from the EU perspective, since it is evident that what can be considered a strength for the EU olive oil can also be considered a weakness in an other region or country (e.g. North Africa, Australia, Argentina…). Moreover, it should be pointed out that this procedure of aggregating and synthesising the information to a manageable number of key issues necessarily implies a simplification of certain aspects, and does not take into consideration all the particularities existing at different stages of the production and marketing chain (farms, milling industries, refining and packing industries, distributors). Here also the strength of one chain agent (e.g. producer) may in some cases be a weakness for another agent (e.g. distributor).

3. Results and discussion

The main findings are summarised in a SWOT frame: Strengths, Weaknesses, Opportunities and Threats. Considering that in developed countries business strategies are shaped by an increasingly demand- driven food chain, the analysis of the internal factors begins by exploring demand issues. Subsequently, marketing, trade and supply aspects are examined and, finally, business strategies are investigated. Similarly, the analysis of external factors begins with the international agricultural and trade policies related to the olive oil sector, followed by economic, social and environmental variables that significantly influence current and future development of the sector in the EU.

3.1. Strengths

- High product quality and positive image. Olive oil is currently considered in most markets a high quality alternative to other edible oils and fats. In the last decade, a big effort has been made to improve the quality of olive oils produced within the EU (European Commission, 2000). Product quality has several dimensions, such as health, taste, safety, etc. The traditional Mediterranean diet, whose most characteristic product is olive oil, has contributed to low rates of number of chronic diseases in the Mediterranean region, and has been proven as a model for healthy nutrition (Wahrburg et al., 2002). As a consequence, it is increasingly appreciated and valued inside and outside the Mediterranean region. Olive oil producers, exporters and institutions communicate the healthy

characteristics of the different categories of olive oils to consumers in order to increase their awareness of these attributes.

Numerous consumers appreciate the taste of olive oil and associate it with the Mediterranean diet. As a result, they are willing to pay higher prices for olive oil than for other edible oils and fats. Several EU olive oil enterprises are specialised on the production of high quality extra virgin olive oils, which are sold at high price levels, frequently in gourmet food stores or speciality departments of large retail channels. The principal EU olive oil brands by consumer awareness and market value ("Bertolli", "Carbonell", "Carapelli", "Hojiblanca", "Borges"…) belong to the world leading companies. The main EU producing countries also have a positive country image as olive oil producers.

- **Product diversity**. In the EU there exist four commercial categories of olive oils (extra virgin olive oil, virgin olive oil, olive oil (blend of refined and virgin olive oils), olive-pomace oil) issued from different varieties, origins and production systems. The consumer preference towards differentiated, high-quality food produced in the EU increasingly is a barrier to imports from other countries. A growing segment of consumers prefer quality food with certification of origin (Protected Designation of Origin "PDO", Protected Geographical Indication "PGI", organic). Marketing of specific, exclusive varieties of olive oil also is a way of product differentiation, though more efforts are necessary to explain the differences between different product and varietal categories.

- **High participation in the world market**. The EU accounts for 80% of total word olive oil production, 70% of world consumption, and 50% of world trade (without including intra-EU trade) (IOOC, 2006). The concentration of olive oil production in few EU regions a priori favours efficiency and economies of scale. On the demand side, olive oil tends to be consumed mainly in the producing areas, a tendency favoured by the preference of many consumers for locally produced olive oils. In addition, Italian and Spanish exports represent 90% of total EU exports. The leading position of the EU in the world olive oil market implies *inter alia* a determinant impact on the international olive oil pricing. The most representative marketplaces for this product are located within the EU: Jaén (Spain), Bari (Italy) and Heraklion/Messinia (Greece). 80% of the world olive oil production is marketed by these three markets.

- **High technological level of the processing industry**. The positive developments in the EU olive oil sector during the two last decades, favoured by the CAP subsidies paid by means of the Common Market Organisation (CMO) for olive oil, made possible a considerable improvement in terms of restructuring and modernisation of the milling and processing industry. Increasingly, classic discontinuous plants and continuous plants in 3 phases are been substituted by more efficient continuous plants in 2 phases, which in Spain already are used in most mills (87% in 1999). The main result of the technological modernisation process is more efficiency in producing and processing activities, and an improved quality of olive oils.

- **Benefits for environment and rural development**. Apart from the purely economic aspects, olive farming has a heavy social and environmental content. The olive tree is robust, well adapted to difficult climatic conditions in the Mediterranean regions, and makes efficient use of scarce water resources, although

it is not very resistant towards frost. Olive oil production is mostly concentrated in less favoured regions of the EU. With a few exceptions (Tuscany in Italy, Catalonia in Spain) the majority of producing regions come under Objective 1 Community Regional Policy, with a relatively lower level of economic development and higher unemployment rates (European Community, 2003b).

The maintenance of the traditional olive groves is benign for environment, since these show low soil erosion and high biodiversity. Indeed, the artificial system of an olive grove is similar to the natural Mediterranean ecosystem. On marginal land, olive growing is often the only alternative to abandonment and desertification. When olive groves sited on marginal land are abandoned, usually they are not replaced with other crops and gradually turn into a kind of scrub. If not maintained, the scrub is a risk for summer fires, one of the chief environmental hazards of the Mediterranean regions (Loumou and Giourga, 2003). However, in the EU, the olive plantations cultivated with techniques respectful with environment are increasing continuously. To some extent, production techniques are communicated to consumers as a mean of product differentiation (organic, integrated production). Many persons perceive that cultivation of olive trees has a positive impact on environment when appropriate techniques are used, and are willing to reward the use of these techniques.

