Support for Farmers' Cooperatives

Case Study Report

Structure and Strategy of Wine Cooperatives: The Case of the Santo Wine Cooperative in Santorini, Greece

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European Commission

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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)", in order to 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, by the European Commission, and by national and regional authorities in their effort to encourage and support the creation of agricultural producer organisations in the EU.

Within the framework of the SFC project, this case study report on the structure and strategy of the wine cooperative in Santorini, Greece.

Data collection for this report has been done in the spring of 2012.

In addition to this report, the SFC project has delivered 32 other case study reports, 27 country reports, 8 sector reports, 6 EU synthesis and comparative analysis reports, a report on cluster analysis, a report on the development of agricultural cooperatives in other OECD countries, and a final report.

The authors would like to thank Mr. Dimopoulos, Chief Executive Officer of the Union of wine cooperatives of Santorini, for his willingness to collaborate in this project and share important information on their cooperatives. The authors would also like to thank Mr Paris Sigalas wine maker from Santorini and owner of the Domaine Sigalas winery.

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1. Introduction

1.1 Objective and research questions

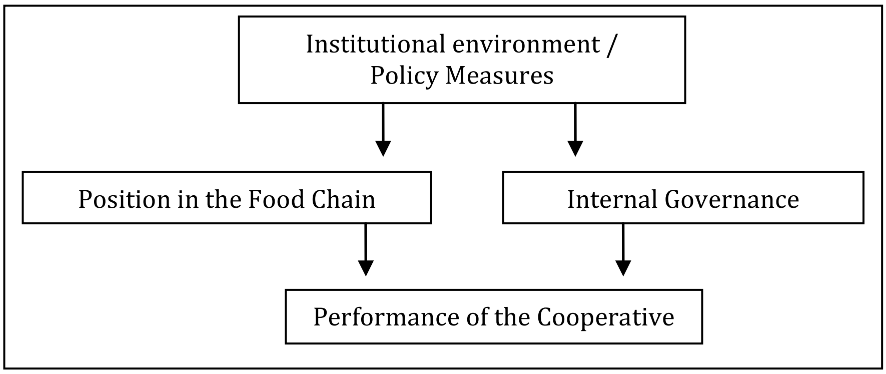
The imbalances in bargaining power between the contracting parties in the food supply chain have drawn much attention, also from policy makers. The European Commission is committed to facilitate the restructuring of the sector by encouraging the creation of voluntary agricultural producer organisations. DG Agriculture and Rural Development has launched a large study, "Support for Farmers' Cooperatives", that will provide the background knowledge that will help farmers organise themselves in cooperatives as a tool to consolidate their market orientation and so generate a solid market income. In the framework of this study, this report focuses on the interaction between cooperative structure and the strategies adopted by the wine cooperative on the island of Santorini, Greece. The wine cooperative of Santorini was chosen due to its structural, ownership, and governance characteristics, as well as its diverse marketing strategies, which enable us to address the abovementioned issues. Santo, the wine cooperative of Santorini, is a second-tier organisation that represents a unique institutional arrangement in European agriculture due to its mandatory status.

The central issue addressed is whether structure (e.g., first versus second tier cooperatives, collaboration between cooperatives or between cooperatives and IOFs in the sector, etc.) has had a significant impact on the strategy adopted by the case cooperative and, consequently, its success/failure and the coordination of the wine supply chain. Particularly, research for this comparative case study has been guided by the following research questions. First, how does farmer-led forward integration affect cooperative's ability to provide their members with significant benefits? Second, does the achievement of social objectives constrain cooperatives' ability to excel in terms of economic performance and thus survive in the long run? Third, how successful are federated structures in achieving the goals of their members? Fourth, should public policies treat different types of cooperatives differently based on their ability to increase/stabilise farmers' income? Fifth, should public policies facilitate cooperatives in achieving a balance between economic and social goals and, if yes, in which ways? Sixth, which public support measures (local, regional, national and/or European) have an impact on the development and success/failure of the case cooperatives?

1.2 Analytical framework

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

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



1.3 Method of data collection

The case study is based on multiple data sources. First of all, secondary data was used such as academic literature, country reports of the Support for Farmers' Cooperatives project, popular press and electronic media, various archives and other sources of information.

Additional information has been collected through personal interviews with various cooperative stakeholders. For this particular study, the manager and farmer-members of the wine cooperative of Santorini, Greece were interviewed as well as Mr Paris Sigalas, wine maker from Santorini and owner of the Domaine Sigalas winery. Standard techniques and approaches used in case study research were used in order to maximise reliability and avoid biases.

1.4 Structure of the report

Chapter 2 provides a full picture of Santorini wine sector, as well as a description of Santo cooperative. Chapter 3 provides a reflection on the results of this case study while chapter 4 concludes the report.

2. The Union of Wine Cooperatives of Santorini, Greece

2.1 Introduction

The main purpose of this study is to analyze the specifics underneath strategic choices made by the Union of wine cooperatives of Santorini ("Santo") and to test relevant hypotheses. The particular cooperative was selected because of its special legal status and the unique characteristics of the Santorini wine industry. As one out of five "mandatory" agricultural cooperatives in Greece, it binds all local farmers and part of their production. This type of cooperative was formed to protect the special production of this island and to ensure property rights and the rational use of agricultural land and is further analysed in section 2.2. The second reason refers to the special characteristics of Santorini's vineyards due to the peculiar local ecosystem created by successive explosions of the island's volcano. Additionally, because of the absence of phylloxera, indigenous varieties are still cultivated. Most of the vineyards are more than 100 years old and retain their original root stocks.

To gather the required information for this case-study, we visited the cooperative and interviewed the cooperative's chief executive officer as well as selected farmer-members. Moreover, we interviewed the owner of the Domaine Sigalas winery. We also considered statistical information from the Ministry of Rural Development and Food as well as numerous academic and popular press articles and sector reports.

2.2 Mandatory cooperatives

Mandatory agricultural cooperatives were first formed in the early 1930s, when national legislation enabled their establishment (Klimis, 1985). While cooperative scholars conceive them as being anti-cooperative and far away from the spirit of agricultural co-operation as expressed in the international cooperative principles (ICA), some of them are among the most successful agricultural cooperatives in Greece. Current legislation makes the sale of particular agricultural products through these cooperatives mandatory. As a result, these cooperatives 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 cooperative of Chios). Among them, the Union of Viticultural Cooperatives of Samos is a second-tier organisation whose members are 26 mandatory first-tier cooperatives representing all the wine growers of the Samos island.

