
Support for Farmers' Cooperatives

Sector Report Olives

Constantine Iliopoulos
Irina Theodorakopoulou
Irene Tzouramani

The 2011-2012 project „Support for Farmers’ Cooperatives“ is commissioned and funded by the European Commission, DG Agriculture and Rural Development.

Contract Number: 30-CE-0395921/00-42.

The project is managed by Wageningen UR’s Agricultural Economics Research Institute LEI and Wageningen University. Project managers: Krijn J. Poppe and Jos Bijman.

Other members of the consortium are:

- Pellervo Economic Research PTT, Finland: Perttu Pyykkönen
- University of Helsinki, Finland: Petri Ollila
- Agricultural Economics Research Institute, Greece: Constantine Iliopoulos
- Justus Liebig University Giessen, Germany: Rainer Kühl
- Humboldt University Berlin, Germany: Konrad Hagedorn, Markus Hanisch and Renate Judis
- HIVA Katholieke Universiteit Leuven, Belgium: Caroline Gijssels
- Rotterdam School of Management, Erasmus University, The Netherlands: George Hendrikse and Tony Hak

How to cite this report:

Iliopoulos, C., Theodorakopoulou, I., Tzouramani, I. (2012). Support for Farmers’ Cooperatives; Sector Report Olives. Wageningen: Wageningen UR.

Disclaimer:

This study, financed by the European Commission, was carried out by a consortium under the management of LEI Wageningen UR. The conclusions and recommendations presented in this report are the sole responsibility of the research consortium and do not necessarily reflect the opinion of the Commission or anticipate its future policies.

Support for Farmers' Cooperatives

Sector Report Olives

Irini Theodorakopoulou

Agricultural Economics Research Institute, Greece

Constantine Iliopoulos

Agricultural Economics Research Institute, Greece

Irene Tzouramani

Agricultural Economics Research Institute, Greece

November 2012

Corresponding author:

Constantine Iliopoulos
Agricultural Economics Research Institute
Terma Alkmanos Street
GR-11528, Athens
Greece
E-mail: iliopoulosC@agreri.gr

Preface and acknowledgements

In order to foster the competitiveness of the food supply chain, the European Commission is committed to promote and facilitate the restructuring and consolidation of the agricultural sector by encouraging the creation of voluntary agricultural producer organisations. To support the policy making process DG Agriculture and Rural Development has launched a large study, “Support for Farmers’ Cooperatives (SFC)”, that will provide insights on successful cooperatives and producer organisations as well as on effective support measures for these organisations. These insights can be used by farmers themselves, in setting up and strengthening their collective organisation, and by the European Commission in its effort to encourage the creation of agricultural producer organisations in the EU.

Within the framework of the SFC project this sector report on cooperatives in the olive sector in the EU has been written.

Data collection for this report has been done in the summer of 2011.

In addition to this report, the SFC project has delivered 7 other sector reports, 27 country reports, 6 EU synthesis and comparative analysis reports, 33 case studies, a report on cluster analysis, a report on the development of agricultural cooperatives and relevant policy measures in other OECD countries, and a final report.

Table of contents

1 Introduction.....	6
1.1 Objective of the study	6
1.2 Analytical framework	6
1.3 Definition of the cooperative.....	7
1.4 Method of data collection.....	7
1.5 Period under study	7
2 Statistics on the evolution and position of agriculture.....	8
2.1 Special characteristics of the sector due to character of the product and the influence of the Common Agricultural Policy.....	8
2.2 Share of the sector in agriculture and in National Product.....	9
2.3 Development in the number of farms	11
2.4 Economic indicators of farms.....	13
3 The evolution and position of cooperatives and their performance.....	15
3.1 Description of the food chain issues in the sector	15
3.2 Performance of coops (market shares, growth, other indicators).....	17
3.3 Description of largest farmer's cooperatives in the sector	18
4 Assessment of developments among cooperatives	20
4.1 The institutional environment.....	20
4.2 The role of cooperatives in the food chain.....	23
4.3 Internal Governance.....	26
4.4 Expert assessment of developments	27
5 Overview of policy measures and assessment of the influence of policy measures on the evolution and current position of cooperatives.....	29
5.1 Introduction.....	29
5.2 Overview of regulatory framework including fiscal and competition issues.....	29
5.3 Expert assessment of impact of policy measures	35
6 Discussion.....	38
REFERENCES	39
APPENDIX.....	41

1 Introduction

1.1 Objective of the study

The imbalances in bargaining power between the contracting parties in the food supply chain have drawn much attention, also from policy makers. The European Commission is committed to facilitate the restructuring of the sector by encouraging the creation of voluntary agricultural producer organisations. DG Agriculture and Rural Development has launched a large study, “Support for Farmers' Cooperatives”, that will provide the background knowledge that will help farmers organise themselves in cooperatives as a tool to consolidate their market orientation and so generate a solid market income. In the framework of this study, this report provides the relevant knowledge from the olive oil and table olives sector.

In this context, the specific objectives of the project, and this sector report, are the following:

First, to provide a comprehensive description of the current level of development of cooperatives and other forms of producer organisations in the olive oil and table olives sector. The description presented in this report will pay special attention to the following drivers and constraints for the development of cooperatives:

- Economic and fiscal incentives or disincentives and other public support measures at regional and national;
- Legal aspects, including those related to competition law and tax law;
- Historical, cultural and sociologically relevant aspects;
- The relationship between cooperatives/POs and the actors of the food chain;
- Internal governance of the cooperatives/POs.

Second, identify laws and regulations that enable or constrain cooperative development and third, to identify specific support measures and initiatives which have proved to be effective and efficient for promoting cooperatives and other forms of producer organisations in the agricultural sector in the olive oil and table olives sector.

1.2 Analytical framework

There are at least three main factors that determine the success of cooperatives in current food chains. These factors relate to (a) position in the food supply chain, (b) internal governance, and (c) the institutional environment. The position of the cooperative in the food supply chain refers to the competitiveness of the cooperative vis-à-vis its customers, such as processors, wholesalers and retailers. The internal governance refers to its decision-making processes, the role of the different governing bodies, and the allocation of control rights to the management (and the agency problems that goes with delegation of decision rights). The institutional environment refers to the social, cultural, political and legal context in which the cooperative is operating, and which may have a supporting or constraining effect on the performance of the cooperative. Those three factors constitute the three building blocks of the analytical framework applied in this study (Figure 1).

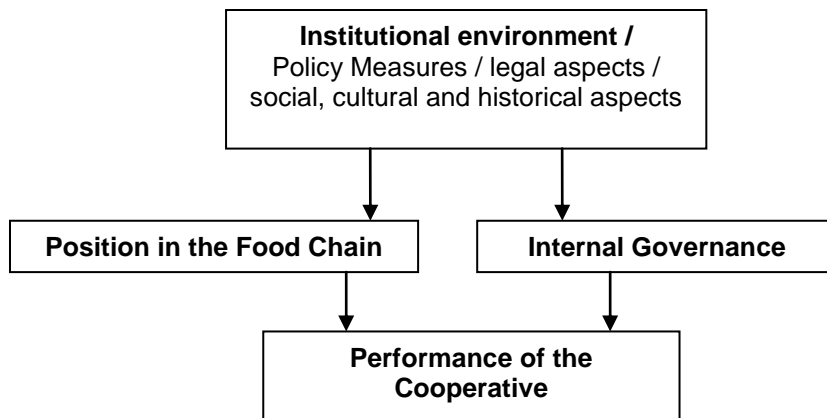


Figure 1. The core concepts of the study and their interrelatedness

1.3 Definition of the cooperative

In this study on cooperatives and policy measures we have used the following definition of cooperatives and Producer Organisations (POs). A cooperative/PO is an enterprise characterized by user-ownership, user-control and user-benefit:

- It is user-owned because the users of the services of the cooperative/PO also own the cooperative organisation; ownership means that the users are the main providers of the equity capital in the organisation;
- It is user-controlled because the users of the services of the cooperative/PO are also the ones that decide on the strategies and policies of the organisation;
- It is for user-benefit, because all the benefits of the cooperative are distributed to its users on the basis of their use; thus, individual benefit is in proportion to individual use.

This definition of cooperatives and POs (from now on shortened in the text as cooperatives) includes cooperatives of cooperatives and associations of producer organisation (often called federated or secondary cooperatives).

1.4 Method of data collection

This sector report is mainly based on the fact finding in 27 country reports, that were made earlier in this project, one per member state. In addition an inventory of policy measures at EU level was used. For these country reports multiple sources of information have been used, such as databases, interviews, corporate documents, academic and trade journal articles. The databases used are Amadeus, FADN, Eurostat and a database from DG Agri on the producer organisations in the fruit and vegetable sector. Also data provided by Copa-Cogeca has been used. In addition, information on individual cooperatives has been collected by studying annual reports, other corporate publications and websites. Interviews have been conducted with representatives of national associations of cooperatives, managers and board members of individual cooperatives, and academic or professional experts on cooperatives.

1.5 Period under study

This report covers the period from 2000 to 2010 and presents the most up-to-date information. This refers to both the factual data that has been collected and the literature that has been reviewed. For member states that joined in 2004 and 2007 the focus is on the post-accession period.

2 Statistics on the evolution and position of agriculture

2.1 Special characteristics of the sector due to character of the product and the influence of the Common Agricultural Policy

Olive oil is a typical product of the Mediterranean basin, where more than 90% of the global production takes place. The main olive oil-producing countries are Spain, Italy and Greece, followed by Tunisia, Syria and Turkey. In the rest of the world, notable production can be found mainly in Australia and Argentina.

World production of olive oil is slightly less than 2.8 million tons (2008/09), a much larger market compared with that of the beginning of the decade (+6.6%). EU-27 ranks first in terms of production, consumption, imports and exports of olive oil. However, only eight countries in the EU participate in this sector. Spain has the lion's share in the world market, recording a production of 1,221,800 tonnes in 2007/2008, followed by Italy and Greece (470,340 and 307,560 tonnes, respectively). Other EU-27 countries that have a significant olive oil and olives sector are France, Portugal, Cyprus, Malta and Slovenia (Anania and Pupo d'Andrea, 2011).

The value chain of olive oil comprises three stages: production, processing and distribution. The main players of the first stage are farmers who act either as individuals or through cooperatives. Following harvesting, olives are transported from the orchard to the olive mill where the oil is extracted. The transportation process has to be completed shortly as the quality of olives, and thus olive oil, deteriorates as time passes. Olive mills are owned either by IOFs or cooperatives. The significance of cooperatives in the milling stage varies among countries; 70% in Spain, 50% in Greece, and 15% in Italy are cooperatively-owned (Langreo, 2010).

After olive oil is extracted, if the mill is owned by a farmers' cooperative, the olive oil is stored in tanks maintained by the cooperative. Members can either agree to sell this olive oil in bulk collectively or individually. Unless the cooperative bottles and sells branded olive oil, usually marketing channels are only vaguely known in advance. Stored in the tanks, the olive oil maintains its highest quality for a few months. Then it is sold at a much lower price, which falls even more as next year's harvest season approaches¹. Given the structure of most olive farms (e.g., small size) and the relatively high cost of setting up a press, olive mills are owned either collectively by farmers or by individual entrepreneurs that buy olives from several regions. Also some farmers own olive mills; these are wealthy farmers with larger than average agricultural holdings. In such cases, however, economies of scale in olive milling make procurement of olives also from other farmers a necessary condition for profit-making.