Olive growing has a positive impact on rural development since it contributes during the harvest season to reduce the high unemployment rates in many EU rural areas (MAPA, 2003). In addition, olive cultivation is increasingly a rural activity combined with tourism. In fact, the olive is a major cultural factor in most Mediterranean regions and has a role that goes beyond a mere farming. It is the basis for a whole series of social and cultural events related to gastronomy, tourism and traditions of local populations (European Commission, 2003a). Thus, in some production areas there are organised olive oil routes, museums…, linking olive tree with Mediterranean climate and lifestyle.

- **Strengths in marketing strategies and chain management.** In the following we will analyse briefly strengths in the marketing strategies and chain management of the EU olive oil industry. It should be mentioned that in spite of these strengths, in many non- traditional markets there seems to be a rather wide scope for increasing demand by adequate marketing measures. Consumer attitudes and behaviour vary significantly between countries and among consumer segments within each country. Olive oil producers should try to adapt the product (type of oil, colour, taste, packaging, labelling), promotion and other marketing variables to the specific circumstances in each target market. One example for this business policy is illustrated by the results of a market research for the design of an *optimal* Cretan olive oil destined specifically to meet consumer needs in the French market (Siskos et al., 2001).

Innovation . Most companies consider that product innovations are an opportunity for augmenting profits and market share. For instance, the Spanish group “Borges” supplies olive oils with various tastes (spicy, etc.). Besides, functional products have been successful in several markets such as the dairy market, and are getting more and more relevant in the oilseed market (see section 3.4). In the olive oil market, until now only few functional products are marketed, as for instance extra virgin olive oil with vitamins A and E from “ArteOliva” company, extra virgin olive oil with coenzyme Q10 (antioxidant) from “Hermejor de la Reina” and olive oil with a

tomato derivative (Antelo, 2005). In addition, several enterprises ("ArteOliva", "SOS") have introduced new packaging (Tetra- Prism). This packaging facilitates the transport and storage in the modern retail chains, and improves the conservation of the olive oil, preserving the properties of the product by keeping it away from oxygen and light.

***Promotion*.** In many EU regions, the leading olive oil companies and some public institutions have spent substantial financial resources for brand and generic promotion in order to develop awareness and favourable perception amongst consumers in the expectation of further demand expansion (Mili, 2006). In Spain, in 2004 companies spent 12.5 Million Euro for olive oil advertising (Antelo, 2006). The "SOS" group accounted for almost half of this amount. Companies, especially in Italy, that prefer the use of traditional pressing systems for obtaining olive oil to the use of more efficient systems (2 phase centrifugation), communicate this aspect to consumers and link it to local history and culture. Many consumers prefer oils obtained by this procedure (Capogna et al., 2001).

Within the EU, there is a potential for the improvement of the coordination of promotion activities. For instance, the introduction of a generic "EU" designation for external third markets might improve the efficiency of promotion campaigns of EU olive oils in emerging markets. When promoting EU olive oils in non- traditional consumer markets, it is advisable to give consumers simple, clear explanations and suggestions for potential product uses.

Raising vertical integration and internationalisation. Several EU companies seek to keep strong positions in the international market through the creation of enterprises in both EU and non- EU producing countries. In this way, the EU enterprises can expand in spite of the demand stagnation in the main EU producing countries, by taking advantage from their comparative advantages both in tangibles (technology, capital availability) and intangibles (brand, reputation, management) in the international market, and by having duty- free access to some markets like the US market. In the US for instance, imported olive oils from some Southern Mediterranean countries do not have to pay any duty, while olive oils imported from the EU have to pay compensatory duties due to production aids received within the EU. Some EU companies import olive oil from third countries under the so- called Inward Processing Arrangements and re- export it (after adaptation to destination market requirements) in order to take advantage from duty- free access.

The Spanish "SOS" group, which is the leading company in packed olive oil worldwide, plans to increase the number of its own olive oil mills until 15 during the next three years. By this up- stream integration it pretends that 20% to 25% of its yearly total olive oil supplies could be covered by own mills, to get more independent from origin markets and to stabilise olive oil prices on the final markets. "SOS" recently has acquired an olive oil milling industry in Morocco, and plans to buy others in Tunisia , Turkey and other Mediterranean countries. Moreover, this company has tried in the last year to consolidate its leading position worldwide by buying the formerly Italian companies "Minerva Oli" and "Carapelli". With these acquisitions "SOS" has a share of 20% in the US olive oil market.

Many other EU companies already established contacts, alliances or subsidiaries in foreign markets. For instance, the Spanish company "Borges" has subsidiary companies in Jordan, Tunisia, Morocco and Chile. Other important olive oil

companies as “Coop. Hojiblanca” and “Acesur” also have alliances, own installations and/or commercial delegations outside the EU (US, Tunisia, Morocco, Syria, Russia, amongst others).

Strategy of distributor’s brands. Increasingly there are stable collaborations in the distributor’s brand market segment between some EU olive oil producing companies and large food distribution chains. Some examples in Spain are the companies “Sovena” and “Olilan” that are specialised in the production of olive oils with distributor’s brand. In Spain, distributor’s brands account for almost 50% of the olive oil market, in Portugal 23% and in Italy 11% (Mili and Mahlau, 2005). In the United Kingdom, most consumers buy olive oil under distributor’s brand, as producer brand loyalty is low and many products are perceived as interchangeable (García Martínez et al., 2002).

3.2. Weaknesses

- **Demand stabilisation in major EU producing countries**. Since the early 1990s, production has increased substantially within the EU, while aggregate demand has increased in a lower rate. Therefore, growing quantities of olive oil had to be exported. Concretely, between 2000/01 and 2005/06 crop years annual production in the EU averaged 2,182,600 t, 39% more than the average of the 1990s (1,569,500 t, crop years 1990/91 to 1999/2000). Meanwhile, respective figures indicate that consumption increased by 30% from 1,495,600 t to 1,949,000 t (IOOC, 2006). Within the EU, in the last decade the share of the main producing countries (Spain, Italy, Greece and Portugal) in total EU consumption decreased from 93% in 1995/96 to 87% in 2005/06.