According to their main function, mandatory cooperatives belong to one of two distinct types. The first type includes cooperatives formed to ensure property rights over, or the rational use of, agricultural land, forests, etc. The second type refers to cooperatives 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 cooperatives are currently active:

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

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

2.3 The Wine Sector and Cooperatives: Facts and Figures

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 data retrieved by FAOSTAT and by the Greek Ministry of Rural Development and Food, the wine-oriented grape cultivated area covers approximately 70,000 hectares in 2008, while wine production approaches 4,000,000 HL. Wine as an important part of the Greek culture has been a major element of the Greek diet for ages. Consumption levels remained relatively constant throughout the years and up until 2009 (3,248,000 HL in 2009). However, there are some very recent signs of a decrease in wine consumption (ICAP, 2009). Not surprisingly, the recent economic crisis-induced- reduction of the disposable income in Greece, has been responsible for the rise in the demand for lower-quality, bulk wine.

The Greek wine industry includes both cooperatives 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. Cooperatives maintain their position in the sector as they contribute more than 20% of the total turnover of the industry. However, with just a few exceptions, their high leverage ratios, and overall financial condition, pose a threat to their competitive positioning in the sector. A key characteristic of the domestic wine industry is that approximately 65-70% of the total production is sold in bulk. Forty out of 720 wineries found in Greece, are cooperatively-owned by local farmers. The vast majority of these wineries are quite small in terms of capacity. On the other hand, few large wineries cover a significant, though decreasing market share (64% in 2001, 46.7% in 2007) of total wine sales (HELLASTAT, 2009).

Wine imports follow a decreasing trend and few firms are engaged in this activity (ICAP, 2009). According to the National Statistical Authority, the total imported volumes were 184,000 HL in 2008, originating mainly from EU countries. On the other hand, 340,000 HL were exported in 2008. Most exports are directed to Europe which absorbs more than 85% of the exporting volumes. The rest is channelled to US and Canada, leaving little for other markets. Germany is the major client followed by France. A slight increase in wine exports is observed since 2005. According to industry experts interviewed for the purposes of this study, this recent trend may be attributed to the promotion campaigns funded for the most part by EU programmes. These campaigns contribute in altering the image of Greek wines from poor-quality-table wines to top quality wines that receive awards in international competitions and get the recognition they deserve in the world market. 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.

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. Contracts and horizontal relationships with wine makers as well as cooperation with other growers could decrease uncertainty and leverage the negotiating power of grape producers. 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 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 could function as a catalyst for Greek wines sales especially during this period of overall economic crisis.

In Greece, there are two distinct organizations; one representing the investor-oriented wineries (the Greek Wine Federation) and one representing the cooperative wineries (the Central Union of Vine and Wine Producing Cooperatives). Moreover, four regional organisational structures have emerged mainly for the promotion of oenotourism through selected wine routes: the wine roads of North Greece, the wine roads of the Peloponnese and more recently, the wine roads of Attica and the wine roads of Central Greece. In addition to the above, there exists a national interprofessional organization of Vine and Wine which aims to improve coordination and facilitate decision-making along the supply chain. Despite all these institutional structures, however, the wine supply chain in Greece remains fragmented and an apparent dichotomy between cooperatives and IOFs is present in all levels of decision making.

2.4 The wine sector in Santorini island and the Santo cooperative

The island of Santorini has a long history in wine making that goes back to ancient times. Grape growing used to be one of the main sources of agricultural income. The Santo cooperative was founded in 1947. However, since the beginning of the 20th century several cooperatives have been created in Santorini to support the island's producers and to protect Santorini vineyard and its unique grape varieties.

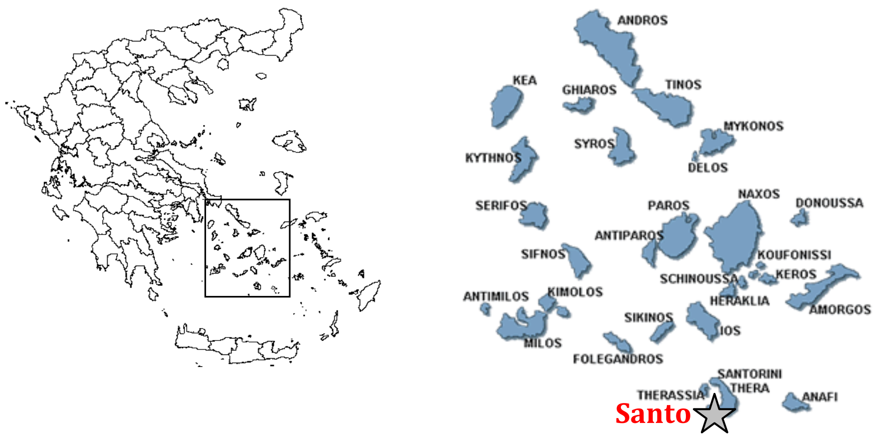
The wine production on the island of Santorini, with the peculiar local ecosystem created by successive explosions of the local volcano, is based on indigenous grape varieties, with low productivity and high quality of produced wine. There are still vineyards more than 100 years old that retain their original root stocks. Asyrtiko (covering approximately 85% of the vineyards in Santorini), Athiri and Aidani are the most common species of white grape, while the most commonly cultivated red varieties are Mantilaria, Mavrotragano and Voudomato. The Santorini island, is one of the most prestigious wine regions in Greece, since it is home to many indigenous varieties that produce distinct character wines mainly due to the volcanic soil and the harsh climatic conditions on the island.

The Union of Wine Cooperatives of Santorini, commonly referred to as "Santo", was founded in 1947 (Law 359/1947). Its members are 14 first-tier cooperatives, which represent approximately 2500 farmers; that is, all of the island's producers. The total vineyard area covers around 1,300 hectares. According to data gathered during the interviews, Santo manages 60% of the total grape production of the island, which corresponds to 18,000 HL per year. Seventy percent of its production is destined for packaged wine while the remaining 30% is sold in bulk. In 2009 Santo's total sales amounted at 6.3 million € which corresponds to a market share of 2.1% of the total wine market in Greece (own calculations derived from the data provided by ICAP, 2009). As far as the economic scale is concerned, Santo cooperative produces around 18,000 hl per year and has a yearly turnover of about 3.6 million €.

