asociación española de historia económica

DOCUMENTOS DE TRABAJO

CHANGE AND DEVELOPMENT IN THE SPANISH WINE INDUSTRY, 1950-2009

José Miguel Martinez Carrión and Francisco José Medina-Albaladejo

DT-AEHE N°1006
www.aehe.net

June 2010[i]

asociación española de historia económica

DOCUMENTOS DE TRABAJO

CHANGE AND DEVELOPMENT IN THE SPANISH WINE INDUSTRY, 1950-2009

José Miguel Martínez Carrión * and Francisco José Medina-Albaladejo*

AEHE DT-1006, June 2010

JEL: N54, O33, Q13, L66

ABSTRACT

In recent years the European winegrowing regions have been carrying out deep changes in response to increasing international competition, outstanding the case of Spain. This study analyses the main sequences of changes the Spanish wine industry has undergone: the evolution of consumption; the role of exports; the spread of marketing and business organization; the factors that have been involved in the modernization of the wineries. An initial valuation leads us to conclude that it has been an authentic wine revolution in reference to the transformations that have occurred in a period of farming changes and technological modernization for the business.

Keywords: Wine industry revolution, technological modernization, enological change, Spain, twentieth century

RESUMEN

En los últimos años las regiones vitivinícolas europeas han llevado a cabo una serie de profundas transformaciones en respuesta a la creciente competencia internacional, destacando el caso de España. Este estudio analiza las principales secuencias de cambio que ha experimentado la industria vinícola española: evolución del consumo, papel de las exportaciones, difusión del marketing, organización empresarial, factores que han intervenido en la modernización de las bodegas. Una valoración inicial nos permite concluir que en las últimas décadas se ha producido una auténtica revolución vinícola en referencia a las transformaciones ocurridas en las explotaciones vitícolas, cambios enológicos y modernización tecnológica de las empresas.

Palabras clave: Revolución vitivinícola, modernización tecnológica, cambio enológico, España, Siglo XX.

* Professor of Economic History; Address: Applied Economics Department, Faculty of Economics and Business (Universidad de Murcia). Campus Espinardo, 30100, Espinardo (Murcia, Spain); Tlf. 868883832 E-mail: jcarrion@um.es

* PhD candidate of Economic History, with a research fellowship (FPU, Ministerio de Educación de España); Address: Applied Economics Department, Faculty of Economics and Business (Universidad de Murcia). Campus Espinardo, 30100, Espinardo (Murcia, Spain); Tlf. 868888752; E-mail: fjmedina@um.es

INTRODUCTION*

Since the 1980s the traditional European winegrowing regions have been carrying out deep changes in response to the onslaught of winegrowers in the New World. In recent years Spanish regions have been foremost in Europe in terms of change in areas turned over to wine production and distribution (Anderson, Norman and Wittwer, 2004). Some writers have gone so far as to talk about a "revolution in the vineyards and wines of Spain" in response to increasing international competition. The changes have been prolific since Spain's entry into the European Economic Community in 1986. European agricultural policies supposed a huge readjustment in the geographical distribution of Spain's vineyards and it had a significant effect on the regions in the country which were involved in the regulation of the wine market. This study analyses the main sequences of changes the Spanish wine industry has undergone: the evolution of consumption through the changes in consumer drinking habits; the leading role of exports in international markets; the spread of different types of marketing and business organization; the distribution in large and small sellers, and the main factors that have been involved in the chain of production and in the modernization of the wineries.

1. CHANGES IN CONSUMER HABITS

1.1 The fall in wine consumption and the arrival of new drinks

Wine consumption underwent broad changes on a world level during the second half of the twentieth century. Old World countries (France, Italy, Spain and Portugal), huge producers and consumers since the end of the nineteenth century (Pinilla and Serrano 2008, Unwin, 1991), witnessed a steady, general decline in the last third of the twentieth century. In contrast, the New World countries (United States, Chile, Argentina, Australia, New Zealand or South Africa) saw an increased demand as of the 1980s, as would Northern European and Asian countries later (Anderson, 2004). However, this increase in new producer countries has not offset the decrease in

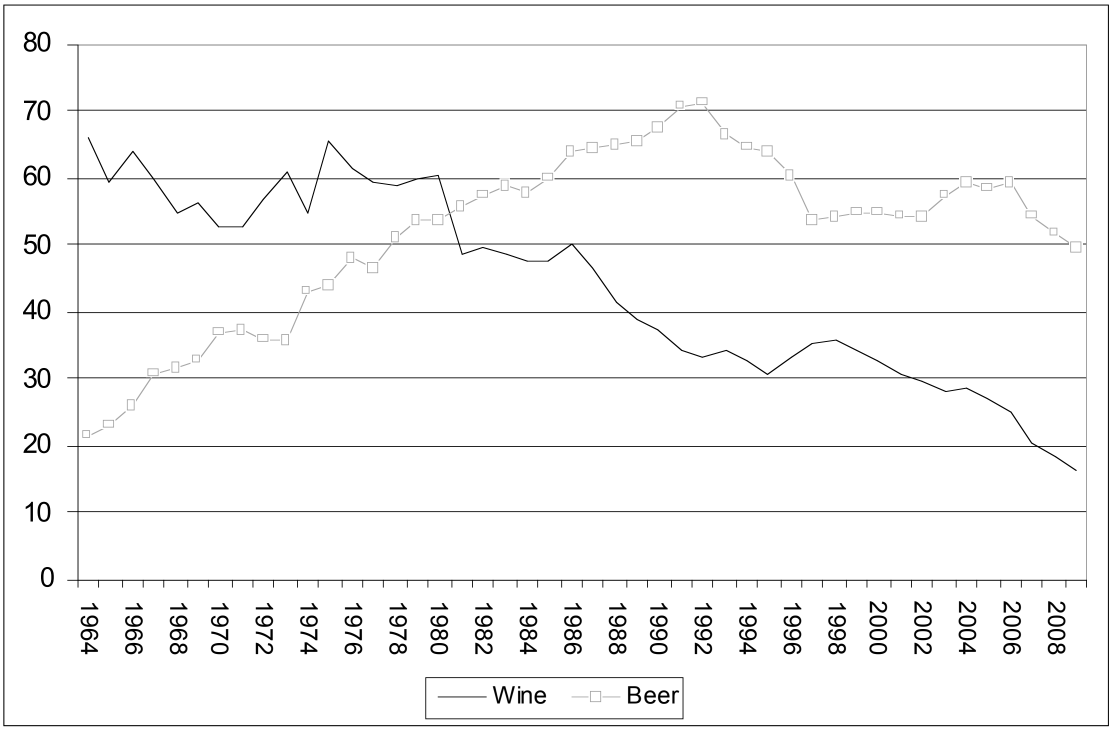
* This study was performed under research projects *00681/PI/04, 11992/PHCS/09* (Fundación Séneca, Región de Murcia) and *SEJ 2007-60845* (Ministerio de Ciencia e Innovación de España). This paper was presented at 35th Economic & Business Historical Society Conference Conference 2010, Braga, May 27-29.

traditional ones, and worldwide consumption fell from 286.56 million de hectolitres in 1979 to 244.90 in 2008, while there has been a 14.54% fall in wine consumption in this period (Organisation Internationale de la Vigne et du Vin, 2008).

Spain's high consumption of wines remained practically unchanged up to the 1960s, when considerable changes in Spanish drinking habits would begin to come in. In 1964 consumption stood at 66 litres of wine per capita, as opposed to 21.5 litres of beer, making wine the number one drink in the country. But the situation was to change in just a few years. From the mid 1960s to the end of the 1980s the per capita consumption of beer rose steeply while that of wine remained at the same levels (see Figure 1). Wine consumption has since fallen sharply from the 1980s to the present day.

FIGURE 1

EVOLUTION OF WINE AND BEER CONSUMPTION IN SPAIN, 1964-2009 (LITRES PER CAPITA)



Source: Ministerio de Agricultura (1950-1971); Ministerio de Agricultura, Pesca y Alimentación (1972-1997, 1987-2009). Own elaboration.

Wine consumption in Spain has followed much the same course as that in other traditional producer countries of Europe. The growth during the 1970s was followed by quite a sustained decline in the last decades of the twentieth century and through to the dawn of the twenty-first. Wine ceased to be the main drink in 1981, behind beer and soft drinks. The per capita consumption of 48.7 litres of that year would drop to 32.7

litres in 2000 and to 16.5 litres in 2009. In 28 years it had fallen by 66.22%, sufficient for it to be overtaken by mineral water, the drink that today occupies the top spot.

What lay behind such a radical change in consumer habits in Spain? José Morilla (2001) informs us of the simplified demand models according to prices and income, and their limited predictive ability in the case of wine. This is due to differentiation trends in this product, the regulations in its markets, moral, legal and social interferences, and irreversible demand curves of a lot of consumers. Therefore, we have to search for other kinds of causes to explain these transformations in the wine consumption trends. The simple changes in income or prices are not valid, although cultural and social factors are important (Bardají, 1992; Golan and Shalit, 1993; Labys, 1976; Lecocq and Visser, 2006; Oczkowski, 1994; Tapli and Ryan, 1969; Troncoso and Aguirre, 2006).