- **Higher price and income elasticity of demand in non-traditional markets**. In non-traditional consuming countries, many consumers consider olive oil as a non-essential product, for which demand tends to be more price and income elastic than in the traditional consuming countries. In the traditional countries, price increases (until certain levels) only cause small, temporary drop in consumption, while in non-traditional markets they may cause a long-run shift in consumption to other types of oils and/or to lower quality and cheaper categories of olive oils. However, as mentioned above, price fluctuations are difficult to avoid, at least at local level, due to climate variations and alternate bearing. Changes in exchange rates also may accentuate price fluctuations. The current revalorization of the Euro regarding the dollar has a negative impact on EU olive oil exports, as the high value of the Euro raises the price of the EU olive oils in the United States and many other importing markets.

- **High production and marketing costs**. The cost structure of olive groves depends on a multitude of variables, in particular their type (conventional, intensive), the lie of the land (sloping, level ground), productivity, etc. For the EU as a whole the data available does not provide a suitable basis for meaningful comparisons. Generally speaking, the unit costs of production are lower for high-density olive groves than for low-density olive-growing. Moreover, for identical yields, production costs per hectare are higher in the case of olive groves situated on slopes (European Communities, 2003a). This applies in particular to the costs of harvesting, which for most olive growers accounts for 50% or more of the total production costs. The costs of harvesting depend on the costs of labour, the type of

grove and its density, the yield per hectare and, above all, the degree of mechanisation.

Within the EU, olive oil is cultivated mainly in small and medium farms. Some technologies remain inaccessible for smaller farms and on slopes steeper than 15 degrees. In these farms, the lack of mechanisation increases substantially the labour costs. The costs imposed by eco-conditionality also tend to increase production costs in the EU. One way to reduce production costs is to achieve higher productivity and regular yields, e.g. by the application of genetic innovations and improved production techniques. Some studies indicate that there is a considerable margin for cost reduction in organic and conventional olive growing farms by increasing technical efficiency (Tzouvelekas et al., 2001). Available data do not either allow a cost comparison of olive production in the EU with its main competitors; however, the high protection level of the EU olive oil industry (see section 3.4) suggests that in many EU olive growing holdings the production costs are at present higher than in other producing countries.

Furthermore, despite the modernisation of the producing and processing industries, the atomisation of the holdings, structural duality in the processing industry, high costs of labour and the relatively low vertical integration in many cases still cause high transaction costs. In several EU regions, there exists a capacity excess of the olive oil processing industry. While the technological improvements implemented in the producing and processing industries made possible a rise in the average product quality, these changes affected principally processes and products. In entrepreneurial management and organisation only few innovations have been introduced, and the EU olive oil sector as a whole still has deficiencies with regard to commercial and logistical organisation (Mili and Rodríguez-Zúñiga, 2005).

- **Structural inelasticity of supply**. Given the perennial nature of olive cultivation, a major feature of olive holdings is the structural inflexibility of their production response, which restricts their ability to take advantage from market opportunities and to reduce supply when prices are low. The decision to install new olive plantations has medium and long term consequences. Newly planted trees do not attain maturity for a variable period of at least ten years. Once the plantations are providing olives, farmers only have few possibilities to adapt their production to market and price fluctuations. When prices are low, in the short run they only may grow olive trees with low input use, leave the olives on the olive trees without harvesting them, or, in extreme cases, grub up the olive trees.

- **Large production and price fluctuations**. Wide production fluctuations, linked to climate variations and alternate bearing are characteristic of olive groves, whereby huge production tends to be followed by lower production in the following year. The fluctuations in production cause price fluctuations in the olive oil market. Moreover, marked heterogeneity of production systems implies the need to regulate the coexistence of different types of farming.

- **Weaknesses in the product strategic marketing**. The EU olive oil sector has traditionally responded more to supply criteria than to policies to promote demand and to capture new markets (Mili, 1999). Until recently there has been scarcity of efficient export strategies with medium and long term vision. In addition to brand promotion, there is a need of more common coordinated promotion and advertising actions in external markets. Generic promotion traditionally has been undertaken

by the IOOC with the financial support of the EU. In the last years there also have been several programs for generic promotion of EU olive oils within the EU and in some non-EU emerging consumer markets (European Commission, 2006).

- **Scarcity of reliable, homogeneous statistical information**. Within the EU, statistical data on olive oil production, marketing and consumption are rather scarce and, sometimes contradictory. The contradictions often have their origins in the use of different methodologies when collecting data. Regarding production, in spite of the improvement of the data bases by the increasing use of the Geographic Information System (GIS), still there are considerable divergences in the estimations of the number of olive trees, areas under olive cultivation and yields facilitated by different sources. With respect to consumption, data obtained from household and HRC panels differ significantly from balance sheets data and professional associations statistics (Mili, 1996). Direct sales and consumption on the farm, which still account for significant proportions in all producing countries, further difficult the obtaining of reliable statistical data. The scarcity of reliable statistical information is a relevant weakness since it reduces transparency along the production and marketing chain, increases uncertainty and information asymmetry, and makes more difficult planning and exhaustive analysis of this sector.

