THE INTERNATIONAL VINICULTURE MARKET: A COMPARATIVE STUDY

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ABSTRACT

This study presents an analysis of international viniculture to explain the factors that contribute to the success of the wine business in both the New and the Old World. It also discusses the new challenges the traditional wine-producers face in competing in foreign markets. The recent trends show an increase in consumption in United States, but a decrease in some other markets. The long-term outlook for exports of wine for New World producers are predicted to improve. The results of the time series analysis (1985–2005) that were made on exports, imports, per capita consumption, total wine consumption, and production have allowed us to make reliable predictions of the wine industry in Spain, France, the United States, Argentina, and Chile.

INTRODUCTION

The international viniculture market has undergone a major transformation in the past twenty years in terms of competition, the imbalance between supply and demand, and new consumer demands, and this is forcing the traditional wine-producing countries to rethink their export strategy.

From a situation in which European wines were absolutely dominant in exports, things have changed to intense competition. Wines from the southern hemisphere are cornering a greater and greater share of the market because they are high-quality wines at very good prices. This has led the traditional wine-producing countries to consider new ways of producing so they do not lose the leading position held so far.

Aware that European wines must reinforce their position, the Common Wine Market Organization (CWMO) is developing instruments in order to, firstly, increase the competition in the viniculture sector—basically focusing on the problem of the existent imbalance in the European Union (EU) market between supply and demand—and secondly, to soften the regulatory framework and make it more efficient in terms of labeling and production (Bernal & Mercado, 2004).

INTERNATIONAL CONTEXT: WINES FROM THE OLD WORLD VERSUS WINES FROM THE NEW WORD

Globally, as much demand as supply of wine has undergone an important transformation. Consumption has diminished notably while supply increases incessantly, giving rise to an imbalance that could bring about a crisis in the sector.

Wines from the so-called New World are those produced in Australia, Chile, South Africa, New Zealand, the United States, Argentina, and some Eastern European countries. Since the 1990s, they have constituted the new protagonists on the international scene. The consumption and production of wines coming from Brazil, Peru, and Uruguay have been stagnant or in decline since the beginning of the present century. All together, the wines from the New World are rapidly increasing their share of the market at the expense of traditional European wines. Examples of this are Australia, which has gone from producing 3,110 hectoliters (Hl) in 2000, to 7,020 Hl in 2005; Chile, with a production of 650 Hl in 2000 to 827 Hl; and Argentina, from 12,060 Hl to 15,047 Hl for those same years.

At the beginning of the 1990s, European wines from the traditional producers—France, Spain, Italy, Portugal, and Greece—controlled 70% of the world production due to their tradition, prestige, and especially the minimum competition from emerging countries in the New World, whose share was then 15% of the world production. However, this European dominance has been weakened considerably in the past decade by the growth in volume and by way of the improved quality of wine exported by the new producer countries. Consequently, in 2003, the European wine producers saw their world production cut back to 65.4%, contrasted with the growth of the new wines, which are situated at 21%. It is necessary to mention the *success factors* of the wines from the New World that the authors will delineate from those shown by Gallardo (2004).

REGULATION

In European countries, there are numerous regulations in the viniculture industry and these regulations are too rigid, covering a wide field. In France, the varieties that can be planted in each region, the way in which the different varieties must be harvested, the information contained on the label, etc., are all regulated. The authorities point out that the objective of these regulations is to allow consumers to know what they are drinking, to protect tradition, and to maintain the prestige of the wine-producing regions. However, such regulations have affected the development of the industry. With respect to the countries from the New World, the regulations are fewer, and in the cases where they exist, they are much simpler than they are in Europe. This situation allowed these regions to adapt to new technologies and to the preferences of consumers, as well as to experiment with new varieties of grapes and production methods. All of that has given the new wine producers important advantages and greater flexibility in the market with respect to the producers from traditional countries. For that, the CWMO considers it of vital importance to carry out a profound reform with the aim of simplifying viniculture regulations and achieving greater international competition. The norms in the grape and wine-producing sector must be redefined, keeping in mind the diminishing and changing demand, to combine tradition with flexibility. That is, they want to achieve greater market orientation.