There are several reasons for this general evolution in Spain. First, the rise in income and the higher standard of living in this country due to the industrialization and urbanization processes. This is not related to a higher purchasing power, but to a population which is much more concerned about health and fitness, and therefore a lower consumer of alcoholic drinks. Other factors are the changes in the age structure of population or the new substitute beverages, which are much better adapted to the demands of young, urban people (Barber, Dodd and Ghiselli, 2008).

During the last quarter of the twentieth century, wine competed with its main rival, beer, but also with fruit juices, mineral water, fizzy drinks and soft drinks. The climate of Spain accounts for the start of the tremendous upsurge of soft drinks in detriment to wine (Sainz, 1997), and this growth has been sustained by huge investments in advertising and marketing of substitute and complementary products that are controlled by huge multinational companies. This contrasts with the low commercial capacity of Spanish wine business sector, which, with its huge number of wineries and brands, is excessively atomized (Millán and Yagüe, 1997). New eating habits in Spain, with the emphasis on a healthy life and physical appearance, have also had an effect, as have other aspects like anti-alcohol advertising campaigns promoted by public administrations (Millán and Yagüe, 1997).

The fall in consumption is also seen as part of the progressive abandoning of the more traditional Mediterranean diet. Even though its virtues have been proclaimed by food experts and health institutions in recent years, it has been losing ground for three decades against the surge of fast and ready-to-eat foods. This may explain why the Ley de la Viña y el Vino de 2003 (Vine and Wine Act) put emphasis on the close relationship between wine and the Mediterranean diet (Manteca, 2003). The substantial changes to the diet have been an increase in lipid intake with an ever greater presence of meats, fish, eggs, oils and dairy products, and a decrease in the consumption of cereals, fruits, vegetables, pulses or wine (Rodríguez Artalejo, Banegas, Graciani, Hernández and Rey, 1996).

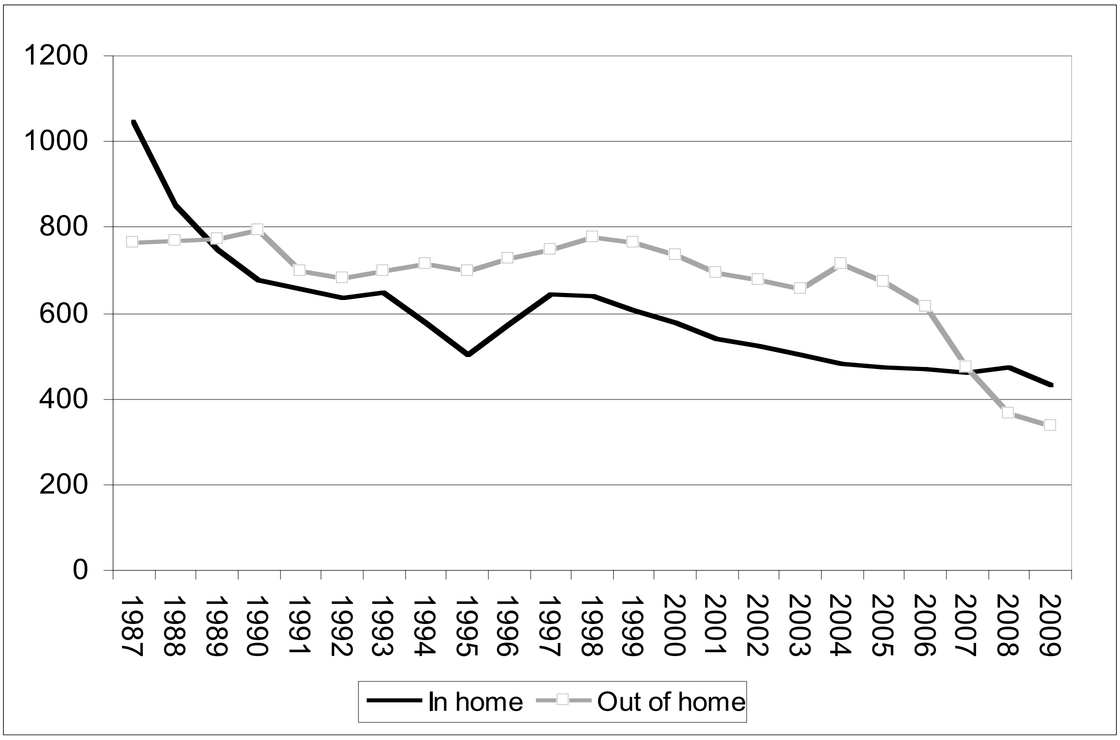
1.2 Structure of wine consumption during the last quarter of the twentieth century

A detailed analysis of the structure of the demand for wine is useful in understanding the sharp fall in consumption over the last decades of the twentieth century and the new habits of the Spanish population. A breakdown of consumption according to product type (table, appellation of origin, sparkling wines, and others), reveals significant changes that reflect a clear trend towards quality wines. In 1987, 78.11% of wines consumed in Spain were normal or table wines, 13.5% were appellation of origin, while by 2009, table wine had dropped to 49.20%, and quality wines had accumulated 38.02% of the share. According to these figures, the fall in wine consumption in Spain has been due mainly to the drop in demand for table wines (falling from 36.4 to 8.1 litres per capita over the period 1987-2009), while quality wines has remained in 6.3 litres per capita over the same period (Ministerio de Agricultura, Pesca y Alimentación, 1987-2009).

Another factor that needs to be considered is the evolution of the places in which the product is consumed as this also helps to understand the new wine consumption habits of Spain. In 1987, 57.8% of wine consumption in Spain was in the home, versus 42.2% outside the home or in the HORECA channel (hotels, restaurants, cafés etc.); while in 2004 home consumption had fallen to 40.4% (see Figure 2). The figures show that the overall trend in consumption has shifted towards out-of-home channels, where around 70% of appellation of origin wines is consumed, although in-home consumption of quality wines is rising considerably (Mahlau and Mili, 2003; Ministerio de Agricultura, Pesca y Alimentación, 1987-2009). In recent years, the advertising campaigns of the government and a harder law against the intake of alcoholic beverages and driving has provoked the drop of the out-of-home consumption.

FIGURE 2

EVOLUTION OF WINE CONSUMPTION IN AND OUTSIDE THE HOME IN SPAIN, 1987-2009 (MILLIONS OF LITRES)



Source: Ministerio de Agricultura, Pesca y Alimentación (1987-2009). Own elaboration.

The end of the twentieth century saw a change in consumer habits, with a shift towards higher quality and higher priced wines that were healthy, of low alcohol content (Morilla, 2001), elaborated with new winemaking technologies and consumed in restaurants and bars. Today the average consumer is under 50 years old, of high cultural level, holds a university degree and has an average to high income. The consumer has converted the purchase of wine into a carefully thought out process and its consumption is an integral part of a gastronomic ritual which is of an occasional nature (Millán and Yagüe, 1997). Although more in-depth studies are required, this profile of the contemporary consumer contrasts sharply with that of the traditional consumer, who was older, opted for more common wines of lower quality and price, and who preferred wines of higher alcohol content, although recognizing quality wines.

The new typical consumer that emerges is highly in tune with the recent health benefits that experts attribute to wine. He considers that moderate consumption will help to bring down levels of fat and cholesterol in blood and that wine is a powerful ally against cancers and oxidants while also serving as cardiovascular protector (Agrawal, Halaweish and Dwivedi, 2007; Renaud and Lorgeril, 1992). These properties are found especially in the tannins of high quality red wines and the consumption of these is on the increase probably because of the newly discovered attributes of this traditional Mediterranean product (de la Torre, 1997).

In short, the dawn of the twenty-first century is witness to new models of wine consumption which are in line with the new, worldwide, eating habits which were adopted during the last quarter of the twentieth century and which favour eating out more and suppose an appreciation of quality, variety and convenience in detriment to general and quantitative attributes. Eating in general is moving more and more towards products of higher quality that are safe and natural, and eating out in restaurants and the like has increased (Mili, 2005). The changes in wine consumers' habits described are not, therefore, isolated, but respond to an overall pattern of food consumption.