3.3. Opportunities

- **Changes in consumer preferences and increasing demand for olive oil worldwide**. The rising per capita income and changing consumption patterns towards healthier and safer products, favour the quantitative and qualitative increase of olive oil consumption in and away from home. Within the product categories, these trends favour especially the increase of the high-quality categories of olive oil. World consumption has been progressing fairly steadily, without the fluctuations that are more a production feature. Many consumers consider that olive oil is a healthy, natural and good-tasting product. Nevertheless, olive oil only accounts for approximately 3% of total edible oils consumption at world level. This share is much higher in the EU producer countries (65% in Spain and 69% in Italy) where olive oil traditionally played a major role in oils and fats supply.

However, for instance in the United States, the fourth largest consumer country of olive oil worldwide and with a per capita consumption of 0.7 kg, olive oil only has a share of 2.5% in total vegetable oils consumption (Ismea, 2005). There is a large potential for demand increase worldwide even taking into consideration that olive oil consumer prices are higher than prices of other vegetable oils. In producer countries, the greater increase in consumption mostly will be the result of demand from a segment of population that is concerned about the quality of its diet rather than the relative price level. Similar trends can be observed in non-producer countries, although in this case there is also a large potential for growth in consumption in the young, urban population (Mili and Rodríguez Zúñiga, 2001).

Another salient trend in food consumption is the increase of expenditure on food consumed away from home. Due to the growing importance of eating out in most developed and emerging countries, the use of olive oil in HRC outlets is increasing continuously. In Spain for instance, according to the consumption panel of the Ministry of Agriculture, the share of HRC in total olive oil consumption raised from 12% in 1990 to 18% in 2004, largely at the expense of the at home consumption share (Mercasa, 2005). In 2005, in Spain there was an overall consumption growth

of olive oil by 1.8% with respect to 2004, which has been the result of an increase in olive oil consumption in HRC by 22.3% and a decrease of consumption in households by 2.9%.

- **Increase of exports owing to increasing world agricultural trade liberalisation**. Agricultural trade liberalisation made possible an improved access by competing countries to international markets, especially non-traditional markets. Trade liberalisation is expected to continue affecting the international olive oil market. In the last decade, consumption increased only slightly in the main producer countries of the EU, while imports increased almost exponentially in some non-traditional countries. This evolution is one of the main reasons why EU olive oil companies are increasing their internationalisation. With average imports amounting to 202,300 t during the period 1999/90-2005/06, the United States accounts for 38% of the world total, being this country by far the chief destination of world exports (without considering intra-EU trade). With imports of 112,700 t (21%), Italy lies at some distance behind the United States. Next come Japan (5.7%) and Australia (5.4%) (IOOC, 2006). Some countries like the US, Japan and France, are very relevant importers in qualitative terms because they import exclusively or mainly extra virgin olive oils. Since olive oil tends to be mostly consumed in production areas, external trade still concerns an average of less than 20% of world production.

- **CAP reform**. In 2003/04 the CAP has been reformed (Luxembourg Agreement), introducing changes to the former regulation. The reform aims, amongst other things, at making EU agriculture more competitive and market oriented. Another objective of this reform is sheltering as large a proportion of direct payments as possible within the subsidies classified as *Green* in the WTO terminology. The European Commission expects that CAP reform will stabilise farmers' incomes. For many years, incomes have been varying largely for olive oil producers due to climate variations and alternate bearing. The introduction of production aids gave certain stability to incomes in the face of weather variations. Now, the decoupling of subsidy payments from production to the producer basis allows a stability of payments in time. The European Commission also expects that the reformed CAP will consolidate the positive image of farmers in the society with regard to transparency, quality, safety and environmental protection (European Commission, 2003b). In this context, a special Eurobarometer survey (European Commission, 2004) reveals that a majority of the EU citizens (60%) support the new directions the CAP has taken recently that put more emphasis on sustainability issues (food quality, safety, environment).

A remarkable aspect of the CAP is the special focus on improving quality. Specifically in the olive oil sector, because olive oil price is higher than of other common vegetable oils, the consumer expects olive oil to be of impeccable quality. The regional, national and EU institutions are aware of the key importance of quality as key factor for sectoral performance. Some measures of the CAP comprise the improvement of the intrinsic quality (organoleptic, sensorial parameters), combating fraudulent mixtures, and new rules on labelling in order to provide more precise information to consumers. The EU also has recognised many protected extra virgin olive oils (PDO/PGI). These typical oils, which are mainly famous for their sensorial properties, present a complex and specific qualitative profile including both intrinsic and extrinsic attributes (Caporale et al., 2006).

- **More efficient production in more liberalised markets**. It is well known that protectionism tends in the long run to decrease efficiency and competitiveness. In liberalised markets, the vast majority of EU olive oil farms should produce competitive raw materials at lower costs while maintaining high quality and environmental standards. Processors also should produce more efficiently than nowadays. One way of improving efficiency is farm expansion. Bigger units mean better exploitation of technology, capital and labour. Another way to gain efficiency is narrow and stable collaboration between producers and distributors (traditionally adversaries). The capacity of national and EU public institutions to facilitate the adaptation of farmers and processing industries to the new competitive setting will influence the rapidity of the necessary changes of the production and marketing processes. Consumers should profit from the mentioned reduction in costs, as these make possible a decrease in final prices.

- **Specialisation on specific, high-value market segments**. Another alternative (besides or combined with cost reduction) to react to world market liberalisation would be the specialisation on certain market segments, increasing the quality of products, processes and logistics (Mili and Zúñiga, 2005). Some producers and processors will seek to develop closer links with their customers and aim to regional added value, for instance with local specialities. The development of regional markets is an expression of higher consumer needs for safety and quality that will become even stronger in the course of globalisation and open new market opportunities for European olive oil producers. Some olive growing holdings and olive oil mills have been rather successful with the development of local markets for virgin and extra virgin olive oils. Others expect to increase their sales benefiting from tourism and selling these products in speciality stores in the domestic and foreign markets.