MARKETING

Nowadays, there is high consumer demand for Mediterranean wines because consumers believe there is no price-to-quality ratio. To a great extent, this is the consequence of pricing policies carried out in Europe. The wines of the New World are perceived as wines capable of satisfying the preferences of the consumers where the price-to-quality binomial does in fact seem to be met. Furthermore, these wines are characterized by their almost immediate drinkability, unlike European wines that spend a long years in casks. With respect to the required labeling already mentioned above, commercializing the traditional wines is complex, while emerging countries allow the consumer to select by the label. This is to say that the labels are clear and simple, and do not lead to consumer confusion. Designation of Origin (D.O.) is a prestigious product classification in Spain awarded to products like wine, cheese, and ham that are produced in designated areas and that follow strict production criteria.

COUNTRY IMAGE STRATEGY

The wine producers from the New World have presented country-brand strategies with the aim of favoring the image of these countries and stimulating wine sales abroad. Australia's strategy of "Marketing Decade" is worth highlighting, as are South Africa's "Vision 2020," the United States' "Wine Vision," and Chile's "Wines of Chile" (founded in July 2002) (Costa, 2004). Such strategies have not been carried out by the traditional countries or have not been projected correctly. In Spain, the idea of "Wines from Spain" or "Vineyards of Spain" has been launched with limited success because the producers of prestigious wines (those classified as D.O.) and the association of winery owners do not want to form part of an "umbrella" framework that would (according to them) damage their international reputation of quality. On the level of the European Union, we find sectors in which they point out the possibility of placing the logotype of the EU on bottles with the aim of strengthening promotion in foreign countries. Nonetheless, if such initiatives by the member states have not been successful on the European level because of the fragmentation of the industry, they might have even less success abroad or might not be carried out at all.

INDUSTRY STRUCTURE

In the traditional countries, fragmentation is evident. For example, in the year 2000, Bordeaux registered some 12,000 producers, the majority of them very small. That is to say, in a specific region, there were no dominant companies in the market. This contrasts with the few wineries in emerging wine-producing countries, which favors economies of scale and facilitates regular volumes of wine for the retailers. In 2003, Chile registered 85 exporting wineries, represented by two producer associations: Chilevid, with 42 vineyards, and Viñas de Chile, with 45 vineyards, responsible for 90% of the bottled wine exports, and around 90% of the domestic market (Müller, 2004). Competing with wines from the new wine-producing countries, European countries must promote measures in the private sector to draw up a common, wide-scale, exporting strategy and to establish incentives for the production of better quality wine and greater homogeneity. It is necessary to promote synergies in the wine-producing sector in European countries.

CULTURE

The central axis of European wines is the producer, who suffers from a loss of competitiveness by betting on tradition and prestige. The central axis of the new wine producers is the consumer, betting on innovation and a vision toward the future. The countries of the New World offer wines that are easy to drink, fruity, and that have other attributes that are highly valued by the present-day consumer (Hernández, 1997). The European Union has sent a message warning that the European vineyards must be adapted to the consumer if they want to attain more competitiveness.

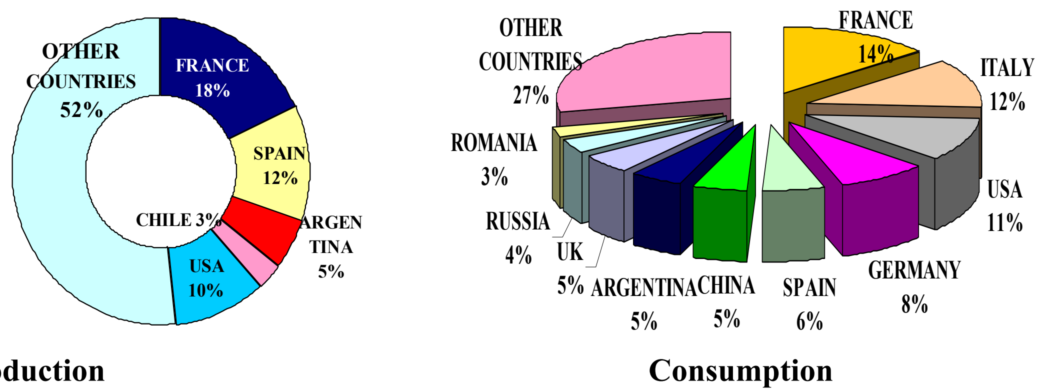
In conclusion, European wines must advance in each of the factors mentioned if the producers want to position themselves against emerging wines. The regulatory framework could contribute to those advances by strengthening promotion measures and by allowing for greater flexibility in labeling.