In addition to its agricultural and processing activity, Santo offers its members supply services, administration, advising and technical assistance. The cooperative also processes, markets, and exports under the Santo brand name, a variety of locally cultivated and processed quality products, such as tiny tomatoes, fava beans, caper and caper leaves. Santo social responsibility profile goes along with its corporate strategic view. Their aim is to support Santorini producers and to protect Santorini vineyard and its unique grape varieties.

According to the general director of Santo, there is a recent significant increasing trend in the vineyard area of Santorini. The demanding viticultural practices required to maintain the vines, and the fact that Santorini is one of the world's premier travel destinations, have made wine-making an unpopular economic choice for producers of the island. Against these odds, however, wine industry in Santorini still remains vibrant and the observed trends may highlight the return to wine making as a significant source of income.

Figure 2. Map of Greece and the island complex (Cyclades) where the Union of Wine Cooperatives is located

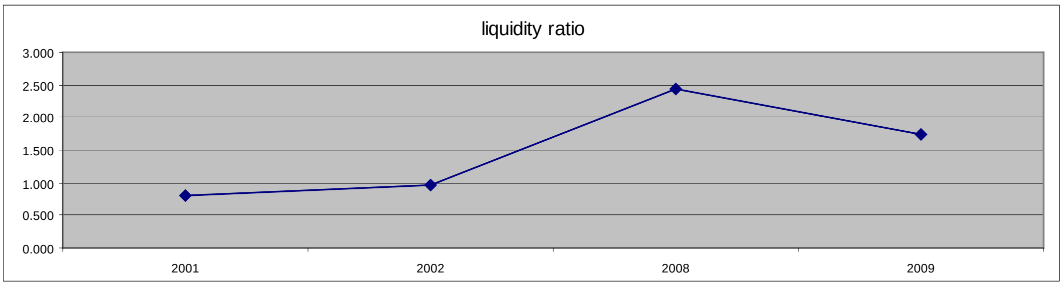


2.5 Financial Analysis of the Santo Cooperative

In this section, some financial ratios for Santo are presented. When discussing a cooperative's finances it should be kept in mind that some of the commonly used financial ratios are not quite suitable to estimate cooperative performance or make inferences about the cooperative's overall financial state. In many cases, cooperative managers trade long-term investments for short-term revenue for the cooperative's patrons. The cooperative's capacity to create value for its members should be seen in relation to other issues, some of which are not easily quantified and cannot be depicted in the cooperative's financial statements. Nevertheless, the use of standard financial indices may provide an understanding of some aspects of the cooperative's economic performance.

In the case of the Santo cooperative, attention has been given into four years: 2001, 2002, 2008 and 2009. The reason behind choosing these specific years is twofold: first, in 2002 following a general assembly decision, member's equity was doubled. Second, in 1998 and 2005 under EU's support schemes (Commission Regulation (EC) No 866/90, Commission Regulation (EU) No 1257/99) the cooperative invested in improving its wine-making capacity by modernizing the cooperative winery. Therefore, by observing the financial figures during these years some inferences on the cooperatives performance should be made possible.

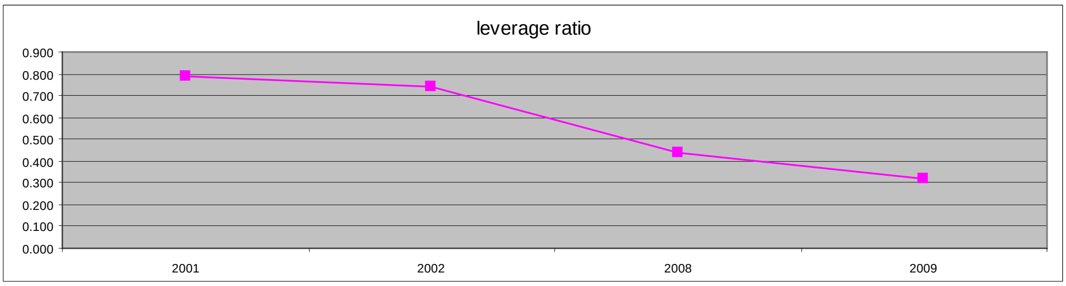
Graph 1: Santo' s liquidity ratio, selected years



Source: own calculations from the cooperative's balance sheets and income statements

Liquidity ratios attempt to measure a company's ability to pay off its short-term debt obligations. This is done by comparing a company's most easily-converted-to cash assets, to its short-term liabilities. The year 2002 signals a new era for Santo cooperative as since then, the cooperative exhibits a steady capacity to pay off its debts due in the near future, and still fund its everyday operations.

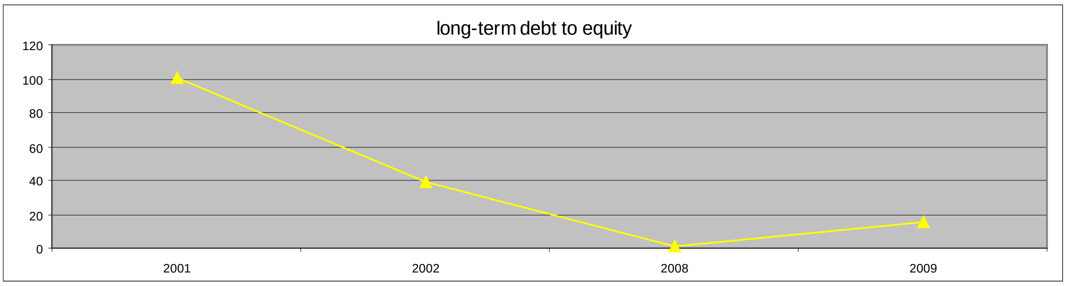
Graph 2: Santo' s leverage ratio, selected years



Source: own calculations from the cooperative's balance sheets and income statements

Leverage measured as total debt to total assets ratio, reveals Santo's capability to finance debt by own assets. Small leverage ratios can be seen as another measure of the cooperative's financial health.