Some initiatives linked to olive oil culture and tradition are been developed with this purpose. Up to now, in many Spanish olive oil production areas, the marketing of olive oil with PDO/PGI has been successful, although only few PDO/PGIs are well known at national level. However, there also have been detected problems with the marketing of regional specialities and organic products due to their high price that are partly a consequence of the high certification costs. One example has been the marketing of olive oil with the PGI “Terra di Bari” in Italy. Probably actually there are too many quality designations in Spain and Italy, and some of them do not reach a minimum size that is necessary for efficient promotion.

Other ways of specialisation are the supply of organic products, top-quality olive oil, or olive oil obtained with traditional milling systems, favoured by a stable collaboration between producing and distribution companies (see section 3.1).

- **Use of compulsory and voluntary certification schemes**. The EU “quality strategy for olive oil” and food policy anticipate incentives for enhancing quality. Quality has to satisfy primary requirements as health and food safety and secondary requirements as convenience, services, durability, etc. The EN ISO 9000 which gives general standards to which a quality system has to conform for accreditation, is of direct importance for the food sector. A regulation to improve food quality and safety is incorporated in EN ISO 9000: the Hazard Analysis of Critical Control Points (HACCP). The Directive 93/43/EEC made the HACCP system mandatory for food companies. The HACCP system has been recommended by the

World Health Organisation and the Codex Alimentarius as one of the best systems in order to guarantee microbial safety and healthy food (Vilar et al., 2003).

The article 4.4 of the EU Regulation 1.334/2002 deals with the creation and management of traceability systems for olive oil. Some companies as "L. Padillo" and "Westfalia Separator" have developed and installed a technology that allows the use of HACCP in the olive oil industry (Grupo Padillo, 2005; Vilar et al., 2003). The implementation of a HACCP system in a milling industry not only increases food safety, it also increases the share of virgin olive oil in total olive oil production. Besides, companies can communicate their use of these quality management systems to consumers in order to reach a differentiation from competitors. However, the industry fragmentation and the lack of sufficient information are obstacles for rapid implementation of the HACCP schemes.

The increasing use of certification schemes that are imposed to suppliers by the modern retail chains (not by governments), as for instance EUREP/GAP, may be considered an opportunity for the EU leadership in international trade (García Alvarez-Coque, 2005). While food safety and quality standards are seen as key for maintaining and improving reputation, additional labour and environmental standards are also gaining ground as strategies to forge customer loyalty and to increase market shares. Food standard schemes are likely to be an instrumental in shaping the food system, determining how food is grown, processed and delivered (Fulponi, 2006).

- **Potentialities opened up by new information technologies**. The use of new information technologies for national and international commerce is an opportunity for EU olive oil operators. It allows producers to provide consumers in many countries with detailed information about the characteristics of their products: origin, varieties used, organoleptic and sensorial properties, potential uses... In the EU, almost all the big distribution chains are placing heavy stakes on e-business. These firms take advantage of the Internet as an additional business channel that allows them to expand their business to new buyers, as well as a tool for customisation. There are also firms formed by alliances between on-line communications companies and food enterprises, which combine their complementary skills to sell food through the Net. Business to business (B2B) electronic trade is starting to expand in the olive oil industry. The use of information technologies is more widely spread in the EU than in most competing countries, although in the long run competitors also may profit from these technologies.

3.4. Threats

- **Cheaper vegetable oils competition**. Olive oil has to compete to some extent with sunflower oil, soybean oil, rapeseed oil and other substitute oils and fats. Each oil has its unique characteristics, and none are equally suitable for all purposes. In applications where consumers seek specific characteristics, substitution effects are limited. However, where they can be readily substituted, price can be an important determinant of market share (Owen et al., 1995). World-wide, soybean oil is the most consumed oil (30% of world consumption of vegetable oils). However, consumption patterns of the different types of vegetable oil vary largely among countries (Mattson et al., 2004). In non-traditional countries where consumers are

accustomed to use other vegetable oils, eating habits and traditions may make difficult the introduction of olive oil.

Compared with other edible oils, olive oil is an expensive product. At the retail stage, the price ratio between olive oil and common edible oils is in the order of 4:1 to 5:1. Besides, olive oil increasingly is competing with new products which have been developed in order to improve characteristics of substitute vegetable oils (functional food). Many consumers may have a better image of these new products with some added healthy components, than of the traditional oilseed oils. These products are more expensive than traditional oils, but cheaper than olive oil. For instance, in France "Lessieur" has developed mixture of sunflower oil, rape seed oil, grape seed oil and a fatty acid with high content of oleic oil called "Oleisol", with addition of vitamins D and E, which is marketed with the brand "Isio4". In the view of the French consumers, this product ranks second with regard to the healthy image of edible oils and fats, after olive oil and before sunflower oil and other oils and fats (Parras Rosa et al., 2005). In Spain, "La Española" ("Acesur") offers "Naturaceites Soy Plus", which adds vitamins, fatty acids Omega 3, minerals and natural antioxidants to a mixture of sunflower and soybean oils. Some studies even suggest that olive oil is not healthier than rapeseed and other vegetable oils (Boztas, 2001). Olive oil producers and institutions would need to continue enhancing the image of olive oil as a healthy, natural and good-tasting product, in order to maintain the higher consumer valuation toward this product compared to these new, potential substitute products.

- **World supply increases with higher rates than world demand**. Worldwide, supply is expected to increase with higher rates than potential demand (Mili and Rodríguez Zúñiga, 2001; IOOC, 2001). The rise of the olive oil supply stems *inter alia* from an extension of cultivated areas and technological improvements. It may cause price drops if it will not be possible to achieve similar increases in olive oil demand.