SECTORIAL VISION OF WINE

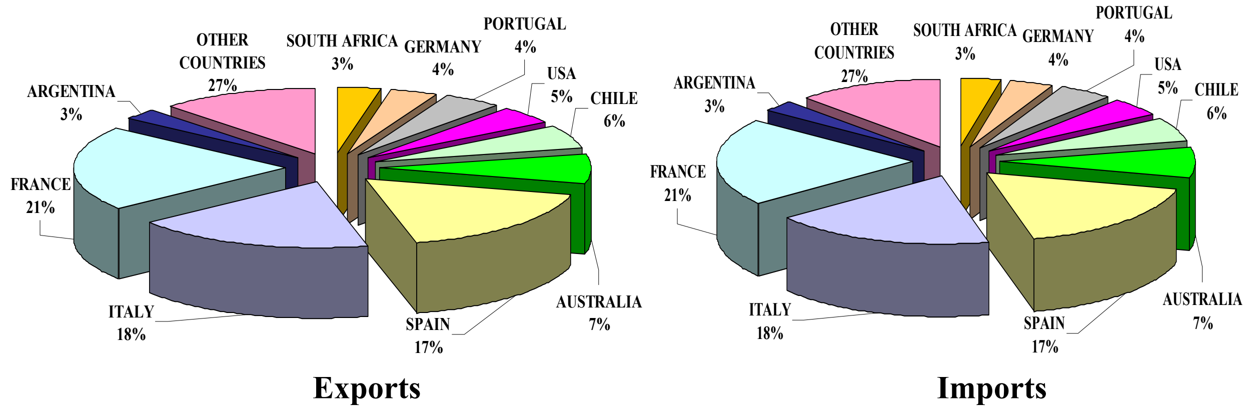
In 2005, the wine sector in Spain figured at 580,000 viticulturists, 4,055 companies within which there are 750 cooperatives producing 70% of the total and that directly employed 30,055 people, generating some 4,475 million euros (Ministerio de Agricultura, Pesca y Alimentación de España ([MAPA], 2006). According to data offered by the National Inter-Professional Office of French Wine (Office National Interprofessionnel des Vins [ONIVINS], 2007), in this same year, France had 118,586 wine-producing operations, employing 150,000 viticulturists in more than 4,500 companies of which 840 are cooperatives. As with Argentina, Chile has modernized the sector with significant investments, and the domestic wine consumption maintains more stable figures.

In 2004, Argentina has 26,011 wine-producing operations and 1,275 wineries with oak and modern casks. Its most distinguished product is definitely wine-in-bulk. In 2004, the price came down and the volume doubled. The country that receives the most Argentine exports is the United States (34% exportations in 2004), followed by Canada (8%) and Germany (6.7%) (Instituto Nacional de Vitivinicultura de Argentina [INV], 2006).

The production of wine in Spain during the 2004–2005 campaign rose to 34.75 million hectoliters (Hl), a record figure for Spain. Of that the 34.75 million, approximately 12 million Hl are allocated to domestic consumption (third consumer country, but not per capita, with 26.7 liters per person) (MAPA, 2006). This production record places Spain in third place in the world ranking, behind France and Italy. The total production of these three countries together represents 83% of the total produced in the 25 countries of the European Union (EU25), and more than 50% of the world total. EU25 produces more than 60% of the total wine production worldwide (the International Organization of Vine and Wine [OIV], 2005).



FIGURES 1 AND 2: WORLD PRODUCTION AND CONSUMPTION OF WINE IN 2005. Authors' own work from data offered by the International Organization of Vine and Wine, CORFO, ONIVINS, MAPA, OIV and INV.



FIGURES 3 AND 4: WORLDWIDE WINE IMPORTS AND EXPORTS IN HL. IN 2003. Authors' own work from data offered by the International Organization of Vine and Wine, CORFO, ONIVINS, MAPA, OIV and INV.

The tendency of Spanish and French exports is a drop in product volume and a moderate increase and decrease, respectively, in the value of wine exports. United States has steadily increased the consumption, exports, and imports during the last 15 years. The main importers of wines—United Kingdom, Germany, the United States, and France—are purchasing wines that are of more and more varied origin, in some cases diminishing the demand from traditional providers. The market loss of traditional countries leads us to a comparative sectorial study with New World countries.

