Support for Farmers' Cooperatives

Country Report
Greece

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European Commission

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.

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How to cite this report:

Iliopoulos, C. (2012). Support for Farmers' Cooperatives; Country Report Greece. Wageningen: Wageningen UR.

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November 2012

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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 country report on the evolution of agricultural cooperatives in Greece has been written. Data collection for this report has been done in the summer of 2011.

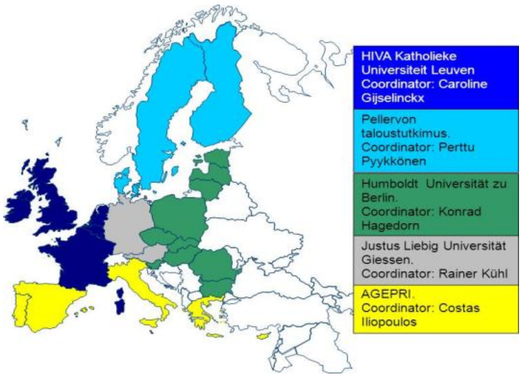
In addition to this report, the project has delivered 26 other country reports, 8 sector reports, 33 case studies, 6 EU synthesis reports, a report on cluster analysis, a study on the development of agricultural cooperatives in other OECD countries, and a final report.

Chapter 4 was written by Dr Irene Tzouramani and Dr Irini Theodorakopoulou.
Very helpful research assistance was provided by Angelos Liontakis, MSc, and Kostas Varotsos, MSc

Various individuals, organisations and public agencies have provided valuable help in gathering information, securing access to data, providing expert opinions, and contacting agricultural co-operatives. Especially I would like to thank the following:

- Eleni Larentzaki, Antonis Sofronas, and Liolaki Emmanouela Ministry of Agriculture and Food, Department of Collective Action
- Yiannis Tsiforos, Director General of PASEGES
- Kostas Anastasopoulos, former staff member, PASEGES
- Georgia Simatou, and Freideriki Gkouliaditi, staff members, PASEGES
- Panagiota Sergaki. Lecturer, Lecturer at Aristotle University of Thessaloniki, Department of Agricultural Economics
- Michael Fefes, Lecturer, University of Peloponnesus, Department of Social and Educational Policy
- Mimika Agelopoulou, and Madalena Bardounioti, staff members, National Agricultural Research Foundation, Agricultural Economics and Policy Research Institute

The Country Report Greece is one of the country reports that have been coordinated by Costas Iliopoulos, AGEPRI. The following figure shows the five regional coordinators of the SFC project.



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1 Introduction

1.1 Objective of the study

The imbalances in bargaining power between the contracting parties in the food supply chain have drawn the attention of 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, under the title "Support for Farmers' Co-operatives", that will provide the background knowledge that will help farmers organise themselves in co-operatives as a tool to consolidate their market orientation and so to generate a solid market income. In the framework of this study, this report provides the relevant knowledge from Greece.

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

First, it aims at providing a comprehensive description of the current level of development of co-operatives and other forms of producer organisations in Greece. The description presented in this report will pay special attention to the following drivers and constraints for the development of co-operatives:

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

Second, the report will identify laws and regulations that enable or constrain co-operative development as well as specific support measures and initiatives which have proved to be effective and efficient for promoting co-operatives and other forms of producer organisations in the agricultural sector in Greece.

1.2 Analytical framework

There are at least three main factors that determine the success of co-operatives in current food chains. These factors relate to (a) their position in the food supply chain, (b) their internal governance, and (c) the institutional environment. The position of a co-operative in the food supply chain refers to the competitiveness of the co-operative 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 along with the delegation of decision rights). The institutional environment refers to the social, cultural, political and legal context in which the co-operative operates, and which may have a supporting or constraining effect on the performance of the co-operative. Those three factors constitute the three building blocks of the analytical framework applied in this study (Figure 1).

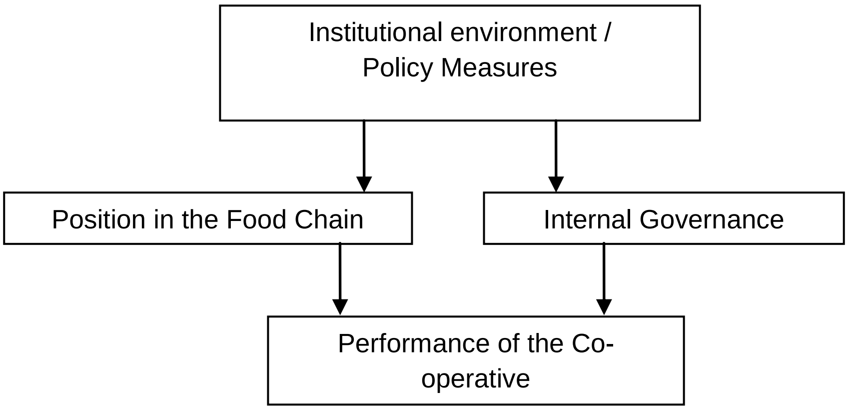


Figure 1. The core concepts of the study and their interrelatedness

1.3 Definition of the co-operative

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

- It is user-owned because the users of the services of the co-operative/PO also own the co-operative 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 co-operative/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 co-operative are distributed to its users on the basis of their use; thus, individual benefit is in proportion to individual use.

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

1.4 Method of data collection

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 DG Agri database on producer organisations in the fruit & vegetable sector. Data provided by Copa-Cogeca has also been used. In addition, information on individual co-operatives has been collected by studying annual reports, other corporate publications and websites. Interviews have been conducted with representatives of national associations of co-operatives, managers and board members of individual co-operatives, and academic or professional experts on co-operatives.

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.

2 Facts and figures on agriculture

2.1 Share of agriculture in the economy

In 2007 agriculture represented 3.1 % of Greece's GDP (Figure 2). The share of agriculture to the GDP is constantly decreasing over the last ten years; since 2000 it has been reduced at about 50% (Figure 2).

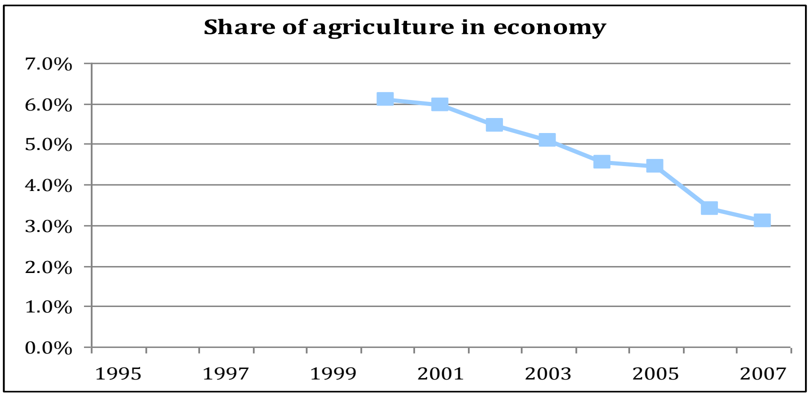


Figure 2. Share of Greek agriculture in the Greek GDP. Source: Eurostat Nat. Accounts

2.2 Agricultural output per sector

Within Greek agriculture, several sectors exist; Figure 3 provides information on the Most important of these sectors. In terms of production value, fruits and vegetables is the most important sector, followed by cereals, olive oil and table olives, and dairy. The production value of the sugar sector is small, especially in recent years.

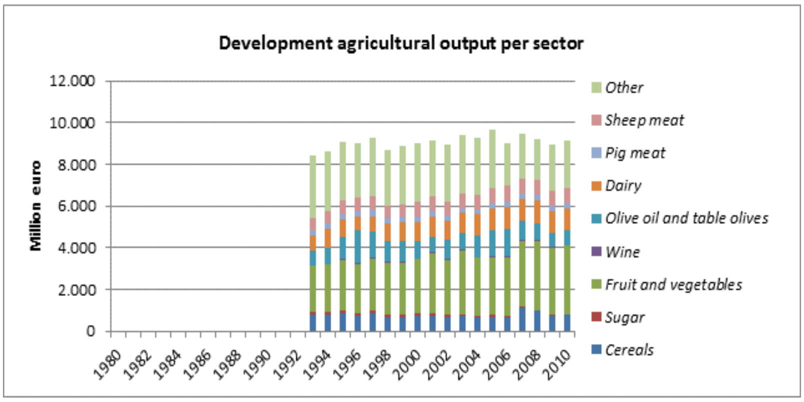


Figure 3 Development of the different sectors in agriculture, value of production at producer prices (millions €). Source: Agriculture Economic Accounts, Eurostat

Figure 3 indicates a diachronic decline of the role of agriculture in Greece. In the period 2001-2009, only three agricultural sectors exhibit a positive average growth rate. The wine sector has the highest positive average growth rate of about 4%, followed by fruit and vegetables and milk with 2% and 1% growth rates, respectively. On the other hand, the pig, sheep and goat meat sectors present a small negative growth rate. The lowest growth rate is observed in the sugar sector, probably as a consequence of the latest EU regulations. The sectors of olive oil, cereals and cattle present a negative growth rate that lies between the aforementioned extreme cases.

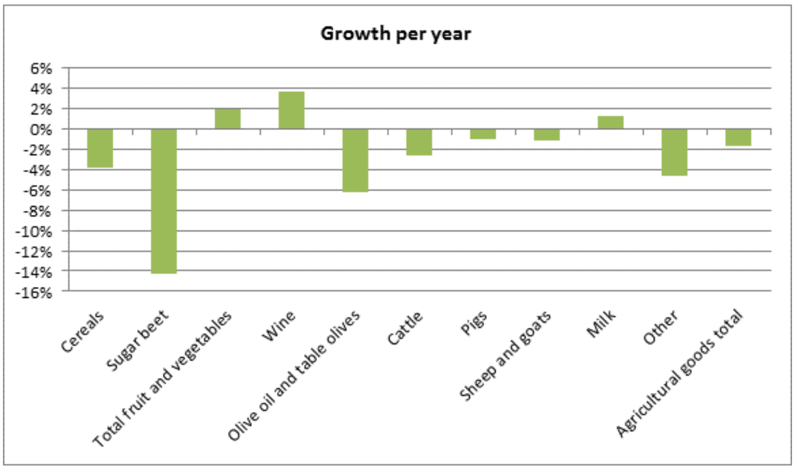


Figure 4 Trend in output per sector "2001" - "2009". Source: Economic Accounts of Agriculture, Eurostat.

2.3 Development in the number of farms

The number of farms in Greece for years 2000 and 2007 is given in Table 1 and Figure 5. Olive oil and table olives farms are by far the most common farms in Greece as they represent almost 50% of Greek farms. The number of farms with sugarbeets, cereals, and fruits and vegetables follow. However, more recent data, reveals the abandonment of the sugar beet production. Since the sugar reform of 2006, the number of sugar beet farms has been sharply declining. On the other hand, some growth in the number of farms is observed in the beef sector, followed by the cereals and the dairy sectors. In the cases of pig meat and olive oil and table olives sectors, the number of farms is almost stable during the period of study.

Table 1. Number of farms in Greece (2000, 2007)

	2000	2007	% change per year
Cereals	65.640	88.130	4,30
Sugar	124.150	97.510	-3,39
Pig meat	3.120	3.220	0,45
Sheep meat	43.870	40.500	-1,14
Total fruits and vegetables	70.550	78.280	1,50
Horticulture	13.820	16.980	
fruit and citrus fruit	56.730	61.300	
Olive oil & table olives	289.870	286.990	-0,14
Wine	20.000	23.050	2,05
Dairy	2.040	2.620	3,64
Beef	2.400	3.940	7,34

Source: Eurostat, Farm Structure Survey.

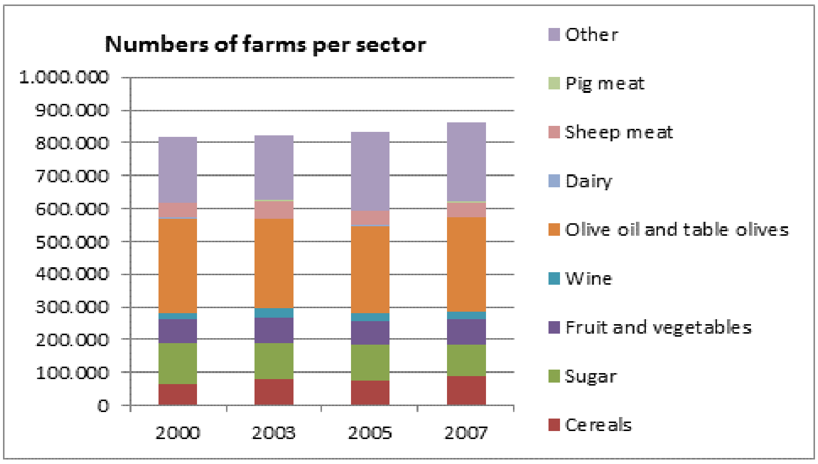


Figure 5 Number of farms 2000 - 2007 with data per specialist type of farming. Source: Eurostat, Farm Structure Survey.

2.4 Size of farms

Farms size varies from small, part-time farms to large holdings. Figure 6 shows the distribution of farms per size class, measured in European Size Units (ESU).

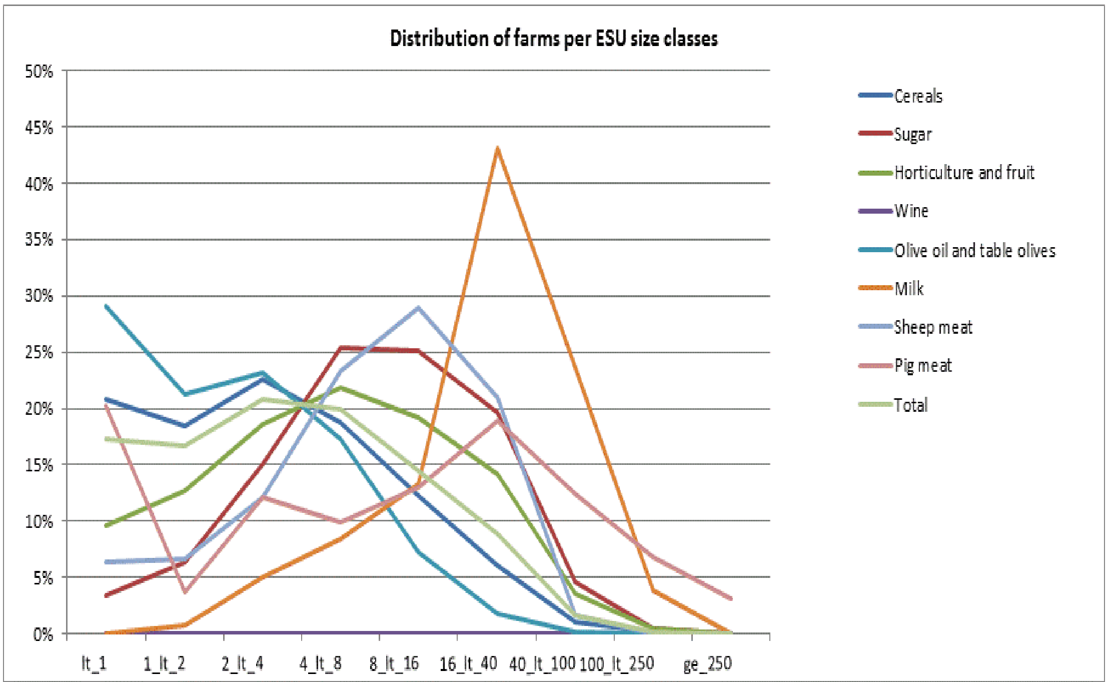


Figure 6 Number of farms per size class, measured in ESU, per specialist type of farming. Source: Eurostat, Farm Structure Survey.

As shown in Figure 6, there is a high variance in the distribution of farm sizes between the various sectors. In total, the size of the majority of farms is up to 8 ESUs.

In several cases (sugar, horticulture, sheep meat), the peak of the distribution is located around the medium ESU. The case of pig meat is interesting, as the distribution has two peaks. The first one is located at the lower value of European Units (between 0 and 1). The second peak of the distribution occurs at the area between 16 and 100 ESUs. Another interesting case is the distribution of the dairy farms where the peak is observed in relatively high ESUs. Finally, no data for grape farms were available.

2.5 Age of farmers: distribution of farms to age classes

The age of active farmers varies. Greece ranks 17th among the EU-25 countries according to the percentage of young farmers in the total farmers' population; moreover, a high percentage of farmers are over 65 years old. Consequently, due to the investment horizon problem1, investment decisions become less efficient.