Presumably, increase in world production will be caused mainly by 1) the expected rapid rise in production in non-EU Mediterranean producing countries (Tunisia, Morocco, Turkey, Syria, Jordan), and 2) the New (World) producing countries: in the next years, probably the highest rates of growth in production will be seen in some new producing countries, such as Argentina, Chile, Brazil, Mexico, South Africa, China, Australia, New Zealand and the United States. These countries have comparative advantages for the olive oil production, as for instance the availability of cheap labour force (excepting Australia, New Zealand and USA), large extensions suited for olive cultivation, adequate structure of farms and public incentives (low-rate loans, other fiscal advantages). For instance, Argentina is only cultivating some 79,000 ha with olive trees, although according to estimations 80 Million ha are suitable for olive groves. In California (USA), the expansion of the olive oil industry is based on the use of new varieties, new plantations with high-density (250-300 plants per acre) or super-high-density (600-900 plants per acre), the use of mechanical harvesters and excellent quality oils with large and varied labels and styles. In the next five to seven years, the Californian production can easily double when new plantations come into full production (Vossen and Devarenne, 2005).

Furthermore, the creation of transnational joint ventures and alliances by EU olive oil leading groups (e.g. "SOS" group) might in the long run cause a reduction of investments within the EU. These processes may become even more accentuated in

future due to bilateral trade agreements and the liberalisation of the agricultural world markets. In Southern Mediterranean and New World producing countries, public and private sectors are favouring modern, competitive plantations. In the EU, policy makers are paying attention to such developments, as they have to take into consideration the interests of huge areas of marginal land, where olive growing is the only feasible activity.

- **High dependency on public subsidies**. The Producer Support Estimate (a measure of support developed by the Organisation for Economic Co-operation and Development (OECD) in order to estimate the total monetary transfers from consumers and taxpayers to agricultural producers) shows that these transfers account for approximately 50% of the gross income of EU olive growing farmers (García Alvarez-Coque, 2001; Drogué, 2005). According to an evaluation study based on Farm Accountancy Data network (FADN) figures, a decrease in income equal to the production aid would imply that 18% of the total area under olive trees would no longer be profitable (European Commission, 2003a). As mentioned above (section 3.2), the subsidies for olive oil production at least partly can be explained by the location of most olive oil production in less developed EU rural areas.

In the context of the 2003/04 CAP reform, the EU has changed domestic support schemes by introducing decoupled farm subsidy payments. Complementary payments take into account social and environmental considerations. Farmers who get these payments may continue to produce although their costs are higher than perceived prices. On the other hand, more efficient farms will not get complementary payments. The price drops and the uncertainty with regard to the market regulations in this sector may disincentive investments and modernisation of the more efficient farms.

- **Increase of imports derived from growing world agricultural trade liberalisation**. International trade agreements, especially bilateral trade agreements with third countries, made possible an increased access by some competing countries as Tunisia and Morocco to the EU market. EU olive oil imports from these countries are possible under three regimes: 1) the preferential tariffs and quotas regime (the unique significant quota is the allocated to Tunisia: 57165 tons in bulk in 2005, entering with 0% tariff), 2) the inward processing regime (60% to 80% of total volume of EU olive oil imports, mainly from Tunisia and to lower extent from other suppliers such as Turkey, Morocco and Syria; the quantities imported under this regime are high when EU production is low and are destined principally to refining), and 3) the normal (Most Favoured Nation "MFN") regime in which *ad-valorem* tariff equivalents are quite high (65% to120%, depending on the product category).

The ongoing WTO negotiations anticipate the elimination of the EU subsidies for agricultural exports by 2013 (for olive oil these subsidies have been eliminated since 1998), a significant reduction in tariffs and in domestic support linked to agricultural production and prices, in order to reduce distortions on the international market. Some agricultural exporting countries such as Brazil, the United States and India demand further liberalisation of world agricultural markets. By contrast, other countries as Japan, the EU as a whole and Switzerland, are less enthusiastic to this perspective, as they fear a negative impact on their agricultural sector.

Trade liberalisation also concerns non-tariff trade barriers, which in many countries protect domestic producers and/or consumers. For instance, some developed countries, such as numerous EU countries, Switzerland and Japan, would prefer a more explicit admission of the "principle of precaution" in WTO agreements. Various countries limit imports of certain products with barriers such as quantitative import restrictions, variable import levies, antidumping duties, restrictive customs procedures and administrative practices, heath and sanitary regulations, safety standards, and labelling and certification requirements.

- **Growing bargaining power of the distribution sector**. Over the two last decades, the rapid concentration of the EU food distribution led to an oligopolistic market structure and an increase of the bargaining power of the retail distribution with regard to producers and processors. Nowadays, retailers are the key players in the more demand-driven food system. Payment conditions usually are more favourable for retailers. The market share of distributor's brands is expanding at the expense producer brands (see section 3.1). In many modern retail outlets (large self-service stores, hard- discounters, etc.), low prices are an important aspect of their business model, with an extraordinary price pressure on the food industry as a consequence. In addition, the retail chains decide which innovations have to be adopted by farmers and processors in order to take account for the changes required by final markets. Retail outlets also have an influence on the prices paid by consumers for the different categories of olive oil. For instance, in the United Kingdom the supermarket margins average up to 40% for olive oil, compared with 15% with sunflower oil (García Martínez et al., 2002).