Olive yields vary extensively from year to year mainly in traditional plantations thus leading to huge and unpredicted price swings. In Spain the new modern plantations that have been established, have smaller yield variability in production volumes. However, the majority of olive plantations in the EU are traditional, thus leading to price fluctuations. The Common Agricultural Policy (CAP) has been instrumental in safeguarding producers against these price oscillations. Yet, as price supports tend to decrease, marketing pools operated by cooperatives would offer significant protection from the negative consequences of yield and price sways.

While most olive oil is still sold in bulk, dramatic changes in consumer tastes and habits (e.g. preference for healthy food) combined with research results that associate the consumption of extra virgin olive oil with good health have during the last twenty years altered the way olive oil markets operate. For example, branded olive oil of very high quality, usually certified by

¹ For Mediterranean countries the harvest season starts in mid-October and, in some cases, ends in March.

international certifying organisations, now reaches very large markets (e.g., the USA, China, etc.). In such markets, proffering top-quality olive oil is a prerequisite for entrance.

The quality of olive oil depends on some crucial parameters such as the location of the farm, the particular olive variety planted, the quality of soil, weather, the production methods adopted, the olive oil extraction technology used, the quality of the tank and length of storage, etc. Farmers through the farming techniques adopted can improve the quality of olive oil significantly. This is why during the last ten years many cooperatives have adopted various integrated production systems and protocols; members sign contracts with the cooperative that penalize those who do not follow the instructions of certified agronomists. The CAP has subsidised investments in these quality-guaranteeing systems.

The olive oil and table olives sector is mainly affected by the CAP. From the very beginning of CAP implementation, the olive oil sector has been benefited by market-based as well as by structural aid policies. In the market regime, the following main instruments can be identified: production and consumption aid, price support and trade barriers to third countries to avoid inexpensive olive oil imports. Consumption aids were paid as export subsidies, while production aids were proportional to the size of the olive oil farms. Price support guaranteed a minimum price for producers, and was maintained by a combination of import restrictions and intervention buying. On the other hand, the structural aid policies aimed at enhancing productivity, via the restructuring of the orchards and infrastructure improvements. For each country, production aid was limited to a national guaranteed quantity (de Graaf and Eppink, 1999). In 2004, however, the olive oil sector has been integrated into the single farm payment scheme and production-based subsidies were abolished (Scheidel and Krausmann, 2011).

Under this new scheme, “cross compliance” – farmers’ compliance with certain rules of environmental and agricultural practices - has become obligatory (de Graaf et al., 2010). The reform has targeted quality improvement and aimed at balancing supply and demand of olive oil in Europe. Even though Spanish production has skyrocketed during recent years, sales for the 2010/11 crop year have hit record high levels with almost the whole production been sold (IOC, 2011) the balance between supply and demand has not been distorted. Therefore no significant olive oil surpluses have been accumulated at the EU level.

Another policy that affects the market of the olive oil in EU is the import policy scheme with the non-EU Mediterranean countries. Commonly, imports from non-EU Mediterranean countries enjoy preferential access, which differs from one country to another, under the form of duty free import quotas and preferential tariffs. Moreover, a large part of EU imports from other Mediterranean countries takes place under Inward Processing Relief Traffic (IPRT) conditions. Within the context of the IPRT scheme it is possible to import duty free olive oil into the EU, provided that the same quantity (and quality) of oil is subsequently re-exported after undergoing processing inside the EU, which could even be only bottling (Anania and Pupo d’Andrea, 2011).

As a consequence, most of the EU imports of olive oil are duty free, within a preferential quota or, more frequently, under the IPRT regime and only a small proportion is subject to the payment of a tariff. While preferential duty free access affects the relative competitiveness of imports from different countries, the IPRT scheme affects the volume of olive oil imported by the EU, with the decision on where to import from, based solely on considerations that have to do with competitiveness (price and quality) (ibid).

2.2 Share of the sector in agriculture and in National Product

During the last decade a significant increase in the value of the EU-27 olive oil and table olives sector output has been reported, which reflects the boost in both acreages and yields of mainly Spanish production. As indicated in Figure 2, total value of production ranges between 4 and 7

billion Euros. Spain, Italy and Greece are the dominant countries in the sector, followed by Portugal and France. Cyprus, Slovenia and Malta have a limited impact on the total EU output. Since 2006, the value of the sector's output follows a downward trend mainly due to the declining trend in olive oil producer prices and the slight reduction in volume due to unfavourable weather conditions.

Figure 3 contains the average growth of production value per year (%) in the olive oil and table olives sector. A negative growth rate of about 1% is observed only in the case of Greece, which may be attributed to the stagnated producer prices and the annual decline of production rates. Portugal has the highest growth rate (about 9%) followed, in descending order, by Slovenia, France, Spain and Italy. Information from Portugal's country report, confirms the result depicted in this Figure. The sector's performance in the country has been significantly affected by the changes that have been implemented in the context of several EU support programmes, namely, the use of modern production techniques, in particular irrigation technologies, or the installation of new plantations and varieties. In the case of Slovenia, the country has been benefited by the Common Market Organisation of olive oil and table olives after its accession in the EU in 2004. France and Spain have both exhibited an increase in production over the last decade. The production increase in Spain has been accompanied by investments in the olive groves (e.g., irrigation infrastructure) that counterbalanced the decline in producer prices. However, information from the Spanish country report reveals that superior quality olive oils do not receive the price premiums that they deserve. Also, small variations in product availability result in significant price swings. Eventually, the effect of increased quantities on production values is bound to be eliminated by price declines.

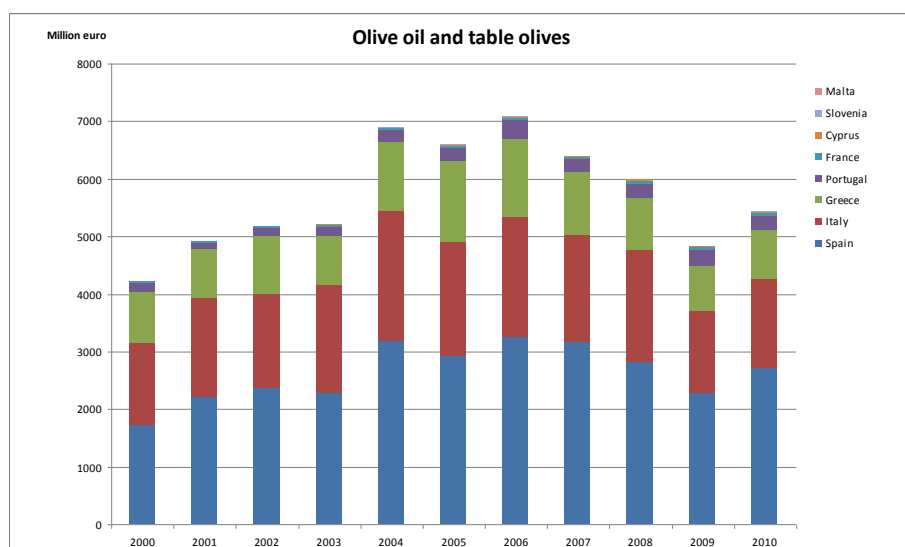


Figure 2 Trend in output per sector "2001" - "2009". Source: Economic Accounts of Agriculture, Eurostat

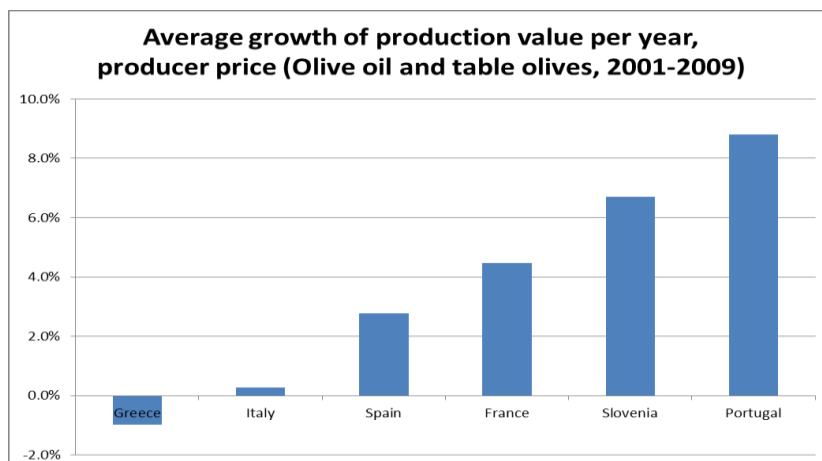


Figure 3 Change in output per year, per country. Source: Eurostat Economic Accounts.

2.3 Development in the number of farms

The number of farms in olive oil and table olives sector is given in Table 1 and Figure 4. Table 1 indicates that, in the period from 2000 to 2007, the number of farms, in the main producing countries like Greece, Italy and Portugal, has been declining. However, the average growth rate per year is positive in the case of Spain (2%). Since 2000 the area of Spanish olive groves has increased considerably. This boost can be partially explained by the favourable conditions created by the adoption of the CMO for olive oil and table olives regulation following the accession of Spain in the EU in 1985. In addition, in Spain, the new production and irrigation techniques that have been introduced have transformed the traditional “low input-low output” farming system with a more intensive one. The introduced novel production technologies in olive groves improved land and labour efficiency of olive production and contributed to lower production costs. At the same time, however, the structural reform of the Spanish groves produced some rather drastic changes in the Mediterranean landscapes with significant environmental impacts (Polytechnic University of Madrid, 2005).

Table 1 Number of farms, 2000 and 2007

Country	2000	2007	Average change per year
Cyprus	n/a	1520	
Greece	153430	142210	-1.1%
Spain	146210	167750	2.0%
France	0	40	
Italy	168880	109300	-6.0%
Portugal	5570	3800	-5.3%
Slovenia	n/a	90	

Source: Eurostat, Farm Structure Survey.

Figure 4 indicates that the number of farms specialised in the production of olive oil and table olives remained almost stable in the years between 2000 and 2003 (around 950,000 farms). After 2003 the number of farms suffered a small decrease to reach a value of less than 900,000 in 2005. Among the main producing countries and in the period under investigation, the fluctuation in the number of farms is more evident in the case of Italy.

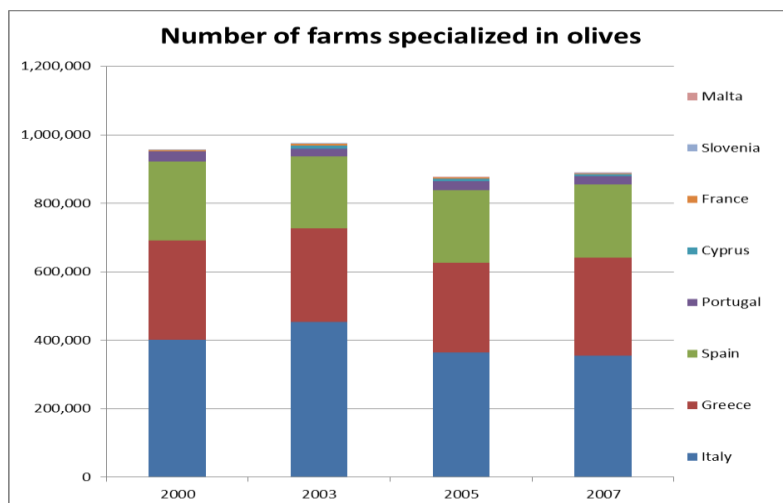


Figure 4 Number of specialised farms per country. Source: Eurostat Farm Structure Survey

Size of farms

The structure of olive farms within EU is highly diversified. Farms come in different sizes from small part-time farms to large exploitations. Figure 5 shows the distribution of farms per size class, measured in European Size Units (ESU) per country and for the EU in total.