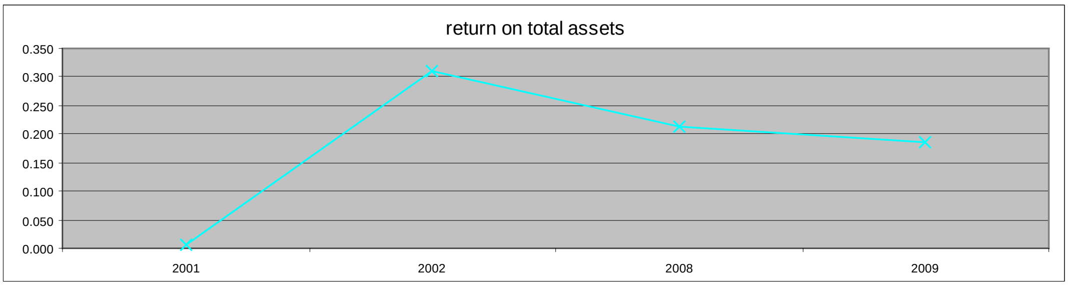
Graph 3: Santo' s Long-term debt to Equity ratio, selected years



Source: own calculations from the cooperative's balance sheets and income statements

This debt to equity ratio, measures how much of the cooperative's total debt is financed by its debt holders in relation to its owners. The graph shows that from 2011 onwards the cooperative has been financed mainly by long term loans and not by its owners.

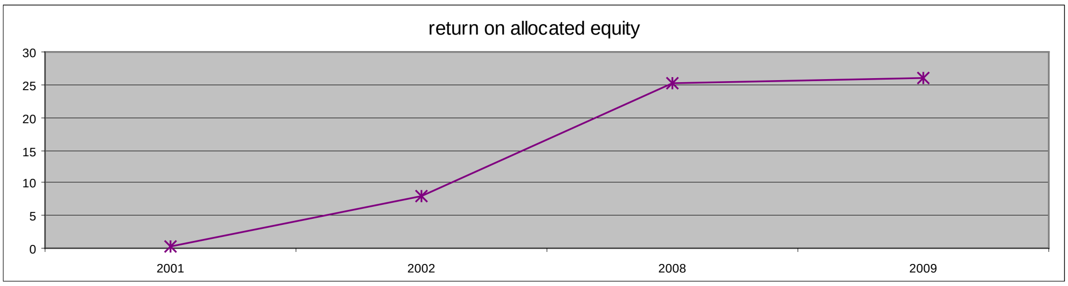
Graph 4: Santo' s Return on total assets ratio, selected years



Source: own calculations from the cooperative's balance sheets and income statements

The ratio is an indication of how effectively the cooperative can use its total assets to generate earnings. The higher the ratio, the more effectively the cooperative is using its assets.

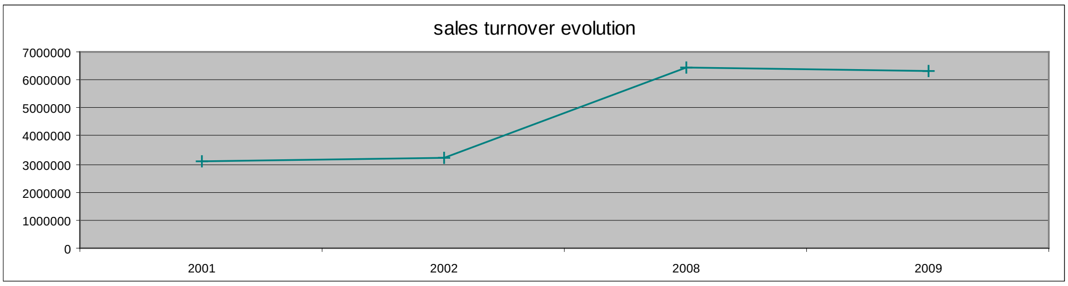
Graph 5: Santo' s Return on allocated equity ratio, selected years



Source: own calculations from the cooperative's balance sheets and income statements

Similarly to the previous index, this measure is an indication of how effectively the cooperative uses its members' equity to generate income.

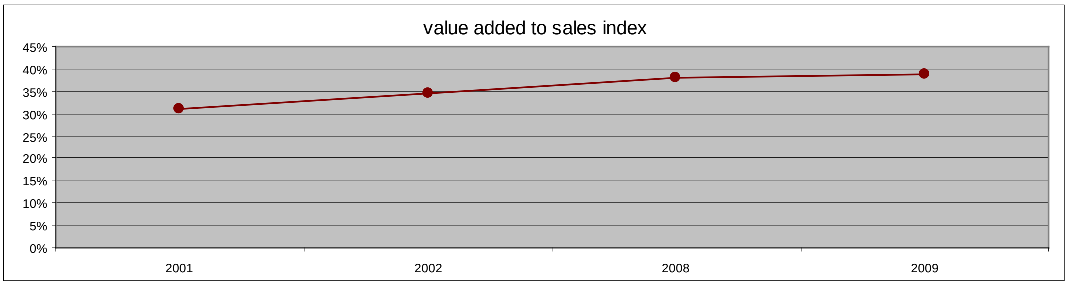
Graph 6 : Santo' s sales turnover evolution for the years 2001, 2002, 2008, 2009



Source: own calculations from the cooperative's balance sheets and income statements

The graph indicates that sales between the years 2002 and 2008 have been almost doubled, following the cooperative's strategic shift to bottled wine and the investments aiming at improving production efficiency and quality.

Graph 7: Santo' s Value added to sales ratio for the years 2001, 2002, 2008, 2009



Source: own calculations from the cooperative's balance sheets and income statements

This ratio provides another indication of the cooperative's capacity to create value for its stakeholders. Although the cooperatives total turnover almost doubled between the years 2002 and 2008, the value-added to sales ratio remained relatively constant. This may be attributed to the following reasons: either the cooperative paid a higher price to its members (the grape growers) or all costs related to wine production increased relatively more than sales, or that both of the above happened to an extent.

2.6 Strategy and Structure

Santo originally aims at supporting the Santorini island's producers and protecting island's unique vineyard and landscape. The cooperative developed in the biggest wine producer of the island and as quoted by Mr. Dimopoulos, the chief executive officer of Santo, "each year the cooperative handles more than 60% of the grapes grown in the island, while more than 65% of the wine produced in Santorini, which corresponds to 18,000 HL, is processed through the cooperatively-owned winery."