2. CHANGES IN CULTIVATED AREA AND PRODUCTION

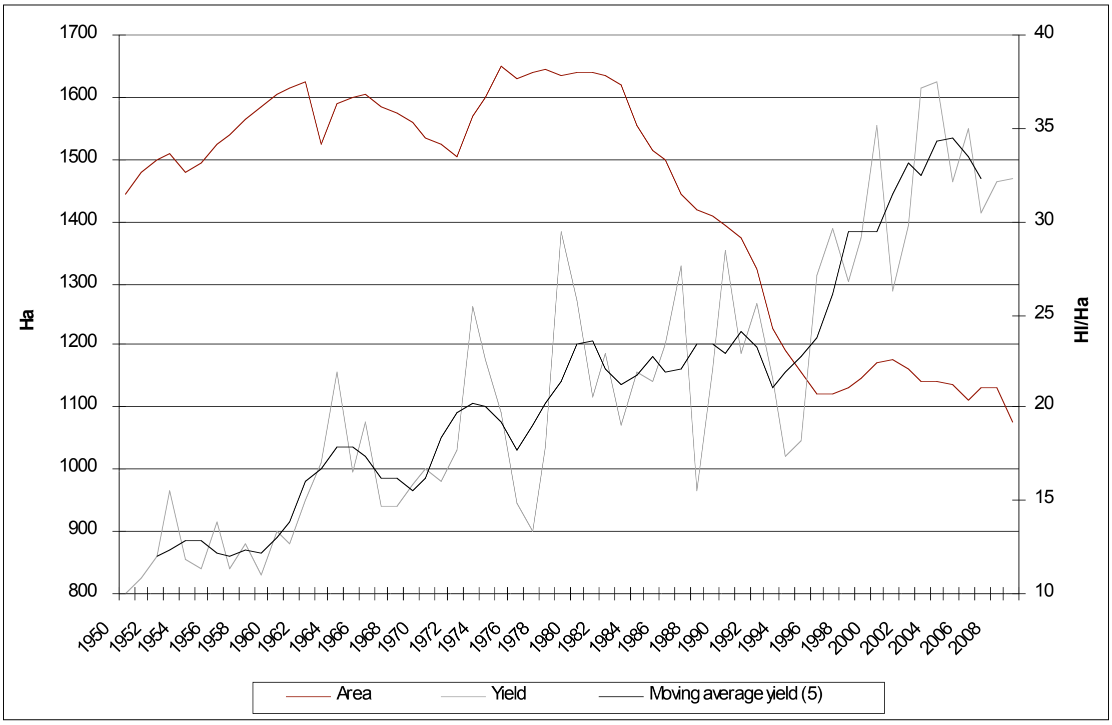
2.1 Adapting the area of vineyards to the new market conditions

Spanish vineyards have adapted to the new conditions. The adjustment has not been without problems because Spain is the country with the most area of land turned over to wine growing in the world, as well as being one of the leading producers of wine, after France and Italy. According to Faostat, despite spectacular advances in per unit yields, Spanish vineyards still rendered only 32.07 hectolitres per hectare in 2008, as opposed to 56.47 in France, 55.21 in Italy, 60.68 in the United States, 70.45 in Argentina, 85.06 in South Africa or 58,67 in Australia.

This adjustment was at the end of the twentieth century. Traditionally the sector had been characterized by an imbalance, which was produced by an excess supply for the demand. It is a problem that European and Spanish winegrowing had been prey to throughout the last century, and one that had led to widespread falls in prices and enormous build ups of surpluses (Pujol, 1986, Pan-Montojo, 1994). In order to strike a better balance in the wine market, the main European producers started, in the 1970s, a reconversion process by reducing the area turned over to winegrowing. Spain undertook the same process, although somewhat later, and it was as of 1980 that the area of vineyards began to be drastically reduced. Between then and 2009, a total of 565.100 hectares were dug up, a figure that represented 34.40% of the total area of vineyards 29 years earlier (Figure 3).

FIGURE 3

CHANGES IN AREA AND YIELDS OF VINEYARDS IN SPAIN, 1950-2009



Source: Ministerio de Agricultura (1950-1971); Ministerio de Agricultura, Pesca y Alimentación (1972-1997, 1998-2009). Own elaboration.

The strong contraction and reconversion of vineyards that are represented in Figure 3 had to do with Spain's joining the European Economic Community (EEC) in 1986. EEC membership supposed the acceptance of a firm policy of adjustment imposed by Brussels through the 1987 Common Organization of Wine-Market which was part of the Common Agricultural Policy (CAP). In recent decades, European regulation and normative have fostered the production of quality wines and restricted table wines. It was the driving force behind the subsidies for pulling up vines; it encouraged compulsory distillation, the method used to eliminate surpluses throughout the Union. The aim was to eliminate the less efficient vineyards, adjust the supply to meet the demand, and to reward the production of wines of higher quality.

Even with the heavy reduction in vineyards since 1987, the areas that suffered the most, because of their excessive growing areas, were Castile-La Mancha, Extremadura and Valencia, which represented high percentages of the total area in Spain, (50.39%, 8.08% and 7,07% respectively in 2009) (Ministerio de Agricultura, Pesca y Alimentación, 1998-2009). Given the prevailing climatic and soil conditions of some rural areas, it is difficult to replace the pulled up vines with other plants. The process has caused socioeconomic problems in some areas whose impact goes beyond the mere municipal level and affects whole regions, as has been borne out by recent studies.

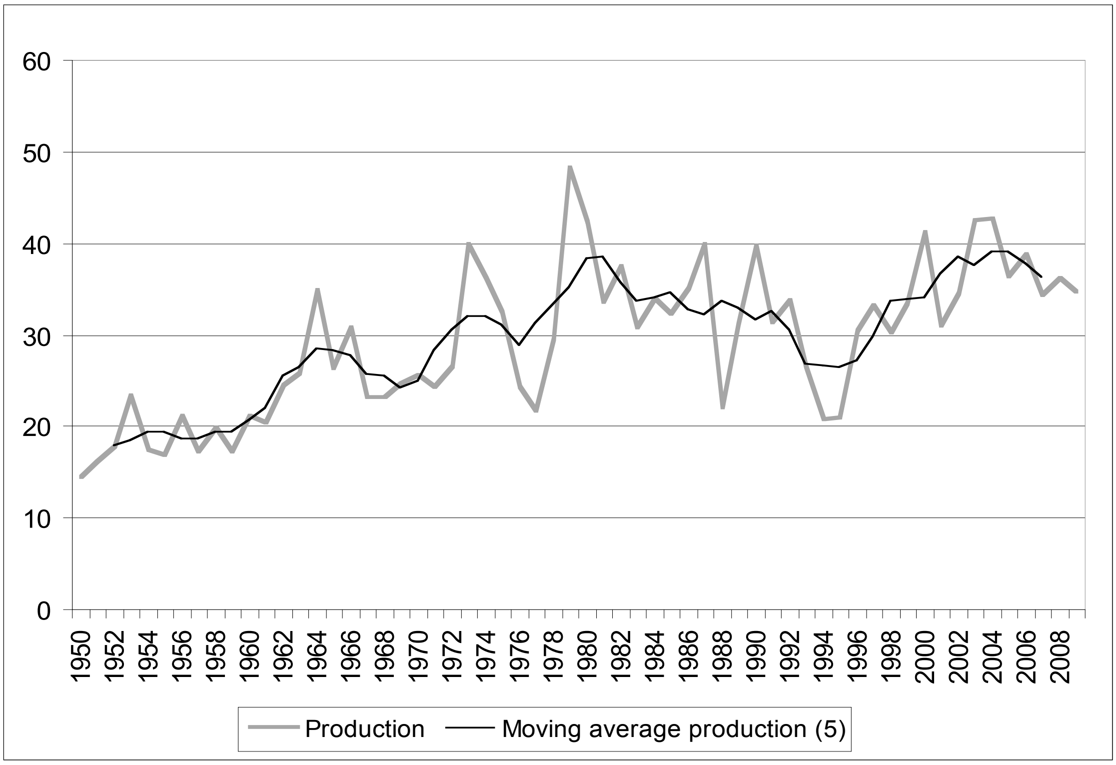
So what varieties finally predominated? The autochthonous varieties traditionally grown in Spain have been, in the case of white wines, airen (especially in Castile La Mancha), albariño (Appellation of Origin Rías Baixas, Galicia), pardina, macabeo and palomino fino (Andalusia), although there are other areas where xarello, moscatel de alejandría, pardilla and merseguera are found, and of less importance are the varieties verdejo (in Appellations of Origin Rueda, Castile and Leon) and zalema. While for reds, the areas that stand out are tempranillo, bobal (Appellation of Origin Utiel-Requena, Valencia), garnacha tinta (all in the north of Spain) and monastrell (south-east), followed by mencía, mazuela and prieto picudo. For rosés the only variety that stands out is mollar cano (Duque and Pérez-Camacho, 2006). However, recent years have seen the introduction of a series of noble varieties of non autochthonous character in many regions (Aragon, Catalonia, Navarre, Murcia, Valencia, among others), like cabernet sauvignon, chardonnay, merlot, syrah or petit verdot, and others which have been introduced with the aim of improving the quality of the wines and of offering products distinguish themselves from the best known Appellation of Origin (Rioja), which uses tempranillo as its main variety (Ferris, Viñegra and García Rivas, 2000).

2.2 Evolution of production and elimination of excess production

The reduction in winegrowing areas has had important knock-on effects for the stocks of wine but it has not supposed a greater balance in wine production nor has it solved the structural problem in Spain of excess wines. According to the data available, there has been no reduction in production levels (see Figure 4). Despite the heavy decrease in vineyards, coupled with the mid-1990s drought which seriously affected the size of the harvest and the amount of wine produced, the supply of wine at the beginning of the twenty-first century maintained the same optimum level of the 1970s. This together with a decease in production on the part of the two other European giants, France and Italy, has enabled Spain to reduce the differences in production levels with the major producer countries in the world to the extent that they now almost on a par. Nevertheless, the characteristic fluctuations of Spanish wine production remain (Figure 4). These are explained by the heavy dependence of the Spanish winegrowing industry on climate and by the widespread use of traditional growing practices (Roca, 1997).