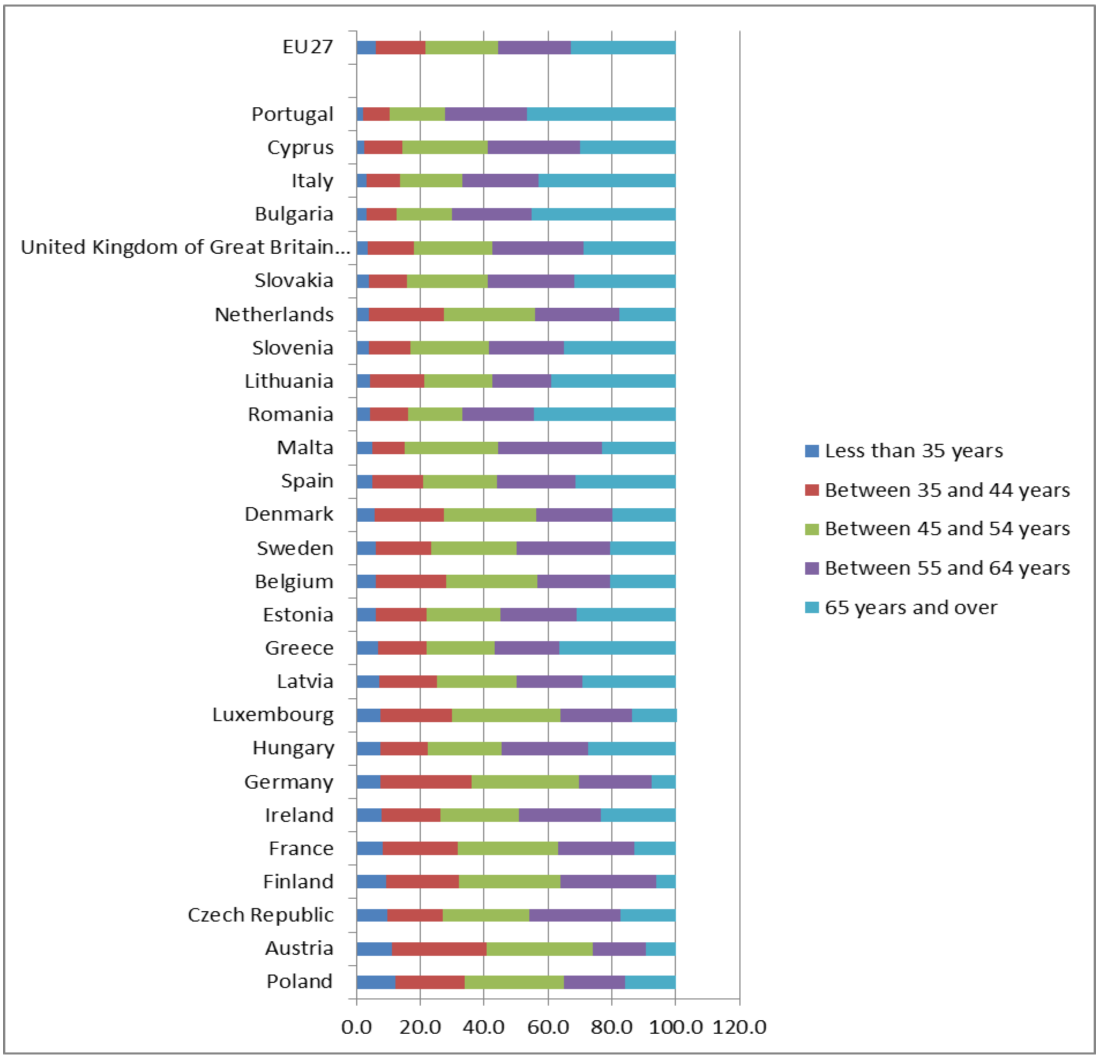


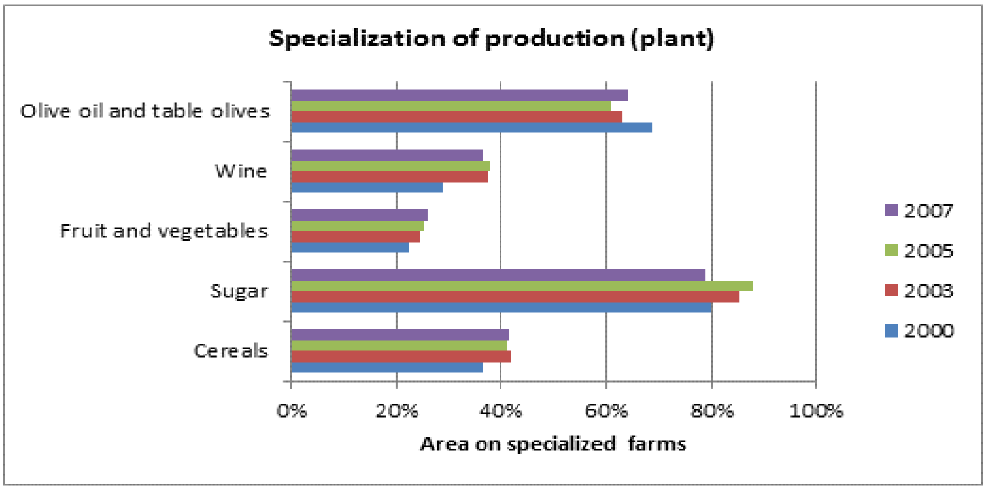
Figure 7. Percentage of farmers per age class, per Member State and EU27, 2007 (ranked with countries with the lowest percentage of young farmers on top). Source: Eurostat, Farm Structure Survey.

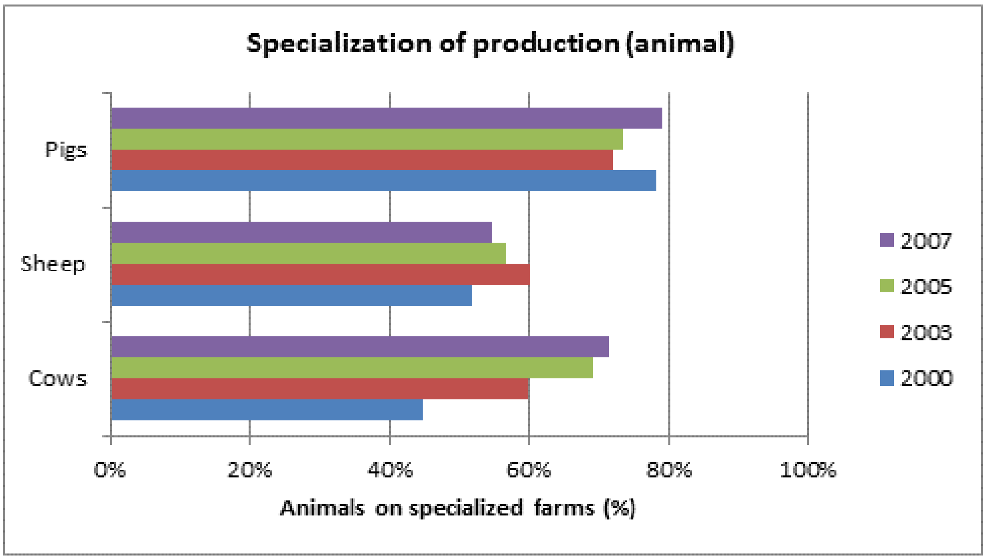
2.6 Specialisation of farm production

Co-operatives may not only have member-farmers with varying farm sizes or ages. Farms also exhibit diverse production portfolios and thus input needs. This is observed even more in the case of specialist farms where, for example, dairy farmers may also have beef or sheep production or they may sell hay. Additionally, many mutli-product (non-specialised) farms exist. Farm heterogeneity, in terms of specialisation, can be estimated by calculating the production shares of specialised farms. This is shown in Graph 7 (7A for plant production and 7B for animal production).

[1] See Cook and Iliopoulos (2000) for a definition and in-depth analysis of the horizon problem.

As far as crop farms are concerned, higher specialisation appears to be the case in sugar, and olive oil and table olive farms. In the case of livestock, specialisation characterises pig and cow farms. A comparison of Graphs 7A and 7B reveals that livestock production has a higher degree of specialisation, compared to crop production. Moreover, during the period 2000-2007, an almost negligible trend for specialisation is observed. Cow farms provide a noticeable exemption as their degree of specialisation increased by almost 30%.





Graphs 7 A & B Heterogeneity in farm production: the share of specialist farm types in total production. Source: Economic Accounts of Agriculture, Eurostat

2.7 Economic indicators of farms

The description of agriculture is concluded with the presentation of some economic indicators (Table 2). These indicators were calculated based on the net value added and income from farming, as well as the level of farmers' investment. From all investment options available the most preferred by farmers is investment in farm assets. Investment in the form of equity shares in co-operatives is also observed. Table 2 provides us with several indicators that allow for comparison between the studied sectors. As revealed by this table, dairy farms appear to have the largest economic size while olive oil and table olive farms the lowest. Compared to the other studied sectors, the cultivation of cereals is an extensive, low income per hectare activity, a fact also indicated by the high total utilised area and the low total output. On the other hand, sheep meat, pig meat and dairy production are more labour intensive, as indicated by the high labour input.

The value of total output is higher in the case of dairy and pig meat farms as well as in the fruit and vegetable farms, while it is significantly lower in olive oil and table olive farms and in extensive crops, like cereals. Farm net value added and net income appear to be higher in pig meat farms and lower in the olive oil and table olives farms. In terms of net worth and value of total assets, the dairy and pig meat sectors appear to perform better that the other sectors.. Cereals, sheep meat and olive oil farms on the other hand have low total assets and net worth. Finally, it should be noted that fruit and vegetable farms depend less on subsidies, compared to the other sectors; subsidies are very important to dairy and sugar farms but also sheep and cereals farms.

Economic indicators average per farm (2006-2008)

	Cereals	Sugar	Fruit and vegetables	Olive oil and table olives	Dairy	Wine	Pig meat	Sheep meat
Economic size - ESU	8.93	14.83	14.41	6.77	41.20	11.10	38.50	13.20
Total labour input - AWU	0.66	1.05	1.39	1.07	2.04	1.25	1.78	1.72
Total Utilised Agricultural Area (ha)	15.7	11.0	3.5	4.3	13.2	3.9	12.6	6.0
Total output €	14,309	17,053	29,849	9,896	122,853	19,637	159,460	33,922
Farm Net Value Added €	10,150	14,794	19,016	8,968	34,003	15,721	46,044	23,075
Farm Net Income €	7,643	11,608	16,040	7,972	29,088	13,573	40,785	21,238
Total assets €	69,890	82,628	82,662	70,362	236,792	88,292	208,068	77,960
Net worth €	69,504	82,031	82,111	70,131	234,929	88,142	205,154	77,440
Gross Investment €	330	563	891	283	2,274	546	19,942	635
Net Investment €	-3,010	-3,152	-2,911	-1,500	-3,351	-2,597	13,718	-1,704
Total subsidies - excl. on investm. €	8,231	11,379	1,877	3,746	17,313	4,334	6,568	8,870
Farms represented	52,243	86,850	52,960	139,843	1,220	13,733	1,817	34,627

note: less than 3 years available

Table 2 Economic indicators for farms (2006-2008). Source: DG Agri, FADN.

3 Evolution, position and performance of cooperatives

3.1 Types of co-operatives

Examples of diverse co-operative arrangements have been reported in Greece since the ancient times. During the 18th and 19th centuries, co-operation adopted more formal organisational structures (Klimis, 1985). These predecessors of modern co-operatives were extremely successful under highly unfavourable conditions (e.g., high taxation by the Ottoman Empire, geographic constraints, etc).

The first modern agricultural co-operative was formed in 1906 and served as a very valuable example of what co-operatives can achieve on behalf of their members. Based on this experience, agricultural co-operatives flourished in a few years' time. From 150 agricultural co-operatives reported in the official statistics of 1915, in 1929, 5,186 organisations have been established (Papagarifallou, 1973).

Around the same period, many consumer, credit, and various supply and service co-operatives were founded in urban areas (Klimis, 1985; Daskalou, 1992). Most of these co-operatives failed in the short to medium run. Noticeable exceptions, however, do exist. One such example is provided by the Credit co-operative of Lamia, which was established in 1900 and still serves its members efficiently (Daskalou, ibid).

Today, some of the urban co-operatives are extremely successful; e.g., supply co-operatives owned by pharmacies, plumbers, electricians, and taxi drivers. As discussed in next sections of this report, in sharp contrast to the constant governmental intervention into agricultural co-operative's affairs, urban co-operatives were left to their own destiny, probably because their members did not represent a significant part of the population eligible for voting in general elections. This observation may help in explaining the post-1980 rapid growth of urban co-operatives (Iliopoulos, 2000). In the post-1990 period, facilitated by EU and national policies, various types of so called social enterprises/co-operatives have emerged (CIRIEC, 2007). The primary goal of such organisations is to facilitate the integration of disadvantaged people into society (CIRIEC, ibid). Still, agricultural co-operatives outnumber all other types of co-operatives.

The number of the various types of Greek co-operatives are summarised in Table 3. In addition to agricultural co-operatives, several other types of co-operatives exist. The number of insurance associations and co-operative banks has been significantly reduced since 1999, when 60 and 27 enterprises were active, respectively (Iliopoulos, 2002a). However, this development might have been caused by structural changes in the respective industries that led to considerable consolidation during the last decade or so. In other words, it seems that the wave of international demutualization have not yet reached the shores of Greece.

Women co-operatives have a very important role in the economic, social and cultural life of rural Greece. In essence, these are worker-owned co-operatives that provide their members with income. In addition, such organisations provide rural women with a means of achieving social integration and personal empowerment. In 2005, there were 104 women co-operatives with 1,792 members. According to this expert's perception, however, both the number and members of women co-operatives have increased in recent years.

Pharmacy co-operatives also represent cases of successful collective action. They are in fact supply co-operatives that provide their members (pharmacists) with drugs and other pharmaceutical products. Their market share in the early 2000s was about 51% (Papageorgiou, 2007).

Finally, supply co-operatives owned by electricians and plumbers represent another type of very successful co-operatives. In the early 2000s, they commanded market shares of approximately 15% and 65%, respectively (Papageorgiou, ibid).

Table 3. Types and number of co-operatives in Greece

Types of Co-operatives	Facts	
Agricultural Co-operatives	2000:	9.782 jobs 746.812 members 6.464 enterprises
Co-operative Banks	2004:	762 jobs 16 enterprises
Co-operative Insurance	2003:	73 jobs 1 enterprise
Housing Co-operatives	1992:	143.382 members 450 enterprises
Pharmacy Co-operatives	2002:	800 jobs 30 enterprises
Co-operatives of Plumbers	2001:	890 jobs 31 enterprises
Co-operatives of Electricians	2002:	1.500 jobs 69 enterprises
Women Co-operatives	2005:	108 jobs 1.792 members 104 enterprises
Social Co-operatives	2000:	571 jobs 68 enterprises
TOTAL		12.345 jobs 974.304 members 7.233 enterprises

Source: CIRIEC, 2007

The predominant governmental attitude toward co-operatives has been one of constant attempts to intervene into agricultural co-operative's affairs. Since the early 1930s, consecutive governments used agricultural co-operatives as their public policy tools for providing rural credit, organising agricultural markets, and so on (Patronis and Papadopoulos, 1999). In combination with the influence activities of powerful investor-owned wholesalers and processing industries toward the government, many amendments to the first co-operative law of 1915 resulted in a highly fragmented legal framework that imposed severe constraints on agricultural co-operatives. As explained in detail in chapters 5 and 6 of this report, only co-operatives whose leaders were able to design relevant strategies and bypass such constraints were successful in playing a significant role in Greek agriculture. Other leaders, however, used their positions as a means of achieving their personal pecuniary or other objectives to the detriment of their co-operatives (Iliopoulos and Valentinov, 2012). By the end of the 1980s, agricultural co-operatives had accumulated enormous debts that threatened their survival. State help, sometimes questionable, in terms of its compliance with competition regulations, saved these co-operatives in the short run but did not have any long-lasting effects (Christou, 1995). Currently, many agricultural co-operatives are facing life-threatening challenges while their ability to confront these problems is moot. The worst effect of the aforementioned developments, though, is not in the financial and leadership crises of agricultural co-operatives; it is in farmers' and the general public's perception that co-operatives are synonymous to mismanagement, opportunism, and subsidised survival (Papageorgiou, 1997; 2010).

The national umbrella organisation that represents all agricultural co-operatives is the Pan-Hellenic Confederation of Unions of Agricultural Co-operatives (PASEGES). PASEGES was founded in 1935, initially as an association of secondary agricultural co-operatives. Today, however, PASEGES represents the interests of all agricultural co-operatives, and provides them with lobbying, technical assistance, co-operative education, and other related services.

While agricultural co-operatives are an important part of Greek agriculture, official statistics or other data have not been published since the early 1990s when the Agricultural Bank of Greece stopped monitoring agricultural co-operatives[2]. In order to confront this problem, several sources of information have been used; business guides, in-person and over the telephone interviews with managers and chairpersons of co-operative boards, business magazines, association leaflets, diverse publications, academic journals, and the under development database of the Ministry of Agricultural Development and Food (Department of Collective Action). The help of PASEGES' current and former staff has been crucial in tracking and collecting all information available as well as in contacting co-operatives and evaluating source reliability.

Unavailability of official data also characterises Producer Organisations. However, this problem is moderated by the fact that most Producer Organisations are incorporated as co-operatives. The lack of detailed data is mostly addressed through the existing expertise and the willingness of the contacted co-operatives to provide the requested information.

The extant literature describes various typologies and classifications of co-operatives. Following this literature, we classify Greek agricultural co-operatives as follows:

By Sector

Greek agricultural co-operatives are involved in several food sectors. However, there are no agricultural co-operatives in the sugar, pig meat, and sheep meat sectors. Producer Organisations are mainly involved in two sectors: fruits and vegetables, and olive oil and table olives.

The majority of the Unions of Agricultural Co-operatives[3] are also involved in sectors other than the eight sectors studied in this report, e.g., industrial crops (mostly cotton) and forage plants (e.g., alfalfa/lucern). Table 4 presents data on the structure of the Greek agricultural co-operative organisations per focus sector.

