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Alejandro Gennari, Jimena Estrella Orrego
and Leonardo Santoni

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Wine Market Regulation in Argentina: Past and Future Impacts

ALEJANDRO GENNARI, JIMENA ESTRELLA ORREGO and LEONARDO SANTONI

Department of Economics, Policy and Rural Management, National University of Cuyo, Almirante Brown 500, Lujan de Cuyo, Mendoza, Argentina

I. Introduction

The origins of the Argentinean wine industry can be traced to the Spanish colonial period and the establishment of the Virreinato del Rio de la Plata. However, the emergence of the modern wine industry is explained by the Italian and Spanish immigration of the late XIX century and by the contribution of European specialists hired by emergent Schools of Agriculture such as the Faculty of Agrarian Science from the National University of Cuyo, as it is known nowadays. The planting of French varieties (Cabernet Sauvignon, Merlot, Tannat and especially Malbec), Italian varieties (Barbera, Nebbiolo, Sangiovese, Bonarda) and Spanish ones (Tempranillo, Semillón, Pedro Giménez) took place simultaneously with the introduction of the railway in the provinces of Mendoza and San Juan thus favoring immigration and the diffusion of new growing and wine-making techniques. The irrigation system and water management organization also began at the time, giving a key contribution to the wine industry emergence. Big family wineries of Italian (Giol, Gargantini, Tittarelli, Cavagnaro, Filippini, Rutini, etc) and Spanish (Escorihuela, Arizu, Goyenechea, etc) origins were born, grew and consolidated in this period.

During the XX century the Argentinean wine industry experienced periods of expansion triggered by the credence on an unlimited domestic market and periods of intense crisis with disastrous consequences for wineries and grape growers. Public regulations were present in these fluctuations aiming at reducing the negative impacts of recession or aiming at profiting from the expansion period. Wineries, grape growers, governors and congress men gave shape with their actions to the wine industry with diverse impact in the economy of the main wine producing regions: Mendoza and San Juan. Implemented regulations include: temporary plantation prohibitions, tax-breaks programs for specific vine varieties, regulations for sales quantity, public acquisition of grapes and wine for ulterior elimination or distillation, among others. Most of these initiatives only had short term effects thus constantly required new measures. This extensive regulation constitutes a vast experience for all agri-food chains and for the whole Argentinean economy, as it illustrates the short-term and long-term advantages and disadvantages of different measures.

II. Early history of wine regulations: 1890-1930

During the second half of the XIX century the economy of Mendoza suffered great changes as exports of cows to Chile drastically decreased as rivalry from the Pampas region increased reducing price and profitability. Simultaneously, the great phylloxera crisis in Europe generated a boom of wine prices. Both situations gave place to a strategic productive change in Mendoza and San Juan: the emergence of the wine industry. Regulations began to promote the activity and change its previous marginal role in terms of economic importance[1]. During 1880s the government established tax-exempt programs to promote the cultivation of vineyards, olive plants and fruit trees defining the official starting point of agricultural regulations. Domestic consumption experienced strong growth at the time, mainly in cities, and was

[1] According to Mateu (2008) in 1860 there were only 56 wineries in Mendoza.

supplied by the new national industry and by Italian and Spanish imports. Soon after, a first oversupply crisis occurred, in 1897. Local wine producers protested against unfair competition from "producers of artificial wine" and asked for import duties on foreign wine. Therefore, the government of Mendoza passed a regulation (Law 47/1897) with the prohibition of artificial production of wine and the creation of an *ad hoc* organization for its control (*Comisión para la Defensa de la Industria Vitivinícola).* Seven years later, a group of wine growers created the *Asociación Vitivinicola Argentina.*