TAB LE 1: SECTORIAL IMPORTANCE OF WINE IN THE COUNTRIES ANALYZED – YEAR 2005.

Principal sectorial data	Ranking Spain	Ranking France	Ranking USA	Ranking Chile	Ranking Argentina
Vine surface area (Ha)	1º 1,205,028	2º 846,859	6º 376,420	12º 175,365	10º 212,858
Wine production (Hl 000)	3º 34,750	1º 52,004	4º 20,109	10º 7,886	5º 15,222
Wine consumption (Hl 000)	5º 14,000	1º 34,000	3º 25,929	20º 2,500	7º 11,500

Principal sectorial data	Ranking Spain	Ranking France	Ranking USA	Ranking Chile	Ranking Argentina
Wine exports	1º	2º	23º	11º	10º
(Hl 000)	14,439	13,556	388,2	4,807	2,100
Wine imports	17º	1º	4º	30º	10º
(Hl 000)	336	5,514	6,415	93	2,932

Note. Authors' own work from data offered by the International Organization of Vine and Wine, CORFO, ONIVINS, MAPA, OIV and INV.

ANALYSIS OF THE DIMENSIONS OF APPARENT CONSUMPTION OF WINE IN FRANCE, ARGENTINA, CHILE, AND SPAIN 1985–2005.

The time analysis of the level of apparent consumption analyzed (total and per capita wine consumption, exports, imports, and production) includes the period from 1985 to 2007 in two countries from the New World (Argentina and Chile), and three from the Old World (Spain, EE.UU, and France). In all of them, with the exception of EE.UU, which has raised the third ranking position in the word, the per capita wine consumption has decreased in the 21 years considered. However, Chile currently maintains wine consumption figures similar to those from 10 years ago. In 2005, this figure stood at 17 liters per person per year, against 18 liters from 1994. Even so, this makes Chile a country of low wine consumption.

France is the biggest wine-consuming country in the world (in volume and per inhabitant) with clear differences with respect to the other three countries. Despite the per capita consumption stabilizing in the past 5 years, France has reduced its consumption by 38.45% in the past 20 years, going from 76.4 liters in 1985 to 52 liters in 2005. Argentina and Spain have had similar per capita consumption levels since 1994, despite both tendencies intersecting in that period on several occasions. If we look at the total volume consumed, both countries are equal throughout the series. Adding the total wine consumption from both countries, we obtain a figure somewhat inferior to that of the total consumption in France.

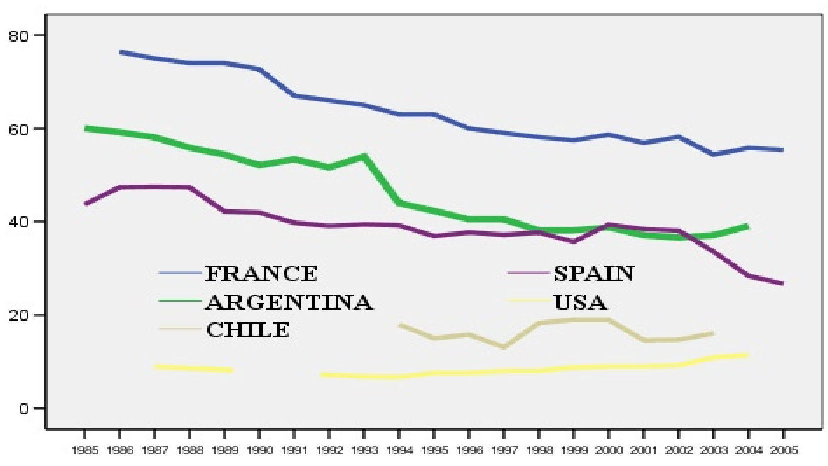


FIGURE 5. CONSUMPTION OF WINE PER CAPITA IN FRANCE, ARGENTINA, THE USA, CHILE, AND SPAIN (LITERS). Authors' own work from data from OIV, CORFO, ONIVINS, MAPA, and INV.