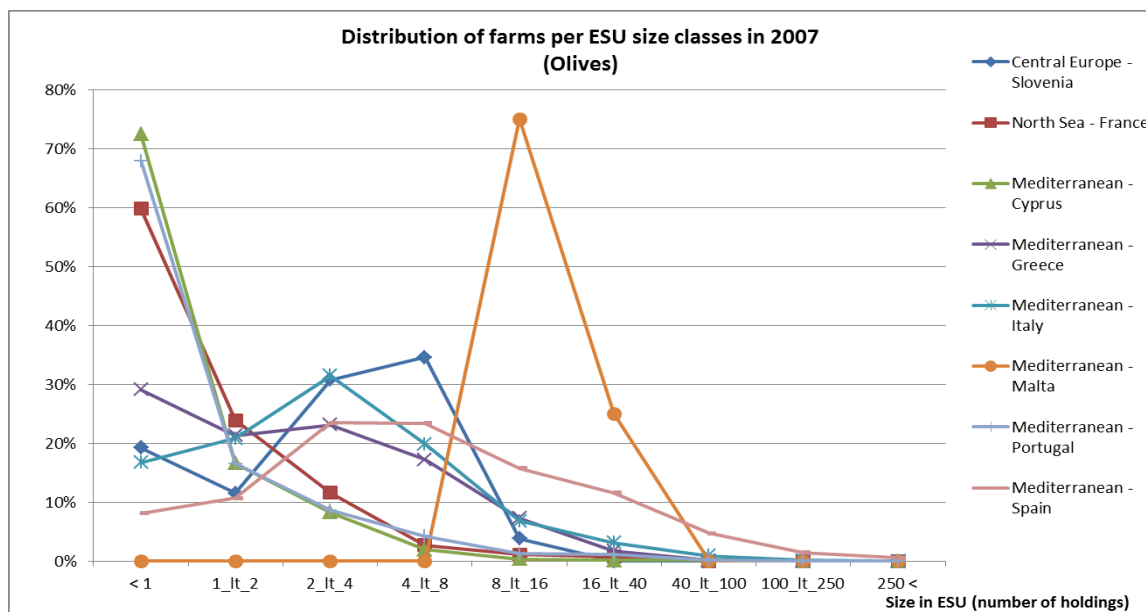


Figure 5 Number of farms per size class, measured in ESU, per specialist type of farming. Source: Eurostat, Farm Structure Survey.

The figure indicates that the olive oil and table olives producing countries form two main groups, according to the distribution of farms per farm size. The first group consists of France, Cyprus and Portugal, where over 60% of the farms have a very small size, less than 1 ESU.

Countries in the second group have a larger average farm size. This group consists of Greece, Italy, Slovenia and Spain, where farms are more evenly distributed among different farm size classes.

Malta is characterised by a different farm structure, compared to all the above countries, since almost 75% of the farms have a size of 8 to 16 ESU.

Specialisation of farm production

Cooperatives might not only have member-farmers with different farm sizes or different age. Farms also have a different composition of their production. In addition to that a lot of mixed (non-specialized) farms exist. The heterogeneity of farming in terms of specialisation can be estimated by calculating the share that specialized farms have in the total production. The results are shown in Figure 6.

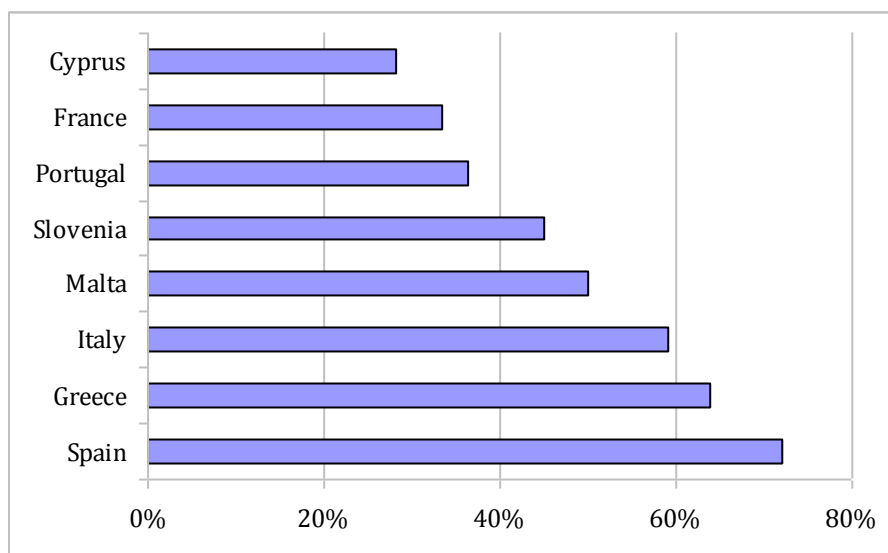


Figure 6 Heterogeneity in farm production: share of specialist farm types in total area. Source: Eurostat, Farm Structure Survey

Figure 6 indicates that the sector of olive oil and table olives is characterised by a higher degree of specialization especially in Spain, Greece and Italy, where the share of the specialised farms in terms of the total cultivated area ranges from 59 to 72%. In the rest of the main producing countries of the EU, the degree of specialisation is also high, the lowest being 28% in Cyprus.

2.4 Economic indicators of farms

The description of agriculture is concluded with some economic indicators (Table 2). These indicators focus on the net value added and farm income from farming, as well as the level of their investment. Some of this investment might be in equity of cooperatives, but far the most will be in farm assets. As shown in Table 2, among the main producing countries in the EU, the economic size of farms and the total utilised agricultural area is greater in Spain. Total output, total assets and net worth are also higher in Spain, indicating that the country is characterised by not only large but also modern farms with high invested capital. Spain has the best economic performance (farm net value added) of the olive holdings and the highest return on labour (farm net income) compared to the other olive-producing countries. Though Italy also has large farms, mainly in terms of economic size, the total assets and net worth are significantly lower compared to Spain.

Farms in Greece and Cyprus are smaller, in terms of economic size and total utilised agricultural area. The main difference between the two countries is that farms in Cyprus are characterised by very high total assets and net worth. Nevertheless, the county's farms are characterised by poor value added and small total output and net farm income. Finally, it should be mentioned that in all countries the farms show negative net investment.

Table 2 Economic indicators for farms

Olive oil and table olives	Cyprus	Greece	Spain	France	Italy	Malta	Portugal	Slovenia
Economic size – ESU	4.60	6.77	21.07	-	12.23	-	7.90	-
Total labour input – AWU	0.73	1.07	1.36	-	0.92	-	1.24	-
Total Utilised Agricultural Area (ha)	3.38	4.30	13.27	-	6.78	-	33.78	-
Total output €	4,188	9,896	20,911	-	16,326	-	20,034	-
Farm Net Value Added €	691	8,968	17,177	-	12,376	-	14,244	-
Farm Net Income €	142	7,972	12,640	-	9,477	-	11,463	-
Total assets €	176,601	70,362	247,420	-	149,708	-	149,010	-
Net worth €	176,526	70,131	245,888	-	149,518	-	145,564	-
Gross Investment €	554	283	506	-	308	-	33,084	-
Net Investment €	-2,485	-1,500	-1,055	-	-2,162	-	29,987	-
Total subsidies - excl. on	2,156	3,746	3,832	-	3,452	-	4,753	-
Farms represented	1,493	139,843	149,587	117	109,147	7	3,527	97

Source: DG Agri, FADN.

3 The evolution and position of cooperatives and their performance

The objective of this chapter is to give an introduction to the evolution and position of cooperatives in the olive oil and table olives sector. Section 3.1 describes the issues in the food chain. Then section 3.2 describes the performance of the cooperatives active in this sector in terms of market share.

Section 3.3 reports on individual cooperatives. After this statistical information we describe and analyse in chapter 4 the three building blocks: institutional environment, position in the food chain and internal governance.

3.1 Description of the food chain issues in the sector

The main producing countries have a very different role in the international olive oil trade flows: The position of Italy is very important, while the position of Spain exhibits continuous improvement. Moreover, Turkey as an exporter to the USA and Syria as supplier to the Middle East hold a stable market share. Finally, product flows from North Africa to the EU are growing (Langreo 2010).

So far, the global consumption of olive oil has risen along with production. EU-27 is the leading consumer of olive oil, with about 70% of the world consumption. Traditionally, the main consumers of olive oil are its producers. However, especially in the last decade, this fact has been partially altered. Olive oil, praised as a healthy food, increasingly appears in food stores in non-producing countries and developed from an expensive niche product to a standard component of diets (Scheidel and Krausmann, 2011).

As far as the trade facts are concerned, EU-27 ranks first in olive oil exports (566,500 tonnes in 2008). Spain is the world top individual exporter (662,850 tonnes in 2007/2008, almost 80% of which went to the EU countries). In the second place is Italy, which also ranks first in olive oil imports. It is worth mentioning that large parts of the Spanish as well as the larger part of Greek virgin olive oil are exported to Italy, a net importer of olive oil. This can be explained by the fact that Italian companies process and re-export the imported olive oil (which may include blending it with other oils and bottling it) (Anania and Pupo d'Andrea, 2008). Other major importers of olive oil are U.S.A. and France both in quantitative but also in qualitative terms because they import exclusively or mainly extra virgin olive oil (Mili, 2006). As far as table olives are concerned, the main statistics are in line with those of the olive oil market.

The trade policy for olive oil in the EU has undergone several changes during the past decades. Export subsidies have not been used in the EU since 1998. Imports of olive oil from most Mediterranean countries enjoy preferential access, which differs from one country to another, under the form of duty-free import quotas and preferential tariffs.

The olive oil supply chain is characterised by a low degree of cooperative mill-initiated vertical integration into other downstream activities (e.g., bottling). Cooperative-owned mills may sell olive oil to farmers and other local customers for home consumption. Also, they sell in bulk to refineries, packing plants and merchants; the latter acting as intermediaries linking olive mills and packing plants and refineries. However, there also exist some very successful cooperatives that have invested in vertical integration. Such organisations own larger-capacity olive mills and may sell directly to international markets (ibid).

Distribution to final consumers is usually accomplished by large scale distributors²/supermarkets as well as traditional retail outlets and specialty stores. The

² In this report, the term “distributors” refers to both wholesalers and retailers.

concentration of large quantities by large-scale distributors empowers them when negotiating with suppliers. However, there are several differences in the market share and action of large-scale distributors; they have very small share in non-EU Mediterranean countries but large in central and northern EU countries as well as in the U.S.A. Moreover, their market share varies among the EU producer countries; 60% in Spain and 20% in Italy and in Greece. The traditional retail outlets, on the other hand, are small in terms of points of sale, number of employees and amount of sales. They are identified with traditional distribution or sales channels and are usually family-run businesses (Langreo, 2010).

The largest portion of olive oil is marketed under retailer brands (private labels) of either the discounters or the importers and is often of dubious quality (due to unknown origin and characteristics of the content) (Drakos, 2006). Although some private label olive oils have high quality/value ratios due to, among other things, the adoption of strict tracing and tracking systems, at the same time other private label olive oils are found at the lower end of the quality/value ratio. As a result, consumers often mistrust private label products. It is also important to mention that there are several EU olive oil enterprises specialising on the production of high quality extra virgin olive oils, which are sold at premium prices, frequently in gourmet food stores or speciality departments of large retail channels.

Several EU companies seek to keep strong positions in the international market through the establishment of branches in both EU and non-EU producing countries. In this way, the EU-based companies can expand by exploiting 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 markets such as that of the US.

A strong position in international markets is also achieved by forming adaptive networks. Stable collaborative networks have been set up in the distributor's brand market segment, between some EU olive oil producing companies and large food distribution chains. In Spain, distributors' brands account for almost 50% of the olive oil market, in Portugal 23% and in Italy 11% (Mili and Mahlau, 2005).