FIGURE 4

EVOLUTION OF WINE PRODUCTION IN SPAIN, 1950-2009 (MILLIONS OF HECTOLITRES)

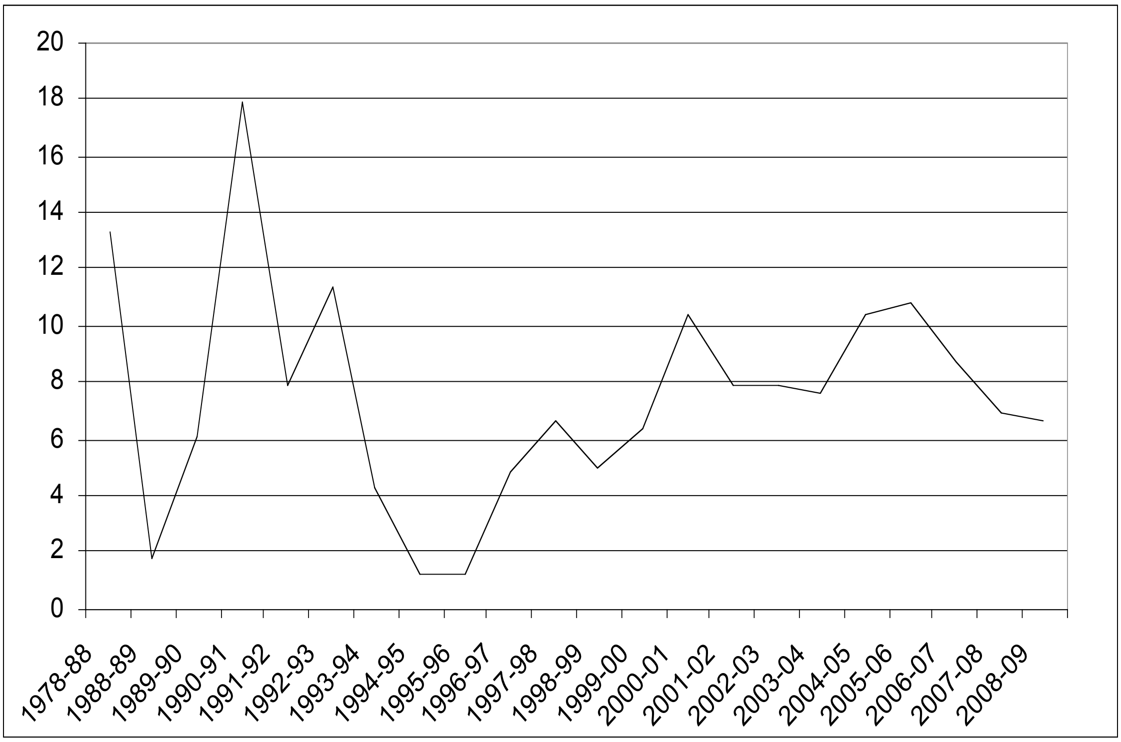


Source: Ministerio de Agricultura (1950-1971); Ministerio de Agricultura, Pesca y Alimentación (1972-1997, 1998-2009). Own elaboration.

The results show that the European policies to reduce production by incentivising the elimination of vineyards have not had the desired results in Spain. According to article 124 of the Treaty of Spanish EEC Membership, the mean production assigned to our country was 27.5 million hectolitres, above which it was compulsory to distil the alcohols. This figure has never been complied with except in the mid 1990s when the drought conditions had considerable effects on grape and wine production, and the figures stood well below the almost 35 million hectolitres of 2009. As can be checked from Figure 5, following the drastic fall in wine distillations in Spain in the mid-1990s, these have recovered and have reached around 8 million hectolitres, although up to 10 million on occasions. These figures mean that Spain is the leading generator of wine surplus in the European Union, receiving 78% during recent years of the financial aid available from the institutions. The areas of the La Mancha and Extremadura have been the most serious in terms of regions (Piqueras, 2006).

FIGURE 5

EVOLUTION OF WINE DISTILLATIONS IN SPAIN, 1978-2009, (MILLIONS OF HECTOLITRES)



Source: Ministerio de Agricultura (1950-1971); Ministerio de Agricultura, Pesca y Alimentación (1972-1997, 1998-2009). Own elaboration.

Has there been any penalization for these wine surpluses? The compulsory distillations are usually sold off by producers at prices fixed by the European Commission, in an attempt to "punish" wineries that produce surpluses. However, in certain areas of the La Mancha and Extremadura, these low prices have been more attractive and profitable than those paid for cereals, the sole alternative crop for these soils, so rather than punishing surpluses, the measure has fostered them, as has been pointed out (Piqueras, 2006).

2.3. Improvement in yields and technical innovations

The key to why Spain has increased its levels of production, in spite of the notable reduction in growing area, is the tremendous advance in per unit yields. This advance has been particularly apparent in those regions with greater areas of cultivation and has supposed the relative failure of the European policies aimed at reducing the supply and at getting a more balanced wine market.

Spanish wine producers saw yields grow by 85.28% between 1994 and 2009, and there has been an accumulated growth of 222.21% since 1950. The strong increase in per unit yields has meant that Spanish wines have ceased to be among the lowest in the world. Figures have risen from 13.24 hl/ha in 1960 to 25.81 in 1980 and to 32.29 in 2009. After this huge increase, the highest of the period along with new producers like Australia and South Africa, Spain now sits above the world averages for the first time, although it is still a long way off the figures of other countries, which stand at well over 50 and even 60 hl/ha. Although there is still leeway to improve yields, the advances in the second half of the twentieth century have been spectacular if we take into account the low initial level in 1950 of 10.02 hl/ha (Figure 3).

The reasons for this improvement lie in the considerable technological transformation that the sector as a whole has undergone since 1980. The modernization of wine growing has benefited from new irrigation systems (drip irrigation), especially in water stressed areas, and from mechanized processes to prepare the land and in the harvest. At the same time there has been a search for more suitable and more productive varieties of better quality in line with the climate conditions of each region. These varieties have included the noble non autochthonous ones of international renown like the above-mentioned cabernet sauvignon, chardonnay, merlot, syrah or petit verdot.

There has also been a technological improvement of winemaking processes. Better raw materials have been selected for quality wines and new techniques have been employed during the pressing process (soft pressing, etc.), fermentation (stainless steel tanks, etc.) and maturing (use of barrels, etc.), all of which has supposed the abandoning of traditional practices (Loubère, 1990).

In short, Spanish wine producers have made considerable efforts in investing in technology, research and human capital since Spain’s entry into the EEC in 1986. These efforts have been aimed at improving the wine production processes and at obtaining a product of higher quality and with greater added value. In the face of consumer demands and new international market conditions, Spanish wineries have reinvested profits considerably in times of increased costs and difficulties in foreign trade. Exports were put at around 100.000 million pesetas between 1986 and 1993, of which 40% were used to improve the production processes. The subsidies from European institutions also favoured this phenomenon (Menéndez de Luarca, 1994-95). In terms of the autonomous communities, Castile-la Mancha stands out as it accounts for 34% of the total Spanish investment during the period mentioned. This has some justification in that it is the most extensive of the winegrowing regions of Spain. It is followed by Catalonia (14%), La Rioja (10%) and Andalusia (9%).

3. THE GROWTH OF WINE EXPORTS

3.1 Evolution, structure and geographical changes in exports

During the second half of the twentieth century international wine markets grew substantially and this coincided with an increase in consumption that accompanied the period of greatest economic growth, from the 1950s through to the mid-1970s (the so called "golden age"). It was a circumstance that favoured the increase in Spanish wine exports, although the greatest increase would be during the last three decades of the century.