Table 4. Number of co-operative organisations per sector in Greece (2008)

SECTORS	U.A.C.*	Tertiary	Corporations	Joint Ventures	Total
Fruit and vegetables	59	2	4	5	70
Cereals	49	0	1	0	50
Dairy	31	0	2	1	34
Wine	19	1	2	1	23
Olive oil & table olives	51	1	0	0	52
Beef	3	0	0	0	3
Sheep Meat	0	0	0	0	0
Pig Meat	0	0	0	0	0
Sugar	0	0	0	0	0
Other	85	5	9	4	103

*Union of Agricultural Co-operatives
Source: Ministry of Rural Development and food

[2] This development was caused by the enactment of legislation that passed the responsibility for the development of agricultural co-operatives back to the Ministry of Agriculture. Subsequently the government covered bank losses caused by the implementation of national policy toward co-operatives (e.g., subsidised loans).

[3] Unions of Agricultural Co-operatives are secondary co-operatives whose members are primary co-operatives.

By Main Function

The main functions of the Greek agricultural co-operatives are the following:

- Providing farm inputs,
- Providing credit,
- Processing farm products and
- Marketing farmer products

Providing of farm inputs is performed by the majority of the secondary co-operatives, whereas credit providing is usually performed by primary co-operatives. Processing of farm products is a common function of the secondary co-operatives (e.g., in the cereals and dairy sectors), whereas the marketing of farmers' products is performed through co-operatives at all levels (primary, secondary, etc). Unfortunately, detailed data that would allow a quantitative illustration of this typology are not available.

By Diversity of Functions and Products

Agricultural co-operatives in Greece are usually not much specialised, as they usually handle multiple products from diverse agricultural sectors. Moreover, the vast majority of agricultural co-operatives are engaged in political activities such as lobbying and protesting. On the other hand, no reports on social activities have been published.

By Position and Function of the Co-operative

Most primary agricultural co-operatives provide their members with a number of services. Consequently, they perform various functions within food supply chains and hold diverse positions.

The *raison d' etre* of most primary and secondary co-operatives is to provide a market for their members' produce and collect farm products. Fewer agricultural co-operatives are involved in primary processing, and even fewer in secondary processing that result in consumer products. The majority of secondary co-operatives are engaged in marketing commodities but not branded products. Co-operative wholesaling is important in sectors such as olive oil, fresh vegetables, and cereals. Finally, only a few co-operatives are present in retail markets (e.g., the Union of Mastic Co-operatives of Chios, the Union of Agricultural Co-operatives of Volos, and the Mandatory Co-operative of Crocus Producers of Kozani).

By Type of Members

Typically, the members of primary co-operatives are farmers, while the members of secondary co-operatives are primary co-operatives. Table 5 presents co-operative organisations in Greece according to their members' type. As far as Producer Organisations are concerned, no association has been founded yet.

Table 5. Co-operative organisations in Greece, by member type (2008)

Co-operative Organisations	Members	Number
Primary Agricultural Co-operatives	Farmers	5548
Union of Agricultural Co-operatives	Primary Agricultural Co-operatives	108
Tertiary Co-operatives		
- Central co-operative Unions	Unions of Agricultural Co-operatives	9
- Joint Ventures	Unions of Agricultural Co-operatives and/or Primary Agricultural Co-operatives	10
Corporations	Union of Agricultural Co-operatives and/or Primary Agricultural Co-operatives	17

Source: PASEGES[4]

[4] Available at: http://www.paseges.gr/portal/PasegesMembersGuide-2008.doc

By Geographical Scope of Membership

Typically, primary co-operatives are local organisations active at the municipality or village level. On the other hand, secondary co-operatives usually perform their functions at the prefecture/county level. Many joint ventures and associations have members in several prefectures or even from the whole country. Finally, there are no transnational agricultural co-operatives owned by Greek farmers.

By Financial/Ownership structure

Following the classification of Chaddad and Cook (2004), the vast majority of agricultural co-operatives are traditional co-operatives. Only a few co-operatives own IOF subsidiaries (e.g., TRIKKI and PINDOS).

By Legal form

According to Law 2810/2000 (Articles 2 and 3), the agricultural co-operative is a distinct legal form of business. Agricultural co-operatives are organised as:

- Primary agricultural co-operatives
- Secondary or federated co-operatives (called Unions of Agricultural Co-operatives)
- Tertiary co-operatives, formed by either or both primary and secondary co-operatives. Such organisations are either joint ventures of two or more co-operatives, or central co-operative unions focusing on a single product/commodity.

The number of co-operatives in Greece according to their legal form is presented in Table 5. It is obvious that the dominant type of legal form is the co-operative and particularly the primary co-operative. However, in several sectors like cereals and dairy, there exist several large co-operatively-owned corporations and joint ventures that command significant market shares.

Another interesting and unique type of co-operatives observed in Greece is the "mandatory agricultural co-operative" which was first introduced in the early 1930s. According to their main function, mandatory co-operatives belong to one of two distinct types. The first type includes co-operatives formed to ensure property rights over, or the rational use of, agricultural land, forests, etc. The second type refers to co-operatives formed to address market failures in the markets of special products or products of particular geographic regions (Vavritsa, 2010).

According to data provided by the Ministry of Agricultural Development and Food, the following mandatory agricultural co-operatives are currently active:

1. Union of co-operatives of Cretan Citrus producers (Law 4878/1931)
2. Union of wine-making co-operatives of Samos (Law 6085/1934)
3. Union of Mastic producers of Chios (Law 1390/1938)
4. Union of agricultural co-operatives of Thiras' products (Law 359/1947)
5. Co-operative of safran (crocus) producers of Kozani (Presidential Decree 818/1971)

The first four co-operatives in this list are secondary co-operatives while the last one is a primary co-operative. Further, co-operatives formed to manage collectively onwed land property and forage (Law 11.7.1923, FEK 196A') as well as co-operatives of forest-owners (see 1627/1939, FEK 64A') are mandatory co-operatives, too.

3.2 Market share of farmers' co-operatives in the food chain

Agricultural co-operatives command significant market shares in the olive oil & table olives, wine, and dairy sectors but, on the other hand, they have a negligible presence in the sugar, pig meat, and sheep meat sectors. The limited availability of reliable data on the financial profile and sales of most co-operatives and Producer Organisations, in many cases makes reliance on expert assessments as the only means to sketching an accurate picture of Greek co-operatives. Table 6 presents all available figures.

Table 6. Market Share of Co-operatives

	"1996"		**"2010"**		**Comments**
Sector	**Number of members**	**Market Share (%)**	**Number of members**	**Market Share**	
Cereals		49			
Sugar				0%	
Pig meat		5		0%	
Sheep meat				0%	
Fruit & vegetables - Fruits - Vegetables		 51 12			In the market of canned fruits, in 2003 the share of the two top co-operatives (Venus growers and ALMME) was 18.5-19%.
Olive oil & table olives		60 (1998)			There are many co-operatives involved in this sector. In 2004, Elaiourgiki and U.A.C. of Lesvos had a share of about 8% in the national market of branded olive oil. In 2010, two companies control 50% of the market. The next 4 larger companies are secondary co-operatives that control 13.5% of the market. In the national market of olives, seven companies control about 50% of the market. The market share of the largest co-operatives (U.A.C. of Chalkidiki and Kavala) was about 19% in 2004 and 17.5% in 2009.
Dairy - Milk - Cheese		20 35 (1998) 50 (1998)			Apart from Dodoni, TRIKKI and NEOGAL, which have a high market share, there are many other smaller agricultural co-operatives. In 2002, the market share of Dodoni S.A. in the fresh milk market was 4.5-5%, while it had a significant share in the traditional yogurt market.
Wine		50			

Source: Papageorgiou (2007), Sergaki (2004), ICAP (2003a, 2003b, 2004, 2005a and 2005b, 2009, 2011), interview with PASEGES experts.

3.3 List of top 50 largest farmers' co-operatives

Table 7 presents the top-50 Greek agricultural co-operatives in terms of sales[5].

Table 7. The 50 largest farmers' co-operatives in the food chain of Greece

	Name of the Co-operative	Sector(s) involved in:
1	"PINDOS" Agricultural poultry co-operative	Poultry
2	DODONI S.A.	Dairy
3	Agricultural Poultry Co-operative of Arta	Poultry
4	U.A.C.[1] of Larissa – Tyrnavos – Agia	Industrial crops (Cotton), olives, cereals, fruits, forage plants
5	SEKAP S.A.	Industrial crops (Cigarettes)
6	U.A.C.* of Heraclion	Olive oil, wine, grapes
7	"Venus Growers" A.C.** of Veroia	Fruits
8	SEKE S.A.	Industrial crops (Raw tobacco)
9	U.A.C. of Trikala	Industrial crops (cotton), cereals, forage plants, seeds,
10	U.A.C. of Kavala, "EASK"	Fruits, vegetables, cereals, olive oil, olives, industrial crops
11	U.A.C. of Lamia	Industrial crops, cereals, forage plants, milk, vegetables
12	U.A.C. of Aigio, "PES"	Fruits, olive oil
13	"ALMME" joint venture of Agricultural co-ops	Fruits
14	U.A.C. of Orestiada	Cereals, forage plants, potatoes, industrial crops
15	U.A.C. of Rodopi	Industrial crops (cotton), dairies, forage plants
16	U.A.C. of Peza	Wine, olive oil, fruits, forage plants
17	U.A.C. of Preveza	Olive oil, industrial crops, forage plants, olives, animals
18	U.A.C. of Messinia	Olive oil, olives, fruits
19	U.A.C. of Kalavrita	Dairies, other crop products, forage plants
20	NEOGAL	Dairy
21	Agrozoi S.A.	Services
22	SKOS S.A.	Grapes
23	A.C. of Zagora	Fruits
24	U.A.C. of Naxos	Dairies, seeds, forage plants
25	U.A.C. of Messara	Olive oil, grapes
26	ASEAR S.A.	Cereals, forage plants, industrial crops
27	U.A.C. of Sitia	Wine, olive oil
28	U.A.C. of Volos "EBOL"	Dairies, vegetables, forage plants, seeds
29	A.C. of Tympaki	Vegetables, Olive Oil
30	TRIKKI S.A.	Dairies
31	U.A.C. of Argolida, "REA"	Fruits, olive oil, industrial crops
32	U.A.C. of Chios Gum Mastic	Mastic
33	ELAIOURGIKI	Olive oil and Table olives
34	U.A.C. of Mesologgi – Nafpaktia	Industrial crops (fibre plants), olives, fruits
35	U.A.C. of Rethymno	Olive oil, dairies
36	U.A.C. of Agrinio	Forage, Fruits, Table olives
37	U.A.C of Lakonia	Olive oil, Industrial crops
38	U.A.C. of Thesprotia	Fruits, Cereals, Forage, Seeds
39	Union of winery Co-operatives of Samos	Wine
40	U.A.C. of Drama	Cereals, potatoes, industrial crops (fibre plants), seeds
41	U.A.C. of Lesvos	Industrial crops, olives
42	U.A.C. of Veroia	Fruits, vegetables, cereals, industrial crops (cotton), forage
43	U.A.C. of Serres	Cereals, industrial crops (cotton), forage plants, pigs
44	U.A.C. of Ileia – Olympia	Olive oil, grapes, wine
45	Agricultural Co-operative of Tyrnavos	Wine
46	U.A.C. of Mylopotamos	Olive oil, grapes, milk
47	KASO "DANAOS"	Fruits and Vegetables
48	U.A.C. of Patras	Wine, Fruits, Olive oil
49	A.C. for Processing & Marketing of Citrus Products, Amykles, "LAKONIA"	Fruits
50	U.A.C. of Dodekanisos	Cereals, forage plants, seeds, grapes, potatoes

* Unions of agricultural co-operatives, ** Agricultural co-operatives

[5] The information provided in this table was supplied by PASEGES.

3.4 List of top-5 farmers' co-operatives per sector

In Greece, there are no co-operatives active in the sugar, pig meat, and sheep meat sectors. Moreover, as Table 8 indicates, some co-operatives hold a position among the top 5 co-operatives in more than one sector (e.g., the U.A.C. of Peza).

Table 8. Most important Greek agricultural co-operatives in the sectors under investigation

Sector	**Position**	**Name of Co-operative**
Cereals	1	U.A.C.* of Orestiada
	2	U.A.C. of Larisa-Tyrnavos-Agias
	3	U.A.C. of Kavala
	4	U.A.C. of Lamia
	5	U.A.C. of Drama
Fruit & vegetables	1	Joint Venture of Agricultural co-operatives 'ALMME'
	2	U.A.C. of Aigio "PES"
	3	U.A.C. of Larisa-Tyrnavos-Agias
	4	SKOS S.A. A.C.**
	5	U.A.C. of Argolida "REA"
Olive oil & table olives	1	U.A.C. of Heraclion
	2	U.A.C. of Peza
	3	U.A.C. of Sitia
	4	U.A.C. of Messinia
	5	U.A.C. of Lakonia
Wine	1	Union of winery co-operatives of Samos
	2	U.A.C. of Peza
	3	Agricultural Co-operative of Tyrnavos
	4	U.A.C. of Heraclion
	5	U.A.C. Thira's products
Dairy	1	U.A.C. of Kalavryta
	2	DODONI S.A.
	3	NEOGAL
	4	U.A.C. of Naxos
	5	TRIKKI S.A.

* Unions of agricultural co-operatives
** Agricultural Co-operative
Source: PASEGES

The top-5 list of agricultural co-operatives in each sector was provided by the Pan-Hellenic Confederation of Unions of Agriculture Co-operatives (PASEGES).

3.5 Transnational co-operatives

Many co-operatives are active internationally. In most cases the foreign activities of co-operatives are limited to marketing, trade and sales. Usually they do not buy agricultural products from farmers, or supply inputs to them. However, there is a growing group of co-operatives that do business with farmers in other EU Member States. These co-operatives are called international co-operatives. They can be marketing co-operatives that buy from farmers in different countries, or they could be supply co-operatives that sell inputs to farmers in different countries. One particular group of international co-operatives is the so-called transnational co-operatives. These co-operatives do not just contract with farmers to buy their products or to sell them inputs; they actually have a membership relationship with those supplying or purchasing farmers. In sum, a transnational co-operative has members in more than one country.

In Greece, no transnational or international co-operatives owned by Greek farmers have been formed. Foreign transnational and international co-operatives hold significant market shares in some products (e.g., Arla, Friesland Campina, Welch's, etc.). However, only FrieslandCampina has invested in local capacity and thus buys milk from Greek farmers who, though, are not members of the co-operative.

Table 9 below presents the only foreign international (and transnational) co-operative active in Greece. This is a co-operative from the Netherlands that trades directly with Greek farmers as contractual input suppliers (not as members). Other international co-operatives are also active in Greece through their IOF subsidiaries. These co-operatives sell various products in the Greek market but do not source from Greek farmers (e.g., Arla, the Swedish/Danish dairy co-operative).

Table 9. The foreign transnational co-operatives and international co-operatives that are trading with farmers in Greece

Name of the Co-operative	**Mother country**	**Sector(s) involved in:**
Transnationals		
Internationals		
FrieslandCampina	NL	Dairy

Table 10. The transnational co-operatives and international co-operatives from Greece that are trading with farmers in other countries

Name of the Co-operative	**Host countries**	**Sector(s) involved in:**
Transnationals		
Internationals		

As Table 10 shows, there exist no transnational or international co-operatives owned by Greek farmers.

4 Description of the evolution and position of individual co-operatives

4.1 Data gathering per co-operative

The description of the evolution and position of Greek co-operatives is based on data collected from various sources. The Pan-Hellenic Confederation of Unions of Agriculture Co-operatives (PASEGES) and the Ministry of Agricultural Development and Food provided valuable access to all data currently available. Other important sources include: telephone and in-person interviews with co-operative executives and chairpersons, articles from industry magazines and academic journals, co-operative leaflets, annual reports and websites, etc.

4.2 Position in the food chain

Of the top-50[6] agricultural co-operatives in 2009, 24 were active in the fruits and vegetables supply chain, 18 in the olive oil & table olives, 12 in the cereals, 9 in the dairy industry, 6 in the wine supply chain, while 29 were involved in other sectors (e.g., the first co-operative in the list is the PINDOS Poultry Co-operative). Most of these co-operatives are involved solely in first-level processing activities. Only a few are involved in second-level processing; these are in much better positioned to capture a larger share of the retail value and return it to farmer-members.

In the latest official statistics available (1992), the number of Greek agricultural co-operatives is high and their presence in most agricultural markets, products, and downstream activities gives the impression of a co-operative movement well positioned to provide indispensable services to its members. Today, however, many primary co-operatives are inactive and thus official statistics on their number and positioning should be interpreted with caution. In April 2011, the Ministry of Agricultural Development and Food sent a questionnaire to 5,648 agricultural co-operatives. From those that replied, 1,543 co-operatives had no income, 3,266 had extremely low income, while only 908 were profitable[7]. In comparison to the current situation, the pre-1980 picture of agricultural co-operatives seems to be brighter.

It should be noted that several agricultural co-operatives have invested considerably during the last decade in processing facilities and expanded in both domestic and export markets. For example, the Union of Agricultural Co-operative of Volos has invested in the dairy industry and constantly improves its positioning in the domestic market by introducing high-quality innovative dairy products. Another example is provided by the very successful co-operative Ardas in northern Greece, which exports branded asparagus to Germany and other EU countries.