The bargaining power of the distribution sector is steadily growing (Mili, 2006). Over the two last decades, the rapid concentration of the EU food distribution led to an oligopolistic market structure and an increase in the bargaining power that retail distributors enjoy vis-à-vis 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 distributors' brands is expanding at the expense of producer-owned brands. 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.

Finally, there is a remarkable growth of imports in EU-27 from non-EU Mediterranean countries. This trend, combined with the lower production costs in comparison to the EU-Mediterranean member states, provides non-EU Mediterranean countries with comparative advantages and creates additional possibilities for positive developments of their exports (Drakos, 2006). Nevertheless, smaller producers and trading companies have intensified their efforts to export high-quality olive oil and gain access to niche markets. This trend might result in a large number of companies each commanding lower market shares.

Focusing on prices, representatives of producers advocate that there is a downward pressure on prices in the context of the global economic crisis, which brings a knock-on effect on all the links of the value chain. According to information from the International Olive Oil Council³ the price

³ IOC Advisory Committee on Olive Oil and Table Olives, Market Commentary, Newsletter No40 June 2010

paid by end consumers for extra virgin olive oil is more than 1.5 times than that received by producers. Interviews with retailers and distributors on the other hand reveal that there are other reasons for low prices: “Olive oil prices are determined by what consumers are willing to pay. In the midst of an economic crisis consumers favour low-priced olive oil,” a wholesaler said. A representative of a large retailer said that: “...retailers do not have a policy of price squeezes and claims made by olive oil producers against large super market chains are unsubstantial.”

As far as the market chain of table olives is concerned, it is similar to that of the olive oil. The only difference is that in the table olives value chain, there are manufacturing plants instead of olive mills. The continuing leadership of Spain on the international table olive market is worth mentioning (Langreo, 2010).

3.2 Performance of coops (market shares, growth, other indicators)

As shown in the following table, cooperatives in Spain have the largest market shares among their European counterparts, followed by Greece and Portugal. At the other end we find Italian cooperatives with small (and decreasing) market shares (Table 3). This variation in cooperatives market shares among the EU member-states can be attributed to the following reasons: First, the methods used by country experts to estimate market shares. In the cases of Spain and Greece, market shares refer mainly to the production side of the chain, as cooperative-owned brands have little presence in the retail end of the chain. In the case of Portugal, information on market shares is based on industry experts’ estimations. In the Italian country report market shares were obtained from sales revenue data for both cooperatives and IOFs. If accurate data on cooperatives’ market share at the retail level were available, the competitive position of olive oil cooperatives could be better sketched. An overall assessment by the authors of this report is that cooperatives command less than 10% of retail markets for olive oil in most, if not all, countries.

Table 3 Market Share of Cooperatives in the olives and olive oil sector

Country	“2000”		“2010”	
	Number of members	Market Share (%)	Number of members	Market Share (%)
Portugal		35 (2003)		30 (2009)
Italy		13		5 (2008)
Spain		75 (2003)		70 (2008)
Greece		60 (1998)		

Sources: country reports

A second reason is the structural characteristics of regional supply chains. In Spain, a few distribution companies control the purchase side of the chain and distribution brands dominate the market. Cooperatives are less commercially oriented when compared to IOFs and much of their produce is sold in bulk. While certain actions have been taken by some cooperatives toward promoting their labels of top-quality olive oil, international markets are dominated by IOFs. The latter firms focus mostly on supplying consumers with average-quality olive oil at as low a price as possible, while recently they have started entering niche markets for top-quality olive oil as well. The same is true for Greece; however the chain structure is somehow different as two multinational companies hold the lion’s share (55%) of the market of bottled olive oil. In Italy, cooperatives’ market shares are decreasing mainly due to the fact that most olive oil producing cooperatives are local and not commercially oriented to final consumer products. Last, in Portugal the supply chain of olive oil is organized around the so-called olive filières in which, according to the country report, cooperatives have a significant albeit decreasing influence.

3.3 Description of largest farmer's cooperatives in the sector

The two following tables show the most important cooperatives, in terms of turnover, for each olive oil producing country and for Europe as a whole. Spanish cooperatives hold a leading position, followed by Italy and Greece⁴.

Table 4 Most important cooperatives in olives and olive oil sector, per country

Country	Names of Cooperative	Primary (P) or Secondary (S) cooperative	Turnover 2010* (million Euro)
Spain	1. Coop. Hojiblanca	S	451.07
	2. Coop. Agro Sevilla Aceitunas	S	146.23
	3. Coop. Jaencoop	S	77.51
	4. Coop. Oleoestepa	S	70.216
	5. Olivar del Segura	S	41.5
Italy	1. Oleificio Montalbano	S	60.341
	2. OL.MA. Collegio Toscano degli Olivicoltori	S	8.471
	3. Cooperativa C.A.S.O.	S	5.331
	4. Oliveti Terra di Bari	n/a	2.85
	5. Oleificio Cooperativo Cima di Bitonto	P	2.382
Greece	1. U.A.C. of Heraclion	S	52.32
	2. U.A.C. of Peza	S	26.12
	3. U.A.C. of Sitia	S	27.872
	4. U.A.C. of Messinia	S	13.982
	5. U.A.C. of Lakonia	S	12.173
Portugal	1. Beja e brinches,CRL	P	19.358
	2. Moura e Barrancos	P	15.128
	3. Vidigueira	P	4.699
	4. Valpaços	P	3.401
	5. Ervedal e Figueira e Barros	P	1.442
Slovenia	1. Vinska klet "Goriška Brda" z.o.o., Dobrovo	P	14.935
	2. KZ Agraria Koper, z.o.o., Koper	P	10.512
	3. Oleum Nostrum Slovenske Istre	P	0.028
France	Non available		
Cyprus	Non available		

*: 2010 or latest year available

⁴ However, it should be noted that in the case of Greece multi-product cooperatives have been included and although the ranking refers to the significance of their olives and olive oil branch, the total turnover includes income generated from all other activities.

Table 5 Most important farmers' cooperatives in the food chain of olive and olive oil sector in Europe

	Name of the Cooperative	Country
1	Coop. Hojiblanca	Spain
2	Coop. Agro Sevilla Aceitunas	Spain
3	Coop. Jaencoop	Spain
5	Coop. Oleoestepa	Spain
6	Oleificio Montalbano	Italy
7	U.A.C. of Heraclion	Greece

Transnational cooperatives

While olive oil is produced in all neighbouring Mediterranean countries, no transnational cooperative exists in the sector.

4 Assessment of developments among cooperatives

4.1 The institutional environment

The small average size of farms in olive oil and table olives producing countries has made farmer-initiated collective action a prerequisite for farmer involvement in the sector. Agricultural cooperatives and producer groups are active in all major olive producing countries of the EU; they represent the majority of producers in the sector (Table 6). Moreover, these organisations have traditionally played a significant role in facilitating the smooth coordination of the olive oil supply chain. When both first-tier and second-tier cooperatives are organized, the first operate olive mills while the latter, due to economies of scale, focus on processing and commercialisation.

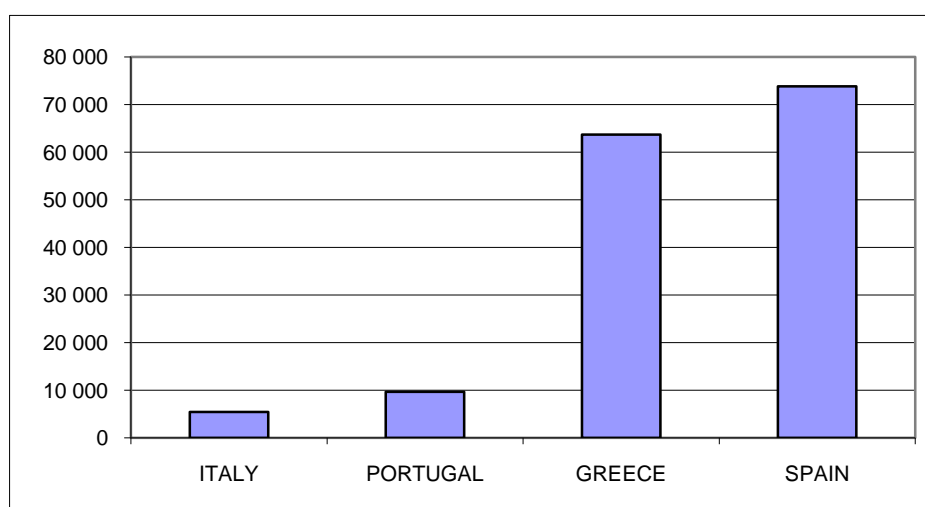


Figure 7 Number of farmers-members in the top-5 olive oil and table olives cooperatives of the major EU olive oil producing countries

The 2009 turnover of the top-5 olive oil cooperatives in each country are shown in the following figure.

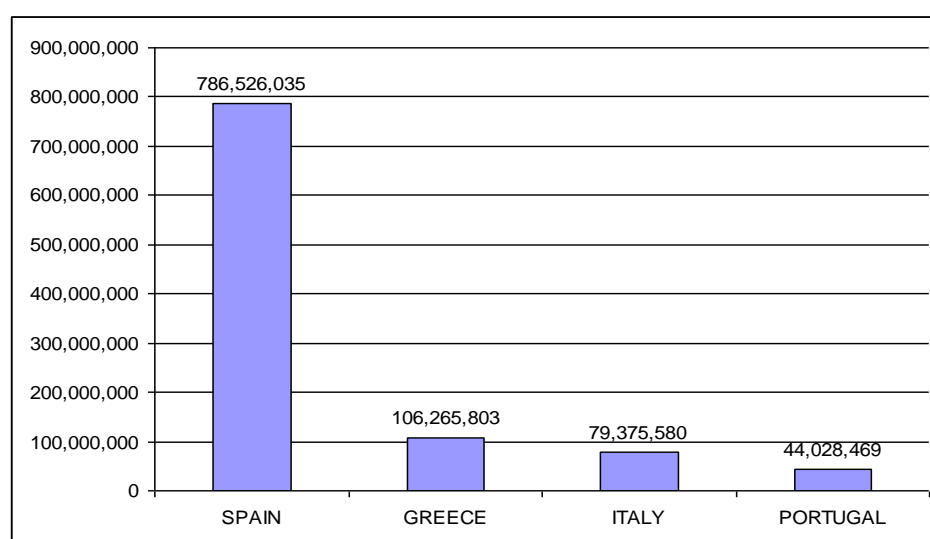


Figure 8 Total turnovers of the top-5 olive oil and table olives cooperatives in major EU olive oil producing countries (2009)

Farm size and structure crucially affect the organisation of the olive oil and table olives supply chain and the profitability of farming. According to a recent study published by the National bank of Greece (Milonas et al., 2011):

- Small olive groves (< 5 hectares) are unprofitable even after subsidies have been added to farm income.
- Olive groves of 5-20 hectares are profitable only after subsidies are included in farm income; these subsidies cover 50% of labour costs.
- Only olive farms above 20 hectares are profitable. In Spain they represent 70% of olive production; 35% in Italy and 20% in Greece.

In Greece and Italy, the high percentage of olive farms located in mountainous areas places these countries in comparative disadvantage relative to Spain. The latter, due to a larger percentage of olive farms being located in flat, fertile lands, implements intensive, highly mechanized cultivation technologies that result in lower production costs.