The mandatory character of the cooperative is enforced by national legislation and is further manifested in the cooperative's bylaws; membership in the Cooperative is compulsory for Santorini farmers, who are obliged to deliver at least 25% of their yearly production to the cooperative. Santo Wines, on the other hand, receives the input from its members, processes, bottles and markets the wine. The earnings that are accumulated at the end of each year are either distributed to members or enter a special, non-taxable reserve in order to finance future investments. Due to its special nature and organizational structure, Santo manages to absorb a large part of market and price fluctuations and operates as a safety net for its members. While the mandatory character of Santo Wines might be perceived as a violation of competition rules, certain functions performed, and structures and intra-organisational rules adopted by the cooperative seem to suggest that this is not the case. Nevertheless, this is a legal question that may or may not deserve further legal analysis before one arrives at a conclusion informed by sound economic analysis.

The structure of the Santo cooperative is characterised by a high degree of vertical integration that extends to distribution and marketing. The Santo cooperative manages 60% of the total grape production of the island,. Seventy percent of its production is destined for packaged wine while the remaining 30% is sold in bulk. In addition to its agricultural and processing activity, Santo offers its members supply services, administration, advising and technical assistance. The cooperative also processes, markets, and exports under the Santo brand name, a variety of locally cultivated and processed quality products, such as tiny tomatoes, fava beans, caper and caper leaves. More recently, the cooperative has entered the tourism business, organising weddings and wine tasting tours.

Apart from the cooperative winery, 13 investor-oriented wineries are based on the island. Because of the mandatory nature of the cooperative, all wine growers –including winemakers who have their own wineries—have to be members of the cooperative. Santo is the price leader while investor-owned wineries act as price takers. At the same time they have to offer a premium price to ensure quantities and compensate wine growers who have invested in producing top-quality grapes. In the words of a Santorini wine maker: "We, the investor-owned wineries, have to pay a 25-40% mark-up to grape growers so that we make sure we stay in the market". Cooperative ideology remains strong on the island and, according to representatives of Santorini winemakers; it is often used by cooperative leaders as a strategic tool against competitors. The cooperative in its countervailing power role is willing to accept all the produce brought-in by members irrespectively of the quality delivered. Then, grapes are selected according to strict quality standards and the process yields an array of different products, ranging from bottled top quality wines to medium quality wines delivered in 5, 10 and 20 lt packages, to vinegar and other grape and wine by-products.

Santo also pursues a differentiation strategy. In addition to the wine business, the cooperative gathers, markets and promotes specialty products (tiny tomatoes, tomato paste, fava beans, capers, etc.). "This way we can finance our wine business and support local grape farming done under conditions extremely hostile to agriculture", Mr Dimopoulos stated. Preserving Santorini's vineyards is indeed important especially since there is always the threat of abandonment due to additional income from tourism: "In Santorini there are only but a few wine growers who view grape growing as their major source of income", said Paris Sigalas, one of Santorini's most renowned wine makers, and continued: "the rest simply see grape growing as a source of some additional income and committing them to producing top quality grapes is not always easy."

Given the small quantities produced on the island the strategic choice of some of the investor-owned wineries for backward integration has been imperative. However, in these cases the cooperative does not exercise all the rights emanating from its mandatory status. Individual wine makers are informally exempted from the delivery requirement.

Recently Santo entered a strategic partnership with TSANTALI, one of the major Greek wine and spirits company. According to this agreement TSANTALIS exclusively takes over the distribution of Santo wines both within Greece and in overseas markets. The cooperative will make use of TSANTALIS' exporting infrastructure and know-how to further improve its market positioning in the wine industry.

Hambrick and Fredrickson (2001) in their already classic piece on strategy suggest that business strategy is in fact an integrated set of choices. They suggest that business strategy can be analysed into five different elements, each one providing answers to a series of fundamental questions.

The first element is the "Arenas" or in other words the question of "what business will we be in". This practically means that each company should be as specific as possible about product, categories, market segments, geographical expansion, and the stages the company intends to be active in.

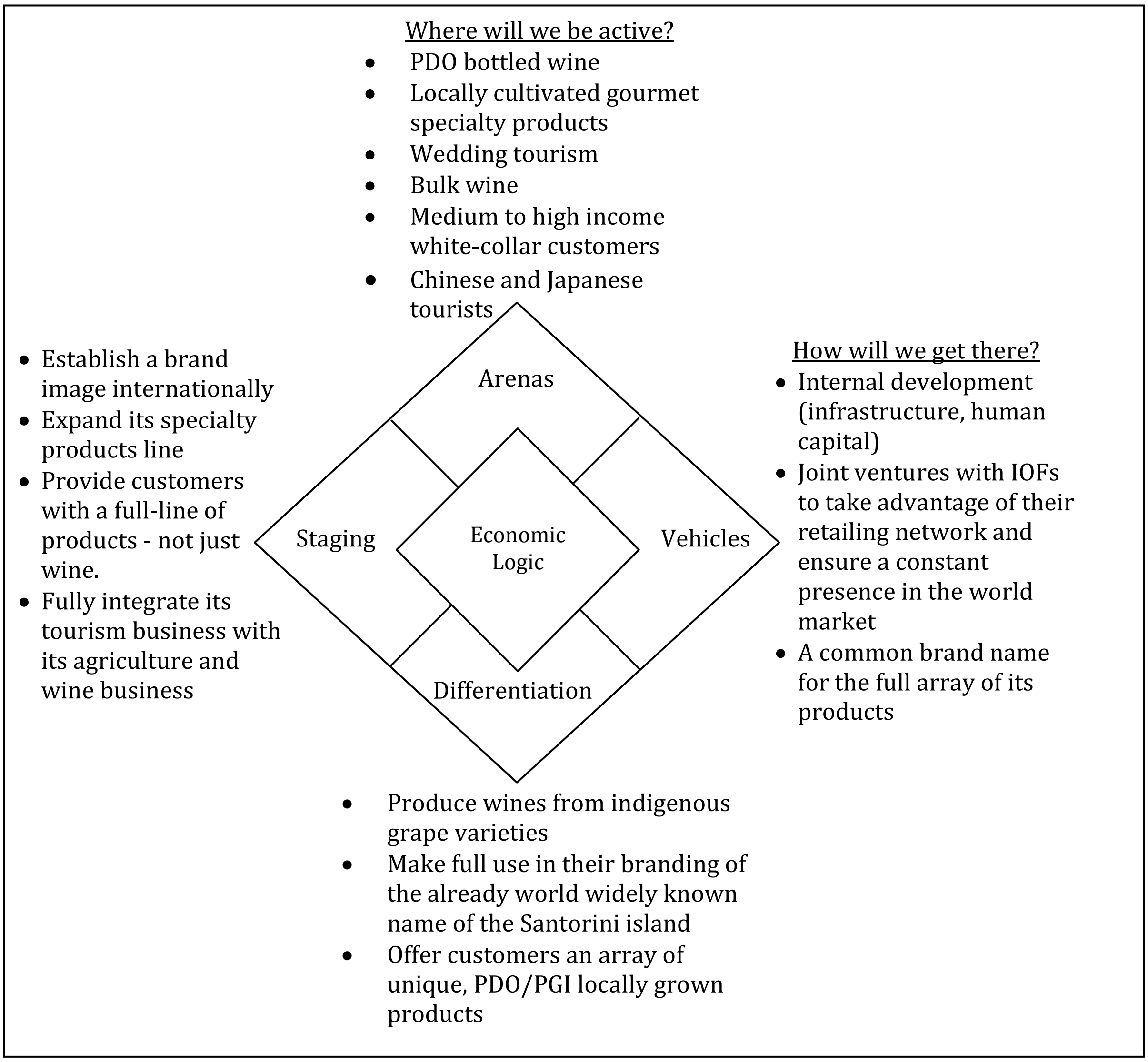
The second element is the "Vehicles" or the answer to the question " how will we get there". This element includes decisions related to the means to achieve our Arena objectives. "Differentiators" is another important element of strategy which highlights the company's capabilities and competencies to win in the market place and create a broad customer base. The fourth element of strategy, "Staging" , is about making the right choices and plan a sequence of moves that will eventually lead the company to success. The role of leadership is crucial in this element of strategy, since personal judgment is required to assign priorities to the various available options. Of course, resources and other capabilities also play an important role in the final decision-making process.