Yet, an overview of developments since the early 1980s is rather disappointing. Most tertiary co-operatives and co-operative IOF subsidiaries have either shut down or majority ownership passed to non-member investors (e.g., the State-owned Agricultural Bank of Greece). Despite the significant problems faced by agricultural co-operatives and the problematic relation to succeeding governments, the post-war period, at least until the dictatorial regime of 1967-1974 and immediately after, saw co-operatives improving their positioning considerably. Co-operative subsidiaries and, in some cases, co-operative joint ventures enabled agricultural co-operatives to bypass the constraints imposed on them by a constantly amended legal framework. Table 12 reveals the negative evolution of co-operatives positioning in crucial market niches.

In terms of strategies adopted, agricultural co-operatives are fairly defensive organisations. That is, their major focus is on providing a market for their members' products, or inexpensive agricultural inputs (supply co-operatives). This observation serves as an explanation of the limited scope for

[6] In terms of sales.

[7] Personal communication with the Secretary General of the Ministry of Agricultural Development and Food (16 February 2011).

investments in advertising (Oustapassidis et al., 1998; Papageorgiou, 2010). Only a few co-operatives have adopted an offensive strategy whose goal is to capture added value form other stages of the vertical supply chain (Iliopoulos, 2002b). However, many producers' organisations have taken advantage of quality regulations (both EU and national) to differentiate their products. Such groups focus on marketing high quality agricultural products (e.g., organic produce) to consumers willing to pay a premium.

Among co-operative leaders there have been thoughts and discussions about creating collective co-operative brands for specific products, namely fresh milk and olive oil. However, these thoughts have not been materialized, as the substantial capital investments required and ownership-control issues have not permited the implementation of growth-related strategies.

Table 12. Co-operatives' position in the food chain

Name	Industry	Legal Form	Year of Establishment (Active in 1981)	Situation in 2010
Agricultural Supplies				
SPE	Machinery, etc.	SA	1949	Closed
SPEKA	Machinery	SA	1957	
Ktinotrofiki	Animal breeding	Tertiary co-operative	1962	
ELVIZ	Condensed feedstuffs	SA	1963	Majority ownership passed to the Agricultural Bank of Greece
KYDEP	Cereals for feedstuffs	Co-operative-owned joint Venture	1978	Closed
SYNEL	Fertilizers	SA	1981	
Marketing of Agricultural Products				
KYDEP	Cereals, cotton, seeds	Co-operative-owned joint Venture	1940	Closed
KSOS	Black currants	Co-operative-owned joint Venture	1940	Limited activity
SEKE	Tobacco	SA	1947	
ELAIOURGIKI	Olive oil & table olives	Tertiary co-operative	1949	
KEOSOE	Wine	Tertiary co-operative	1949	
SYKIKI	Figs	Tertiary co-operative	1953	Active
DODONI	Milk and dairy products	SA	1963	Majority ownership passed to the Agricultural Bank of Greece
SKOP	Fruit & vegetables	Co-operative-owned joint Venture	1963	Closed
SEKOBE	Processed fruits and vegetables	SA	1969	
SEBATH	Processed fruits and vegetables	SA	1978	
SEKAP	Cigarettes	SA	1975	Majority ownership passed to the Agricultural Bank of Greece
Provision of Services				
CO-OPERATIVE SCHOOL	Executive education	Owned by PASEGES		Owned by PASEGES

ASE	Printing and publishing	SA	1958	Closed
ELSY	Logistics	SA	1977	
SYNETAIRISTIKI ASFALISTIKI	Insurance	SA	1978	Active
SYNEDIM	International transport	SA	1980	Closed
SYNEDIA	Advertising, public relations	SA	1981	Majority ownership passed to the Agricultural Bank of Greece

Source: Papageorgiou (2010)

4.3 Institutional environment

The first modern agricultural co-operative (Stock Agricultural Society of Almiros[8]), was established in the 1900s (Klimis, 1985). The introduction of this new collective institution intended to help poor farmers to address extreme market failure conditions. It provoked a great deal of opposition and conflict, became an object of persecution and inhibition, but also a means to implementing the State agricultural policy (Patronis and Papadopoulos, 1999). The State recognised the potential of co-operatives to simultaneously achieve several social goals and subsequently afforded them a special role in the Greek Constitution (Article 12, paragraph 5):

> "The agricultural and urban co-operatives of any kind are self-governed entities according to the law and their bylaws; they are protected and supervised by the State, which is obliged to support their development."

Therefore, the role of the State has been essential for their establishment and development (Papageorgiou, 2007). As described in section 6.1 of this report, the frequent amendments to the co-operative legislation during the 20th century have resulted in an unstable institutional environment that largely prevented agricultural co-operatives from serving their members efficiently (Lambropoulou-Demetriadou, 1995; Papageorgiou, 2010). During every political period in the modern history of the country a major reform of, or several amendments to, the basic co-operative law was introduced. Besides obvious historical reasons behind this phenomenon, the attempts of most governments to tightly embrace co-operatives in order to achieve goals high on their political agendas have also been identified by many students of Greek co-operatives (e.g., Papageorgiou, 2007; Iliopoulos, 2000, Patronis and Papadopoulos, 1999). Starting from the early 1900s the Greek State pursued and achieved the complete control and fragmentation of the agricultural co-operative movement. The oversized State bureaucracy and its autonomy from society, in combination with the absence of a strong civil society movement, resulted in the organisation of the State in a way radically different from that of Western European societies (Tsoukalas, 1977). Consequently, the organisation and representation of farmers' interests did not follow a bottom-up approach but, instead, was planned by the ruling political powers aiming at the alignment of farmer interests with State politics (Patronis and Papadopoulos, 1999). The tight embracement of agricultural co-operatives by consecutive governments reduced them exclusively to tools of the official agricultural policy.

Despite the abovementioned phenomena, agricultural co-operatives played an important role in improving the socio-economic status of Greek farmers (Klimis, 1985). However, the many successes of these organisations were overshadowed by the crisis of the 1980s and 1990s that still constrains their ability to effectively provide significant services to their members as in all agriculturally advanced countries (Papadopoulos and Patronis, 1997; Iliopoulos, 2000).

[8] Almiros is a village in the Thessaly region in Central Greece.

4.4 Internal Governance

According to the current co-operative law (2810/2000), the governance of agricultural co-operatives is performed by two bodies: the general assembly and the board of directors. In all co-operatives, the general assembly has the right to make decisions that may result in major change in the co-operatives ownership structure (e.g., liquidation, merger with another co-operative, etc). All other decisions are made by the board of directors. However, the board may decide to retain the right to make all strategic, medium- to long-term decisions and pass all other decisions to hired management. Consequently, two governance models prevail in Greek agricultural co-operatives. In primary co-operatives with a very low budget and corresponding sales, the board of directors acts also as a management board where the chairperson works full time as the chief executive officer (CEO) of the co-operative. In co-operatives where the sales value permits it, the board hires a professional CEO to run the business on a daily basis. However, even in this second governance model, the degree of delegation of management duties to the professional CEO varies considerably.

In some secondary co-operatives, even some with a relatively high business volume, the professional manager is merely an assistant to the chairperson who acts as the chief executive (Iliopoulos and Valentinov, 2012). The adoption of this variant of the second governance model may explain the negative economic performance of most secondary agricultural co-operatives (this report).

All members of agricultural co-operatives have by law one vote in the general assembly. In secondary co-operatives, the co-operative-members may have additional votes in proportion to patronage, if so specified in the bylaws. In this case, no member is allowed to have more than five votes. PASEGES has proposed an amendment to the co-operative law so that additional votes, in proportion to patronage are also allowed in primary co-operatives.

Given the small size and spatial scope of most agricultural co-operative in Greece, the adopted voting systems have always been simple. Further, representation of a member by another member is not currently permitted, probably because it was not deemed necessary by those who drafted the co-operative law.

One of the most pressing, internal governance-related problems of Greek agricultural co-operatives is the prevailing involvement of political parties in co-operatives' affairs. In many cases, business decisions are made based on criteria other than improving efficiency or maximising the value of members' patronage. Legislation enacted in the early 1980s made election on the board of directors dependent on a candidate's support by a particular political party (Papageorgiou, 2010). Even after 2000, when law 2810/2000 removed any reference to political parties, the results of most elections in agricultural co-operatives are announced in newspapers and other news media in the same way as in general elections for government.

The observed general apathy of members in more recent years has given room to the opportunistic behaviour or co-operative leaders and managers (Iliopoulos and Valentinov, 2012). Such member apathy has been caused by several factors, including the extremely low investment per member in most organisations, which dilutes any incentives to exercise effective control over the board and management.

4.5 Performance of the co-operatives

The population of Greek agricultural co-operatives is larger in comparison to those of most other European Union countries (Iliopoulos and Valentinov, 2012). Yet, this fact does not translate into a significant market share in food supply chains. In some cases, a significant percentage of a commodity is marketed through co-operatives. However, given the negligible presence of agricultural co-operatives in processing, co-operatives market shares in final product markets are extremely low.

Exceptions do exist. For example, the Pindos Poultry Co-operative currently commands a 30% share in the poultry industry. Another example is the Union of Mastic Gum Producers of Chios, which holds an almost monopolistic position in the mastic gum products market. The last case is not representative of Greek co-operatives as the Chios co-operative belongs to a special type of co-operatives, i.e., mandatory co-operatives. In certain products and/or regions, co-operative legislation makes selling of the product to a co-operative mandatory. The Chios mustic gum is included in the list of products of Regulation (EC) 510/2006, which requires that every mustic producer on the Chios island has the right to use the Chios Mustic Gum logo without any requirement to join the local co-operative. However, the Commission did not express any opinion because the specific product was recognized as a PDO in 1996 when a simpler procedure was adopted.

In 2000, secondary co-operatives[9] had, on average, a total turnover of 7.97 million €, which corresponded to product sales, commodity sales, and service sales of 4.13, 6.68, and 0.74 million €, respectively (Sergaki and Semos, 2006). At the same year, however, many agricultural co-operatives had negative net positions, low working capital, and their equity capital was either insufficient or not efficiently utilised (Sergaki and Semos, ibid). In the same year, the average net profit of secondary co-operatives was -0.420 million € while the same figure for IOFs was 0.435 million €.

In 2009 the total turnover of the top-five co-operatives in each of the eight sectors studied was: in cereals 163,906,621.38 €, in fruits and vegetables 154,912,496.12 €, in olive oil & table olives 121,130,314.11 €, in wine 102,177,019.80 € and in dairy 171,607,284.12 €.

Another criterion used in assessing the performace of co-operatives is the prices they pay to their members relative to prices paid by IOFs in the same market. While such micro data are not available, a few observations can be made. First, the number of co-operatives active in an industry is not a satisfactory indicator of co-operatives' ability to pay prices higher than competitor IOFs. For example, while numerous olive oil co-operatives exist in Greece, producers still receive very low prices for olives delivered. Second, in some regions and industries co-operatives are able to pay, on average, higher prices than IOFs. The Dodoni dairy co-operative is an exemplary case; this explains the resistance of local dairy farmers to governmental plans to sell the shares of the State-owned Agricultural Bank of Greece to private investors. Third, the ability of co-operatives to pay higher prices than IOFs in the same market depends on several parameters, including the size and structure of the industry, their share in the market for final, consumer products, the degree to which they control the supply of the product, etc.

Drawing comparative conclusions about the financial situation of agricultural co-operatives in 2000 and 2009 is not possible because data on the top-5 co-operatives of 2000 are not available. In the wine, fruits and vegetables, and olive oil and table olives sectors, the top-5 agricultural co-operatives of 2009 improved their financial position during the last ten years; their debt to equity ratio decreased, from 350% to 200% (wine); from 679 to 420 (fruits and vegetables); from 422 to 367 (olive oil and table olives). The top-5 co-operatives in the cereals sector, during the same period, have, on average, exhibited a negative financial trend as shown by an increase of their debt to equity ratios on average, from 350% to 604%. Finally, the top-5 dairy co-operatives remained at about the same levels, given that their debt-equity ratios slightly increased from 182% to 190%[10].

[9] Unfortunately, similar data for primary agricultural co-operatives are not available.
[10] Calculations are based on the data given in the Excel file entitled "2. questionnaire."

5 Sector analysis

5.1 Introduction

In this chapter we discuss developments in the eight sectors that are central in this study. We report on trends in the markets, important changes in (agricultural) policy and we try to link these to the strategies and performance of investor-owned firms and co-operatives in the sector. The period of observation is 2000 – 2010.

5.2 Cereals

Cereals occupy almost 30% of the total Greek arable land and contribute 15.36% and 10.61% to the agriculture output and the total output of agricultural industry, respectively. In 2007, the production area covered 1,044 thousand hectares (26.2% share of Usable Arable Area-UAA), following a declining trend compared to the area cultivated in 2000 (1,377 thousand ha). The total annual production of cereals is on average 4500 thousand tons. The main crops are durum wheat (46% of total cereal production), maize (21% of total cereal production), common wheat (15% of total cereal production), and barley (10% of total cereal production). Rice production is small, around 200 thousand tons covering an area of 29 thousand hectares. Cereal production is historically located in the Thessalia, Sterea Ellada and Macedonia regions, mainly in plain areas where the climate and soil characteristics are better suited for these types of crops. CAP reforms contributed significantly to the production pattern of cereals in Greece. The specific premiums introduced by CAP led to the significant increase of durum wheat in contrast to a considerable reduction of soft wheat production.

Cereal markets have a relatively positive outlook due to world demand and high prices. Prices after 2006 followed an upward trend. The surge in cereal prices resulted from a combination of structural and temporary factors mainly due to the adverse weather conditions and the strong global demand. However, the competitiveness of the Greek cereal sector is negatively affected by a number of impediment parameters such as, the increased production cost, the small size of holdings, land parcelling, trade restrictions, the absence of marketing structures, as well as the absence of promoting activities and integrated quality control mechanisms. The country's trade balance in cereal is negative. Imports increased from 1,416 thousand tons in 2000 to 1898 thousand tons while exports directed mainly in bulk form to the EU countries (Italy, UK and Bulgaria).

The supply chain structure of cereals is relatively straightforward. The sector is characterised by numerous small farms. The most common marketing channel used by the majority of farmers is to sell their production either to middlemen or to co-operatives for storage and first marketing. There are a few second degree co-operatives which are engaged in storage and trade of cereals. Sales directly to the industry are very limited and depend on the quality of the product. Also, a significant quantity of cereals—in general production of inferior quality— is directed to the feed industry. The next stage downstream the supply chain, is the milling industry which provides inputs for the pasta, sweet and bread industry.After the collapse of KYDEP in 1991, agricultural co-operatives never regained a significant market share in the cereals sector. KYDEP was the largest tertiary co-operative in Greece that was exporting cereals. Currently, only second-tier agricultural co-operatives are active in the sector. In 2009, the top-5 co-operatives had a cumulative turnover of, approximately, € 125.4 million, down from € 154.6 million in 2000. None of the co-operatives is involved in processing activities as their main function is to store cereals and negotiate producer prices with wholesalers and the processing industries. As shown in the statistics on the top-5 co-operatives per agricultural sector, cereal co-operatives are highly leveraged; analysts forecast that within the next 1-2 years these co-operatives will go out of business.

The economic performance of cereal co-operatives is explained by the inability and reluctance of co-operatives to design long-term strategies. However, such strategies were needed in order to ameliorate the negative impact of significant structural changes in the international cereal markets that started taking place in the late 1980s with the collapse of the Soviet Union. Farmers were cultivating cereals primarily in order to receive EU subsidies and their co-operatives adjusted to a role of subsidy distributor. Government interference in co-operatives' affairs, on the other hand, resulted in co-operatives acting as semi-governmental organizations implementing public policies, even when that was resulting in the accumulation of tremendous losses (e.g., paying prices far higher than the average market price). At the same time co-operative leaders were elected only if supported from a political party and that party's interests became more important than serving the true needs of farmer-members. Even worse, low member investment diluted any member incentive to exercise control over very powerful boards of directors and/or management.

EU policies intended to support farmer income in the cereals sector resulted in a negative externality; farmers had no incentive to invest in improving the performance of their farm business and their co-operatives. Further, subsidies enabled inefficient farms to stay in business. At the same time, national policies that were supposed to help cereal farmers resulted in the collapse of KYDEP. For example, during the 1980s KYDEP was forced by the government to give its members a price higher than the market price. The promise that the difference was going to be paid by the government was never kept and the co-operative borrowed heavily from the state-owned Agricultural Bank to keep operating. This process was repeated several years before KYDEP was liquidated. Other factors also led to this development. For example, labor legislation enacted in the early 1980s gave co-operative employees a significant say in co-operatives' business decisions. As a result, many bad managerial decisions were taken and, when decisions not supported by the employee union were made, strikes were organized even in periods when that meant huge economic losses for the co-operative.

5.3 Sugar

Up until the implementation of the 2006 EU reform of the sugar sector Greece was self-sufficient in sugar and an amount of 60,000-80,000 tonnes was exported every year. After the reform, the national sugar quota assigned to Greece was reduced by 50%, and the country is now being entitled to produce 158,700 tonnes of sugar. The objective of the EU reform of the sugar sector was to safeguard and improve the competitiveness of the sector as a whole and to assist the local rural communities affected in order to facilitate their smooth changeover to other, more competitive crops, as well as to maintain the competitiveness and viability of the sugar factories that would continue to produce.