Despite the significance of cooperatives and producer groups, the olive oil market is dominated by large, heavily capitalized IOFs. In most cases, cooperatives and producer groups sell olive oil in bulk to IOFs which bottle and brand it in order to capture the high value added through these activities. Having adopted this strategy, most cooperatives are not well positioned to support producer prices which have dramatically fallen during recent years. This development cannot be attributed to excess supply alone. According to IOC data, the retail price is more than double the price received by producers. This gap existed even before the increase in Spanish olive oil production and is an indication of the uneven distribution of the added value created along the olive oil supply chain to the benefit of downstream links of the chain.

As explained next, the low degree of vertical coordination among cooperatives and the structure and conduct characterizing the olive oil sector are interrelated.

In some countries, over 70% of the olive oil produced is handled by cooperatives (Figure 9). Even in such cases, however, the many, small-capacity cooperative olive mills are in competitive disadvantage relative to large, multinational IOFs. This is evident in the little presence of cooperatives in retailing. Six olive oil cooperatives are among the top-50 cooperatives in Spain; two in Portugal; none in Italy; and no cooperative exclusively focusing on olive oil in Greece.

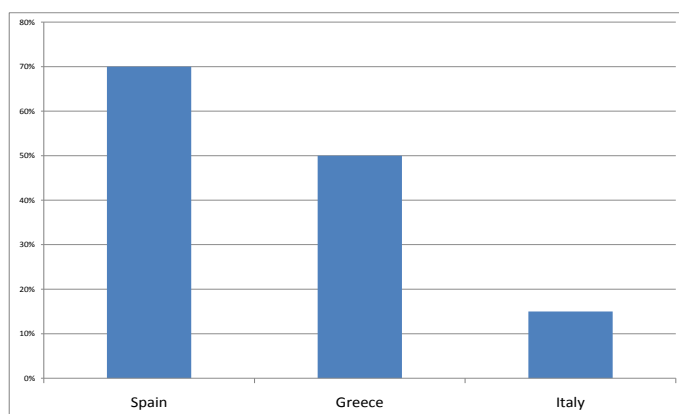


Figure 9 Percentage of olive oil produced by cooperative olive mills. Source: Milonas et al. (2011)

In Italy and Greece most cooperatives are involved only in first-level processing while leaving capital-intensive activities (e.g., bottling, branding, advertisement, etc.) to IOFs. At the same time, in both countries cooperatives have lost market share during the last ten years to competitor IOFs. In Italy, for example, cooperatives commanded a 13% market share in 2000 while only 5% in 2008.

The olive oil and table olives sector is characterized by a higher degree of specialization only in the case of Greece, where the share of the specialized farms in total production is 16% (Figure 4, Section 2.3 of this report). A controversial finding for the same country is, however, that the top-5 agricultural cooperatives in the olive oil sector handle other commodities, too. This might be explained by the large number of small olive farms and the high yearly variance in olive production that makes pluriactivity a prerequisite for survival.

A large part of Spanish olive oil is sold in bulk and/or to lower income consumers. The organisation of the olive oil sector primarily in large cooperative-owned olive mills might be related to this structure. According to cooperative scholars and industry analysts, quality control and the promotion of premium olive oil is more difficult to achieve in cooperatives due to problems arising from misalignment of incentives (adverse selection and free riding problems) (Milonas et al., 2011; Cook and Iliopoulos, 2000). On the contrary, Italy promotes branded products and olive mills owned by cooperatives absorb just 15% of the annual harvest (Figure 9). Greece has a high percentage of cooperative-owned mills (50%). Yet, they are relatively of very small capacity and thus unable to influence the terms of trade for their members.

In Portugal, cooperatives are becoming less prominent as new IOFs keep entering the olive oil supply chain. Three olive oil cooperatives were among the top-50 Portuguese cooperatives in 2005 while two in 2010 (translated into a 5% drop in cooperatives' market share in the sector). So, even if cooperatives market branded olive oil, all major commercial brands are owned by IOFs.

The significant amounts of risk capital required in order to invest in the high value-added segments of the olive oil supply chain might explain the reluctance of farmer cooperatives to engage in such segments. Olive farms show a negative net investment in the majority of EU olive oil producing countries as well as very low average farm net income (Table 2, Section 2.4 of this report). Consequently, farmers do not have the amounts of capital required to invest in branding

and retailing. At the same time, most, if not all, of these cooperatives are traditional; that is, their ownership structure is characterized by:

- Patronage, residual income and decision rights are restricted to member-patrons;
- Residual income rights are non-transferable, non-appreciable and redeemable;
- Residual income rights are distributed among members in proportion to patronage (the volume of business done by a member);
- Decision rights are exercised in a democratic way (one member-one vote, or in proportion to patronage).

Consequently, these organisations are better geared toward defence (Cook et al., 2008). That is, they were by design intended to play a competitive yardstick role in commodity markets rather than invest downstream and capture rents from successive stages of the vertical olive oil supply chain. The ownership structure described above gives rise to three capital acquisition problems: the free rider, horizon, and portfolio constraints (Cook, 1995). Due to their vaguely-defined ownership structure, traditional cooperatives do not provide their farmer-members with incentives to invest in their cooperative. The emergence of various innovative cooperative models in the post-1990 period and in several parts of the world represents attempts to ameliorate the aforementioned constraints (Cook and Iliopoulos, 2000; Chaddad and Cook, 2004). Yet, such innovations in ownership and capital acquisition techniques have not been adopted by olive oil cooperatives in the EU. Why is this so?

Among the reasons cited by national cooperative experts, the following deserve special attention. The first refers to producer attitudes; a predominant trend toward localization has been documented. Most producers in small towns and villages view the locally produced olive oil as “the best in the world.” At the same time, cooperative leaders in fear of losing the privileges inherent in serving as the chairperson of a cooperative board, are against every attempt to merge or even collaborate with other local cooperatives.

The institutional environment has played an important role in setting cooperatives’ priorities and influencing their attitude toward entrepreneurial, capital-intensive ventures. While government intervention has been observed on most olive oil producing countries of the EU, in some cases, the effects have been dramatic. For example, in Greece governments have traditionally viewed agricultural cooperatives as a low-cost means to implementing national and EU agricultural policies. Gradually this led both farmer-members and consumers to view cooperatives as semi-governmental organisations that distribute subsidies. Of course, this effect is not unique to olive oil cooperatives. Yet, given their number and the importance of the olive oil sector for the national economy, governmental interference has had a more noticeable effect on olive oil cooperatives.

4.2 The role of cooperatives in the food chain

The analysis of data on the top-5 agricultural cooperatives in the major olive oil producing countries reveals several interesting aspects of their role and position in the olive oil and table olives supply chain. The main functions of the top-5 olive oil cooperatives (except otherwise indicated) are shown in Table 7.

Table 7 Main functions of the top-5 olive oil and table olive cooperatives in major producer countries

Function	Number of cooperatives performing each function			
	Spain*	Greece	Italy	Portugal
Production (on-farm)	1	5	2	0
Farm Machinery	0	0	1	0
Marketing (processing)	2	5	5	5
Supply of farm inputs	1	4	4	0
Credit	1	0	1	0
Insurance	0	0	0	0
Plant/animal breeding	0	0	0	0
Water supply	0	0	0	0
Soil/nature conservation	0	2	1	0

*: Information provided on 2/2 cooperatives

Only Portuguese olive oil cooperatives focus exclusively on providing marketing (processing) services to their members. In all other countries, cooperative also provide their members with farm supplies and/or various other services.

Although limited information is available on mandatory marketing agreements signed by members, in Portugal all top-5 cooperatives sign such agreements with their members. No marketing agreements are signed in Greece between cooperatives and their members. In Italy and Spain marketing contracts are used by some cooperatives but not by others. This information seems to be in line with the availability of alternative marketing channels to the members of the top-5 cooperatives per country (Table 8). In Portugal farmers have no alternative and so signing a marketing contract with their cooperative provides both parts with considerable benefits. On the contrary, in Greece where farmers have access to alternative marketing channels, marketing contracts are not used as a means of controlling supply and enabling better coordination along the olive oil supply chain probably due to the difficulty of enforcing such contracts. In the case of Spain and Italy some farmers have access to other marketing channels and some have not. Consequently, in the first case, their cooperatives use mandatory marketing agreements while in the latter one they do not.

Table 8 Availability of Alternative Marketing Channels to Farmers

COUNTRY	Do farmer-members have marketing alternatives (other than their cooperative)?		
	YES	NO	n/a
Spain	1	1	3
Greece	5	0	0
Italy	1	3	1
Portugal	0	5	0

Data on the position of the top-5 cooperatives in the olive oil and table olives supply chains of the major olive producing countries is shown in Table 9 (Appendix 1). According to this information, involvement in marketing branded products and retailing activities characterizes 2 out of the top-5 cooperatives. Three out of the top-5 Italian cooperatives are involved in primary and secondary processing but also in marketing branded products. In Greece, secondary processing is central to the activities of four out of the top-5 cooperatives. Only one organisation is involved in primary processing as these are secondary cooperatives whose member-cooperatives are responsible for performing this function. Supplying their members with farm supplies needed in olive cultivation is among the priorities of two cooperatives. In Portugal, all top-5 cooperatives collect the produce of their members and engage in first processing activities.

Four of these organisations engage in second processing activities, while three also market branded products.

The cumulative turnover of the top-5 olive oil and table olives cooperatives in the major olive oil producing countries of the EU is shown in Figure 10.

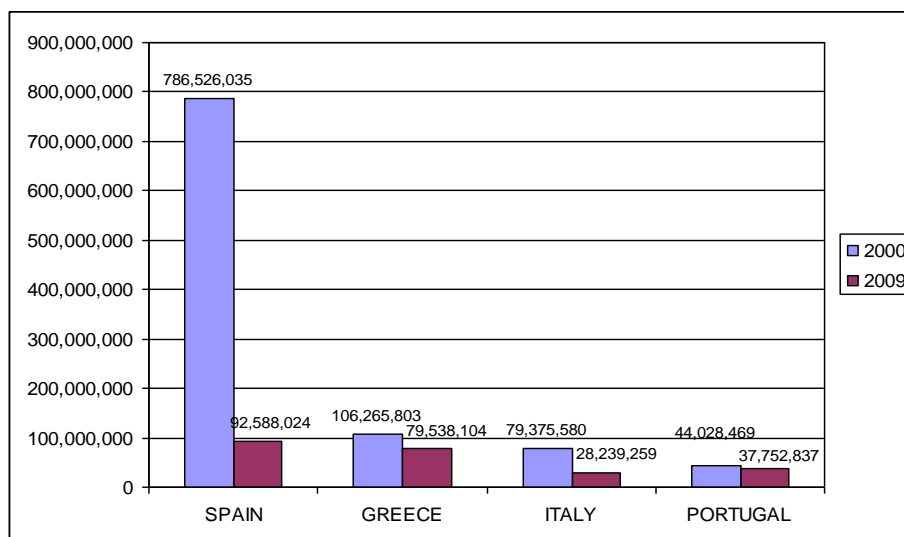


Figure 10 Total turnovers of top-5 olive oil and table olives cooperatives per country, selected countries (2000, 2009)*

**Turnover values for the year 2000 are not available in several cooperatives of Spain and Italy. Especially, in the case of Spain, the absence of the turnover of “Hojiblanca” cooperative creates a high distortion in the total turnover of the top-5 cooperatives. Other cooperatives with no available turnover in the year 2000 are the “Jaencoop” and “Olivar de Segura” in Spain and the “Cooperativa C.A.S.O”, “Oliveti Terra di Bari” and “Oleificio Cooperativo Cima di Bitonto” in Italy.

In 2009, the average debt to equity ratio of the top-5 olive oil and table olive cooperatives was 1.74 in Spain, 4.55 in Italy, 3.16 in Greece, and 2.22 in Portugal (Table 10).