- **Other threats**. For the olive oil sector there are other threats and vulnerabilities stemming from the socioeconomic environment. For instance, in many EU rural areas, young persons prefer to search employment in the services, construction or industry sectors where usually wages are higher. Sometimes, it is difficult to find workforce for agricultural activities. Besides, the consequences of the monetary policy (revalorization of the Euro with respect to the dollar, the yen and other currencies, the increase of interest rates, changing agromonetary schemes, etc.) could be a threat for olive oil producers and exporters. A weakness of the world economy (e.g. because of energy scarcity) could have a negative impact on olive oil demand, as consumers might substitute olive oil by cheaper products. Furthermore, increasing obesity prevalence in many developed countries implies that in this population segment persons have to reduce their calorie intake and consumption of oils and fats.

Last but not less important, as in most other agricultural and industrial activities, the olive oil sector will in the long run be affected by climatic change. Temperatures in many regions are raising slowly but constantly due to harmful gases emissions and other factors. This could have multiple effects on olive growing. Owing to climatic change, some areas may become more suitable and others less suitable for olive cultivation. However, available data still do not provide a reliable basis for the assessment of the consequences of climatic change.

4. Concluding remarks

In this study a structured survey of internal and external key factors affecting EU olive oil has been carried out. The SWOT profile suggests that any strategy should

allow the sector to take advantage from its strengths and opportunities, and to minimise the impacts of its weaknesses and external threats.

The principal strengths of the EU olive oil are related to the product characteristics, the leading position of the EU in the international market, the benefits for environment and rural development, and the marketing strategies of the olive oil companies. The EU olive oil industry should maintain or even improve product quality, diversity and image. Olive oil operators have to focus on communicating these advantages to consumers, especially in non-traditional markets. By using an adequate marketing mix, competitiveness may be enhanced and EU world leading position consolidated.

The EU olive oil industry also has to adopt strategies in order to face its weaknesses and vulnerabilities. In EU producing counties, where demand has almost stabilised in quantitative terms, operators should make efforts to add value by favouring consumption of high-quality oils. In addition, companies and public institutions involved in the sector should try to increase demand in non-traditional consumer countries both inside and outside the EU, taking into consideration that the price elasticity usually is higher in new markets. They also have to enhance communication of the meaning of the different types of olive oil.

Olive oil chain agents should try to solve specific problems related to supply chain management, in particular interest conflicts and marketing costs. Producers and processors also have to deal with some aspects regarding supply, such as the structural inelasticity of supply and the high costs of raw materials. Moreover, the elaboration of more reliable statistical data would contribute to increase transparency along the olive oil marketing chain, as well as the capacity for its investigation and analysis.

The increasing demand for olive oil worldwide as well as the demand for healthy, high quality products, constitute a positive context for the development of this sector. The last CMO for olive oil reform have introduced measures oriented to improve product quality, to promote consumption and to strengthen environmental benefits along the olive oil supply chain. The increasing liberalisation of international agricultural markets provides considerable opportunities to EU olive oil companies. These either may increase their exports and/or create alliances with operators in non-EU producing countries in order to enhance their price-competitiveness and control over international markets. Within more liberalised world markets, companies may try to reach a cost leadership or to specialise on specific market segments (local markets, organic products, PDOs). Technological developments tend to favour production within the EU. Special attention should be given to information technologies that are developing vigorously. Their use has helped to speed up business operations and to improve customer service.

The olive oil sector also is exposed to threats, such as cheaper vegetable oils competition, and an increase of global supply with higher rates than potential demand. Another threat is derived from the high dependency of the EU olive oil producers on public subsidies. In addition, producers and processors have to deal with the increasing bargaining power of the distribution sector. In the short and medium run they also have to adapt their strategies in order to cope with macroeconomic changes (revalorisation of the Euro with respect to dollar, fiscal and

agromonetary policies), social and cultural environment (health care, obesity, population ageing) and, in the longer run, climatic change.

Finally, it should be pointed out that this analysis seeks to contribute to the ongoing debate on the implications at the product- level (a differentiated product in this case) of the broad change and reform processes under way in the global agri-food markets, and at the same time stimulate new, more focused research on a subject scantily approached in the specialised literature despite its strong importance for numerous EU regions.

References

Antelo, A.B. (2005). Los aceites buscan ser más saludables. *Alimarket Revista*, 183, 04.2005, pp. 115- 116.

Antelo, A.B. (2006). Aceite de oliva, de nuevo por las nubes. *Alimarket Revista*, 191, 01.2006, pp. 107- 122.

Boztas, S. (2001). Olive oil is no healthier than cooking oil. *The Sunday Times*, www.sunday- times.co.uk/news, 25.02.2001.

Capogna, D., Costagli, G. and Alba, J. (2001). El proceso de producción del aceite de oliva virgen. Comparación entre España e Italia. *Agricultura*, 833, pp. 784- 788.

Caporale, G., Policastro, S., Carlucci, A. and Monteleone, E. (2006). Consumer expectations for sensory properties in virgin olive oils. *Food quality and preference*, 17, pp. 116- 125.

D'Auria, R. (2001). The olive oil commodity chain in Italy. *Olivae*, 90, pp.14- 27.

Drogué, S. (2005). Description and Quantification of the EU Protection for Imported Olive Oil from Mediterranean Countries. EU-MED AGPOL Project Report D13, INRA- INAPG, France.

European Commission (2000). The quality strategies for olive oil. Communication from the Commission to the Council and the European Parliament, COM (2000) 855 final, Brussels.

European Commission (2003a). Working Paper of the Directorate- General for Agriculture: The olive oil and table olive sector. Brussels.

European Commission (2003b). Accomplishing a sustainable agricultural model for Europe through the reformed CAP – the tobacco, olive oil, cotton and sugar sectors. Communication from the Commission to the Council and the European Parliament, CON (2003) 554 final, Brussels.