During the restructuring process two out of five sugar factories in the country seized operations while for the remaining ones there were plans for the partial conversion of their production facilities into the manufacturing of products not subject to the common organisation of the market in sugar (mainly bio ethanol).

To date, five years since the reform was imposed, the assigned quota is not covered by domestic production. The total cultivated area needed to meet the assigned quota, is approximately 23,000-25,000 hectares. However, according to information from the Greek Ministry of Rural Development and Food in 2010 barely 12,000-13,000 hectares were cultivated, producing a total quantity of less than 80,000 tonnes of sugar. The estimation for 2011 is that the total sugar quantity that will be produced does not exceed 40,000 tonnes.

Agricultural co-operatives never were numerous or important in the Greek sugar industry. The heavily regulated structure of the industry and the monopsonistic position of the state-owned sugar factories explain the lack of need to form traditional, defensive co-operative structures in the sector. The implemented CAP diluted any farmer incentive to cultivate sugar beets. EU and national policies for the sugar sector made the formation of sugar co-operatives unnecessary. Currently, no farmer co-operative is active in the sugar industry.

5.4 Fruit and vegetables

Fruits and vegetables have been traditionally cultivated in Greece for centuries. The sector has a major contribution to the domestic economy, expressed in terms of employment, production areas, volumes and values. Fruits and vegetables contribute 53.25% to the agriculture output and 36.78% to the total output of the agricultural industry in Greece. Between 2000 and 2008 the share of fruits and vegetables in Greek agriculture production increased. Greece is the fourth largest producer of fruits and vegetables in the EU. In 2008, fruits covered a total area of 1 million ha (27% of total UAA) and vegetables 104 thousand ha (2.8% of total UAA). In terms of production value, oranges, peaches, nectarines and watermelons, have the most significant share in exports. As far as vegetables are concerned, tomatoes are the leading exporting cultivation, followed by onions, cucumbers, cabbages, etc. The fruits and vegetables sector includes a large number of products directed to different channels either for fresh consumption or for processing (citrus fruit, canned stone fruit, tomato, etc).

The EU actively supports the fruit and vegetable sector though the Common Market Organization for fruits and vegetables. The basic goal of the scheme is the creation of a more competitive and market-oriented sector through the support of producer organizations via operational programmes. It also promotes product quality by applying marketing standards to certain products and supporting operational programme measures that improve or maintain product quality.

Additionally, CMO predicts several measures that ensure fewer crisis-related fluctuations in producers' income like product withdrawal, harvest insurance, and secure bank loans. Finally, the CMO for fruits and vegetables, enhances the consumption of fruit and vegetables in the EU and the usage of eco-friendly cultivation and production techniques.

The 2007 reform the CMO adds more flexibility to the scheme and adaptation to the local conditions. It encourages growers to join producer organisations (POs), which have a wider range of crisis prevention and several management tools. Moreover, it gives incentives to POs and farmers to cooperate beyond national borders, while it also requires POs to include a minimum level of environmental spending under operational programmes. Finally, under this reform, fruit and vegetables are part of Single Payment Scheme, processing aids are totally decoupled by 2013, export subsidies are totally abolished, and more EU funding is provided for promotion programmes and organic production.

Prices in the fruits and vegetables sector are mainly affected by supply and demand. Demand for fruits and vegetables, is generally steady, varying less than supply. Prices may fluctuate strongly and reflect seasonal, annual and long-term trends. Greek producers of fruits and vegetables have a weak negotiating position in the chain and in addition they face strong competition from imports. Quality and origin are important factors in price determination. Prices in recent years follow an upward trend.

The total quantities of fruits and vegetables exported, represented in 2008 roughly 33.5% of all Greek agricultural exports. The main exported fruit and vegetables are apples, oranges, asparagus, peaches, watermelon and cucumbers.

The fruits and vegetables supply chain includes various actors. More specific, farmers can sell their production either directly to consumers through street markets or to wholesalers. Taking full advantage of EU regulations, many producers are organized in producer groups and associations in the sector. Currently there are 151 producer groups[11] that plan to invest in equipment for

[11] Data retrieved from the annual report on fruits and vegetables, European Commission, 16-6-2009.

cultivation, manufacture and marketing of their products. Further down the supply chain there are several wholesalers, importers and exporters. In Greece, there are two central fruits and vegetable markets, in Athens and in Thessaloniki. Wholesalers in central markets purchase products directly from local producers or import and sell to specialized retailer outlets and supermarkets. Supermarket chains cover their needs either through purchases from producers and wholesalers or imports. Concentration is increasing at the retailer level.

While agricultural co-operatives and producer groups play an important role in the Greek fruits and vegetables sector, they are very far from realizing their full potential. The cumulative turnover of the top-5 co-operatives in the sector was, approximately, € 105.9 million in 2009, up from € 92.8 million in 2000. Four second-tier co-operatives and one wholly co-operative-owned IOF make the list of these top-5 co-operatives. General comments about the competitive position or performance of fruits and vegetables co-operatives/producer groups are difficult to make as many product sub-categories exist and several co-operatives specialize in one or two of these groups of products. For example, the agricultural co-operative of Zagora that markets the apples of its members (under the very successful trademark *Zagorin*) is a very successful co-operative but does not make it to the top-5 list because other co-operatives sell many different product categories and thus have a higher turnover.

Data on the market share of co-operatives/producer groups are not available. Yet, according to sector analysts, co-operatives' market share should be around 30-40%. In no case, however, fruits and vegetables co-operatives can compare to large multinational companies that represent very powerful conglomerates.

The prices paid to producer-members are higher than those paid by IOFs in the sector. In the 1980-1990 period, many co-operatives experienced financial problems and some went out of business. In the 1990s and 2000s, however, several, small, innovative fruits and vegetables co-operatives were formed to serve their members needs. Some are very active in exporting to the rest of Europe, Middle East and Russia.

The failure of several fruits and vegetables co-operatives in the late 1980s and early 1990s left producers of some areas with no market alternative or without shield against powerful, opportunistic middle men and processors. This might explain the emergence of several, local, successful co-operatives in the sector in the late 1990s and early 2000s. Given that fruits and vegetables are highly perishable, farmers very often face opportunistic behaviour by middle men and processors in the form of various hold-up and moral hazard problems. Farmers are in constant need of institutional arrangements that will act as marketing alternatives and/or empower them in bargaining with the processing industry. Thus, despite the efficiency-robbing governmental interference in Greek agricultural co-operatives that frustrated producers of other products, fruit and vegetable producers never ceased organizing in collective action schemes. However, these co-operatives and producer groups have been criticized in terms of their reluctance to cooperate and overcome the small-volume barriers facing each of them in the international markets.

EU policies have been instrumental in supporting the income of fruit and vegetable producers. Particularly the support of farmers through the institution of "producer group" has motivated the collective organization of marketing channels. Further, given their small size and very low market shares, POs and co-operatives do not seem to face constraints in accessing rural development funds as those reported in other EU Member States (e.g., Italy). National policies to support co-operatives have not been designed particularly for fruits and vegetables co-operatives. Thus, the general observation that government interference has had a very negative impact on all co-operatives is also valid in this sector.

5.5 Olive oil and table olives

The olive tree, symbol of the Mediterranean basin, represents one of the most important agricultural crops well adopted in the Greek territory for ages. The olive oil sector has a major contribution to the agro-ecological, socio-economic and cultural standing of Greek agriculture. The sector (olive oil and table olives) contributes with around 13.73% to the agriculture output and 9.48% to the total output of agricultural industry. Greece is the third producing olive country with 807 thousands of hectares after Spain (2,470 thousands ha) and Italy (1,161 thousands ha). It produces around 300 to 360 thousands tons of olive oil annually which averages to about 15% of the world's production and 20% of the EU production. Moreover, Greece produces 90 thousands tons of table olives which corresponds to 6% of world's production and 16% of the EU production. Olive groves cover 91% of holdings in tree crops and occupy 20% of Greek utilized agricultural area. The olive production is located in plain areas (49%), 34% in semi-mountainous and 18% in mountainous areas. It provides seasonal employment and wealth for many rural areas. Regarding to human capital and labor cost, the olive oil production sector engages more than 450.000 people that correspond to more than 90.000 annual working units (Galanos and Manasis, 2010).

Olives are cultivated primarily in southern Greece, mostly in two regions, Crete (30.52%) and Peloponnesse (27.54%). In total, there are 27 olive areas that have received EU protection; 16 have received a Protected Designation of Origin (PDO) status and 11 a Protected Geographical Indication (PGI) status. Farm management systems are conventional, to a large extent, while organic production accounts for about 3.8% of the total utilized agricultural area.

The vast majority of producers are small scale land owners, and harvesting represents the largest cost for them. More than 70% of the olive oil produced in Greece is extra virgin. According to industry experts, this is an asset that if coupled with efficient marketing can lead to increased market shares. Olive oil is a globally traded commodity, and prices, are determined by the market. Alternate bearing is an important characteristic of the olive oil tree: a heavy cropping year is followed by a low yield year production. Greek production exceeds domestic demand. Export quantities fluctuate each year, depending on the amount produced and on the demand by importing countries. Although labeled Greek olive oil is gradually gaining shares in world markets, the single market orientation of bulk Greek olive oil to Italy, is translated to reduced competitiveness and small market diversification index.

Overall, the olive oil chain does not display a high degree of concentration. Practically every producer belongs to one of the 47 operators' organizations[12] in the olive oil sector that are active nationwide. Small scale olive growers sell their product either to wholesalers or directly to consumers through their personal contacts and networks. A high proportion of Greek olive oil production (32%) goes to self-consumption and the rest 75% is marketed as bulk (43%) or packed (25%).

Beyond the farm gate, the chain is complex, industries and big enterprises collect, store, refine, blend, bottle and market olive oil. Overall, the production sector for olive oil is made up of a large number or companies whose size and activities vary. Several agricultural co-operatives or co-operative unions also operate in this sector, whose main activity is to collect the produce of their members and then take responsibility for processing, standardizing and marketing it. The olive oil Inter-professional Association was the first association of this kind to be created by the supply chain stakeholders.

The processing units, (olive oil mills) both co-operative and privately owned, extract the oil and separate it from the solid material. Operating mills (1498 mills are operating in Greece) are dispersed throughout the country but mainly located in the regions of Peloponnesse (29%) and

[12] These are organizations that have been created following the introduction of Commission Regulation (EC) No 867/2008, Article 5, Operators' Organisations in the olive Sector

Crete (26%). During recent years about 80% of the mills have been modernized and the most widely extracting method is centrifugation. Certified organic olive oil is extracted at room temperature (cold process). Some olive oil is stored at the oil mills, but most goes to commercial or co-operative storage facilities that usually pack it and /or trade it in bulk. There are around 221 table-olive packing and bottling plants that usually store, bottle and/or blend olive oil. A few refining plants are also present in the supply chain.

Wholesalers and retailers market the packed olive oil to the food industry or final consumers. Regarding the market of labeled/standardized olive oil products, despite the large number of operating firms, two companies hold the largest market shares, while the rest is divided among a large number of small, mainly co-operative firms. Among these, Elanthi (35% market share) and Minerva, (20% market share) control around 55% of the Greek bottled olive oil market (ICAP, 2011). Four co-operative firms hold a market share of around 12-13%. More specifically the Agricultural Union of Peza has a 5% market share, Agricultural Union of Rethimno 4%, Lesel Agricultural Union of Lesvos 3% and Union of Lakonia 1.5%. Seventy percent of the marketed labeled olive oil is distributed and sold at retail outlet chains and 30% at smaller, specialized shops.

The many, small olive oil and table olives co-operatives hold minor market shares in the Greek and international markets. Their failure to merge or collaborate in order to compete against the multinational companies that dominate the market has resulted in very low market shares and failing olive oil prices over the last twenty or so years. The extremely low producer prices barely cover production costs and, as a result, many producers have abandoned their farmlands or harvest only as much as they need for family consumption. The top-5 co-operatives in the sector are second-tier organizations that, in 2010, they had a cumulative turnover of € 132.5 million. The respective figure for 2000 was € 88, 3 million. This increase might be attributed to the involvement of some co-operatives in selling more bottled, branded olive oil and less so in bulk. As shown in the relevant statistics file on the top-5 per sector co-operatives, these organizations are highly leveraged; their debt to equity ratios have increased dramatically over the last decade and some are close to declaring bankruptcy.

Despite the significant amounts of EU and producer money invested in olive oil co-operatives during most of the 1980s and 1990s, farmer-members realized only minor benefits. The role played by governments and politicians in all sectors, combined with negative developments in the structure of the international olive oil market resulted in the loss of many significant opportunities to improve the bargaining position of farmers. The lack of leadership interested in serving members and not pursuing personal goals and the farmers' perception that co-operatives are nothing but semi-governmental organizations that distribute subsidies also form a significant part of the explanation as to why co-operatives in the sector have no power to alter the terms of trade. Furthermore, the inter-professional olive oil association has not managed yet to promote collaboration along the olive oil supply chain to the benefit of all stakeholders.

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 co-operatives 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 co-operative leaders, subsidies have had a significantly negative impact on co-operatives. Of course, farmers also have a large share of the responsibility for the current situation.

5.6 Wine

The past two decades have been characterized by the so-called renaissance of the Greek wine industry. Although wine consumption is falling –as in many other wine producing countries—this decline has been matched by a demand for better quality wines. Home to more than 250 indigenous grape varieties, Greece may offer an opportunity for the wine making business as wine consumers around the world exhibit increasing varietal fatigue.

According to Eurostat (2008)[13] the total cultivated area devoted to viticulture in Greece amounts to 70,000 ha, while wine production is around 3.9 million hectoliters. Domestic consumption is declining at an average rate of 7.8% per year. Within the past 10 years, the value of wine exports has been declining at a yearly rate of almost 2%. In 2009 Greek exports suffered a serious blow, as world economies took a nose dive and demand for exports faltered. However, wine exports have been slightly growing since, in terms of exporting quantities. Most exports are directed to Europe which absorbs more than 85% of the exporting volumes. The rest is channeled to US and Canada, leaving little for other markets. Germany is the major client followed by France.

The Greek wine industry includes both co-operatives and Investor Oriented Firms (IOFs). In terms of size, the industry is comprised by 4-5 large and several small and medium size firms. Large companies hold the lion's share of bottled wine sales in the domestic market, while the smaller ones are divided into two categories: the ones that produce both bulk and bottled wine and the others who had made significant investments towards the production of improved quality wines. Co-operatives maintain their position in the sector as they contribute more than 20% of the total turnover of the industry. As explained below,with just a few exceptions, their high leverage ratios, and overall financial condition, coupled with intensified competition from low-cost wines originating in non EU countries, results in difficulties in adopting expensive strategies that raise the competitive level of a co-operative.

Under the Common Market Organization (CMO) for wine, a "National Envelope" has been allocated to each member-state in order to create individual support plans that better fit the particularities of each country member. The Wine CMO outlines 11 different measures that each member state can choose from to support its wine industry. The Greek national support program includes the following measures and amounts to approximately 50million €: single payment scheme (29 million €), promotion in third countries (10 million €), and restructuring and conversion of vineyards (11 million €). The participation of co-operatives in the promotion programs is rather limited: only 7 co-operative firms have applied in total of 49 applications. This translates into only 12% of the allocated budget having been claimed by co-operatives. Despite the fact that beneficiaries' contribution is only 20% of the eligible expenditure, industry experts explain the relatively low co-operative involvement in the Programme as a consequence of the economic crisis that has hit Greece. Farmer-members view even this very low percentage contribution as a significant amount in absolute terms. Further, the poor financial situation of many wine co-operatives prevents them from finding the necessary funding.

The wine supply chain includes several different types of suppliers who have different degrees of negotiating power. For example, the limited number of glass bottle manufacturers and the small production of bottles that fails to meet demand drive bottle prices upwards and thus increase the negotiating power of bottle makers. On the other hand, grape growers (with some exceptions, vineyards are still in the hands of farmers rather than wine producers) have usually less bargaining power as the final producer price depends heavily on grape quality. Although there are several agronomic practices that lead to higher quality grapes, the weather remains one of the quality determinants and hinders the competitive positioning of grape growers. The majority of grape growers are members in co-operatives. Membership is voluntary with the exception of the mandatory wine co-operatives[14] on the island of Samos[15]. Wine co-operatives buy grapes from their

[13] EUROSTAT, 2010.Agricultural Statistics: Main Results—2008-09.

[14] The mandatory participation of wine grape producers in these co-operatives has two major implications. On the positive side, the co-operatives have a tighter control over supply and thus are able to plan for the future and conclude sales deals before harvest. On the negative side, some of the members complaint about the resulting loss of flexibility for their individual farm businesses. Yet, avoiding free rider problems was the very reason for the formation of mandatory co-operatives in the first place.

members and take up vinification and marketing on their behalf. In many cases, besides supplying their co-operatives, grape growers—especially within denomination regions—also have been establishing contracts and horizontal relationships with wine makers in an effort to decrease uncertainty and ensure a market for their quality grapes. On the demand side of the wine supply chain, the large retailers, wholesalers and specialized liquor stores, usually exert their power to influence the wine supply chain to meet their needs. Small wineries are particularly challenged because they do not have the leverage associated with volume that the larger wineries have. As a result, the force of buyers on a small winery can be viewed as relatively strong. However, the recent economic developments along with the global economic crisis, has changed consumers' recreational habits. So, as more and more consumers reduce their nights out, wine producers are shifting their interest towards sales to the super-market chains.