Table 10 Average leverage ratios of top-5 olive oil and table olives cooperatives per country, selected countries (2000, 2009)

COUNTRY	2000	2009	% CHANGE
Spain	3.85	1.74	-54.80
Italy	3.94	4.55	15.48
Greece	3.36	3.16	-5.95
Portugal	11.82	2.22	-81.22

In terms of the adopted marketing strategy, Spanish cooperatives cost leadership is sought by all top-5 Portuguese cooperatives while it is much less popular in Greece and Italy. The top-5 cooperatives in these countries have chosen to differentiate their products in order to target high quality segments of the market and/or to focus on serving niche markets with higher profit margins. Two of the top-5 cooperative in Spain that provided relevant information also adopt the same strategic approach (Table 11).

Table 11 Marketing strategy adopted by the top-5 olive oil and table olives cooperatives per country

	Cost leadership	Differentiation	Focus
Spain*	0	1	1
Greece	1	4	2
Italy**	1	3	3
Portugal	5	3	0

*: Information provided on 2/2 cooperatives

** : Information provided on 4/5 cooperatives

Whether a cooperative sells branded products is also related to the adopted marketing strategy. According to the data shown in Table 12, three out of the top-5 Greek cooperatives sell more than 40% of their products as branded; two in Italy, and none in Spain and Portugal.

Table 12 Top-5 cooperatives selling branded products per country

COUNTRY	Top-5 Cooperatives with More than 40% of their Sales being Branded Products		
	>40%	<40%	n/a
Spain	0	0	5
Greece	3	2	0
Italy	2	2	1
Portugal	0	5	0

Information on the growth strategies adopted by olive oil cooperatives is rather scarce. According to the information gathered in the corresponding national reports for this study, in Greece, Italy and Portugal all the top-5 cooperatives in these countries are autonomous in terms of growth strategy, i.e., they are trying to increase their returns without M&A. In Spain, there is available information only for two cooperatives. One of them adopts an autonomous growth strategy, whereas the other is trying to expand by vertical and horizontal M&As.

4.3 Internal Governance

The internal governance of olive oil and table olives cooperatives is characterized by many similarities and a few differences across EU countries. Some basic characteristics of the internal governance structure adopted by the top-5 olive oil cooperatives in the major olive oil producing countries are discussed next.

Among the Spanish top-5 olive oil cooperatives, operational management is in the hands of professional managers at least in three cases⁵. Similar is the situation in Greece, although Chairpersons have a significant influence even on day-to-day operational decisions. On the other hand, the top-5 cooperatives in Italy and Portugal (except from one cooperative in Italy, where there is no available information) report that the operational management is implemented by the Board of Directors.

The predominant board structure in all olive oil producing countries is one-tier with the general assembly electing the board of directors as the single decision making body except in case of some major decisions (e.g., mergers, liquidation, etc). Supervisory committees are not common

⁵ No information was available on the other two cooperatives.

in olive oil cooperatives. Given that most POs adopt the cooperative legal form, the aforementioned observations apply to these organisations, too.

Regarding the rules that apply to the election of members on the board, regional representation is the basic criterion used in Greece where all olive oil and table olives cooperatives are second-tier organisations whose members are primary cooperatives. Personal expertise is the most important criterion used in Italy and Portugal while no specific rule is applied in Spain (Table 13).

Table 13 Election rules adopted by top-5 olive oil and table olives cooperatives by country, selected countries

COUNTRY	ELECTION RULE			
	Personal Expertise	Regional Representation	Product Group Representation	Other
Spain*	0	0	0	2 (election by primary co-ops)
Greece	0	5	0	
Italy**	4	0	0	1 (co-ops representation)
Portugal	5	0	0	

*: Information provided on 2/2 cooperatives

**.: Information provided on 4/4 cooperatives

The one-member, one-vote rule is used in all top-5 olive oil cooperatives in Italy and Portugal. Proportional voting based on volume of patronage is implemented in Greek and at least one Spanish olive oil cooperatives. The Greek Cooperative Law places an upper limit of a total of five voting rights while no such limit is implemented in Spain.

The internal governance of olive oil and table olive cooperatives also had a significant impact on the evolution of these organisations. The predominant one-member, one-vote rule adopted in member decision-making is in line with a highly homogenous membership in terms of farm size, economic interests, social characteristics, etc. At the same time, the lack of professional management, due to the presence of many small-capacity cooperatives, deprived them of the ability to design efficient commercialisation strategies. In many first-tier cooperatives, the chairperson of the board (i.e., a farmer) is also responsible for day-to-day operations. Finally, the federated cooperative structure where local, first-tier cooperatives collect the olives from members' farms and then forward them to the second-tier cooperative in order to extract olive oil, bottle and brand it (or sell it in bulk) seems to have reached its limits. While in past times the road network and transportation technologies posed significant constraints to what and how fast could be transferred from farms to processing facilities, 21st century conditions make some of the coordination schemes of the past obsolete. In some countries, the second-tier cooperatives either absorb local, first-tier ones, or they merge with one of their first-tier cooperative-members (Bijman, 2005).

4.4 Expert assessment of developments

EU olive oil cooperatives have performed rather satisfactorily in the past. Today they need to modify their organisational structures and attitudes in order to keep providing their members with better prices and services. Given that consumer prices are not much affected by the currently very low producer prices, it is apparent that the structure of the market is problematic. This is where olive oil cooperatives and POs should play a crucial competitive yardstick role. However, this role might not be successfully played by cooperatives that simply stick to a defensive role. More offensive, market-oriented collective entrepreneurship schemes may be needed to alter the landscape to the benefit of producers as well as consumers.

Examples of such cooperative ventures are not many but exist. The Spanish cooperative Hojiblanca is the largest olive oil producer-owned organisation in Europe. By adopting new governance and organisational structures, and implementing innovative marketing plans, Hojiblanca has managed in recent years to increase the total value captured by its members. It is worth-mentioning that Hojiblanca, a single Spanish cooperative process a quantity that, approximately, equals 70% of the olive oil produced in Greece⁶. The cooperative's strategy is also based on horizontal expansion through mergers in order to benefit from scale economies.

The Greek cooperative of Kritsa, Crete, is a primary cooperative owned by 890 olive farmers. By implementing a strict quality policy, the cooperative has gained international respect for its olive oil (winner of the 2008 Marios Solinas prize for best quality olive oil).

A related issue is the alignment of marketing strategies with organisational structures. The traditional cooperative model seems to be better suited to serving organisations targeting medium quality, and/or low income consumers market niches than high quality, branded olive oil market segments. In some cases, this model may serve the needs of cooperative members. However, cooperatives in countries with a very high percentage of their produce belonging in the extra virgin olive oil quality category need to invest significant amounts in building strong brands and promoting them in the national and international markets. In such cases the adoption of new, innovative models of cooperative organisation might be the only viable alternative. Similar strategies have been adopted by dairy cooperatives in Europe, the USA, and Oceania with very promising results. Of course, the structure cooperatives adopt is a means to achieving an end, not a goal in itself. Consequently, it is crucial for olive oil producing countries to design a marketing strategy that fits their structural and other characteristics (e.g., targeting high quality vs. lower quality markets). Then cooperatives might need to alter their organisational structure so that it facilitates the implementation of the chosen strategy. In any case, steps should be taken toward ameliorating the inefficiencies arising due to the presence of many small cooperatives in the same market. The trend toward industrialisation of olive production may turn the organisation of cooperatives into larger, vertically integrated and capital-intensive units a prerequisite for delivering significant benefits to farmer-members.

⁶ Personal communication with the Spanish national expert on October 7, 2011.

5 Overview of policy measures and assessment of the influence of policy measures on the evolution and current position of cooperatives

5.1 Introduction

The performance of cooperatives is significantly influenced by the current regulatory framework. This framework is multi-level: EU regulations, national laws and—in some countries—even regional policies influence the way cooperatives operate and the strategic choices available to them. In this chapter we look especially at the regulatory framework that influences the competitive position of cooperative vis-à-vis IOFs and other players in the food chain.

The objective of this chapter is to identify support measures that have proved to be useful in supporting farmers' cooperatives, and other that have been rather counterproductive. In section 4.2 relevant policy measures and their potential impact on the olives and olive oil sector are identified. Section 4.3 proffers an assessment of the identified policy measures.

5.2 Overview of regulatory framework including fiscal and competition issues

The table below identifies policy measures that have an effect on the competitive position of the cooperative versus IOFs or other players in the food chain. In Spain the sector-specific measures aim mainly at creating added-value and commercially oriented agri-food businesses. Although the legislation applies to all agricultural businesses, cooperatives are favoured by extra points in the point system upon which aid is granted. In Greece, the regulation on POs has benefited cooperatives since most of the cooperatives (1st or 2nd tier) have been also recognized as POs. Finally in Italy, the national legislation on food labelling and quality, provides cooperatives with a competitive advantage since most Italian olive oil cooperatives market olive oil produced by their members locally, so labelling and tracing origin is logistically simpler compared to IOFs that market produce of different origin—sometimes even under the same brand.

Cooperatives and POs have also benefited from other policy measures. For example, given their numbers in all olive oil producing countries, both of these types of organisations have had access to measures and benefits provided through the CMO for olive oil and table olives. Yet, such measures have also benefited other players in the olive oil and table olives supply chains and thus they are not discussed in this report. Cooperative legislation and cooperative incorporation laws are also not described nor analysed here. Such legal texts, along with the bylaws of each cooperative in many countries, set the basic institutional and legal environment in which cooperatives operate. Hence they are discussed in depth in the cross-country comparison of agricultural cooperatives and POs (Theme 4).

Table 14 Most relevant policy measures and especially analysis of regulations, fiscal and other types of support specific to the table olives and olive oil sector

Country	Core	Policy Measure Name	Policy Measure Type	Regulatory Objective	Policy Target	Expert comment on effects on development of the cooperative
Spain	2	Order of 23/07/2009, of the local Ministry of Agriculture and Rural Development, which establishes the regulatory bases for the increase of added value of agricultural product and the promotion of agro alimentary quality (FOCAL) (Community of Castilla-La Mancha)	2. Inducement . Financial and other incentives 3. Capacity Building	2. Attainment of equity or social goals	3. Applicable to business in general (specific to agricultural)	-Concession of aid to agro alimentary businesses that attempt to increase their added value through investments that are related to the transformation and/or commercialisation of specified products. -This aid is available to both physical and legal persons that transform and/or commercialise agricultural products in establishments within Castilla-La Mancha. The point system upon which aid is granted is an objective system according to a competitive process. However, within such 15 point system, 5 of such points are related to projects proposed by cooperatives or inter-cooperative agreements and one of the criteria of the point system is the prioritisation of the olive oil and wine sectors.
Spain	2	Order AYG/695/2011, 6 of May, for the convocation of subsidies, co-financed by the European Agricultural and Rural Development Fund (FEADER), in the improvement of production structures and the modernisation of farms, for the application of Council Regulation (EC)	3. Capacity Building	2. Attainment of equity or social goals	3. Applicable to business in general (specific to agricultural)	-Subsidies included in this Order are: a) Modernisation of agricultural farms (investments in farms through plans for improvement and investments for the efficient use of irrigation water. b) Placement of young farmers.