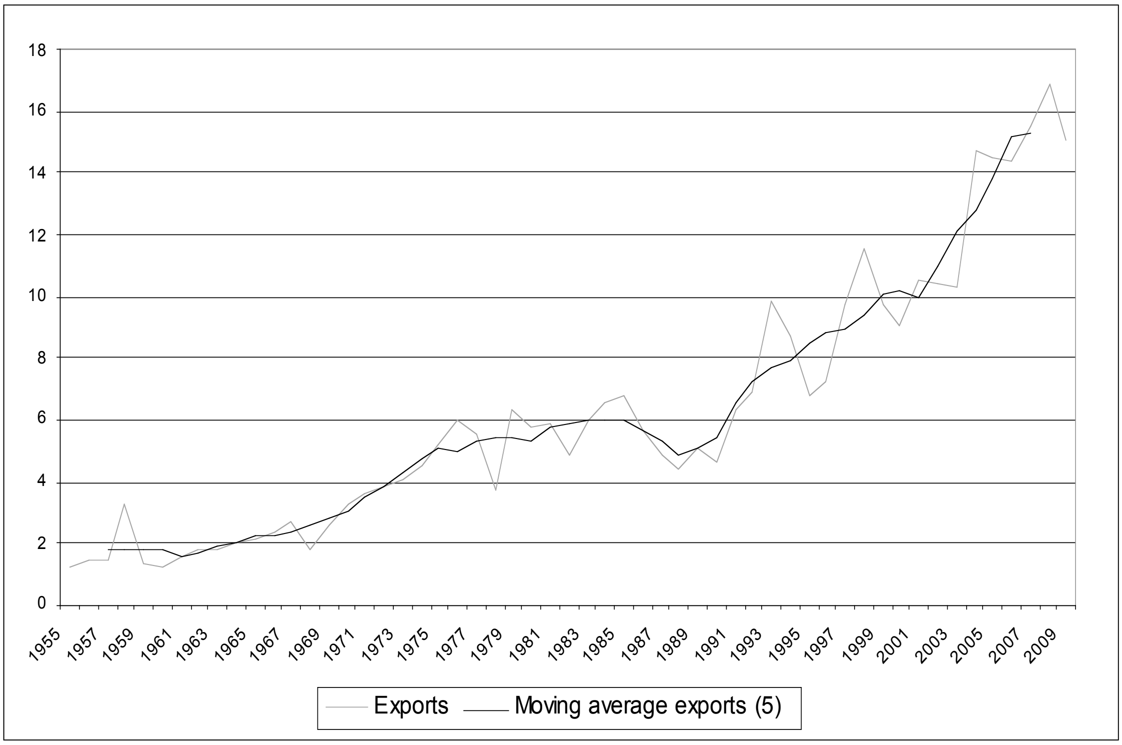
The traditional markets for Spanish wine in the twentieth century were European countries like Switzerland, Germany, United Kingdom and the Netherlands, the first two for red wines and the other for liqueur wines. But the Treaty of Rome and the creation of preferential agreements between member countries, which initially did not include Spain, meant that Spanish wines suffered in Europe. High customs duties and competition from EEC member countries like Italy all but pushed Spanish wine out of the potential markets of France or Germany (Piqueras, 1992).

In this scenario, Spain maintained its liqueur wine exports to Holland and the UK, and red wines to Switzerland. Exporters were forced to seek out new markets in areas of lower incomes like the Eastern European countries or the countries of the Gulf of Guinea, destinations that demanded in the main bulk export common wines. These markets led to overseas sales growing considerably in spite of the loss of the European markets mentioned above (Piqueras, 1992). In 1955 this country exported 1.19 million hectolitres of wine, and thirty years later, just before entry into the EEC, the figure reached 6.8 million. In spite of the custom duties difficulties set by EEC member countries, Spanish wine exports rose in total by 472.8% during the period.

The dynamism of the sector is reflected in the vigorous growth in exports. Figure 6 shows how there was a clear upward trend in Spanish wine exports throughout the second half of the twentieth century, although there was some stagnation in the second half of the eighties, brought about mainly by the fall in sales in the area of the Gulf of Guinea and in eastern Europe, as well as by the political and economic crises these countries were undergoing. Moreover, during the period in question the exchange rate of the peseta was revalued, which would harm Spain's competitiveness abroad, not to mention the biased treatment by the EU towards Italy in awarding bonuses for exports to third countries at a time when Spanish wines were 30% more expensive than Italian wines on the above-mentioned markets that were characterized by an ever reducing purchasing power (Piqueras, 1997).

FIGURE 6

EVOLUTION OF SPANISH WINE EXPORTS, 1955-2009 (MILLIONS OF HECTOLITRES)



Source: Agencia Estatal de Administración Tributaria (1955-2009). Own elaboration.

Despite the strong fluctuations in supply which had a determining effect on wine exports during the mid nineties, foreign sales underwent a later, very considerable, increase. The currency devaluations were instrumental in this as they improved the competitiveness of Spanish products abroad as compared to the years before. In general, the lifting of custom duties which accompanied Spain's entry into the European Union served to open up the European markets to Spanish wines.

The fluctuations registered in sales of wine at the end of the last century and the beginning of the present one are also explained by the composition of the products exported. A large part of recorded growth in exports has in some years been due to the bulk table wines demanded by the two great producer countries, France and Italy, which suffered a run of loss-making seasons, leading to the demand for Spanish wine to be used for *coupage* to shoot up. Are we therefore experiencing an increase in exports that is of a seasonal nature? The data advise prudence, but in any case, the rise in foreign trade does not respond to any large extent to the efforts of the Spanish winegrowers to get into the new markets and to develop consolidation strategies in existing ones (Ministerio de Agricultura, Pesca y Alimentación, 2003).

The appellation of origin wines that have had most influence on the rise in exports are Rioja, with 104.1% difference between 1987/88 and 2002/03, Cava (174.2%), Valencia (51.9%) and La Mancha (179.2%), aided by other areas like Utiel-Requena, Valdepeñas and Cariñena. In contrast, the areas that produce liqueur wines, the wines that traditionally have been exported and have been associated with Spain on foreign markets, have lost a lot of ground, for example, Jerez and Manzanilla (down 50.2%) and Montilla-Moriles (down 63.9%). So if we analyse the data according to type of product, we see that it is the smooth, natural, light low alcohol wines, especially the reds, that have had the greatest increase in demand abroad, which is in line with the new worldwide consumer preferences that were outlined at the beginning of this study.

These trends towards a greater weight of EU countries as receivers of appellation of origin wines are closely related. EU member countries (with the above-mentioned exceptions of France and Italy) demand higher quality, more expensive wines, in contrast to the traditional but less and less important markets of North Africa and Eastern Europe which, on account of their lower wealth, seek common wines (Piqueras, 1997). By the end of the period, it was Europe that had the highest concentration of wine sales, with the demand for quality wines of the United Kingdom, Germany and The Netherlands surpassing the traditional consumer countries of table and bulk wines. The United States market gains positions year after year and now sits just behind these three countries (Thach and Cuellar, 2007).

4. SPECIALIZATION AND BUSINESS STRATEGIES

4.1 Business structure

The Spanish wine historically has a business structure which is of a dual nature and heavily atomized since it is made up of small wineries, cooperatives and large businesses, the latter of which carry out the whole process from the vine through to sales (Yagüe and Jiménez 2002; Huetz de Lemps, 1967). In 1978 there were a total of 5,625 wine producing establishments registered in Spain, of which 5,570 employed fewer than 50 workers. Put in other terms, 99.02% was made up of small wineries or family businesses while 55 businesses employed over 50 workers, of which 26 stood out with more than 100, although none employed over 500 (Instituto Nacional de Estadística, 1978).

At the beginning of the twenty-first century, the Spanish business as a whole was dominated by small wineries in general of a family nature that limited their operations to local or regional spheres and did not have any commercial structures nor sales networks nor brands that distinguished them in the markets. They were excessively dependent on the distribution sector, which was highly concentrated and with a tendency towards vertical integration and towards creating its own brands. This harmed the wineries even more because there was an increase in the competition in some markets which were, in general saturated by an excess of supply and a fall in consumption (Gamble and Taddei, 2007; Yagüe and Jiménez 2002). A trend has appeared recently among the larger wineries specialized in ageing and bottling to invest in installations outside the national market and, especially, to set up plants in New World countries like Argentina and Chile, among others.

The network of wineries in Spain contrasts with the competitive business model of the new producers, especially the United States and Australia, where the regulation is freer and more flexible than in Europe and has allowed large *wineries* to be established (Cambolle and Giraud, 2003). These firms achieve mass production of an industrial nature with grapes from various places but which are of varietal homogeneity. These firms thus obtain important economies of scale, range, and a product of quality at very affordable prices (Folwell and Volanti, 2003; Gokcekus and Fargnoli, 2007). The firms are driven to invest heavily in technological improvements, promotion, advertising and marketing (Aylward, 2003; Green, Rodríguez and Pierbattisti, 2003; Jordan, Zidda and Lockshin, 2007).

Despite this atomization of the sector, important business groups are being developed in the traditional European producer countries. These groups are more concentrated and more oriented towards foreign market. The large firms have recently established business networks on a worldwide level in order to export quality wines. They are investing in appellations of origin, which means they are better placed to meet the competition in the new, more dynamic markets in Asia. Two good examples are Freixenet and Codorníu, which together account for almost 80% of the cava market. The main Spanish wineries, with a turnover of over 100 million euros, are J. García Carrión, S.A.; Freixenet; Codorníu, S.A.; Arco Bodegas Unidas, S.A.; Allied Domecq Wines Spain, S.A.; Miguel Torres, S.A.; and Félix Solís, S.A. Among these, those that stand out as the leading Spanish wine businesses in terms of overseas investment are Miguel Torres, Freixenet and Codorníu (Guillén, 2004). The first of these has spread through Argentina, Chile and the United States. The second has dominated exports of cava since the 1980s (accounting for some 70% of the total in Spain) and has become a true multinational, present through its many subsidiaries in all five continents (Spain, United States, Mexico, France, Australia, Germany, United Kingdom, Poland, Italy, Portugal, China, Japan and Cuba). Today Freixenet is number one in the world in the production of *méthode champenoise* sparkling wines (Valls, 2003, 2007, 2009).