Finally, the economic rationale, behind the selected set of strategies lies in the very heart of the company's strategic planning: generate profits and sustain them in the long-run is the ultimate target of every business strategy.

The above described framework is applied to the Santo cooperative, and the results are summarized in the following figure. The idiosyncrasies of Santo's structure –being a mandatory cooperative—have a certain impact on its strategy. The most obvious one, is the fact that due to its mandatory nature the cooperative can make relatively safe projections about the supplied quantities of its diversified products. Furthermore the fact that the cooperative acts as a competitive yardstick, provides an advantage over competition and a safety net for its members.

The economic logic behind Santo's strategy is to create revenues for its member-patrons and at the same time provide local communities with employment opportunities, while at the same time the unique and sensitive natural environment of the Santorini island is preserved.

Figure 3. Santo's Strategy



2.7 Relevant Support Measures

Like the majority of Greek agricultural cooperatives, Santo has been benefited by several laws and regulations, stemming from both national and EU policy schemes. The milestone point in Santo's evolution was the investments in infrastructure and modern wine making technology, in the 1980s. These investments were made possible through the support received by the implementation of Commission Regulation (EC) No 355/77 (70% contribution that corresponds to 265 million drachmas[1]). Over the years Santo has been benefited by several support measures all targeting investments in infrastructure and modernization of wine making methods. In 1998,

[1] Drachma was the national currency until the Country entered the Euro-zone in 2001. At that time, one Euro corresponded roughly to 340 Greek Drachmas.

the cooperative materialized a plan approved under Commission Regulation (EC) No 866/90, an investment that amounted at 25,000,000 drachmas (approximately 75,000 €). Then, in 2005, the cooperative invested 300,000 €, 65% of which was funded through the provisions of Commission Regulation (EU) No 1257/99 for the second modernization of the winery. The third modernization of the winery is currently taking place and is funded by the Rural Development Programme of Greece 2007-2013 (measure 123A). According to the chief executive officer this is by far the largest investment ever implemented by the cooperative (1.2 million €) and provides the opportunity for a full restructuring of the winery.

Apart from the investments in the winery, Santo has been benefited by Council Regulation (EC) No 479/2008 and Council Regulation (EC) No 555/2008 for the promotion of Santorini's wine to third countries.

At present, Santo participates in a three-year program to promote its wine in third, non EU, countries under the Commission Regulations (EC) No 3/2008 and (EC) No 501/2008. Also, Santo's R&D department is involved in research collaborative activities with Universities and research centres, seeking the optimization of cultivation techniques and vinification processes, and the quality improvement of their products.

Vine-growers of Santorini have been also benefited by a premium provided to the Aegean islands' farmers that produce important traditional local products. Under this policy scheme, the vine-growers of Santorini receive 625 €/ha in order to retain their activity. This policy scheme (Common Ministerial Decree No 297060/08-06-2007) is in accordance with the Council Regulation (EC) No 1405/2006 which laying down specific measures for agriculture in favour of the smaller Aegean islands and amending Regulation (EC) No 1782/2003. Moreover, the amount of 800,000 Euros from the Greek Rural Development Programme 2007-2013 funds (Action 4.2-Measure 214 "Agri-environment payments") is going to be allocated to the vine-growers of Santorini for the preservation of the island's distinctive vineyard.

Santo's strategic planning has been largely affected by the support measures described above. They provided the financial leverage that the cooperative needed to invest in infrastructure and the improvement of wine-making equipment in order to produce and distribute top quality wine, penetrate export markets, and establish a very popular and successful brand name.

3. Results

This section uses information gathered to provide insights as to whether the hypotheses stated in the beginning of this report are accepted or not, and discuss relevant policy issues informed by this case study.

3.1 Hypothesis Testing

Agricultural Cooperatives and Vertical Integration

H1: *A higher degree of vertical integration of cooperatives in a sector is positively associated with higher producer income.*
Given the information available, this hypothesis is supported. Santo has been able to guarantee and enhance the income of its farmer-members.

H2: *The cooperative as an integrated processor develops better products and promotes them so effectively as to increase market demand.*
This hypothesis is only partially accepted. The case cooperative has introduced a wide range of wines in the market. However, in acting as a competitive yardstick that disciplines IOF wineries, Santo accepts all member produce and thus it also sells medium quality wines. On the other hand, IOF competitors that seek to maximize their profits focus exclusively on high-end markets.