Despite previous regulations, the period 1980-1930 can be defined as a consistently disorganized growing period. The industry was devoted to the production of medium-low quality wines for the domestic market with a clear preference for quantity over quality. Accordingly, cultivated area grew rising from 5,000 ha in 1890 to 45,000 ha in 1910; 85,000 ha in 1920 and 141,000 ha in 1930 (AVA, 1985). Numerous crises occurred in this period, especially due to overproduction: in 1901-03, 1911-12, 1929-31 and in 1933-38. During these crises a vast body of regulations was developed. The provincial law 4463 of 1904 was aimed at controlling wine production but only after the 1933's crisis regulations were effective. Through Law 12137 and 12355 a regulatory institution was created, *Junta Reguladora de Vino,* with specific competence for plantation and wine production control. Significant measures were introduced: compulsory uprooting; wine elimination through pouring out into water channels; public acquisition of grapes and wine for ulterior elimination or distillation, among others. The first attempts for horizontal integration can also be traced to these days, even if they were unsuccessful and soon failed. These public interventions were financed mainly by an additional tax to wine and were aimed at reducing new plantations. The recognition of the poor quality of wines was undoubtedly a key issue in this period. The fact that the wine industry has been working for quantity and not for quality was addressed by limiting wine production to the grape producing region. An additional piece of evidence of the quantity approach is the idea of building a wine-duct from Mendoza to Buenos Aires surpassing any rational limit.

III. Wine regulations from 1930 til 2000

Despite a favorable macroeconomic situation with high economic growth and income increase which lead to a growing per capita consumption, oversupply crisis were always present in the wine industry. Regardless of the regulatory efforts and the nationalization of the Giol (1954) and CAVIC wineries, the quantity model shaped the industry's performance. Meardi (1987) describes the authorization for hydration wines as an example of a disastrous initiative since it increased supply with an incredible quality loss. In 1959 the National Law 14878 was passed and still represents the legal framework for the wine industry. This law created the National Institute for the Wine Industry (*Instituto Nacional de Vitivinicultura, INV*) responsible for the technical regulation of the wine industry: land registry; production and commercialization rules; supervision and control.

In 1966 a law for the promotion of dry areas was passed (Law 16833). It included tax-exempt programs for the production in dry areas, especially those with investments in irrigation systems based on underground water. In the following six years more than 50,000 ha of grapes were planted. According to the quantity model of the period, the most used varieties were those of high yields and low enological quality such as Criolla Grande, Criolla Chica, Ceresa and Moscatel Rosada. The grape and wine supply derived from these new plantations generated a permanent imbalance.

When consumption started to decrease, after an historical maximum of 90 liters per capita in 1970, this oversupply situation led to an unprecedented crisis. After one century, it was the end of the "table wine model for the domestic market" (Perone, 1985). Consequences were disastrous: more than 130 thousand hectares were ripped out and almost 21,000 grape growers and numerous wineries were left bankrupt. Perhaps the greatest regret refers to the loss of thousand hectares of the now emblematic and revaluated Malbec grapes: from 72,000 hectares in 1978 to only 10,000 ha in 1990.

In 1970, by the Law 18798, an authorization by the *INV* was required for any new plantation. However, resolution *INV* 753/77 allowed new plantations revoking the previous law. One year later, the national law 18905 and the decree 4240 were passed. These regulations, known as the National Wine Industry Policy, promoted vertical and horizontal integration, offered credits and fiscal aids and promoted bottling in the production place. The quantitative model was designed for the transportation of bulk wine from Mendoza and San Juan to the main consumption centers: Buenos Aires, Córdoba and Rosario. In 1966, 90% of all wine produced was delivered in bulk for the ulterior bottling by 839 bottling facilities, 70% of which did not have any property relationship with the wineries. With the implementation of the Law 18798 the percentage of wine delivered in bulk from the winery was reduced to 72% by 1978 and 57% by 1982. The tenacity of Mendoza's organizations derived in a new Law (23149 of 1984) for bottling in origin, leading to 100% of wine bottled in the production area. Under these measures the first traces of a quality model can be identified as they were aimed at protecting wine quality and controlling fraud.

The lucky strike came with a speculative action carried out by a private winery (Greco) which controlled more than 50% of Mendoza and San Juan supply and used to artificially increase prices. The bankruptcy of the financial holding (Banco Los Andes) and the industrial one (Greco Hnos and 30 controlled wineries) in 1982 led to an incredible price crisis and to the disappearance of wineries, grape growers and suppliers. This event defined a non-return point for the Argentinean wine industry.