		1698/2005.				
Spain	1	Commission Regulation (EC) No 867/2008, Article 5, Operators' Organisations in the olive Sector	1. Mandate. Incorporation law	1. Correction of market or regulatory failures	2. Specific to an agricultural subsector	The Ministry of Agriculture, Rural Areas and Marine agreed with the olive producers not to retain such funds to finance Operational Organizations. Instead, they used all funds to finance a program to fight the olive fly. While the end result is extremely positive for the sector as a whole, it had only an indirect positive impact on cooperatives' competitive positioning
Spain	1	Commission Regulation (EC) No 826/2008 Establishing common rules for the implementation of the private storage aid scheme	2. Inducement . Financial and other incentives	Correction of market	Specific to the olive oil sector	No significant impact on the performance of cooperatives in terms of market share or growth. This is primarily because it does not address structural issues which could affect market shares or growth. It is more of a survival tactic whilst the sector is undergoing major transformation.
Spain	1	Commission Regulation (EC) No 542/2009 Opening the tendering procedure for aid for private storage of olive oil	2. Inducement . Financial and other incentives	Correction of market	Specific to the olive oil sector	No significant impact on the performance of cooperatives in terms of market share or growth. This is primarily because it does not address structural issues which could affect market shares or growth. It is more of a survival tactic whilst the sector is undergoing major transformation.
Italy	1	Commission Regulation (EC) No 826/2008 Establishing common rules for the implementation of the private storage aid scheme	2. Inducement . Financial and other incentives	Correction of market	Specific to the olive oil sector	This kind of support was not effective in Italy because: 1) average prices were (with few exceptions) always above support prices, 2) the financial support given was too little and 3) most processing

						enterprises, including cooperatives, do not own storage facilities and thus would have to incur extra costs for renting them.
Italy	3	Law No 4 of 3 February 2011 (and previous laws on labelling of food products). Measures relating to labelling and quality of food products	Regulation on conditions of market access of food products	Greater transparency of the production processes and the traceability of food products towards final consumer	Applicable to business in the food chain	The Law No 4/2011 introduced the compulsory labelling of farming place of food products. This law is the logical continuation of a series of legislative acts that in the past decade introduced the obligation to designate the place of farming on the label of many important foods (eggs, milk, beef, meat chicken, tomato sauce, extra virgin olive oil and honey). Italian farmers' cooperatives are benefited by this measure since their products are produced locally by their members. Evidently this feature facilitates the implementation of the procedures required by the tracking systems and the promotional communication, which is based especially on the geographic origin of the products.
Italy	-2	Council Regulation (EC) No 1698 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD)	Community legislation supporting agricultural and food products. Definition of entities admitted to "funding and incentives"	Defining of entities admitted to "funding and incentives"	Target of the policy were the large companies, cooperatives and non-cooperatives, operating in the agri-food industry that have been excluded from	The 2007-2013 Rural Development Policy has introduced laws that have negative impact on cooperatives. The regulation (EC) 1698/2005 provides the exclusion of large-sized cooperatives from the European Agricultural Fund for Rural Development grants (previously all firms, cooperative or not, were entitled to that type of support). According to the new laws, now only the intermediate-sized companies (up to 750 employees and with turnover lower than 200

					<p>access to European funding for rural development</p>	<p>million Euros) can take advantage of financial support (with the intensity of support decreased by 50%).</p> <p>Consequently, even the EU guidelines on state aid acted in the same direction (C 319/01/2006). This orientation has hindered the development of cooperation, especially in countries where, like in Italy, the average size of cooperatives is still limited and the agricultural production processed and marketed by farmer's cooperatives is lower than in other countries (especially Northern Europe).</p> <p>The leader cooperatives can no longer rely on the aid from EU member countries and this fact goes against the aim of promoting the concentration of supply of farm production and the income level of farmers. Larger cooperatives are usually those that can improve members' products (by setting the prices of members' agricultural products above the average), through increased efficiency (scale economies), a greater degree of market power (integration of supply) and a better management of assets that are more profitable for members (marketing, manufacturing their own brand, etc.).</p> <p>To avoid this measure limiting the development of the Italian agri-food cooperation, the Italian cooperatives have requested exclusion of cooperatives from limitations related to the size, within the CAP reform debate.</p>
--	--	--	--	--	---	--

Greece	3	Commission Regulation (EC) No 867/2008, Article 5, Operators' Organisations in the olive Sector	1. Mandate. Incorporation law	1. Correction of market or regulatory failures	2. Specific to an agricultural subsector	All regulations that promote the organisation of markets for specific products/commodities through producers' organisations provide a facilitating institutional environment that has considerably improved the positioning of farmers' vis-à-vis their upstream and downstream IOF food supply chain partners. Specific actions that are financed under this measure include: <ul style="list-style-type: none"> • Operational programmes with several targets like, improvement of product quality, increasing the added value of products, and widespread adoption of environmentally friendly methods of production. • Subsidies for the establishment and administrating expenses as well as for part of the initial necessary expenses for the official recognition of the PO
Greece	5 (expected)	Commission Regulation (EC) No 826/2008 Establishing common rules for the implementation of the private storage aid scheme	2. Inducement . Financial and other incentives	Correction of market	Specific to the olive oil sector	According to market analysis, private storage aid would contribute to the stabilisation of the olive oil market.
Greece	5 (expected)	Commission Regulation (EC) No 542/2009 Opening the tendering procedure for aid for private storage of olive oil	2. Inducement . Financial and other incentives	Correction of market	Specific to the olive oil sector	
Greece	3	Commission Regulation (EC) No 1698/2005 on Support for Rural	3. Capacity Building	2. Attainment of equity or social goals	3. Applicable to business in	Many agricultural cooperatives, including those in the olive sector have benefited by this regulation; they received

		Development by the European Agricultural Fund for Rural Development			general (specific to agricultural)	subsidies or subsidised loans to invest in, among other things, processing facilities, rural tourism, promotion activities, rural development projects, etc.
--	--	--	--	--	------------------------------------	--

5.3 Expert assessment of impact of policy measures

Drawing conclusions on the effectiveness of policy measures at the EU level is very difficult. This is primarily because the various policy measures are implemented in different ways in each Member-State. In some countries, the aforementioned measures are implemented at different times and in different ways in each region of the country (e.g., Spain).

Another constraint that makes difficult to draw conclusions is that many policy measures, at the regional, national, or EU level do not target cooperatives and/or a particular sector exclusively. In such a case the cooperatives of a sector might have been benefited more than other types of businesses. Yet, no hard evidence or statistical backup is available on this issue.

Finally, the impact of cooperative legislation on cooperatives, which is not discussed in this report, may have far more important consequences for cooperatives' competitive position vis-à-vis their competitors than sector specific regulations/measures. For example, agricultural cooperatives in Spain can apply for incorporation at either the federal or regional level. Being incorporated at the national level would enable better coordination and more efficient implementation of regulations and laws. However, only cooperatives incorporated at the regional level have access to numerous forms of support given by some of the regional governments. Therefore, many cooperatives prefer to be incorporated at the regional level despite the problems encountered in implementing EU regulations.

The following assessment of policy measures is based on the country reports conducted in Theme 2 of the Support for Farmers' Cooperatives study, the available literature, and personal communication with the authors of country reports.

SPAIN: Four policy measures are identified as having an impact specifically on olive cooperatives. The first is an Order introduced in 2009 by the Ministry of Agriculture and Rural Development of the Castilla-La Mancha Autonomous Community (Order of 23 July 2009)⁷.

The measure distributes subsidies to all companies that invest in increasing their added value through new/improved processing facilities and commercialization activities. The submitted proposals are evaluated on a 15-point scale and five points are given to applying cooperatives. Further, one of the selection criteria gives priority to companies in the olive and wine sectors. The impact that this measure had until now on olive cooperatives is assessed as moderately positive. This is probably because the too many and small cooperatives are unwilling to co-operate in extracting rents available at adjacent stages of the olive oil supply chain. Besides the structural characteristics of olive farms and cooperatives, the attitudes of cooperative leaders who view the locally produced olive oil as the "best in the world" might explain a significant part of this unwillingness.

Order AYG/695 of 6 May 2011 refers to the implementation of the Rural Development Plan of Spain, which is financed by the European Agricultural and Rural Development Fund (FEADER).

⁷ While Andalucía is the most important Spanish region, in terms of olive oil production, Castilla-La Mancha is also important. So reference to this law is due to the fact that only emblematic laws of the regions were identified in the Spanish country report (Theme 3) as no national law on this issue has been passed.

Among the top priorities of the programme is the use of subsidies to modernise agricultural holdings and support the placement of young farmers. However, in the case of olive cooperative, this measure also has thus far a moderately positive impact on olive cooperatives, probably because of the short time that has elapsed since its implementation⁸.

Focusing more closely on agricultural cooperatives, such entities have been acknowledged as drivers of local development in Spain (Bel Durán, 2004; Juliá Igual, 2002, amongst others). The cooperative legislation of the various Autonomous Communities, as well as the Spanish National cooperative legislation, recognize in one form or another, the role of cooperatives in improving the rural environment. Agricultural cooperatives are considered local development agents and act as an intermediary with public administrations and as members of the “local action groups” set up by the various LEADER programs (Gallego Sevilla, 2007). Agricultural cooperatives receive funds from the various Spanish Autonomous Communities to carry out local development measures. In the current National Strategic Plan cooperatives are considered as intermediaries in their capacity of economic and social agents implicated in rural development. The alimentary industry is considered a priority given its key function in adding value to agricultural products and also as a way to rejuvenate rural economies by increasing agricultural product value.

The olive sector has benefited, depending on the particular Autonomous Community Plan, from aid meant to fund, amongst other things, an increase in competitiveness, restructuring initiatives and the encouragement and financing of innovation.

Funds aimed at improving environmental quality and diversification of economic activity have also been utilised by the olive sector.

The fact that much of these funds have been limited to SMEs is also considered problematic.

The third measure refers to Operators’ Organisations in the olive oil sector (Commission Regulation (EC) 867/2008). What is important to note here is that the Spanish Ministry of Agriculture, Rural Areas and Marine agreed with the olive oil producer sector to not retain such funds to finance Operators’ Organisations. Instead, they used all funds to finance a programme to fight the olive fly. While the end results are extremely positive to the olive sector as a whole, the programme had only an indirect impact on cooperatives’ competitive positioning.

ITALY: Three relevant policy measures were also identified in the case of Italy. The first concerns the compulsory identification on the farming place for all food products (Law 4/3 February 2011). This measure already has a moderately to highly positive impact on olive cooperatives because of their close ties with their member-farmers and thus local, primary production. Evidently this feature facilitates the implementation of the procedures required by the tracking system and the promotional communication, which is based especially on the geographic origin of food products.

The second relevant policy measure is Regulation (EC) No 1698/2005 and the subsequently passed national laws that enable its implementation. It refers to the allocation of subsidies and other forms of support funded by the European Agriculture and Rural Development Fund (FEADER). While in most other EU countries, experts report a positive impact of this regulation on cooperatives, the Italian expert suggests a moderately negative impact. According to his argument but also the requests of Italian agricultural cooperatives, the regulation excludes large

⁸ Generally, FEADER funds have an overall positive impact on the Spanish agricultural sector (Ordoñez, 2011). The interest in social issues in rural territories has been one way to legitimate rural activity that has lost relevance in past decades (Moyano, 2006). Gallardo (2005) maintains that FEADER funds have complemented the sectoral and territorial focus and have consolidated the LEADER approach, thus providing a more adequate response to the new social demands of rural areas.

(in terms of surpluses/profits) cooperatives from the application process and thus constrains efficient mergers between cooperatives that would have enhanced their competitive position significantly.

The third measure is twofold and includes Commission Regulations (EC) 826/2008, which introduces common rules for the implementation of the private storage aid scheme for olive oil, and Commission Regulation No 542/2009, which opens the tendering procedure for aid for private storage of olive oil.