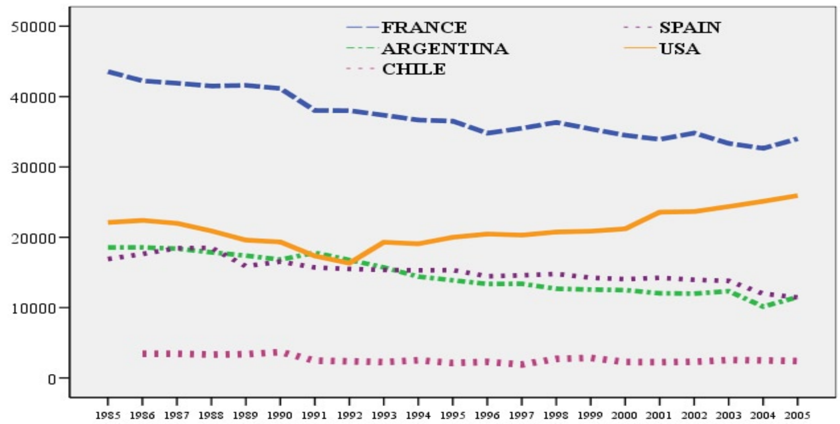


FIGURE 6. TOTAL WINE CONSUMPTION IN FRANCE, ARGENTINA, THE USA, SPAIN, AND CHILE (HL 000). Authors' own work from data from OIV, CORFO, ONIVINS, MAPA, and INV.

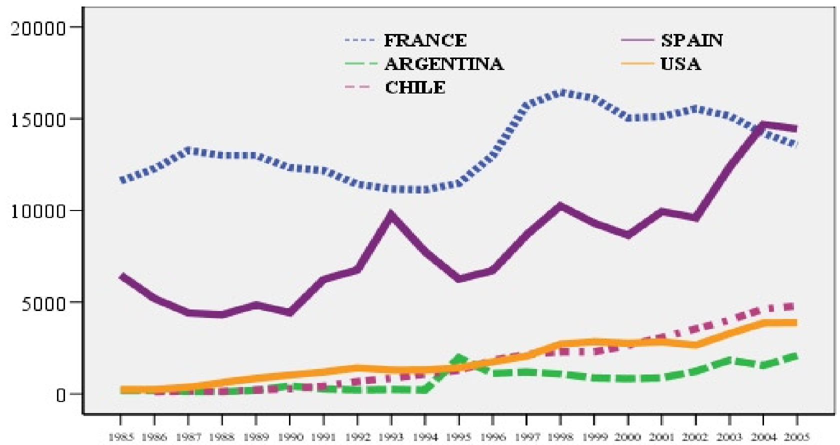


FIGURE 7. WINE EXPORTS IN FRANCE, SPAIN, THE USA, CHILE, AND ARGENTINA (HL 000). Authors' own from data from OIV, CORFO, ONIVINS, MAPA, and INV.

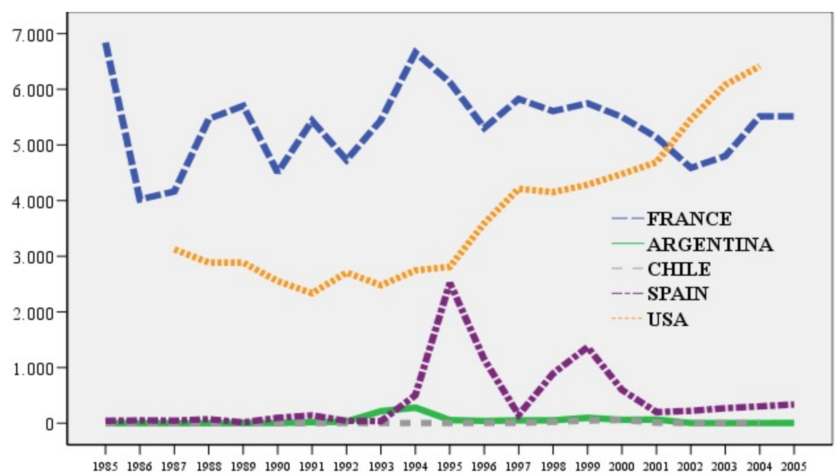


FIGURE 8. WINE IMPORTS IN FRANCE, SPAIN, CHILE, AND ARGENTINA, IN THOUSANDS OF HL. Authors' own work from data from OIV, CORFO, ONIVINS, MAPA, and INV.