4.2 Cooperative wineries

The spread of wine cooperatives took place in the 1950s and 1960s. By 1964 there were 600 cooperatives, accounting for 40% of the Spanish production (Piqueras, 1992). This growth was supported by the institutions of the Franco regime using the systematic policies of foundations carried out by the Organización Sindical (Syndicate Organization), which was based on loans, subsidies for installations and lending of money at low interest rates. All of these were aimed at modernizing the sector and at socially integrating the rural world, although they were also a useful tool for taking surpluses into administration and for regulating the market (Lachivier, 1988; Loubère, 1990; Martínez and Medina, 2008; Pan-Montojo, 2001, Simpson, 2000).

This growth trend has continued through to the present day despite the opposite trend in wineries that has been observed. The total number of cooperatives stood at 750 in 2005. They account for around 70% of wine production and some 80% of small and medium size winegrowers (Confederación de Cooperativas Agrarias de España, 2005). Today the cooperative sector is engaged in an all out crusade in the face of changes to domestic and foreign markets and the growing international competition (Langreo, 2003). They will need to change and extensively modernize their ways of production.

4.3 Specializing in quality wines and appellations of origin

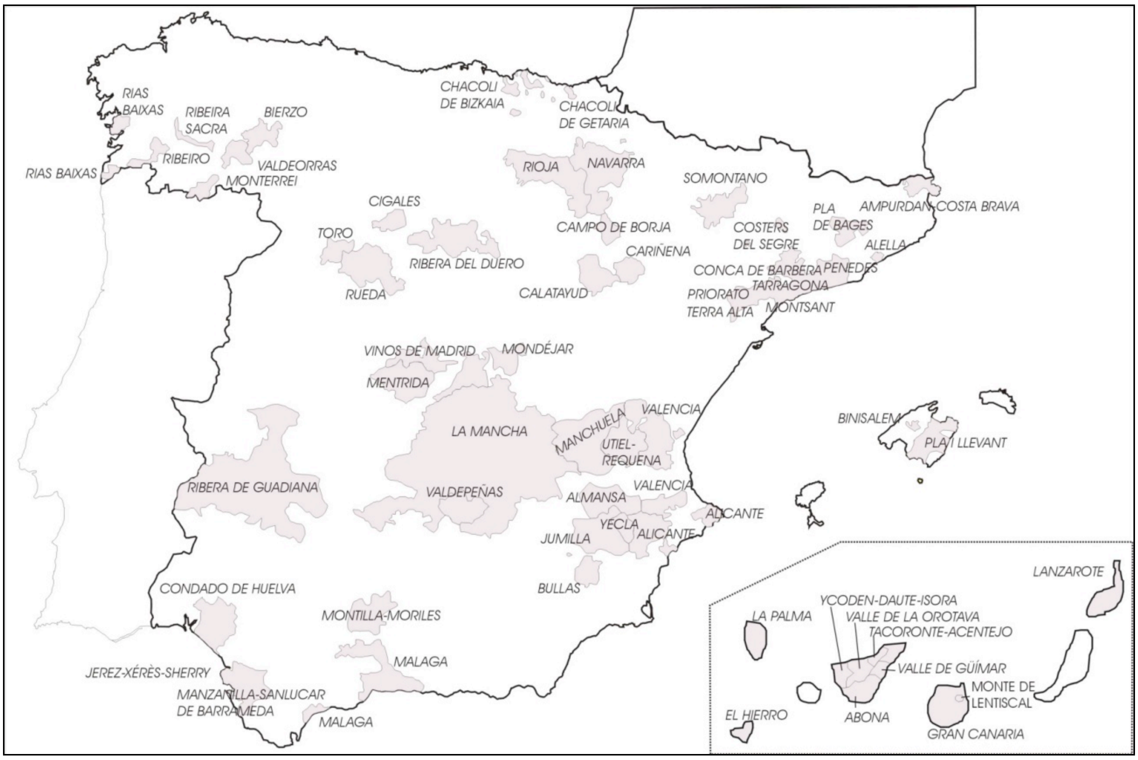
Among the processes to improve the quality of wine, the Appellation of Origin stands out. Set up in the 1930s, it has sought to protect the image and quality of products from a specific geographical area and with peculiar characteristics. In general they are known under European legislation as "quality wines produced in specific regions" (Qwpsr) (Leza, 1997). This description covers producers in a specific geographical area, it guarantees that they do not use grapes or wine from other areas, nor is any part of the winemaking process performed outside that area, including the ageing and bottling processes. It also certifies that winemaking processes are natural and that no sucrose is added to the wine in order to enhance the volume of alcohol through non wine processes.

By the end of the twentieth century the role of the appellation of origin wines was decisive. They have enabled small and medium size wineries to develop marketing and promotional strategies under collective brands both on the domestic and the international markets. This is something that would have been very difficult for them to do individually and it has been fundamental in maintaining levels of competitiveness and product differentiation in such markets. The main appellations of origin in Spain are: Jerez-Xérès-Sherry; Manzanilla Salúcar de Barrameda, Málaga, Montilla-Moriles, Rioja, Tarragona, Priorato, Alella, Utiel-Requena, Valencia, Alicante, Ribeiro, Cariñena, Penedés, Condado de Huelva, Valdepeñas, La Mancha, Navarra and Rueda, which were all created in 1932 under the Estatuto del Vino (Wine Statute) promulgated that year. Other noteworthy appellations would follow – Jumilla (1961), Campo de Borja (1977), Ribera del Duero (1979), Somontano (1980), Cava (1986), Toro (1987), Rías Baixas (1988), etc. (Ministerio de Agricultura, Pesca y Alimentación, 2006). There were 71 appellations of origin in Spain in 2006 and two of them hold the status of D.O.C (Qualified Appellations of Origin) – Rioja, since 1991 and more recently

Priorato, in 2000. This latter status supposes a total prohibition of bulk sales of any product produced in these areas, i.e. the products must be sold bottled (Sainz, 2002).

FIGURE 7

APPELLATIONS OF ORIGIN IN SPAIN



Source: Ministerio de Agricultura, Pesca y Alimentación (MAPA). Own elaboration.

In recent decades important wineries and some cooperatives have opted for differentiation strategies in the international markets, producing quality wines under the appellation of origin. This explains the great increase in the number of appellations of origin which has risen from 23 to 71 since the beginning of the 1970s. In short, in 35 years, 48 new appellations of origin have been created, as opposed to the 23 set up during the first 40 years of the regulation (Ministerio de Agricultura, Pesca y Alimentación, 2006).

4.4 New marketing strategies

Alongside the strategies of specializing in quality wines, the various Spanish appellation of origin wines undertook promotional and marketing activities on an individual basis during the late twentieth century. They acted as collective brands of solid character with restricted access while leaving the firms free to develop their own communication strategies (Bardají, 2003; Carbone, 2003; Johnson and Bruwer, 2007; McCutcheon, Bruwer and Li, 2009; Remaud and Lockshin, 2009; Schamel, 2009; Yagüe and Jiménez 2002). These strategies of image developed by the A.O. wines leaned heavily on the geographical area from which the product came. Emphasis was laid on their tradition, their quality, their distinguishing attributes and their benefits. This meant that a large number of wineries have developed promotional and marketing strategies at national and international level, something which with their low levels of capitalization they would never have been able to achieve as individual entities.

At the end of the 1990s marketing strategies at a national level began to be developed. An example of these was the creation of the "Wines of Spain" image by the Instituto Español de Comercio Exterior (ICEX) (Spanish Institute of Foreign Trade). The main aim of these strategies was to make the European consumer aware of the distinguishing attributes of Spanish wines, their great variety and, above all, their high quality. It was also intended to avoid the confusion caused among European consumers by the separate promotions of the various appellations of origin wines (Espejel y Fandos, 2009).

The use of Internet is still limited, although it is on the up. In 2000, only 5% of Spanish wineries presented their products on the Web, and very few of them were cooperatives, when these produce around 70% of all Spanish wines. The data reveal the scarcity technical and human capacity in promoting and in terms of new marketing strategies, which is what distinguishes the large wineries (Mahlau and Mili, 2003; Nowak and Newton, 2008; Thach, 2009). Other techniques like e-commerce remain almost unexploited since the majority of websites in existence are little more than informative; they merely present the product with information about prices, production, background, etc. and miss out on the possibilities of purchasing or distribution.

5. THE NEW CHALLENGES: PRESENT AND FUTURE

After a strong process of modernization winemaking experienced in the vineyards and Spanish wines for the past 30 years, the sector faces the most promising complex and numerous challenges. The recent increase in competition from countries of the "new world" and the fall in global consumption have not entailed changes in the rankings reached years ago. According to the reports of the OIV released in early 2010, Spain is still the leading country of vineyard plantings, the third largest producer and exporter of wine and even the fifth customer in the world.

But the effects of the impact of the recent global economic crisis may be important. During the Great Recession of 2008-2009, the decline in world wine production has been estimated in 0.5% by the OIV, and Spain and Argentina have the largest falls, over 10%. By contrast, France increases its production and replaces Italy in the first position in world production.