One of the most important threats facing the Greek wine industry is competition from imported high-volume, low-priced wines. With the exception of 4-5 companies, most of the wineries are small family-operated businesses. Yields are much lower when compared to those in France and Italy, mainly due to low rainfall. Most of the vineyards are small, often on hillsides, and require a lot of labour as they are usually hand-tended. Low cost wines imported from non EU countries could threaten Greek wines sales especially during this period of overall economic crisis, since the structural indiosyncracies of greek wine production does not allow them to adjust their prices accordingly.

In 2010, wine co-operatives had a total turnover of € 97 million as compared to € 59.6 million in 2000. Both figures correspond, roughly, to 20% of the market. As mentioned above, the top-5 co-operatives in the wine industry have high to very high leverage ratios (ranging from 57% to 427%) that diminish their ability to provide reliable services to their members. Many co-operatives sell wine in bulk to taverns and restaurants. Also, they sell grapes or wine to wine-making IOFs, which bottle the wine and sell it under their own brand name.

The very high debt to equity ratios of wine co-operatives is partly attributed to the significant amounts of money borrowed by banks in order to provide their members with prices higher than those paid by competitor IOFs. However, the insignificant presence of most co-operatives in retail marketing results in producers capturing a very low percentage of the total value-added. During recent years a few co-operatives have improved their market position by introducing medium to high quality wines through contracts directly with supermarkets. However, intense competition from low-cost countries, especially during times of financial stress, turns focus on high quality wines into a risky strategy.

The internal governance of co-operatives has in some cases been problematic, in the sense that the lack of professional management has left many opportunities in value-added niches of the market go underutilized. Of course, the problems arising from government intervention and discussed in other sectors are also experienced by co-operatives in the wine sector.

EU policies that led to the replacement of local varieties with international ones and/or the abandonment of vineyard have had an extremely negative impact on farmers and their co-operatives. On the other hand, the implementation of EU policies has not always been in ways that safeguard the long-term interests of the Greek wine industry. Particularly, the intense lobbying efforts of co-operative leaders have in many cases resulted in the implementation of pro-cooperative policies that were heavily opposed by IOFs in the sector as disturbing free competition (e.g., low-interest loans available only to wine co-operatives).

[15] For the definition of "mandatory co-operatives" see section 2.2.1 of this report. In recent years, a complaint has been filed with the Commission by a local grape grower of British origin who was refused the right to produce wine on the island.

5.7 Dairy

The Greek dairy industry is the third most important segment of the food and drink sector, representing over 17% of its total production value (Notta and Vlachvei, 2007). Cow milk production is subjected to the EU quota system which assigns Greece an upper limit of approximately 800,000 tons of cow milk per annum. Unlike the Northern European countries, in Greece most of the milk collected, is produced from sheep and goats rather than cows. Sheep and goat milk is mainly used for cheese production which has reached 214,000 tons in 2009 (Hellenic Statistical Autority, 2009). Cheese products account for about 13% of the supermarkets' sales (USDA, 2011). Among the different types of cheese that are offered by cheese producers, "Feta" (a Protected Designation of Origin-PDO product made exclusively from sheep or a mixture of sheep and goats' milk) is the most widely consumed cheese in Greece. In addition to Feta, 20 other different cheeses have been assigned a PDO status[16].

Greece imports milk mostly from Germany, and cheese mainly from the Netherlands, Germany and Denmark. The main destination of Greek exports for cheese is Germany accounting for almost 35 % of the total quantity exported (ICAP, 2006). The main destination countries of Greek exports for dairy products, excluding cheese, are UK, Germany and Italy with yogurt being the most successful product.

The domestic dairy market consists of several firms both co-operatives and IOFs. The market for fresh pasteurized milk however, is highly concentrated to a limited number of firms (among them 3-4 co-operatives). The growing difference between consumer and producer prices for cow milk can be only partially explained by the structural idiosyncrasies of dairy farms. Large retailers play a dominant role in the dairy supply chain as they negotiate higher discounts and longer credit periods. This case of unequal bargaining power drives consumer prices upwards while producer prices at the farm gate remain stagnated or decrease steeply as was the case in 2008-2009 in the aftermath of the world food crisis. The average producer price is 0.36 €/lt which barely covers production costs. Milk producers are linked to processors with contractual arrangements. However, milk farmers have limited bargaining power, as they enter into incomplete contracts that often fail to guarantee a fair price. Undoubtedly, dairy co-operatives could play a major role in the supply chain. Some forms of innovative co-operative structures have been proposed by industry experts in order to link producers and processors—especially small and medium sized firms that are driven out of business by their large competitors—and leverage their position against retailers.

It is worth mentioning that in 2006, the National Competition Authority made a case against nine dairy industries for "horizontal and vertical collusion so as to impose prices to the producers and determine a single retail price for fresh pasteurized milk" (National Competition Authority, 2006). The case resulted in a 77 million € fine for seven, out of nine industries that have been charged with forming a cartel for fresh milk, and 6 retail chains.

The sheep dairy industry, on the other hand, remains small-scale as the small quantities produced and the seasonality of the product discourage large investments. The sheep and goat dairy supply chain consists of several producers, mainly small in size, many co-operatives that produce cheese and other milk products (e.g., yogurt), independent processors who produce and market cheese, the middlemen whose main function is to buy milk from the producer and sell it to the processor, the distributors and the retailers. At the retail part of the chain, besides the large retail chains, there are several small retailers that operate locally and buy cheese either directly from the cheese producer/co-operative or through the distributors. The spatial distribution of cheese making factories is associated with the structure and the prevailing production system in the sheep and goat sector. The most important reasons for the development of a large number of small capacity

[16] These are: Kasseri, Kefalograviera, Manouri, Galotyri, Kopanisti, Graviera Kritis, Graviera Naxou, Graviera Agrafon, Sfela, Anevato, Kalathaki Limnou, Katiki Domokou, Pichtogalon Chanion, San Michali Ladotyri Mytilinis, Metsovone, Batzos, Xynomyzithra Kritis, Xynogalo Sitias and Formaella Arahovas Parnassou.

cheese making factories are the small size of flocks of sheep and goats and their wide dispersal, often in isolated and remote areas, where the pasture lands are located. Moreover, it is estimated that about 1/3 of the cheese produced is made on the farm for self consumption and sale through informal networks (Hadjigeorgiou et al., 1998). Sheep milk, generally receives better prices, as demand exceeds production. Furthermore, the sheep and goat dairy industry is strongly connected to rural development and as such it supports employment and local economies especially in the Least Favoured Areas. Dairy co-operatives command a significant market share in the feta cheese market. Also, they have a significant presence in the local market for some traditional Greek cheeses produced from sheep and goat milk. However, the market for cheeses produced from cow milk is dominated by a few IOFs that produce or import dairy products. In 2009, the cumulative turnover of dairy co-operatives was, approximately, € 178.4 million up from € 105 million in 2000. Yet, the very high leverage ratios of these co-operatives constrain their ability to pay their members process higher than those paid by IOFs. The ownership structure of the largest dairy co-operative (Dodoni, SA) was changed in recent years with the state-owned Agricultural Bank becoming the controlling owner of the firm. As a result, the price policy was redesigned and producers receive milk prices similar to the ones paid by IOFs. The announcement of the forthcoming governmental policy to sell its ownership stake aroused tremendous opposition by dairy farmers and co-operatives. The gradually diminishing role played by dairy co-operatives creates room for IOFs and foreign co-operatives that operate IOF subsidiaries in Greece (e.g., Friesland-Campina, Arla, etc).

The structure of the dairy industry poses significant challenges to dairy co-operatives. Small farm holdings, highly fragmented markets, and inefficiently organized dairy operations make difficult to capture a significant market share in some of the most profitable markets (e.g., yoghurt). Further, nonviable investments made by co-operatives in the 1980s led to the collapse of several, previously successful co-operatives. Most of these investments were highly subsidized by the government, which distributed EU support money in inefficient ways. The lack of a co-operative with very strong bargaining power is painfully felt by small milk producers, particularly in regions where IOFs hold a monopsonistic position. While dairy co-operatives are dominant players in the world dairy markets, Greek dairy co-operatives have a long way to go before they could influence the terms of trade to the benefit of their members. Curerntly, a few attempts to form new, innovative, value-added farmer-owned co-operatives are underway. Their goal is to bypass middlemen and IOF processors and thus be able to pay their members a higher price for milk. Achieving this goal will not result in higher consumer prices because co-operatives still will not hold a monopolistic position in the milk market.

The policies implemented over the last 30 years have not been successful in promoting a beneficial restructuring of the dairy industry to the benefit of farmers. Inefficient implementation of EU policies by local politicians and co-operative leaders has slowed down the emergence of market-oriented collective entrepreneurship schemes that would have acted as competitive yardsticks for the sector. On the other hand, quality-related policies such as the implementation of certification schemes and the recognition of PDO products have helped farmers and their co-operatives in branding their products. Yet, the low capacity of most co-operatives has not allowed them to capture a significant part of the total value produced.

5.8 Sheep meat

Sheep farming is an important and well-established traditional activity in Greece. Greece belongs to the “light” sheep producers as 95% of the sheep farms produce milk rather than meat. It accounts for 27% of the gross animal production value and 7.2% of the gross agricultural production value of the country. Agricultural policy measures always give priority to small ruminant livestock farming as it employs 17% of the work force and accounts for 6.5% of the gross domestic product. Sheep farming is mainly concentrated in semi-mountainous and mountainous areas where employment opportunities outside farming are limited. It supports the rural economy due to the production of traditional products of high nutritional value, the creation of added value through the processing and trading of sheep's meat and milk and the fact that it provides employment and an adequate income to a large number of families in less favoured areas.

However, the majority of sheep farms are non-intensive, small family farms, with a high degree of diversification in terms of herd size, capital, productivity, technology, co-operative spirit etc. The most common Greek sheep farming systems, which account for 85% of the sheep population, are the extensive, the semi-extensive and the low intensive ones, which are based mainly on the extensive use of non-fertilised natural pasture resources. Organic sheep farming, represents 2.9% of the total sheep population in Greece and 9% of the organic sheep population in the EU.

The estimated number of sheep in Greece, in 2009 was 8,966 thousand heads, distributed among 115,350 farms. When comparing the population of sheep between 2000 and 2009, a decline of 3.2% in the number of animals is observed. This decline is the result of partial decoupling of direct payments and the structural changes that accompanied production abandonment. Sheep meat prices follow downward trends while agricultural input prices showed a moderate increase mainly due to higher prices for feedstuffs. Regarding trade, Greek sheep meat sector is under a trade deficit, with short term demand problems. Demand for sheep meat is seasonal and the trade deficit is covered by imports.

The chain among farmers, slaughter houses, processing plans, and retailers is not well-developed. Poor market coordination is directly affecting product prices, the main driving factor in determining market share and profitability among the actors of the chain. The future of the Greek sheep sector depends on its capability to respond accordingly to seasonal demand, improve the co-operative spirit throughout the chain and encourage the development of specialised regional, local and niche products like PDO and PGI.

Agricultural co-operatives are not active in the sheep meat sector. The few local initiatives have a negligible impact on the prices paid to producers. The underdeveloped supply chain for sheep meat and the structural characteristics of the industry described above, explain the nil presence of co-operatives in the sector. While one should expect co-operative initiatives toward developing the supply chain, small capacity producers lack the skills and incentives to engage in the formation of co-operatives. Policies in the sheep meat sector have had a neutral effect.

5.9 Pig meat

Among the animal farming business in Greece, pig farming is one of the most dynamic and business-oriented sectors of the Greek agro-food industry. Its share in the gross value of animal production in Greece is estimated at 10%. In addition, pig farming accounts for 25% of the domestic meat production volume and, during the period, 1990-2006, covered 33% of the country's pork consumption (Ministry of Rural Development and Food, 2008).

The pork production system in Greece has undergone considerable changes over the last few decades, evolving from family-operated business with herd sizes with no more than 10–20 sows to an industrialised, indoor-type operation with a significantly larger average herd size (Galanopoulos et al. ,2006). Today, two types of pig farms can be observed (Aggelopoulos et al., 2011): a) small scale, family-owned, low gross revenue and low investment farms, b) industrial-type, vertically integrated farms, that have invested in all stages of production (i.e., from breeding to processing and marketing of various pig meat products).

The main actors involved in the supply chain of pork are the producers, the processors, the wholesalers and the retailers (butcheries and large retail outlets). Pork is marketed down the supply chain via one of the following routes: (a) the producer sells live animals to the processing units, (b) the producer sells carcasses to wholesalers or retailers and (c) the producer sells carcasses in own butcher shops. Today, there are 97 processing units, including both small, traditional ones operating mainly as slaughterhouses for all kinds of livestock, as well as large processing firms involved in the slaughtering, standardisation and packaging of pork. The latter are gradually gaining market share as they are benefiting from contractual agreements with large retail outlets. Co-operatives do not have a significant representation in the sector. Pig farmers have a weak bargaining position in the supply chain, and prices at the farm gate cannot compensate for the increasing production costs. Vertical integration can offer significant economies of scale and improve the competitive positioning of pig farmers, however the costs associated with such investments are discouraging small scale farmers.

Agricultural co-operatives have a negligible presence in the pig meat sector. While in recent years several groups of producers have announced their intension to form a co-operative, all efforts have remained at the brainstorming level. Currently the market is dominated by a few vertically integrated IOFs and several importing companies. The intense competition from imported pig meat and the very significant amounts of risk capital necessary to invest in processing capacity have probably halted the formation of pig meat co-operatives of non negligible size. Policies for the sheep meat sector have had a neutral effect.

6 Overview of policy measures

6.1 Regulatory framework

The performance of co-operatives (including producer organisations) is influenced by the regulatory framework in a country. This framework is multi-level: EU regulations, national laws and -in some countries- even regional policies influence the way co-operatives can operate. In this chapter we look especially at the regulatory framework that influences the competitive position of the co-operative versus the investor-owned firm (IOF) or the competitive position of the co-operative versus other players in the food chain (e.g. the retail sector).

These competitive positions are influenced within the regulatory framework by much more than the law that establishes the rules for running a co-operative (business organisation law). Well known other examples include agricultural policy (e.g. the EU's common market organisation that deals with producer organisations in the fruit & vegetables sector), fiscal policies (at the level of the co-operative and the way returns on investments in co-operatives are taxed at farm level) and competition policies. There are different types of policy measures in the regulatory framework (McDonnell and Elmore, 1987):

POLICY MEASURE TYPE	DEFINITION
Mandates	Rules governing the actions of individuals and agencies
Inducements	Transfer money to individuals in return for certain actions
Capacity Building	Spending of time and money for the purpose of investment in material, intellectual, or human resources (this includes research, speeches, extension, etc.)
System Changing	Transfer official authority (rather than money) among individuals and agencies in order to alter the system by which public goods and services are delivered

The objective of this project / report is to identify support measures that have proved to be useful in supporting farmers' co-operatives. In section 5.2 the relevant policy measures and their potential impact in Greece are identified. In section 5.3 a number of other legal issues are addressed.

6.2 Policy measures

Agricultural Co-operative

Law 2810/2000 provides the long sought stable institutional environment for the development of Greek agricultural co-operatives. For many decades since the first Greek co-operative law was passed (1915), successive governments experimented with various amendments or totally new laws. For example, in the period 1915-1970, the co-operative law was amended, on average, 2.5 times per month (Lambropoulou-Demetriadou, 1995). In the post-1980 period, several new co-operative laws were also introduced. In stark contrast, the incorporation law of 1929 for investor-owned SAs was almost never amended. All these changes created an institutional environment hostile to agricultural co-operatives and thus played a major role in stealing agricultural co-operatives of their potential to grow into efficient business units. The enactment of Law 2810/2000 put an end to the aforementioned experimentations. The law provides a flexible legal framework that enables each individual co-operative to describe in its bylaws the basic rules of ownership, organisation, and governance. Also, it recognises the uniqueness of co-operative organisations, e.g., by treating surpluses (earnings from member patronage) differently than profits (business with non-members). Consequently, it facilitates co-operatives in improving their positioning in the food system.

Law 2810/2000 also includes articles on the taxation of co-operatives and the provision of special motives for the formation or restructuring of agricultural co-operatives. Some of these articles were further detailed in subsequent legislation. For example, the article 35 of Law 2810/2000 and article 6, paragraph 3 of Law 3399/2005 provide for no stamp duty or other taxation in a number of transactions involving co-operative members and co-operatives; exempt agricultural co-operatives from capital accumulation taxation; and, in several cases, VAT. This legislation has helped agricultural co-operatives to improve their positioning vis-à-vis their competitors by providing a pro-co-operative institutional environment. However, the overall positioning of agricultural co-operatives (with the exemption of some very successful co-operatives) has not yet improved considerably.

Law 2810/2000 also provides the definition and basic rules for the formation and operation of what is called "mandatory co-operatives". Mandatory agricultural co-operatives were first introduced in the early 1930s, when national legislation made their formation compulsory (Klimis, 1985). While co-operative scholars conceive them as being anti-co-operative and far away from the spirit of agricultural co-operation as expressed in the international co-operative principles (ICA), some of them are among the most successful agricultural co-operatives in Greece. Current legislation makes the sale of particular agricultural products through these co-operatives mandatory. As a result, these co-operatives can successfully address free rider issues, control the supply of a product and thus improve their positioning in their respective food supply chains (e.g., the mastic gum co-operative of Chios). Yet, the very establishment of such co-operatives is against the rules of free competition and concerns have been raised about their legitimacy.