Regarding foreign trade, Argentina and Chile have levels close to zero up until 1992. It is in exports where one observes sustained growth in the case of Chile, whose level of exportation in 2005 reached what was exported in 1991 by a traditional wine exporting country like Spain. The peaks of wine imports in Spain coincide with poor harvests. While, in 1995, that peak coincided with limited exports and production, paradoxically, in 1998, exports and imports recovered unexpectedly and production remained constant. This was due to the excellent quality of the harvest and to their juices. Although the volume of production and foreign trade in France is much higher than in Spain, their series maintained symmetry due to similar climatic conditions and because of the raw material of the two countries.

TIME SERIES ANALYSIS OF SPAIN

AUTOREGRESSIVES SERIES

Wine Consumption in Spain

The estimated model is an order 1 auto-regressive (AR(1)) without a constant end (given that it is not significant), of the form $zt = \varphi_1\ zt{-}1 + at = -\ 0{,}588\ z_{t-1} + at$ using a nonseasonal series transformed with two differences and logarithms. Modeling the series on AR(1) means that each observation is made on the previous, making a chain based on the past. It has been proven that the random disturbance of this model has no structure; therefore, the AR(1) model is the appropriate one. The predictions of the model are reliable given that its AR(1) structure helps to compensate for imbalances with respect to what was modeled. In this case, the per capita wine consumption in Spain was 11,446 Hl in 2005, while that modeled for this year adjusts the consumption to 10,981.73 Hl, and the prediction for 2008 and 2009 for consumption was 8,360.96 and 9,056.67 respectively.

TABLE 2: ESTIMATIONS OF THE PARAMETERS.

Nonstationary delays	Estimates	Std. error	*t*	Approx sig.
AR(1)	–.588	.199	–2.948	.009

Note. The Melard algorithm has been used for the estimates.

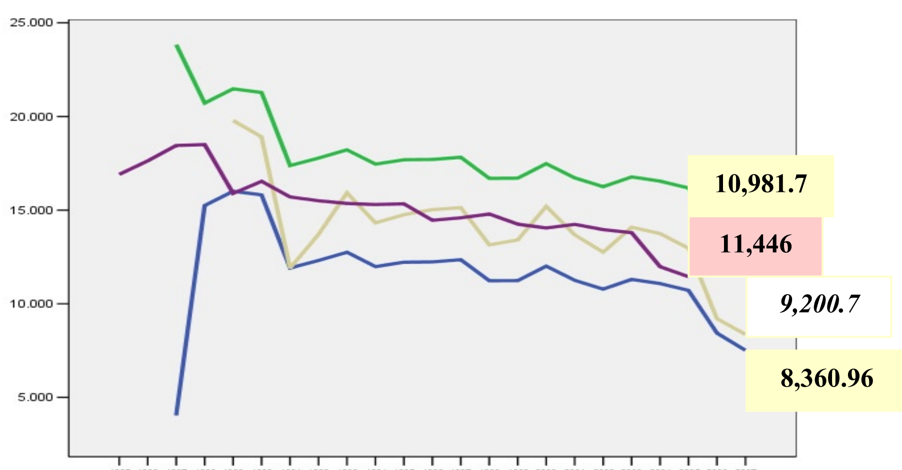
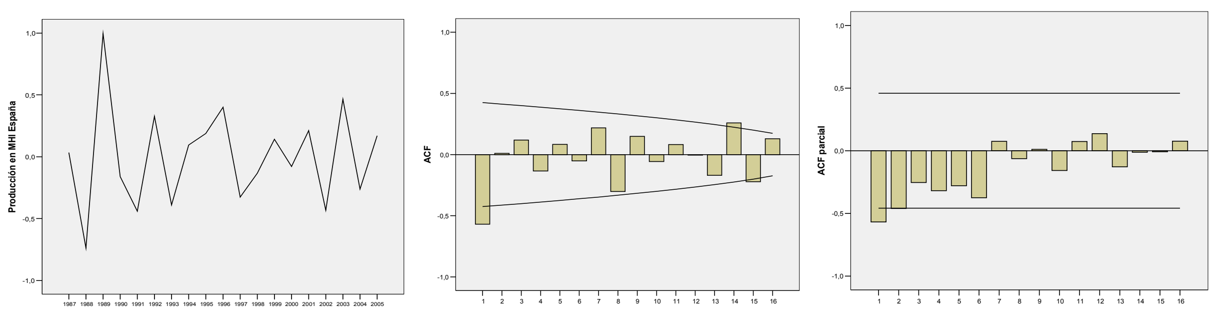


FIGURE 9: PREDICTION OF CONSUMPTION IN SPAIN IN 2006 AND 2007.