European Commission (2004). European Union citizens and agriculture from 1995 to 2003. Special Eurobarometer survey, September 2004, Brussels.

European Commission (2006). Promotion of EU agricultural products outside the EU. Press Release, IP/06/364, 21/03/2006. Brussels.

Fulponi, L. (2006). Private voluntary standards in the food system: The perspective of major food retailers in OECD countries. *Food Policy*, 31 (1), pp. 1- 13.

García Alvarez- Coque, J.M. (2001). La PAC, la OCM e l'olivicoltura spagnola. In A. Cavazzani and G. Sivini (eds.), *L'olivicoltura spagnola e italiana in Europa,* 21- 41, Rubbettino, Soveria Mannelli.

García Alvarez- Coque, J.M. (2005). Comercio internacional y globalización. Implicaciones para los productos mediterráneos. In: S. Mili and S. Gatti (coords.), *Mercados agroalimentarios y globalización. Perspectivas para las producciones mediterráneas*. Editorial CSIC, Madrid, pp. 9- 22.

García Martínez, M., Aragonés, Z. and Poole, N. (2002). A repositioning strategy for olive oil in the UK market. *Agribusiness*, 18 (2), pp. 163- 180.

Grupo L. Padillo (2005). El sistema de trazabilidad de L. Padillo para la producción de aceite de oliva en las almazaras. *Mercacei*, 41, pp. 124- 125.

International Olive Oil Council (2001). Projected olive oil production and consumption by 2008. CE/R.54/Doc. nº 3, IOOC, Madrid.

International Olive Oil Council (2006). World olive oil figures, www.internationalolive oil.org, Madrid.
Istituto di Servici per il Mercato Agricolo Alimentare (Ismea) (2005). *Evoluzione del sistema agroalimentare italiano*. Rapporto Annuale Vol. 1, Roma.
Leone, F.G. (2000). Globalisation du marché de l´huile d'olive et compétitivité du secteur en Italie. Étude comparative. *Olivae*, 83, pp. 10-14.
Loumou, A. and Giourga, C. (2003). Olive groves: The life and identity of the Mediterranean. *Agriculture and Human Values*, 20 (1), pp. 87-95.
Mattson, J.W., Sun, C. and Koo, W.W. (2004). Analysis of the world oil crops market. Agribusiness & Applied Economics Report nº 529. Centre for Agricultural Policy and Trade Studies, North Dakota State University.
Mercasa (2005). *Alimentación en España 2005. Producción, industria, distribución y consumo*. Madrid.
Mili, S. (1996). *Organización de mercados y estrategias empresariales en el subsector del aceite de oliva*. MAFF, Madrid.
Mili, S. (1999). The olive oil sector: International challenges and future scenarios. *Olivae*, 75, pp. 8-16.
Mili S. (2006). Olive Oil Marketing on Non-Traditional Markets: Prospects and Strategies. *New Medit*, 5 (1), pp. 27-37.
Mili, S. and Mahlau, M. (2005). Characterization of European Olive Oil Production and Markets. EU-MED AGPOL Project Report D10, CSIC, Madrid.
Mili, S. and Rodríguez Zúñiga, M. (2001). Exploring future developments in international olive oil trade and marketing: a Spanish perspective. *Agribusiness*, 17 (3), pp. 397-415.
Mili S. and Rodríguez-Zúñiga M. (2005). El sector de aceite de oliva español. Transformaciones estructurales recientes y estrategias empresariales. In: S. Mili and S. Gatti (coords.), *Mercados agroalimentarios y globalización. Perspectivas para las producciones mediterráneas*. Editorial CSIC, Madrid, pp. 93-107.
Ministry of Agriculture, Fisheries and Food (MAPA) (2003). *El libro blanco de la agricultura y el desarrollo rural*. Madrid.
Novicevic, M.M., Harvey, M., Autry, C.W. and Bond III, E.U. (2004). Dual-perspective SWOT: a synthesis of marketing intelligence and planning. *Marketing Intelligence & Planning*, 22 (1), pp. 84-94.
Owen, A.D., Chowdhury, K. and Garrido, J.R.R. (1996). A market share model for vegetable and tropical oils. *Applied Economics Letters*, 3, pp. 95-99.
Parras Rosa, M., Senise Barrio, O., Torres Ruiz, F.J., Murgado Armentero, E.Mª and Serrano Domínguez, C. (2005). El sector del aceite de oliva en Francia. In: S. Mili and S. Gatti (coords.), *Mercados agroalimentarios y globalización. Perspectivas para las producciones mediterráneas*. Editorial CSIC, Madrid, pp. 129-141.
Tió, C. (2005). Reforma de la PAC y productos mediterráneos. In: S. Mili and S. Gatti (coords.), *Mercados agroalimentarios y globalización. Perspectivas para las producciones mediterráneas*. Editorial CSIC, Madrid, pp. 23-32.
Tzouvelekas, V., Pantzios, C.J. and Fotopoulos, C. (2001). Technical efficiency of alternative farming systems: the case of Greek organic and conventional olive-growing farms. *Food policy*, 26 (6), pp. 549-569.
Vilar Hernández, J., Stahnke, W.B. and Nuñez Torres, S. (2003). Sistemas de análisis de riesgos y control de puntos críticos. Consideraciones para el sector oleícola. *Oleo Revista*, 95, pp. 70-82.
Vossen, P. and Devarenne, A. (2005). California olive oil industry. University of California Cooperative Extension. Santa Rosa, CA, USA.
Wahrburg, U., Kratz, M. and Cullen, P. (2002). Mediterranean diet, olive oil and health. *European Journal of Lipid Science and Technology*, 104 (9/10), pp. 698-705.