In the post-2000 period, several amendments were made to Law 2810/2000 in an attempt to add more flexibility, improve transparency, or provide incentives for mergers between co-operatives. Presidential Decree 176/2003 introduced monitoring of the agricultural co-operative movement by the Ministry of Agricultural Development and Food (at that time called Ministry of Agriculture). Despite the relatively strict rules set in this legislation, government monitoring of agricultural co-operatives has not yet been implemented. Even the enactment of a subsequent law (3147/2003) that makes submission of annual reports to the Ministry of Agricultural Development and Food mandatory did not result in improved monitoring of co-operatives since no minister has ever penalised non-complying co-operatives.

The aforementioned law (3147/2003) also permits the membership of first-tier, primary co-operatives in PASEGES, the umbrella lobbying organisation that represents the interests of secondary agricultural co-operatives in national and EU decision-making bodies. By allowing primary co-operative to be represented by PASEGES, this law allows PASEGES to improve its bargaining power.

Law 3399/2005 sets rules of transparency in agricultural co-operatives. It was passed after recognition from the State that, in the 1980s and 1990s, some co-operative leaders used their positions as a means of achieving personal pecuniary objectives to the detriment of their co-operatives (Iliopoulos and Valentinov, 2012). The law affects primarily the internal governance of agricultural co-operatives.

Amendments to the co-operative law or additional legislative texts have put in place a well-designed system of incentives toward co-operatives that merge or restructure in order to improve their positioning in food supply chains. While the system of incentives provided by succeeding governments is well designed, it has not achieved its main goal; to convince agricultural co-operatives to merge into larger, competitive business enterprises. The unwillingness of agricultural co-operatives to merge into larger business units may be explained by reference to their leaders' reluctance to abandon sometimes powerful governance roles, as a result of the decline in available board positions after the merger (Iliopoulos and Valentinov, 2012; Iliopoulos and Valentinov, 2009; Iliopoulos, 2000).

Compared to the pre-2000 period, government intervention in co-operatives' affairs during the last years has been much less severe. Nevertheless, both formal and informal attempts to intervene have been reported. For example, law 3508/2006 was another attempt of the government to intervene in co-operatives' affairs by manipulating their internal governance rules. As a result it had a negative impact on co-operatives' positioning.

A highly controversial issue is the subsidisation of agricultural co-operatives, particularly because of the huge debts many of these organisations accumulated in the 1980s and 1990s. This subsidisation has assumed several forms. For example, law 3399/2005 (article 6, paragraph 4) entitles PASEGES to receive 2.5% of the annual revenue of ELGA (the State-owned agricultural insurance organisation). Several other Ministerial Decrees have provided farmer co-operatives with financial support in order to help them deal with extraordinary situations (e.g., the spillover effects of the current financial crisis). Such support may assume various forms, e.g., interest-free loans given to winemakers' co-operatives. In several cases, such policies have been severely criticised as against the competition law by farmers who are not members of co-operatives.

Producers' Organisations

Producers' organisations were first formed in Greece after accession to the European Union in 1981 and subsequent enactment of national legislation in line with relevant EU regulations. Most producers' organisations have adopted the legal form of the co-operative (more than 95%), while the remaining percentage have been incorporated as SAs, limited liability companies, or partnerships. Irrespective of the legal form, currently producers' organisations are subject to the rules imposed by the following national and European Union legislation:

- Law 867/2008, Article 5, on producers' organisations in the olive sector.
- Law 104/2000, Article 27, on support afforded to producers' organisations in fisheries and aquaculture.
- Regulation (EU) n°1234/2007 (as amended by EC 361/2008), Article 103, on 1) operational programmes with several goals such as improving product quality, increasing the value-added of products, enhancing protection of the environment and promoting environmentally friendly methods of production; and 2) provision of subsidies to cover establishment, administrative, and start-up expenses.
- Law 1234/2007, Article 103 (as amended by EC 361/2008), on the financial support of producers' organisations in the fruit & vegetables industries.
- Regulation (EU) n°867/2008, Article 5, on financial support of producers' organisations to cover expenses related to 1) monitoring and management, 2) minimisation of negative environmental externalities, 3) enhancement of product quality, and 4) dissemination of information on the work carried out in points 1-3.
- Regulation (EU) n°104/2000, Article 27, on the compensation of producers' organisations under conditions of extreme supply-induced very low prices.

All regulations and laws 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.

Table 13 identifies the policy measures that influence the competitive position of co-operatives vis-à-vis the investor-owned firm (IOFs) or the competitive position of co-operatives vis-à-vis other players in the food chain (e.g. the retail sector).

Table 13. Policy Measure Description

Name of Policy Measure	Type of Policy Measure	Objective of the Policy Measure	Target of the Policy Measure	Expert comment on effects on development of the co-operative
	1. Mandate e.g. 1.1. Co-operative legislation/ incorporation law e.g. 1.2 Market regulation and competition policies **2. Inducement** e.g. 2.1 Financial and other incentives **3. Capacity Building** e.g. 3.1 Technical assistance **4. System Changing**	1. Correction of market or regulatory failures 2. Attainment of equity or social goals	1. Specific to co-operatives 2. Specific to an agricultural sub-sector 3. Applicable to business in general	Description on how the policy measure affects development of co-operatives, by reasoning through the building blocks: - Position in the food chain - Internal Governance - Institutional environment of the co-operative
Agricultural Co-operatives				
Law 2810/2000 (as amended by the Law 3147/2003, Article 18) Main national legislation on agricultural co-operatives (Incorporation law)	**1.1**		1	Law 2810/2000 provides the long sought stable institutional environment for the development of agricultural co-operatives. Furthermore, it is a flexible legal framework that enables each individual co-operative to describe in its bylaws the basic rules of ownership, organisation, and governance. Also, it recognises the uniqueness of co-operative organisations, e.g., by treating surpluses (earnings from member patronage) differently than profits (business with non-members). Consequently, it facilitates co-operatives in improving their positioning in food system.

Law 3399/2005, Article 6 The President, the members of the BoD and the General Manager of PASEGES (Umbrella organisation that represents the interests of agricultural co-operatives) as well as the Presidents and General managers of Agricultural co-operatives with more than 2 millions € sales, are obliged to report their income and assets, according to the Law 3213/2003	**1,1**		1	Law 3399/2005 sets rules of transparency in agricultural co-operatives. It was passed after recognition from the State that some co-operative leaders in the 1980s and 1990s used their positions as a means of achieving personal pecuniary objectives to the detriment of their co-operatives. It affects primarily the internal governance of agricultural co-operatives.
Law 3508/2006, Article 4 The duration of the membership of the BoD members of agricultural co-operatives can be extended without previous modification of their memorandum	**1.1**		1	Law 3508/2006 was another attempt by the government to intervene in co-operatives' affairs by manipulating their internal governance rules. As a result it had a negative impact on co-operatives' positioning.
Presidential Decree 104/2003 Incentives for mergers and development of agricultural co-operative organisations	**1.1**		1	While the system of incentives provided by succeeding governments is well designed, it has not achieved its main goal; to convince agricultural co-operatives to merge into larger, competitive business enterprises.
Presidential Decree 176/2003 Monitoring and control of agricultural co-operative organisations and co-operative firms	**1.1**		1	Despite the relatively strict rules set in this legislation (P.D. 176/2003), government monitoring of agricultural co-operatives has not yet been fully implemented.
Joint Ministerial Decision 5999/2008 Details for the implementation of financial incentives to merging secondary co-operatives	**1.1**		1	While the system of incentives provided by succeeding governments is well designed, it has not achieved its main goal; to convince agricultural co-operatives to merge into larger, competitive business enterprises.
<u>**Economic motives and tax exemptions**</u> **Law 2810/2000 Art. 35** and **Law 3399/2005, Art. 6, Par. 3** - No stamp duty or other taxation in a number of transactions - No tax for capital accumulation - No VAT in a number of cases	**2.1**			These legislations have helped agricultural co-operatives to improve their positioning vis-à-vis their competitors by providing a pro-co-operative institutional environment. However, the overall positioning of agricultural co-operatives (with the exemption of some very successful co-operatives) has not improved.

Regulation (EU) nº 1698/2005 Support for rural development by the European Agricultural Fund for Rural Development	**2.1**		2	
<u>Incentives for mergers</u> **Law 2810/2000, Art. 21, par. 4 and 9** - Several tax exemptions - No stamp duty **Law 2810/2000, Art. 21, par. 10A** - Up to 300.000 € to secondary co-operatives that merge, for several reasons (e.g., compensation payments to employees fired) **Law 2538/1997, Art.33. par.2** - Corporate income tax exemption of the surplus allocated to reserves - Capitalisation of the losses through an interest free loan **Law 3399/2005** Art. 6, par. 5: - Investment plans for the restructuring of the agricultural co-operative organisations that are formed as a result of a merger **Law 2992/2002, Art. 9, Par. 4.** - Low taxation rate of profits of the merging co-operatives for the first two years **Presidential Decree 104/2003** Incentives for mergers by supporting several actions, e.g., improvement of skills and education, agricultural administration services, hiring of technical assistance consultants, diffusion of innovations. The maximum level of support is set to 100,000 € in three years	**2.1**		1	While the system of incentives provided by succeeding governments is well designed, it has not achieved its main goal; to convince agricultural co-operatives to merge into larger, competitive business enterprises.
Law 2810/2000 Art. 27, Par.2 Introduction of optional terms and conditions for first degree agricultural co-operatives to obtain more than one co-operative share (maximum number is 5)	**1.1**		1	Law 2810/2000 provides the long sought stable institutional environment for the development of agricultural co-operatives. Furthermore, it is a flexible legal framework that enables each individual co-operative to describe in its bylaws the basic rules of ownership, organisation, and governance. Also, it recognises the uniqueness of co-operative organisations, e.g., by treating surpluses (earnings from member patronage) differently than profits (business with non-members). Consequently, it facilitates co-operatives in

				improving their positioning in food system.
Presidential Decree 176/2003 Details on government monitoring and control over agricultural co-operatives and co-operative firms	**1.1**		1	Despite the relatively strict rules set in this legislation, government monitoring of agricultural co-operatives has not yet been implemented.
Law 2810/2000 Article 39 Definition and special treatment of “mandatory agricultural co-operatives”	**1.1**		1	Mandatory agricultural co-operatives were first formed in the early 1930s, when national legislation enabled their establishment. While co-operative scholars conceive them as being anti-co-operative, some of them are among the most successful agricultural co-operatives in Greece. Current legislation makes the sale of particular agricultural products through these co-operatives mandatory. As a result, these co-operatives can successfully address free rider issues, control the supply of a product and thus improve their positioning in their food supply chains (e.g., the mastic gum co-operative of Chios).
Law 3147/2003, Art. 18, Par. 8 - First degree agricultural co-operatives have to submit annual balance sheet to the Ministry of Agricultural Development and Food - First degree agricultural co-operatives can participate in PASEGES (Umbrella organisation that represents the interests of agricultural co-operatives)	**1.1**			This law intends to facilitate the Ministry of Agricultural Development and Food in monitoring agricultural co-operatives. Given that no penalty threatens co-operatives which do not submit their balance sheets, the initial goal of the legislation has not been achieved. By allowing primary co-operative to be represented by PASEGES, the national umbrella organisation for secondary agricultural co-operatives), this law allows PASEGES to improve its bargaining power.
Law 3399/2005 Art.6, Par. 4 Financial support of PASEGES by entitlement to receive 2.5% of the total annual revenue of ELGA (State-owned Hellenic Agricultural Insurance Organisation)	**3**		1	This is highly anti-competitive subsidy, often being criticised by farmers who are not members of co-operatives and all IOFs.
Besides national and European regulation, there are several other Ministerial Decrees that are issued to deal with specific situations like the spillover effect of financial crisis to the co-operatives (e.g., interest free loans to winemakers’ co-operatives-FEK B 578/2011)	**2.1**		1	This is highly anti-competitive subsidy, often being criticised by farmers who are not members of co-operatives and all IOFs.

Producers' Organisations				
Law 1234/2007, **Article 103** (as it has been amended by **Regulation (EU) nº361/2008), Financial support Producers' Organisations concerning fruit & vegetables**	**1.1**		1	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.
Regulation (EU) nº 1698/2005 Support for rural development by the European Agricultural Fund for Rural Development	**2.1**		2	
Law 867/2008, Article 5, Producers' Organisations in the olive Sector	**1.1**		1	
Law 104/2000, Article 27 Support of Producers' Organisations in fisheries and aquaculture	**1,1**		1	
Regulation (EU) nº1234/2007 **(**as it has been amended by **Regulation (EU) nº361/2008), Article 103,** - Operational programmes with several targets like, higher products' quality, increase of the value of products, quality increase, environmental issues and environmental 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	**2.1**		2	
Regulation (EU) nº867/2008, Article 5, Financial Support for: - Monitoring and administrative management - Improvement of environmental impacts - Improvement of production quality - Traceability, certification and protection of quality of products - Dissemination of information on the work carried out in the areas of the above points	**2.1**		2	
Regulation (EU) nº104/2000, Article 27 Compensation of producers' organisations under conditions of extreme supply-induced very low prices	**2.1**		2	

6.3 Other legal issues

General

Greek agricultural co-operatives' affairs are regulated by three types of legislation: the co-operative law, the tax law, and competition law. Producer organisations may alternatively incorporate as an agricultural co-operative, a societe anonyme (SA), a limited liability company, a partnership, or a limited partnership. The national law does not force incorporators to adopt a particular legal form of business. However, the vast majority of producer organisations have been incorporated as agricultural co-operatives.

The current co-operative law was enacted in February 2000 (Law 2810/2000). After a very long period of experimentation with legal frameworks, it is the first time in modern Greece that a co-operative law has not been amended for over a decade.

Formation/establishment

In general the current co-operative is not restrictive as previous legislation has been. The law-makers' goal was to design a law that acts a general framework and allows each co-operative organisation to set the rules members want to leave with in its bylaws. For example, the law permits outside investors to buy preferred stock in the co-operative that carries no voting rights, according to the rules set by each co-operative in its bylaws. Further, while previous legislation had set a very high prerequisite, the current law stipulates that a minimum of seven farmers can form and incorporate an agricultural co-operative. The initial cost of incorporating as an agricultural co-operative and the cost of maintaining this legal form are both equal to zero.

Membership structures

The co-operative law requires the democratic control of the co-operative business by members. While it refers explicitly to the co-operative principle of one member-one vote, it permits proportional voting according to patronage if a co-operative's bylaws permit it. Furthermore, in case proportional voting is chosen, the law sets a maximum of three votes per member. The law, however, does not permit non-member voting in the co-operative.

The law stipulates that any farmer who can benefit from the services of a co-operative should be allowed to join, as long as s/he does not have criminal record or is the owner of a business that competes against the co-operative. Abiding with the rules set in the bylaws is also a prerequisite for joining the co-operative. Bylaws can set restrictions on who can join the co-operative as long as potential members are not discriminated against due to their colour, race, or sex. Farmers from other member states are free to become a member of a co-operative if s/he abides by the aforementioned rules.

Internal governance

According to the current co-operative law two corporate bodies are mandatory: the general assembly and the board of directors. This is in contrast to previous legislation that made the formation of a supervisory board elected by the general assembly also compulsory. This change has provided room for complaints by some co-operatives and their members. However, the current governance model is rather flexible, particularly if one realises that a co-operative can include in its bylaws a clause that makes the supervisory board mandatory for that particular organisation.

The co-operative law also provides tools for members to influence the decision-making process. For example, it stipulates that 2/3 of the members can ask for a special general assembly on any topic, including voting again on a previously decided issue.

The legal requirements on the composition of the board of directors are semi-flexible. For example, only members can serve on the board. Non-member managers or outside experts are explicitly not permitted to participate in the board. Reactions to these restrictions by farmers and their co-operative leaders have been diverse, ranging from complete opposition to full support. However, as long as managerial duties are delegated by the board to professional executives, such restrictions are in no case the major problem of Greek agricultural co-operatives. More important is the ability of members to monitor their co-operative boards effectively. Unfortunately, the supervision of co-operative boards is neither efficient nor effective (Iliopoulos and Valentinov, 2012). In most cases, farmer-members feel isolated from their organisations and with no effective means to supervise the board (e.g., Kopsini, 2011). The situation is further complicated by the fact that the co-operative law sets only very general rules on the appointment and dismissal of board members.

Financing

Agricultural co-operatives can raise equity by issuing member shares, through patronage retains, debt, and access to governmental subsidies. The following legal methods and instruments are commonly used:

- Unrestricted or restricted member liability in accordance with a co-operative's bylaws.
- Patronage retains held in a general reserve.
- Member participation in raising equity, in proportion to a member's volume of patronage.

Surpluses and profits are distributed as follows. At least 10% of the surplus (the part of income that comes from member patronage), and all non-distributed profit (income that comes from non-member business with the co-operative) is kept in a compulsory capital reserve until the total amount is equal to the co-operative's capital. This legally compulsory reserve may not be distributed. Surplus may be distributed to members as dividends. Distribution of profit is allowed but only to holders of (optional) investments shares (preferred shares), who are members or not of the co-operative, if so provided by the co-operative's bylaws. Part of the surplus may also be distributed to holders of optional shares. Bylaws may also provide for any other way of allocating the surpluses and profits. These rules are rather flexible but, at the same time, they give rise to the standard investment problems of traditional co-operatives (i.e., the free rider, horizon, and portfolio problems).