Wine Production in Spain

The estimated model is autoregressive of order 2 (AR(2)) without constant end (given that it is not significant), of the form: $zt = \varphi_1 z_{t-1} + \varphi_2 z_{t-2} + at = -0{,}937\, z_{t-1} - 0{,}550\, z_{t-2} + at$ using a nonseasonal series (see Figure 9) transformed with two differences and logarithms. Modeling the series on an AR(2) means that each observation is made directly upon the previous observation and continuing the pattern, making a complex chain based on 1 and 2 delays.

This means that wine production depends not only on the production of the previous year, but also directly on the production two seasons previous to that year. It also means that low production has indirect effects throughout the series and a direct effect on the following two years. It has been shown that the random disturbance of this model has a white noise structure. Therefore, the AR(2) model is appropriate. The predictions of the model are reliable given that its AR(2) structure means self-adjustments on what is modeled. In this case, wine production in 2005 was 49,200 Hl, while that modeled adjusts the figure to 48,881.48 Hl. In this way, it was estimated that in 2006 and 2007 that production would be 45,154 and 57,208 Hl, respectively.



FIGURES 10, 11, AND 12: TRANSFORMED SERIES (2 DIFFERENCES AND LOGARITHM), ACF, AND PACF.

TABLE 3: ESTIMATIONS OF THE PARAMETERS

Nonseasonal delays	Estimates	Std. error	*t*	Approx sig.
AR(1)	–.937	.196	–4.777	.000
AR(2)	–.550	.193	–2.852	.011

Note. The Melard algorithm has been used for the estimates.

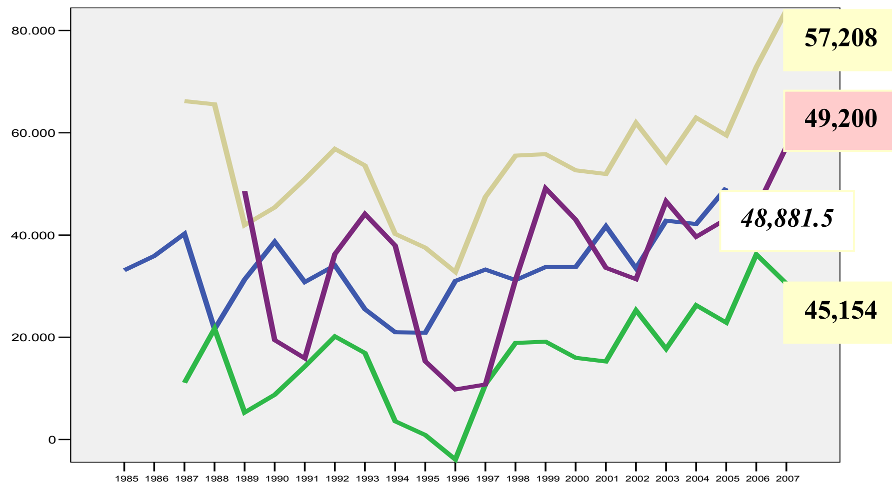
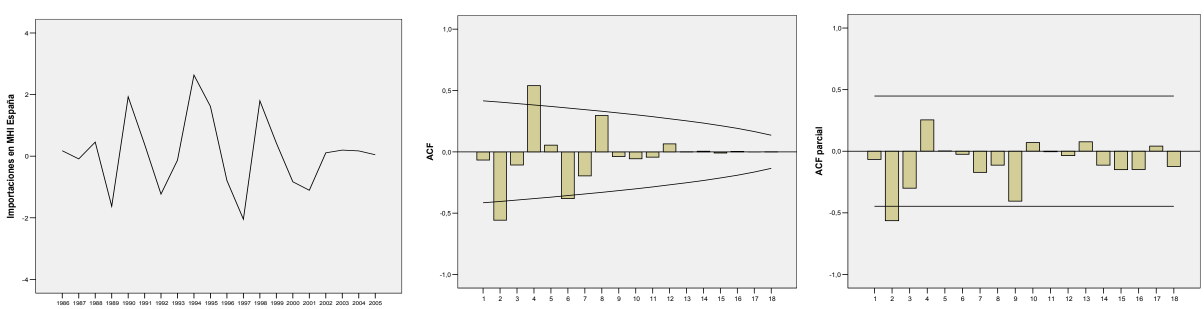


FIGURE 10: PREDICTION OF WINE PRODUCTION IN SPAIN IN 2006 AND 2007.