H3: *Agricultural cooperatives that are successfully involved in selling final, consumer products, have a higher chance of adopting innovative ownership, governance, and capital acquisition methods.*
This hypothesis is rejected as Santo has adopted traditional ownership, governance and capital acquisition structures. Probably the institutional environment in which the cooperative operates has constrained its ability to align its offensive strategies with corresponding ownership and governance structures. Alternatively, other factors, not focused upon in this report, might explain Santo's adherence to a traditional cooperative structure.

H4: *Agricultural cooperatives which collaborate with other cooperatives or IOFs do better, in terms of economic performance and services provided to their members.*
The recent strategic partnership agreement between Santo and Tsantalis seems to provide support to this hypothesis. However, a definite assessment of the impact of this agreement on Santo's economic performance will be feasible only after several years have passed.

Economic versus Social Goals

H5: *Agricultural cooperatives which focus primarily on achieving social goals do worse, in terms of economic performance, than cooperatives which focus primarily on achieving economic goals.*
There is not enough evidence to accept or reject this hypothesis. Santo acts almost as a spatial monopsonist and thus it can focus on achieving social goals in addition to economic goals without seriously jeopardizing its market position.

Second tier cooperatives

H6: *The federated cooperative structure (more than one tiers) is less efficient than the centralized one (one tier structure; farmers are directly members to the cooperative).*
This hypothesis is accepted since first-tier cooperatives are bypassed by their farmer-members who patronize directly the second-tier cooperative. As far as the structure of the cooperative is

concerned, the aforementioned support measures have not affected it. Given the cooperative's mandatory status, according to which all farmers of Santorini are obliged to be members in the cooperative, the establishment and operating rules of the cooperative are described by special laws. Therefore, the recent cooperative legislation (L. 4015/2011[2]) is not expected to affect the structure of the cooperative; Santo is not obliged to operate under this law and the decision of the cooperative's decision-making bodies is not to do so.

Table 1. Hypothesis Testing Results

H_1: A higher degree of vertical integration of cooperatives in a sector is positively associated with higher producer income	
Accepted	Santo has been able to guarantee and enhance the income of its farmer-members.
H_2: The cooperative as an integrated processor develops better products and promotes them so effectively as to increase market demand	
Partially Accepted	Santo has introduced a wide range of wines in the market. However, in acting as a competitive yardstick that disciplines IOF wineries, Santo accepts all member produce and thus it also sells medium quality wines. On the other hand, IOF competitors that seek to maximize their profits focus exclusively on high-end markets.
H_3: Agricultural cooperatives that are successfully involved in selling final, consumer products, have a higher chance of adopting innovative ownership, governance, and capital acquisition methods	
Rejected	Santo has adopted traditional ownership, governance and capital acquisition structures. Probably the institutional environment in which the cooperative operates has constrained its ability to align its offensive strategies with corresponding ownership and governance structures.
H_4: Agricultural cooperatives which collaborate with other cooperatives or IOFs do better, in terms of economic performance and services provided to their members	
Accepted	The recent strategic partnership agreement between Santo and Tsantalis seems to provide support to this hypothesis. However, a definite assessment of the impact of this agreement on Santo's economic performance will be feasible only after several years have passed
H_5: Agricultural cooperatives which focus primarily on achieving social goals do worse, in terms of economic performance, than cooperatives which focus primarily on achieving economic goals	
Not clear	Santo acts almost as a spatial monopsonist and thus it can focus on achieving social goals in addition to economic goals without seriously jeopardizing its market position.
H_6: The federated cooperative structure (more than one tier) is less efficient than the centralized one (one tier structure; farmers are directly members to the cooperative).	
Accepted	First-tier cooperatives are bypassed by their farmer-members who patronize directly the second-tier cooperative.

3.2 Policy Issues

- *Should public policies treat different types of cooperatives differently based on their ability to increase/stabilise farmers' income?*

Santo represents a unique type of cooperative, not found in other EU countries[3]. As a mandatory cooperative, it operates under a specially designed legal framework whose initial goal was to provide local farmers with an institutional means of correcting market failures. Therefore, the cooperative is by its nature treated differently than other cooperatives. Given that Santo has managed to stabilise and increase the income of its members (i.e., of all farmers on the island of Santorini), the public policy that afforded Santo a strong position in the market seems to be sound. On the other hand, new generations of members, who do not have a personal experience

[2] According to L. 4015/2011, all second-tier cooperatives should be restructured as either first-tier cooperatives or cooperatively-owned corporations. The choice is made by each cooperative's general assembly. Mandatory cooperatives have the right to decide whether they will keep operating under the previous cooperative law or will switch to the new law.

[3] Among OECD countries, mandatory cooperatives are found only in Australia.

of past times when their ancestors suffered from the opportunistic behaviour of sundry middlemen, may not realize the true value of membership in their cooperative. Further, IOFs seeking a dominant position in the wine supply chain may question the legitimacy of Santo's mandatory status.

- *Should public policies facilitate cooperatives in achieving a balance between economic and social goals and, if yes, in which ways?*

Unfortunately, the current case study does not seem to shed light to this issue. The predominant public policy approach in Greece is that cooperatives, by their very nature, serve both social and economic purposes without the first jeopardizing the latter.

- *Which public support measures (local, regional, national and/or European) have an impact on the development and success/failure of the case cooperatives?*

This issue is addressed in the section on relevant support measures.