By regions, wine producing regions of low quality retreat. Castile-La Mancha, the most important region in area and production capacity shows the highest drop almost around 25% of its production, followed by sharp declines in Andalusia, Extremadura, and Aragon. On the contrary, quality wine regions -most renowned and recognized abroad- grow: Rioja, Navarre, Catalonia, and Castile and Leon. The fall in production is largely explained by the policy of elimination of less profitable vineyards that implements the European Union.

The major challenges of the Spanish wine sector are in foreign markets and are pending, as well as Europe as a whole, the reform of the *Common Market Organization (CMO)* provided by the European Commission next 2013. Among the main objectives of the reform include: a) continue the reduction of production by the elimination of vineyards in areas of lower yields and poor quality wines; b) limit the distillation and reduce financial aid to it, which is an important part of the EU budget for wine, and c) cope with superior wine competition from the New World.

Domestic consumption has no expectations of improvement in the coming years. In addition, the fall of out-of-home consumption has been strongly affected by the hardening law against drinking on driving, together with advertising campaigns by the institutions in this regard. Internationalization is configured as the best option for Spanish wineries. The increase in consumer demand in Northern Europe and the amazing potential of markets such as Asia or the U.S. could be exploited for wines with good value for money, one of the main competitive advantages of the recent Spanish wines.

The professionalization of the sector goes through improvement of quality of supply combining tradition and innovation in a highly competitive context. It is necessary to increase the size of firms and continue the process of business concentration which is being developed in recently, and also improve the position of cooperatives. This will allow wineries to be more competitive from the standpoint of production and trade. It is particularly interesting the implementation of new marketing policy, which demands innovative techniques such as e-commerce or marketing 2.0., and implements the processes of differentiation with the development of collective marks helping consumers and markets to clearly identify the product within the current complex system of appellations of origin and the companies' own brands.

CONCLUSIONS

An initial valuation of the evolution of the Spanish wine sector in the last decades of the twentieth century and up to the present day leads us to conclude that it has witnessed spectacular changes and, in some cases, there have been successful processes which have been accompanied by a high share of world markets. In just three decades, there has been a shift in national and international recognition of one or some traditional wine producing regions to a whole range of areas, places, municipalities and regions that produce excellent wines from various autochthonous and imported varieties of grape. Experts talk of an authentic wine revolution in reference to the transformations that have occurred in a period of farming changes and technological modernization for the businesses, the wineries and the cooperatives which had had surplus productions.

The difficulties for the sector have been due on the one hand to the demand. Wine consumption has showed a downward trend since the 1970s on account of the drive forward by substitute and complementary drinks (beer, soft drinks and mineral water) which today lead drink consumption. On the other hand, from the perspective of the supply, there has been the emerging production and commercialization of wines from the "New World" countries which have reached a strong competitive level in recent years. The result has been a strong contraction of the vineyards, fostered as well by the European policies to control the wine markets, which have aimed to correct the imbalance between supply and demand that is still present in the European winegrowing sector and which diminished the competitive capacity of its exploitation and businesses. In spite of advances in production lines, the historical problems persist. Exports are fragmented and business structure is atomized, there are deficiencies in management of the cooperatives which produce mainly bulk and low quality wines, as there are in the business and marketing strategies of many cellars of bottled and aged wines. Lastly, the improved quality of Spanish wines, as borne out by the increase in specifications regulating the Qwpsr wines, is not in line with the wines' still minority presence in foreign markets, because of the difficulty of establishing their own more efficient networks and of developing commercial and marketing strategies to favour its inclusion in international distribution chains.

REFERENCES

AGENCIA ESTATAL DE ADMINISTRACIÓN TRIBUTARIA (1955-2009) *Estadísticas del Comercio Exterior de España.* Madrid: Ministerio de Hacienda.

AGRAWAL, P.; HALAWEISH, F. and DWIVEDI, C. (2007) Antioxidant effects and drugs interactions of resveratrol present in wine, *Journal of Wine Research,* 18 (2), 59-71.

ANDERSON, K. (2004) *The World's Wine Markets. Globalization at work.* Cheltenham: Edward Elgar.

ANDERSON, K.; NORMAN, D. and WITTWER, G. (2004) The global picture, in ANDERSON, K. *The World's Wine Markets. Globalization at work*, Cheltenham: Edward Elgar, 14-55.

AYLWARD, D. K. (2003) A documentary of innovation support among New World wine industries, *Journal of Wine Research,* 14 (1), 31-43.

BARBER, N.; DODD, T. and GHISELLI, R. (2008) Capturing the younger wine consumer, *Journal of Wine Research,* 19 (2), 123-141.

BARDAJÍ AZCÁRATE, I. (1992) El consumo de vino, *Revista de Estudios Agro-sociales,* 162, 153-182.

BARDAJÍ AZCÁRATE, I. (2003) Quality wines in Spain, in GATTI, S.; GIRAUD-HÉRAUD, E. and MILI, S. (eds.) *Wine in the Old World. New risks and opportunities.* Milano: Franco Angeli, 73-84.

CAMBOLLE, C. and GIRAUD-HÉRAUD, E. (2003) Economic analysis of certification by an AOC, in GATTI, S.; GIRAUD-HÉRAUD, E. and MILI, S. (eds.) *Wine in the Old World. New risks and opportunities.* Milano: Franco Angeli, 15-28

CARBONE, A. (2003) The role of Designation of Origin in the Italian food system, in GATTI, S.; GIRAUD-HÉRAUD, E. and MILI, S. (eds.) *Wine in the Old World. New risks and opportunities.* Milano: Franco Angeli, 29-40.

CONFEDERACIÓN DE COOPERATIVAS AGRARIAS DE ESPAÑA (2005) *Observatorio socioeconómico del cooperativismo agrario español (OSCAE).* Madrid: CCAE.

DE LA TORRE BORONAT, Mª C. (1997) Ideas actuales sobre la composición del vino. Situación que apoya la hipótesis <<vino y salud>>, *Distribución y Consumo* (February-March), 67-73.

DUQUE, C. and PÉREZ-CAMACHO, F. (2006) El banco de germoplasma de vid inscrito en el registro vitícola español, *Actas del XXIX Congreso Mundial de la Viña y el Vino*, *Logroño (25-30 June 2006)*. Madrid: MAPA.

ESPEJEL, J. and FANDOS, C. (2009) Wine marketing strategies in Spain: A structural equation approach to consumer response to protected designations of origin (PDOs), *International Journal of Wine Business Research,* 21 (3), 267-288.

FERRIS, J; VIÑEGRA, M. and GARCÍA RIVAS, I. (2000) Introducción de variedades de vid de vinificación no tradicionales en España, in MALDONADO ROSSO, J. and RAMOS SANTANA, A. (eds.) *Actas del I Encuentro de Historiadores de la Vitivinicultura Española.* Cádiz: Ayuntamiento del Puerto de Santa María, 177-191.

FOLWELL, R. J. and VOLANTI, M. (2003) The changing market structure of the USA wine industry, *Journal of Wine Economics,* 4 (1), 25-30.

GAMBLE, P. R. and TADDEI, J. C. (2007) Restructuring the French wine industry: The case of the Loire, *Journal of Wine Research,* 18 (3), 125-145.

GOKCEKUS, O and FARGNOLI, A. (2007) Is globalization good for wine drinkers in the United States?, *Journal of Wine Economics,* 2 (2), 187-195.

GOLAN, A. and SHALIT, H. (1993) Wine quality differentials in hedonic grape pricing, *Journal of Agricultural Economics,* 44, 311-321.

GREEN, R.; RODRÍGUEZ ZUÑIGA, M. and PIERBATTISTI, L. (2003) Global market changes and Business behavior in the wine sector, in GATTI, S.; GIRAUD-HÉRAUD, E. and MILI, S. (eds.) *Wine in the Old World. New risks and opportunities.* Milano: Franco Angeli, 157-170.

GUILLÉN RODRÍGUEZ, M. (2004) La internacionalización de las empresas españolas, *Información Comercial Española,* 812, 211-224.

HUETZ DE LEMPS, Alain (1967) *Vignobles et vins du Nord-Ouest d'Espagne.* Burdeos: Féret & Fils.

INSTITUTO NACIONAL DE ESTADÍSTICA (1978) *Encuesta Industrial.* Madrid: INE.

JOHNSON, R. and BRUWER, J. (2007) Regional brand image and perceived wine quality: the consumer perspective, *International Journal of Wine Business Research,* 19 (4), 276-297.

JORDAN, R., ZIDDA, P. and LOCKSHIN, L. (2007) Behind the Australian wine industry's success: does environment matter?, *International Journal of Wine Business Research,* 19 (1), 14-32.

LABYS, W. A. (1976) An international comparison of price and income elasticities for wine consumption, *Australian Journal of Agricultural Economics,* 20, 33-36.

LACHIVIER, Marcel (1988) *Vins, vignes et vignerons. Histoire du vignoble français.* París: Fayard.

LANGREO NAVARRO, A. (2003) New strategies for Spanish quality wines, in GATTI, S.; GIRAUD-HÉRAUD, E. and MILI, S. (eds.): *Wine in the Old World. New risks and opportunities.* Milano: Franco Angeli, 53-72.