At the end of 1982, the National Law 22667 was passed recognizing the supply crisis and aiming at diversifying grape use, promoting exports and improving and diversifying varietals. The law had a high interventionist approach and it included measures for eliminating wine oversupply. The government, through the INV, calculated how much wine could be produced at the national, regional and winery level (*Cupo Nacional de Producción Vínica –CNPV-, Cupo Básico Zonal –CBZ-; Cupo Básico del Viñedo –CBV- y Cupo Definitivo del Viñedo –CDV-).* The vineyard basic quota was estimated as an average of historical production (5 years) adjusted by the national quota, the region and the specific variety. Perone (1983) classifies this system as a "quasi Soviet" one. As could be expected, the consequence of this regulation was the creation of a market for quotas in which producers sold and bought their quotas according to their interest and specific situation. Wine stocks rose enormously leading to the need for wine deposits. New measures were launched to support the wine industry by building enormous tanks to stock wines. This was done both in a direct way (the public winery built tanks for million hectoliters) and in an indirect way (giving private wineries subsidies to build tanks). Nowadays, these public tanks are place to the regional archive were tons of bureaucracy papers are stocked, giving permanent evidence of a regulative failure of the wine industry.

All in all, these measures were only useful for extending the agonizing life of the quantitative model and in 1988 the Law 23.550 and its implementing regulations finally faced the crisis. Thousands of hectares were eliminated, harvest was controlled with percentages according to the varieties, the government bought the excess volumes for ulterior elimination and an extra tax was applied to wine to get financial resources for these measures.

Despite the numerous regulatory measures established, implantation rights similar to the European ones were seldom applied and only in the period 70-77 there was an instrument for asking permission which considered each case in particular and there was not a pre-defined system of regional or provincial rights. Temporal prohibition was more frequently used though always in the scheme stop and go.

As previously described, a countless number of laws and decrees were passed in this period for the regulation of the grape and wine market: new plantations were forbidden; specific plantation authorizations were given; limitations on the percentage of grapes devoted to wine were defined; bans on the quantity of wine sold were created; monthly authorization for wine sales were given; regional governments bought grape or wine for the ulterior elimination or distillation; among others (Maclaine Pont, 2011). These last 20 years (1970-1990) gave place to a regulative and legislative anarchy (Castiñeira de Dios, 1983) aimed at keeping alive an already dead model composed of three lethal elements: oversupply, decrease in consumption and difficulties to access export markets.

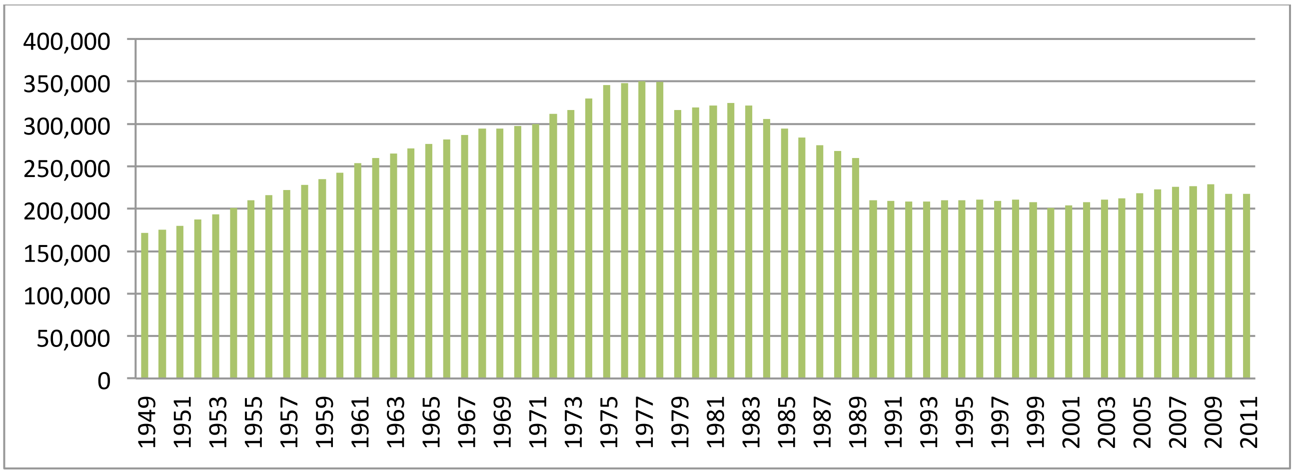
Since 1991 the 2284 law of economic deregulation removed much government intervention in most markets, especially by eliminating barriers to competition. This law also affected the wine industry and it limited the role of the INV to simple inspection and control functions. Moreover, regional governments from Mendoza and San Juan privatized their public wineries. A particular case was that of the Giol privatization. It was done by means of an urgent provincial decree 3345/88. The enterprise and many of the wineries rented by Giol were bought or rented by winemakers who organized themselves with public support into cooperatives (Decree 2247/88 dealing with the integration of producers, Juri and Mercau, 1990). Fecovita, the current powerful cooperative organization of second level[2], is the result of the evolution of that