Table 2. Policy Issues

PI 1: Should public policies treat different types of cooperatives differently based on their ability to increase/stabilise farmers' income?	
Yes	Santo represents a unique type of entrepreneurial collective action, not found in other EU countries. As a mandatory cooperative, it operates under a specially designed legal framework whose initial goal was to provide local farmers with an institutional means of correcting market failures. Therefore, the cooperative is by its nature treated differently than other cooperatives. Given that Santo has managed to stabilise and increase the income of its members (i.e., of all farmers on the island of Santorini), the public policy that afforded Santo a strong position in the market seems to be sound. On the other hand, new generations of members, who do not have a personal experience of past times when their ancestors suffered from the opportunistic behaviour of sundry middlemen, may not realize the true value of membership in their cooperative. Further, IOFs seeking a dominant position in the wine supply chain may question the legitimacy of Santo's mandatory status.
PI 2: Should public policies facilitate cooperatives in achieving a balance between economic and social goals and, if yes, in which ways?	
n/a	Unfortunately, the current case study does not seem to shed light to this issue. The predominant public policy approach in Greece is that cooperatives, by their very nature, serve both social and economic purposes without the first jeopardizing the latter
PI 3: Which public support measures (local, regional, national and/or European) have an impact on the development and success/failure of the case cooperatives?	
n/a	See the section on relevant support measures

4. Conclusions

The case examined in this report addresses a key research question: is structure a crucial determinant of strategy and vice versa, or other factors play a key role? The dominant paradigm in the world of corporate executives is that to develop a strategy, one needs to study and analyze the industry, as well as the institutional and competitive environment in which the company operates. Then, the strengths and weaknesses of your own company and these of the competition have to be assessed and, with these in mind, choose your own strategy and gradually build a competitive advantage either by offering a premium product/price or by pursuing low costs. There have been however, several cases in which a certain strategy shaped the industrial landscape and even created spill over effects to related industries. Moreover, organizations that face unfavourable conditions (i.e. overproduction, the aftermath of an economic crisis etc.) that are difficult to cope with, irrespectively of their available resource potential, have to contribute to the restructuring of the industry and the competitive environment. It is therefore part of an organization's leadership decision-making process to create appropriate governance structures within their organizations which allow them to produce sustainable economic performance.

Santo is a successful, vertically integrated, second-tier cooperative. Its product portfolio includes a wide variety of wines as well as other high-quality local food products. By assuming a competitive yardstick role, the cooperative has successfully supported and stabilised the income of its farmer-members who bypass their local, first-tier cooperatives and patronize directly Santo. In the past the federated structure was an efficient means of coordinating the wine supply chain on the island of Santorini. However, improvements in transportation, storage facilities and technologies adopted over the last decades have made the federated structure obsolete.

Collaboration with IOFs has been chosen by the board of directors of Santo as the most efficient strategy to reach the national and international markets. The key drivers of Santo's success include its vertically integrated business organisation and the dominant position the cooperative holds in the local wine supply chain due to its mandatory status.

The refinement of traditional cooperative practices and principles (Cook, 1997) has been proposed as a strategy chosen by many cooperatives in their attempt to deal with the problems facing their organizations. Santo cooperative have attempted to adjust to a changing industry by seeking and establishing strategic alliances, pursuing mergers with other cooperatives, rationalizing assets, and implementing innovative capital acquisition methods. Although the mandatory nature of the cooperative provides some advantage over competition, its management has timely realised that a refinement of the traditional principles and practices was required for the cooperative to survive in a volatile industry. Forming strategic alliances with IOFs, diversifying its portfolio by offering other products and easing-up the requirements stemming from the legislation on mandatory cooperatives for investor-owned wineries, are all part of the cooperative's refinement strategy. However, there are several factors that limit the effectiveness of a strategy, one being governance.

Finally, it is important to emphasize that Santo Cooperative has been less affected by CMO and CAP reforms as well as the overall economic crisis of the wine sector. There are two explanations for this: first, the cooperative has chosen the path of diversifying its production portfolio, by adding a few albeit unique products that can be sold at premium prices in specific markets (small tomatoes, fava beans etc.). Second, Santo's mandatory nature is an important factor that exerted a yardstick effect on competition. The logic behind the yardstick is that the cooperative will offer farmers more favourable prices because of its practice of providing members service at cost. Competing firms must match the cooperative's performance to avoid losing patrons to it (Hoffman and Royer, 1997). The competitive yardstick role of Santo has offered its members-patrons a shield of protection against market and price fluctuations.

How do the aforementioned conclusions inform the theory of cooperative firm but, primarily, the practice of strategy design and implementation in agricultural cooperatives? Despite a very common but apparently wrong perception, the adoption of a particular structure follows and is dictated by the strategy espoused by the cooperative's board of directors. Strategy in this context is the central, integrated, externally oriented concept of how a cooperative will achieve its objectives. Structures, rewards, processes, people hired, activities, and functional policies and profiles are supporting organisational arrangements. The particular choices made by a cooperative are further informed by the strategic analyses conducted, including industry, competitor, environmental trends, and an assessment of the cooperative's internal strengths, weaknesses, and available resources. The Santo case highlights the links and relationships between these concepts.

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Appendix A - Facts and figures of Santo cooperative

Year founded	1947
Tier	2nd tier
Structure	Holding
Turnover 2010(Mill)	5.6
N of members	14 cooperatives (2.500 farmer-members)
Area (ha)	1,300
Production (hl)	18,000
Bulk	30%
Packaged	70%
Market share	65% of Santorini , 8,05% of Wine Cooperatives, 2,14% market share
Market share of packaged	n/a
Activities	- Production - Packaging - Marketing and distribution: whole sale and retail - Supplies
Member services	- Counselling - Technical assistance
Brands	- Santorini Assyrtiko - Santorini Assyrtiko Grand Reserve 2007 - Santorini Assyrtiko Reserve - Santorini Nykteri - Nykteri Reserve - Santorini Vinsanto - Santorini Vinsanto Vin de Liquer - Santorini Vinsanto 4 - Santorini Vinsanto 8 - Santorini Ageri - Kameni - Athiri - Aidani Assyrtiko - Mavrotragano - Voidomato - Vedema - Imiglykos Santo - Mezzo - Nama - Santorini Nixterinos
Producer income	n/a
Focus on social goals	Protect Santorini's unique vineyard and landscape. Obtain the best prices for their producers.
Collaborations	Research collaboration with the Agricultural University of Athens.
	Collaboration with 4 IOFs: Participation in a three-year program to promote the vine in third countries under the Commission Regulations (EC) No 3/2008 and (EC) No 501/2008.
	Research collaboration with the National Agricultural Research Foundation (N.AG.RE.F.)
	Agreement with TSANTALI, one of the major Greek wine and spirits company. Under the agreement, TSANTALI assume the exclusive distribution and marketing of SANTOWINES products in Greece (except Santorini) and abroad. This is a prestigious alliance of business and innovation that spotlights the growing winemaking tradition of the island through the strategic use of knowledge, infrastructure and fixed export activity of TSANTALI in 55 countries around the world (Agrotypos, 2012).
Successfully selling final, consumer products	70 % packaged wine

Appendix B-Financial Data of Santo Cooperative