LECOCQ, S. and VISSER, M. (2006) What determines wine prices: Objective vs. sensory characteristics, *Journal of Wine Economics,* 1 (1), 42-56.

LEZA, L. F. (1997) Situación actual de la regulación de las Denominaciones de Origen de Vinos, *Distribución y Consumo* (February-March), 42-47.

LOUBÈRE, L. A. (1990) *The wine revolution in France.* Princeton: Princeton University Press.

MAHLAU, M. and MILI, S. (2003) Marketing strategies for Spanish wines: a comparative appraisal, in GATTI, S.; GIRAUD-HÉRAUD, E. and MILI, S. (eds.): *Wine in the Old World. New risks and opportunities.* Milano: Franco Angeli, 41-52.

MANTECA, V. (2003) El nuevo escenario normativo del sector vitivinícola, *Distribución y Consumo* (September-October), 94-105.

MARTÍNEZ-CARRIÓN, J. M. and MEDINA-ALBALADEJO, F. J. (2008) Innovación en el reino de monastrell. Cambio técnico e instituciones vitivinícolas en el sureste español, *Historia Agraria***,** 44, 53-88.

McCUTCHEON, E.; BRUWER, J. and LI, E. (2009) Region of origin and its importance among choice factors in the wine-buying decision making of consumers, *International Journal of Wine Business Research,* 21 (3), 212-234.

MENÉNDEZ DE LUARCA, S. (1994-1995) El esfuerzo inversor del sector elaborador de vino, *Distribución y Consumo* (December-January), 124-125.

MILI, S. (2005): Transformaciones del consumo alimentario y su repercusión en el sistema agroalimentario, *Revista de Estudios Agrosociales y Pesqueros,* 205, 221-247.

MILLÁN CAMPOS, A. and YAGÜE GUILLÉN, Mª J. (1997) Consumo de vino. Evolución y tendencias, *Distribución y Consumo* (February-March), 17-41.

MINISTERIO DE AGRICULTURA, (1950-1971) *Anuario Estadístico de Producciones Agrícolas.* Madrid.

MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACIÓN (1972-1997) *Anuario de estadística agraria.* Madrid: MAPA.

MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACIÓN (1987-2009) *La Alimentación en España.* Madrid: MAPA.

MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACIÓN (1998-2009) *Anuario de estadística agroalimentaria.* Madrid: MAPA.

MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACIÓN (2003) "Diagnóstico y análisis estratégico del sector agroalimentario español. Análisis de la cadena de producción y distribución del sector del vino". Madrid: MAPA.

MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACIÓN (2006) "Relación cronológica de los vinos de calidad producidos en región determinada cuya aprobación ha sido publicada en el Boletín Oficial del Estado", Madrid: MAPA.

MORILLA CRITZ, J. (2001) Cambios en las preferencias de los consumidores de vino y respuestas de los productores en los dos últimos siglos, in CARMONA, J.; COLOMÉ, J.; PAN-MONTOJO, J. and SIMPSON, J. (eds) *Viñas, bodegas y mercados. El cambio técnico en la vitivinicultura española, 1850-1936*, Zaragoza: Prensas Universitarias de Zaragoza, 13-38.

NOWAK, L. I. and NEWTON, S. (2008) Using winery web sites to launch relationships with Millenials, *International Journal of Wine Business Research,* 20 (1), 53-67.

OCZKOWSKI, E. (1994) A hedonic price function for Australian premium table wine, *Australian Journal of Agricultural Economics,* 38 (1), 93-110.

ORGANISATION INTERNATIONALE DE LA VIGNE ET DU VIN (2008) *Situation et statistiques du secteur vitivinicole mundial.* Paris: OIV.

PAN-MONTOJO, J. (1994) *La bodega del mundo. La vid y el vino en España (1800-1936).* Madrid: Alianza Universidad.

PAN-MONTOJO, J. (2001) Las industrias vinícolas españolas: desarrollo y diversificación productiva entre el siglo XVIII y 1960 in CARMONA, J.; COLOMÉ, J.; PAN-MONTOJO, J. and SIMPSON, J. (eds) *Viñas, bodegas y mercados. El cambio técnico en la vitivinicultura española, 1850-1936*, Zaragoza: Prensas Universitarias de Zaragoza, 313-334.

PINILLA, V. and SERRANO, R. (2008) The Agricultural and Food Trade in the First Globalization: Spanish Table Wine Exports 1871 to 1935 A Case Study, *Journal of Wine Economics*, 3 (2), 132-148.

PIQUERAS, J. (1992) El viñedo español entre 1940 y 1990. Medio siglo de cambios hacia la modernización, la calidad y la eliminación de los excedentes, in GIL OLCINA, A. (ed.) *Medio siglo de agricultura en España.* Alicante: Instituto de Geografía de la Universidad de Alicante, 85-114.

PIQUERAS, J. (1997) La exportación de vino de España. Los efectos de la integración en la Unión Europea, *Cuadernos de Geografía,* 61, 117-143.

PIQUERAS, J. (2006) El sector vitivinícola español y la PAC, 1986-2005: del optimismo a la crisis, in *Las agriculturas españolas y la política agraria comunitaria: años después* (Preactas del XIII Coloquio de Geografía Rural, Baeza, 4-6 October 2006).

PUJOL ANDREU, J. (1986) La crisis de sobreproducción en el sector vinícola catalán, 1892-1935, in GARRABOU, R.; BARCIELA, C. and JIMÉNEZ BLANCO, J. L. (eds.) *Historia Agraria de la España contemporánea,* vol. 3. Barcelona: Crítica, 317-346.

REMAUD, H. and LOCKSHIN, L. (2009) Building brand salience for commodity-based wine regions, *International Journal of Wine Business Research,* 21 (1), 79-92.

RENAUD, S. and LORGERIL, M. (1992) Wine, alcohol, platelets, and the French Paradox for coronary heart disease, *Lancet*, 339, 1523-1526.

ROCA, P. (1997) Factores condicionantes de la oferta española de vino, *Distribución y Consumo* (February-March), 8-15.

RODRÍGUEZ ARTALEJO, J. R.; BANEGAS, M. A.; GRACIANI, R.; HERNÁNDEZ DE VECINO, R. and REY CALERO, J. (1996) El consumo de alimentos y nutrientes en España en el periodo 1940-1988. Análisis de su consistencia con la dieta mediterránea, *Medicina Clínica,* 106 (5), 161-168.

SAINZ, H. (1997) Aguas, cervezas y refrescos. Un consumo marcado por la estacionalidad y el clima, *Distribución y Consumo* (June-July), 57-70.

SAINZ, H. (2002) Alimentos y bebidas con Denominaciones de Origen y distintivos de calidad, *Distribución y Consumo* (July-August), 58-73.

SCHAMEL, G. (2009) Dynamic analysis of brand and regional reputation: The case of wine, *Journal of Wine Economics,* 4 (1), 62-80.

SIMPSON, James (2000) Cooperation and cooperatives in southern European Wine Production. The nature of successful institutional innovation, 1880-1950, *Advances in Agricultural Economic History,* 1, 5-126.

TAPLI, J. and RYAN, W. (1969) The prospects for wine in Australia, *Quarterly Review of Agricultural Economics,* 22, 197-209.

THACH, E. and CUELLAR, S. (2007) Trends and implications for Spanish wine sales in the US market, *International Journal of Wine Business Research,* 19 (1), 63-78.

THACH, L. (2009) Wine 2.0 – The next phase of wine marketing? Exploring US winery adoption of wine 2.0 components, *Journal of Wine Research,* 20 (2), 143-157.

TRONCOSO, J. L. and AGUIRRE, M. (2006) Demanda y oferta de vino en el periodo 1980-2004: un análisis econométrico, *Panorama socioeconómico*, 44, 26-32.

UNWIN, T. (1991) *Wine and the vine: an historical geography of viticulture and the wine trade.* London-New York: Routledge.

VALLS JUNYENT, F. (2003) La indústria del cava. De la substitució d'importancions a la conquista del mercat internacional, in COLOMÉ FERRER, J. (coord.) *De l'Aiguardent al cava. El procés d'especialització vitivinícola a les comarques del Penedès-Garraf.* Barcelona: El 3 de vuit i Ramon Nadal editor.

VALLS JUNYENT, F. (2007) Compitiendo con el *champagne*. La industria española de los vinos espumosos antes de la Guerra Civil, *Revista de Historia Industrial,* 33, 47-79.

VALLS JUNYENT, F. (2009) *Champagne*'s rivals. The international competitiveness of *cava*: success of the firm or the district?, *XVTH World Economic History Congress*, *Utrecht (03-07August 2009)*.

YAGÜE, Mª J. and JIMÉNEZ, A. I. (2002) La denominación de origen en el desarrollo de estrategias de diferenciación: percepción y efectos de su utilización en las sociedades vinícolas de Mancha y Valdepeñas, *Revista de Estudios Agrosociales y Pesqueros,* 197, 179-204.