Non-members can participate in a co-operative's equity by buying preferred shares that carry no voting right. The aforementioned rules are intended to facilitate co-operatives interesting in attracting non-member equity. However, this instrument has not been used by any agricultural co-operative thus far.

Exit provisions

The co-operative law allows the specification of reasonable and fair restrictions on member exit. However, the weak or incomplete adoption of these restrictions has contributed significantly to maximising the number of members-free riders. These restrictions are subject to the basic national and EU pro-competition regulations. As a result, the currently adopted practices of restrictions on the exit of members do not deter potential from joining co-operatives and producer organisations.

Reorganisation

The Greek co-operative law provides effective tools for co-operatives/POs interested in reorganising (e.g., through mergers). Agricultural co-operatives may be reorganised as Societes Anonyme (SA) or Limited Liability Companies (LLC) (L. 2810/2000) if 2/3 of the General Assembly participants vote in favour of this. In such a case, the business laws for SAs and LLCs, respectively, apply. Producer Organisations that are incorporated as agricultural co-operatives also fall under this category. Reorganisations are further effected by the provisions of the tax law. Tax breaks are available to co-operatives that merge (given that they comply with certain criteria, such as the realisation of extra added value, no job losses, etc).

Tax Law aspects

Co-operatives' business with members are termed 'surpluses' and are taxed only at the member level. Profits, that is, money earned from non-member business, are taxed according to the corporate tax law as with any other legal business form.

There are certain provisions in the co-operative law, which exempt co-operatives from several articles of the corporate tax law. For example: (1) Co-operatives that buy property located in their county or any used assets are taxed in the same way as public organisations; (2) financial contributions from members to the co-operative are not taxed; (3) property of the co-operative bought by member(s) is exempt from property taxes as long as property tax was paid by the co-operative when initially bought; (4) the added value earned from the sale of property from the co-operative is not subject to income taxation, if it is used to finance co-operative investments or repay loans from the Agricultural bank of Greece. The overall burden of the taxation of co-operatives/POs and its members are reasonable and fair in comparison to the taxation of investor-owned firms.

Competition Law aspects

Co-operatives and POs are subject to competition law regulation on the same footing as investor-owned firms and no general exemptions apply to co-operatives. Furthermore, members can exit the co-operative as long as they have notified the co-operative prior to this, according to the rules specified in the co-operative’s bylaws. Given that the bylaws are signed by an official judiciary authority, the rules specified in the bylaws are necessarily in compliance with national and EU competition regulations.

7 Assessment of developments and role of policy measures

This chapter provides a concluding assessment on the developments of co-operatives in Greece. In chapter 2 the basic statistics on agriculture and farmers' co-operatives were provided. In chapter 3 data on individual co-operatives were reported, especially concerning their internal governance, their position in the food chain and the institutional environment in which they operate. This leads to some first impressions in section 3.5 on the performance of co-operatives in Greece in relation to their internal governance, institutional environment and position in the food chain.

In chapter 4 the data gathering and analysis was broadened by looking at the differences between the sectors and the influence of sectoral issues on the performance of the co-operatives. Chapter 5 looked into much more detail on the how the regulatory framework influences the competitive position of the co-operatives in the food chain and vis-à-vis the investor-owned firms.

This final chapter assesses the (performance) developments of co-operatives and how they can be explained in terms of the building blocks (institutional environment, position in the food chain including sector specifics, and internal governance). Section 6.1 focuses on the explanation of the performance of co-operatives in terms of their internal governance, their position in the food chain (including sector specificities) and the institutional environment (including the regulatory framework). In section 6.2 an assessment is given on which policy measures in Greece seem to benefit co-operatives and which ones have a constraining influence.

7.1 Explaining the performance of co-operatives

In the context of the European agricultural co-operative movement, Greece is remarkable since no other European country has so many agricultural co-operatives that produce so little value for their farmer-members. In 1997, turnover per agricultural co-operative (in billion ECU/co-operative) was 0.0001 for Greece; 0.0188 for Denmark; 0.0892 for the Netherlands; 0.1648 for Sweden; 0.0014 for Spain and Portugal; and 0.0145 for France[17].

The market shares of agricultural co-operatives show a similar pattern; in 1996, co-operatives commanded the following market shares in a few selected industries (Sergaki, 2004):

Industry	Cumulative Market Share of Agricultural Co-operatives (%) in 1996
Beef meat	6
Pork	5
Eggs	3
Milk	20
Fruits	51
Vegetables	12

The first modern Greek agricultural co-operative was founded in the early 1900's but adoption of this organisational model accelerated only after 1915 when the first co-operative law was enacted (Law 602/1915). At that time the government viewed co-operatives as a policy tool useful in addressing extreme market failures caused by asymmetric distribution of information and bargaining power to the benefit of wholesalers of agricultural commodities (Iliopoulos, 2000). The farmers themselves saw co-operatives as the only means to overcoming the extremely harmful consequences of persistent market failures. In the ensuing years, more than 3,000 local

[17] Van Bekkum and van Dijk (1997) and own calculations.

multipurpose agricultural co-operatives provided their farmer-members with credit at favourable terms, access to high quality inputs and marketing channels at reasonable prices. Beginning in 1917, these local co-operatives started organising second-tier, federated structures that invested in processing plants for all major Greek agricultural products. However, direct government intervention, mainly through numerous amendments to the co-operative law, began in the 1930s and continues until today. The extent and intensity of this intervention were maximised during the dictatorial regimes of 1936-1940 and 1967-1974, but also in the 1980's. It is worth noting that, from 1915 to 1970, 946 amendments to L. 602/1915 were passed; that is, approximately two amendments per month (Lambropoulou-Demetriadou 1995). As a result, very few co-operatives kept focusing on achieving the goals that provided their initial founding motivation.

In the 1980's and most of the 1990's the legal framework was modified several times. Political confrontations between board members who represented and were supported by different political parties became the norm. As a result, agricultural co-operatives shifted their focus from pursuing business goals to becoming efficient election campaign mechanisms for political parties. Two political choices caused this catastrophic development. First, political parties chose agricultural co-operatives as a battle field for political confrontations due to the fact that farmer-members represented a significant percentage of voting power in national elections (over 20%) and nearly all farmers were members of at least one co-operative. Second, many co-operative leaders used this development as an excuse for pursuing their individual goals -pecuniary or other- even if their actions harmed co-operatives. The observed increase in memberships after 1982 may be attributed to farmers' belief that they could derive significant benefits by gaining direct access to one of the two powerful political parties, i.e., the right-wing conservative party of 'New Democracy' and the center-left party of 'PASOK.'

Experimentation with different legal frameworks and extensive government intervention into the internal organisation and business decisions of agricultural co-operatives led these organisations into enormous troubles during the 1980's and 1990's. Huge debts accumulated and co-operatives' market shares in both product and input markets fell to unprecedented levels (Tsatsakis, 2008; Agrotypos, 2004; Patronis, 2002; Iliopoulos, 2000). Even worse, the dominant organisational culture within agricultural co-operatives became tolerant of internal dissent.

Another factor that led to the collapse of many agricultural co-operatives was the behaviour of their personnel. An illustrative example is provided by the case of KYDEP, the largest co-operative firm in cereals, cotton, feedstock and seeds until the early 1990s (Papageorgiou, 2010). When faced with consecutive years of negative economic results, the management initiated a decrease in personnel. Subsequently, the co-operative's labour union took advantage of clauses in the labour law and shut down the co-operative for a long period. As a result, the losses increased further. Probably labour leaders had access to inside information as after the co-operative collapsed all personnel was hired by public organisations (Papageorgiou, ibid).

The pressing need of Greek farmers to deal with a number of economic problems created by an increasingly global, competitive environment in the late 1990's and the forthcoming elimination of direct subsidies by the EU forced the government to rethink its role vis-à-vis agricultural co-operatives. As a result, in February 2000 it enacted law 2810, which is characterised by simplicity, generality, and elimination of government intervention.

In the post-2000 years, however, governments kept intervening in co-operatives' affairs (Ana-Mpagi 2006). In the same period, decreasing world commodity prices coupled with dramatic increases in input prices unravelled most co-operatives' inability to protect the income of their farmer-members, let alone to capture added value from other vertical stages of the supply chain. Currently, agricultural co-operatives are faced with life-threatening challenges and critical strategic dilemmas (Iliopoulos, 2002b).

The long history of Greek agricultural co-operatives is characterised by periods of business successes interrupted by market- and incentive-distorting government interventions, and organisational failures ignited by the rent seeking behaviour of co-operative leaders. In the preceding section I discussed how government intervention resulted in severe organisational inefficiencies. Such intervention, however, might have not been possible without the consent of, at least some of, the leaders of agricultural co-operatives. The simultaneous negative impact of these two behaviours explains the aforementioned paradox: among EU member States, Greece has the highest number of agricultural co-operatives but the lowest value produced per co-operative.

The number of active agricultural co-operatives is much lower than the one reported in official statistics, a fact that justifies the low value produced per co-operative (Demakis, 2004; Petalotis, 2004). Indeed, many existing co-operatives do not serve any real business purpose (Papachristou, 2009). Why is this so?

The voting system adopted by co-operatives helps in answering this question. According to the standing but also previous Greek co-operative laws, the members of local co-operatives elect representatives on the board of a second-tier, federated co-operative (called 'association'). Subsequently, these board members elect representatives on the board of PASEGES. This organisation is not involved in any business activity as its primary role is to represent secondary agricultural co-operatives and lobby for their positions in national and European policy-making institutions. It is this proximity of PASEGES to policy makers that makes serving on its board a highly desirable position. Access to personal benefits in various forms[18], the ability to influence important resource allocation decisions, and increased chances to receive support by a political party in national or EU parliament elections are, among others, some of the advantages associated with serving on the board of PASEGES. Being elected on the board of an association or even a local co-operative, which is a prerequisite for election on the board of PASEGES, also provides a farmer with access to local and national policy makers and thus to the abovementioned benefits. The CEO of a federated co-operative argues that:

> "After working twenty years for co-operatives, I am certain that the establishment of 6,000 or 8,000 local agricultural co-operatives was a political decision. That is, politicians decided that they need 10,000 local party leaders … How couldn't they foresee that an illiterate farmer in his 60s who serves on the board of a local co-operative will very quickly realise how lucky he is to run the business on his own, without the help, and thus control, of a professional manager. This farmer will then support the local party leader in the elections for the association's board. Subsequently, the association's board supports the local candidate in the elections for Parliament members. After being elected this member of the Parliament will, in turn, support the farmer to be elected on the board of the local co-operative; this process is repeated for decades. The member of the Parliament helps young people from the village or relatives of the farmer to find jobs. Actually the local co-operative is run by both its board and politicians, which results in the co-op's collapse" (Demakis 2004: 69).

The observed close and mutually beneficial relationship between local or national agricultural co-operative leaders and politicians is manifested in several ways. First, in recent decades several leaders have used their position as a stepping stone for a political career in either the national or the EU parliaments (Demakis, 2004). Second, politicians can more easily influence homogeneous groups of farmer-voters. Thus, they view local co-operative leaders as playing a group-forming and influencing role. Consequently, they receive support by farmers without paying the full cost associated with a political campaign since a major part of this cost is incurred by co-operative organisations themselves.

The opportunistic behaviour of co-operative leaders, which is supported and propagated by many politicians, has resulted in various types of serious organisational inefficiencies in the form of more than € 850 million[19] of debts, low-quality products, inability to protect members' income, very high influence and transaction costs, and low investment levels (Stergiou, 2005). The end results include

[18] In their extreme form such benefits become solely pecuniary.
[19] A 2005 estimate.

lost markets and generalised public distrust in co-operatives as a sustainable business form (Demakis, 2004).

Despite these inefficiencies, local agricultural co-operatives have not responded to any of the market signals or the powerful incentives provided by the government in recent years for mergers between co-operatives (Sergaki, 2006). For example, while producer prices of extra virgin olive oil have been dramatically low for many years, eight federated olive oil co-operatives compete against each other in the prefecture of Chania, just one small county on the island of Crete (Oustapassidis et al., 2000). The situation is similar in other products and regions (Kontogeorgos, 2001). In sum, the number of primary and secondary co-operatives remains very high relative to the needs of farmers and market demand.

7.2 Effects of policy measures on the competitive position of co-operatives

The impact of the various policy measures on the competitive position of agricultural co-operatives has been a highly controversial issue, particularly during the last 30 years. While all legislative efforts in the 1980s and 1990s were supposed to help agricultural co-operatives improve their positioning vis-à-vis IOFs, several intervening factors resulted in extremely negative outcomes. The most easily observed is the aforementioned continuous government intervention into co-operatives' affairs. As a result, co-operatives' ability to play a significant, but also necessary, role in improving farmers' income and the performance of food markets was considerably diluted. Even policies that were protested against by IOFs because they treated co-operatives very favourably had a tremendously negative impact. At the end, IOFs took advantage of co-operative's collapse and improved their competitive position-some of them now command monopolistic/monopsonistic market shares in their industries.

As analysed in chapter 5 of this report, the policies that set the framework within which agricultural co-operatives and, more generally, producers' organisations operate can be classified into 1) incorporation law, 2) economic incentives and tax exemptions, 3) incentives for merging co-operatives, and 4) transparency rules and monitoring. While in the last the incorporation law for agricultural co-operatives has been highly problematic, the current law (2810/2000) is accepted by all co-operative stakeholders as very efficient. Most of the economic incentives and tax exemptions do nothing more than recognising the uniqueness of these institutional arrangements. On the contrary, policies that directly subsidise co-operatives (e.g., Law 3399/2005) but not other legal business forms have often been criticised. Their impact on co-operatives' competitive position is ambiguous. In some cases they may have helped co-operatives to overcome major economic downturns. At the same time they might have stolen co-operatives of their ability to face market challenges by themselves.

All policies that provide economic incentives in an attempt to stimulate mergers between co-operatives have never had any significant impact on the competitive position of co-operatives. This is mainly because of the power attached to board membership and the resulting reluctance of board members to abandon such positions as result of a merger. The voice of members that theoretically could have acted as pressure toward their leaders has never been taken into account. Either members have not realised the benefits associated with the realisation of economies of scale or they have preferred to free ride on other members' efforts. The extremely low investment per member in agricultural co-operatives provides a partial explanation of this behaviour.

Transparency rules and monitoring by the government did not seem to have any significant impact as they were never really implemented. Currently the government has introduced a new draft law that includes strict clauses on government monitoring of agricultural co-operatives. The majority of co-operative leaders, though, have expressed serious concerns about the implementation of this law.

EU's competition rules have had an ambiguous impact on co-operative's competitive position as they crucially depend on whether and how they have been implemented. In general, competition rules seem to have had a neutral effect because all Greek co-operatives are SMEs and thus do not feel competition rules as binding. Similarly, other EU policies such as those imposing quotas and allocating plantation rights have had an ambiguous effect.

Concerns have been raised by co-operatives in other EU Member State about access to FEADER funds. Such co-operatives argue that due to their high turnover they are not eligible for receiving rural development funds even if they do not hold but a minor market share. Given that all Greek agricultural co-operatives are SMEs, they do not face such constraints.

For the programming period 2000-2006, co-operatives and producers' organizations were co-financed by the European Agricultural Fund for Rural Development (EAFRD) and the Public Investment Programme of the Greek Ministry of Rural Development and Food. The total funding received by co-operatives and producers' organizations was approximately 27 million € (this represents roughly 1.2% of the total public expenditure for rural development which fir the aforementioned period sums up to approximately 2 billion €)[20].

Also, from the 'LEADER+ Community Initiative Operational Programme (2000-2006)', which was co-financed by the European Agricultural Guide and Guarantee Fund – Guidance Section (EAGGF-G) and the Public Investment Programme of the Ministry of Rural Development and Food, co-operatives and producers' organizations received approximately € 760.000 which represents around 0.3% of the total public expendure for the Programme[21].

Under the Rural Development Plan of the Greek Ministry of Rural Development and Food (Alexandros Baltatzis 2007-2013) that was created in accordance with Council Regulation (EC) No 1698/2005, co-operatives and producers' organizations have up to now received roughly 11 million € which represents 3.2% of the total public expenditure assigned to Axis 1 of the Plan(Improvement of the Competitiveness of the Agricultural and Forestry Sector, Measure 123 "Adding value to agricultural and forestry products").[22]

[20] Data retrieved from the Ministry of rural development and food, available at: www.agrotikianaptyxi.gr

[21] Data from the Ministry of rural development and food, available at: ww.minagric.gr/greek/data/PINAKES_LEADER.xls

[22] Source: www.agrotikianaptixi.gr/Uploads/Files/paa_xrimatod_v8.xls

8 Future research

As any other research, this one suffers from shortcomings. The most serious one has to do with the limited availability of reliable data on Greek agricultural co-operatives and producers' organisations. Another weakness of the study is the heavy reliance on grey literature or on outdated academic publications.

Future research should focus on the collection of primary data from co-operatives. However, many co-operatives are reluctant to share accounting and economic information and thus the involvement of PASEGES is crucial. Another avenue for future research is the identification of individual co-operatives that are successful. Conducting detailed studies on these interesting cases may help farmers, co-operative leaders, and policy makers in designing strategies and policies that would improve the success potential of collective entrepreneurship in the coming years. The co-operatives proposed in section 2.2.6 may provide a good starting point.

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