HALF MOBILE SERIES

Wine Imports in Spain

The estimated model is a Half Mobile order 1 (MA(1) without constant end (since it is not significant), of the form: $zt = a_t - \theta\ a_{t-1} = a_{t-1} - 0{,}451\ a_{t-1}$ using a non-seasonal series transformed with one difference and logarithms. Modeling the series on MA(1) means that, to a great extent, the effect of an observation is absorbed into the following one, so that the peaks of the series are not assimilated as tendency values and the values return to normal levels in the passing of one year. In this way, the temporary nature of Spanish imports is demonstrated, that is, only done to cover consumption peaks or falls in production. It has been confirmed that the random disturbance of this model has no structure; therefore, the MA(1) model is appropriate. In 2005, exports were 336 Hl, while that modeled was adjusted to 271 Hl. In this way, it was estimated that, in 2006 and 2007, the imports would be 308 and 322 Hl, respectively.



FIGURES 11, 12, AND 13: TRANSFORMED SERIES (1 DIFFERENCE AND LOGARITHM), ACF, AND PACF.

TABLE 4: ESTIMATIONS OF THE PARAMETERS.

Nonseasonal delays	Estimates	Std. error	*t*	Approx sig.
MA(1)	.451	.207	2.183	.042

Note. The Melard algorithm has been used for the estimates.

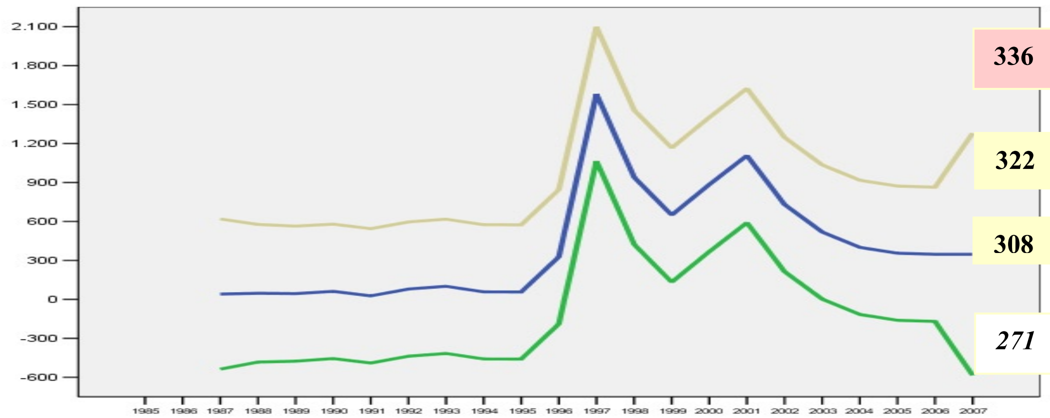


FIGURE 14: PREDICTION OF IMPORTS OF WINE IN SPAIN IN 2006 AND 2007.

CONCLUSIONS

Argentina and Chile have a clear, upward trend in production and exports that coincides with the decrease of wine exports in France. These trends form part of a global reduction of worldwide consumption.

As for the predictions in Spain, it was predicted that wine production would decrease in 2008 to 43,258 Hl and will increase to 44,029 Hl, and that subsequently they would again reach record figures. It was predicted that total wine consumption would fall to 8,396 Hl in 2008, and that the value of wine imports in 2007 and 2008 would remain close to those from 2005 with a smooth raise.

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USEFUL LINKS

Organization	Internet Address
Corporación Chilena del Vino	http://www.ccv.cl
Corporación del Fomento de la Producción	http://www.corfo.cl
European Commission	http:/ec.europa.eu/agriculture /capreform/wine/index_es.htm
Instituto Nacional de Tecnología Agropecuaria de Argentina	http://www.inta.gov.ar
Institut National de l´Origine et de la Qualité	http://www.inao.gouv.fr
Oficina de Estudios y Políticas Agrarias de Chile	http://www.odepa.gob.cl
Food and Agriculture Organization of the United Nations	http://www.fao.org
Portal del Sector Vitivinícola	http://www.vinosdeargentina.com

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