According to the assessment of these two measures' impact on cooperatives' positioning provided by the Italian national expert, the private storage scheme worked only in the case of low quality olive oil. In the case of high quality olive oil, this kind of support has not been effective because of three reasons: 1) average prices for extra virgin olive oil in Italy have usually been much higher than the prices paid under the scheme; 2) the financial support given through this measure was very low; and 3) most processing companies, including cooperatives, do not own storage facilities and thus would have to incur the extra cost of renting them.

GREECE: Four policy measures are identified as having an impact on olive cooperatives. The first is the Commission Regulation (EC) No 867/2008, Article 5 which refers to operators' organisations in the olive sector. It concerns the rules for allocating subsidies to these organisations (primarily cooperatives and POs) in order to improve the organisation of the olive oil and table olives market. Two of the instruments used are the funding of operational programmes submitted each year by operators' organisations and subsidies to cover the initial expenses incurred for receiving PO recognition. The operational programmes focus primarily on strategies to improve product quality, increase the added value of olive oil, and adopt environmentally friendly methods of production. The impact of this measure is assessed as moderately to highly positive as many olive cooperatives and POs have benefited by it.

Commission Regulation (EC) 826/2008 introduces common rules for the implementation of the private storage aid scheme for olive oil while regulation No 542/2009 opens the tendering procedure for aid for private storage of olive oil.

While they have not been implemented yet, olive cooperatives are strong supporters of the measure as they argue that its implementation will enhance their bargaining power and help them mitigate the dramatically falling olive oil prices during recent year. Opponents of the private storage aid schemes argue that falling prices and low bargaining power of farmers and their cooperatives is rather a structural problem of the sector and thus spending money on storage schemes will have only negligible results.

Finally, the implementation of the Council Regulation (EC) No 1698/2005 (FEADER) has a moderately to highly positive impact on olive cooperatives and POs; many have received funding to invest in processing facilities, promotion campaigns, rural tourism and other rural development projects.

Regarding FEOGA subsidies, EU policies have been very supportive of farmer income. However, as in most other sectors, subsidies diluted farmers' incentives to invest in their farms and cooperatives in order to gain a competitive position and thus be protected from downturns and the costs of structural adjustments. Combined with a lack of long-term vision on the part of politicians and cooperative leaders, subsidies have had a significantly negative impact on cooperatives. Of course, farmers also have a large share of the responsibility for the current situation. Subsidies have had similar effects on other sectors. Yet, such effects were much more immense in the case of the olive oil sector due to its importance for the Greek agricultural economy.

6 Discussion

While the information and policy assessments presented in this report are useful for policy makers and practitioners, it is characterized by the following shortcomings. First, due to the fact that several chapters or sections are primarily or exclusively based on material gathered by national experts in the country reports of Theme 3, the reported information carries on the limitations of those data. Missing data on the top-5 cooperatives of the sector for 2000 and/or 2010, in some cases, made comparisons cumbersome. At the same time, the country reports included different sets of information that did not allow a meaningful comparative analysis of the sector in the olive oil and table olives producing countries.

Second, country reports addressed sector issues primarily from an industry perspective but not from a cooperative one. Consequently, in some cases very little information was available on, e.g., the performance of cooperatives in a particular sector. Unfortunately, the academic literature on this is rather poor and mass media articles are available only in the locally spoken language. Another consequence of the primarily industry focus of country reports is that policy measures were not assessed in terms of their impact on the cooperatives and POs of a particular sector. Thus drawing conclusions on the effectiveness of particular policy measures and the intervening factors was nearly impossible. The help of national experts, who were conducted after this gap was identified, was indispensable in completing this report.

Given the aforementioned shortcomings, future research is highly needed in order to inform policy makers at the EU level. Among the topics that deserve special attention the following seem of a higher priority:

- Inter- and intra-country comparative assessment of public policies and measures toward cooperatives, POs, and other forms of collective entrepreneurship.
- Governance of particular supply chains from the producers' perspective. The results of this research program would inform policy makers about how alternative governance structures interact with particular policy measures.
- Which new, innovative models of collective action and under what conditions would maximize the final product value captured by primary producers-members? This is a particularly crucial question to address for the olive oil and table olives sector.

Particularly, cases study research in successful cooperative ventures, like those identified in this report, should look into issues such as:

- What are the factors that have led to the success of the cooperative? Are these factors location specific? What was the role played by the members and cooperative leaders?
- What drives entrepreneurial behaviour in olive oil cooperatives?
- What are the limits of the traditional olive oil cooperative model, what alternatives are available and at what cost?
- Which public policies have facilitated or constrained the success of the case study cooperatives and why?

Conducting in-depth research in order to address these topics rests on the regular collection of primary data on agricultural cooperatives and POs in all EU countries and at the sector and policy levels. Further, more detailed analysis of successful cases of olive oil cooperatives necessitates the collection of primary data from individual organisations. Only if informed by reliable, primary and detailed data would the results of research be highly useful to policymakers, farmers and their cooperatives.

REFERENCES

- Anania, G. and M.R. Pupo d'Andrea (2008). "The Global Market for Olive Oil: Actors, Trends, Policies, Prospects and Research Needs," Working Papers 6109, TRADEAG - Agricultural Trade Agreements.
- Anania, G. and Pupo d'Andrea, M. R. (2011). "Olive oil in the Mediterranean area: production, consumption and trade", The CIHEAM Watch Letter, Winter 2011, No 16.
- Beldurán, P. Las sociedades cooperativas: motores del desarrollo territorial. En: Congreso.
- Bijman, J. (2005). "Network and Hierarchy in Dutch Cooperatives: A Critical Analysis," The International Journal of Cooperative Management, 2(2): 16-24.
- Chaddad, F. R., and M. L. Cook (2004). "Understanding New Cooperative Models: An Ownership-Control Rights Typology," Review of Agricultural Economics, 26(3): 348-360.
- Cook, M. L., and C. Iliopoulos (2000). "Ill-defined Property Rights in Collective Action: The Case of US Agricultural Cooperatives." In C. Menard (ed.) Institutions, Contracts, and Organisations: Perspectives from New Institutional Economics, pp. 335-348. London, UK: Edward Elgar Publishing.
- Cook, M.L., Burrell, M., and C. Iliopoulos (2008). "New Producer Strategies: The Emergence of Patron Driven Entrepreneurship." XIIth Conference of the European Association of Agricultural Economists, Ghent, Belgium, August 26-29, 2008.
- de Graaff J., Duarte F., Fleskens, L. and T. de Figueiredo (2010). "The future of olive groves on sloping land and ex-ante assessment of cross compliance for erosion control", Land Use Policy, 27: 33-41.
- de Graaff, J., L.A.A.J. Eppink (1999). "Olive oil production and soil conservation in southern Spain, in relation to EU subsidy policies," Land Use Policy 16: 259-267.
- Drakos P. (2006). "Supply chain analysis of the olive oil market in The EU", Report prepared for the Medfrol Project "Market and Trade Policies for the Mediterranean Agriculture: The case of fruit / vegetables and olive oil."
- Drakos, P. (2006). "Supply chain analysis of the olive oil market in The EU", Report prepared for the Medfrol Project "Market and Trade Policies for the Mediterranean Agriculture: The case of fruit / vegetables and olive oil."
- Gallardo, R. (2005). Reflexiones sobre la futura política de desarrollo rural europea. Revista Tierra Sur, nº 18: 23-25.
- Gallego S. L. (2007). Función de las Cooperativas en la Normativa de Fomento del Desarrollo Rural REVESCO Nº 92 - Segundo Cuatrimestre 2007.
- González Regidor, J. (2005). "Consideraciones en torno al FEADER." Tierra Sur, 18: 20-22.
- International Olive Council (IOC) (2011). Market Newsletter No. 54, October 2011. Available at: <http://www.internationaloliveoil.org>.
- Juliá Igual, J., and Marí Vidal, S. (2002). "Agricultura y desarrollo rural: contribuciones de las cooperativas agrarias." CIRIEC-España, 41: 25-54, ISSN: 0213-8093.
- Langreo Navarro, A. (2010). "Business strategies in the olive oil sector and their impact on the value chain", paper Presented to the IOC Advisory Committee Essaouira, 22 June 2010.
- Mili, S. (2006). "Market dynamics and policy reforms in the EU olive oil industry: An exploratory assessment". Paper presented in the 98th EAAE Seminar 29 June-2 July, Chania, Greece.
- Mili, S. and M. Mahlau (2005). "Characterization of European Olive Oil Production and Markets". EU-MED AGPOL Project Report D10, CSIC, Madrid.
- Milonas, P., Voumvaki, F., Savva, M., and A. Koutouzou (2011). Olive Oil: Promoting Quality through Concentration and Standardization. Sector Studies, National Bank of Greece (in Greek). Available at: <http://www.nbg.gr/Ανακοινώσεις-Εκδόσεις/Δημοσιεύματα-Εκδόσεις/Κλαδικές Μελέτες>.
- Moyano, E. (2006). "Nuevas orientaciones de la política europea de desarrollo rural. A propósito del nuevo Reglamento de desarrollo rural." VI Coloquio of the Spanish Association of Agrarian Economy/Portuguese Society of Rural Studies, El papel de las regiones en las economías rurales. Huelva (Spain), 23-24 of February.
- Polytechnic University of Madrid, 2005. Evaluation de l'impact environnemental de l'organisation commune de marche des cultures permanentes : OCM olive etude nationale Espagne et etude de cas Andalusia. November 2005. Available at : <http://ec.europa.eu/agriculture/eval/reports/crops/annex2.pdf>

- Rodríguez, M., Galdeano, E., and Céspedes, J. (2004). "Rural multifunctionality in Europe: Concept and Policies. 90 Seminario de la Asociación Europea de Economía Agraria, Multifunctionality agriculture, policies and markets: understanding the critical linkage. Rennes (France), 27-29 October.
- Saladar Ordóñez, M. (2011) La Demanda social por la agricultura: contraste de preferencias y Política Agraria Común. CES, Junta de Andalucía, Sevilla.
- Scheidel, A., and F. Krausmann (2011). "Diet, trade and land use: a socio-ecological analysis of the transformation of the olive oil system". *Land Use Policy* 28, 47-56.
- Universidad Politécnica de Valencia (2004). *Internacional de Cooperativismo y Desarrollo Rural [CD-ROM]*, ISBN: 84-9705-683-3.

APPENDIX

Table 9. Position of top-5 olive oil and table olives cooperatives per country in the food supply chain

	COUNTRY															
	Italy				Portugal				Spain				Greece			
	Not relevant	Relevant	Most relevant	n / a	Not relevant	Relevant	Most relevant	n / a	Not relevant	Relevant	Most relevant	n / a	Not relevant	Relevant	Most relevant	n / a
Providing a market	3	1	0	1	5	0	0	0	0	1	1	3	1	4	0	0
Collective bargaining	2	2	0	1	5	0	0	0	0	1	1	3	3	2	0	0
Collecting farm products	1	3	1	0	0	5	0	0	0	2	0	3	0	3	2	0
Primary processing	1	1	3	0	0	5	0	0	1	0	1	3	1	3	1	0
Secondary processing	0	2	3	0	1	4	0	0	0	1	1	3	0	1	4	0
Commodity Marketing	3	1	0	1	5	0	0	0	0	1	1	3	2	3	0	0
Marketing branded products	1	1	3	0	2	3	0	0	0	2	0	3	0	1	4	0
Wholesaling	1	1	2	1	5	0	0	0	0	1	1	3	5	0	0	0
Retailing	2	1	1	1	5	0	0	0	0	2	0	3	1	3	1	0
Both Supply / Marketing	2	0	0	3	5	0	0	0	0	0	0	5	0	3	2	0
Other	2	0	2	1	5	0	0	0	0	2	0	3	0	0	0	5