[2] According to Euromonitor information FeCoVitA Coop Ltd is the 15th company in the world market of wine in terms of company shares, accounting for 0,5% of total trade volume in 2012.

process. From this moment onwards, the activity of private and public agents put an end to the old quantitative model and started a new process focusing on international and domestic market, considering their specific characteristics. Moreover, a new decision-making scheme was born with high interaction between private and public sector. The Must Agreement between Mendoza and San Juan and the Strategic Plan for the Wine Industry are both results of this new approach. In both initiatives inclusion and participatory governance constituted core-elements (McDermott, 2007).

The evolution of the key variables of the wine industry system such as surface, predominant varieties, wine production and its destiny are clearly depicted in the following figures and tables[3]:

Figure 1 Evolution of vineyard surface - hectares

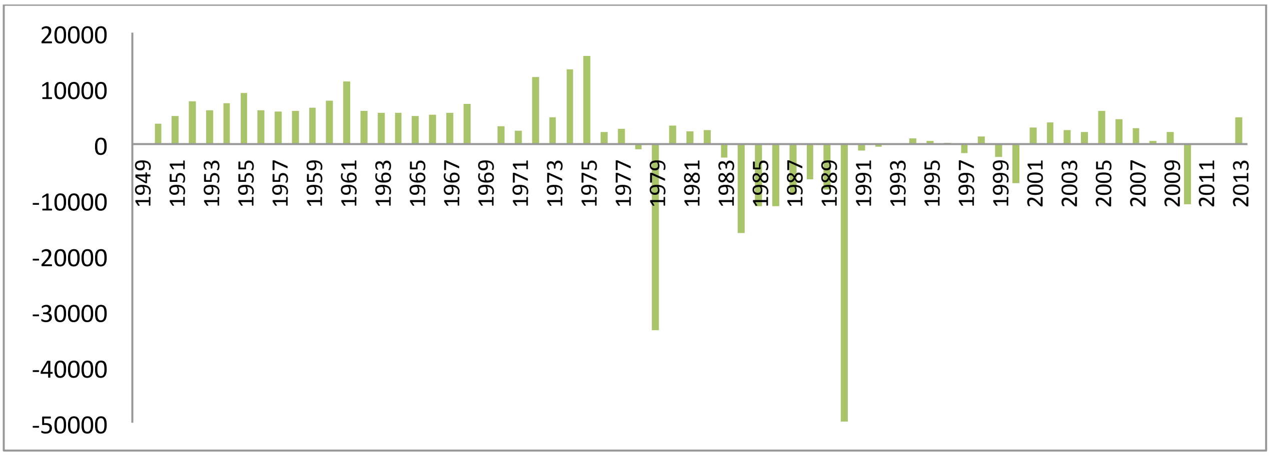


Source: our elaboration from INV data

As it is clearly depicted in the above figure, the grape surface grew constantly til 1977 reaching the historical maximum of 350,680 hectares. From this moment onwards, the total surface diminishes til the year 2000 accounting for only 201,113 hectares. Between 1977 and 1991 the national grape surface diminished 141,422 hectares being the terminal period of the quantitative model based on table wine for the domestic market. Evidently, this reduction of the grape surface was greater in Mendoza and San Juan, particularly in the first one: from 252,000 hectares in 1978 to 170,000 hectares in 1989. But the great loss was not only quantitative but also qualitative; thousands of hectares of noble varieties such as Malbec were eliminated in Lujan de Cuyo, Maipú, San Rafael, Tupungato and San Carlos. Consequently there was a qualitative impoverishment of the national vineyard. Some years later, this reduction process reversed and a growing process began in 2000 reaching 217,750 hectares in 2010.

[3] Data from official statistics for available periods.

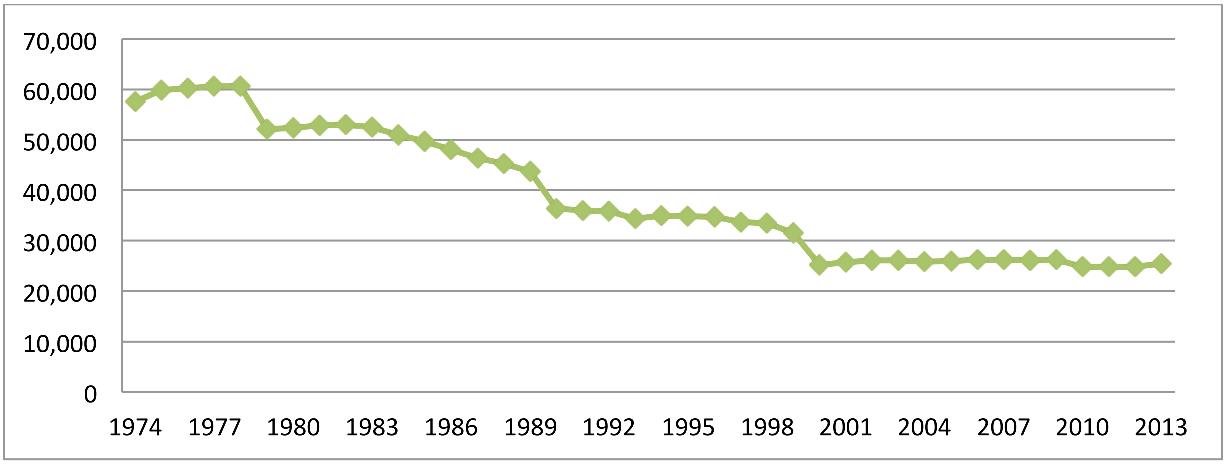
Figure 2 Evolution of the annual differences of grape surfaces - hectares



Source: our elaboration from INV data

Figure 2 clearly shows two years of great losses in grape cultivated hectares: in 1979 a loss of 33,363 ha was registered and in 1990 49,828 ha were lost as a result of the 23550 law, indicating the end of the predominant quantitative model.

Figure 3 Evolution of number of vineyards in Argentina



Source: our elaboration from INV data

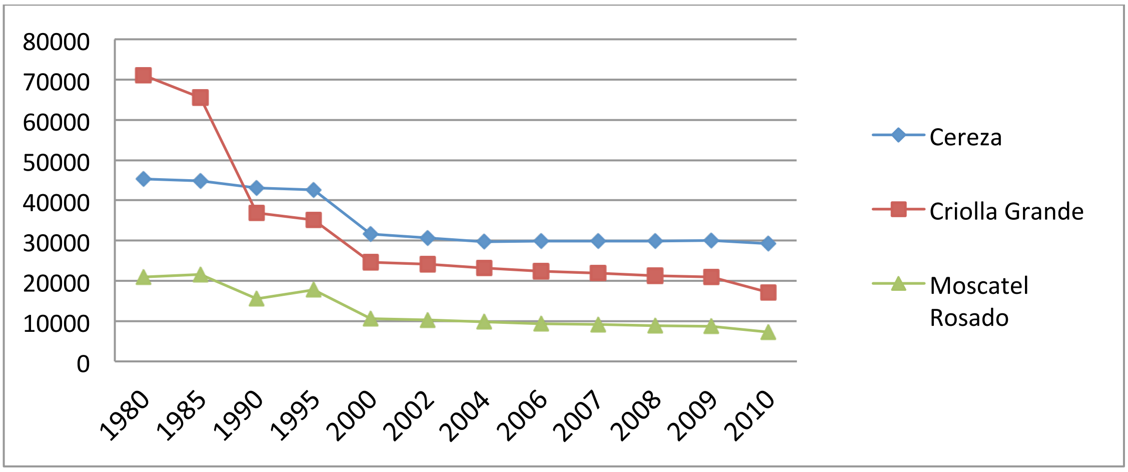
The number of vineyards also decayed greatly turning from 60,583 units in 1978 to 24,780 in 2010. During the whole quantity based model (up to 1990s) small producers were strongly affected in particular those with low yields and those vineyards with red quality varieties with low production, as it was the case of Malbec. In a similar way, the vertical shoot position method (VSP) was gradually abandoned since the two meter high pergola (called “el parral”) showed a great vegetative development and greater yields. The average yield turned from 6,000 kg per hectare during the 1960 decade to 12,000 kg per hectare at the beginning of the 90s.

Table 1 Evolution of cultivated hectares of rose varieties for vinification

ROSE VARIETIES	1980	1985	1990	1995	2000	2002	2004	2006	2007	2008	2009	2010
Cereza	45,338	44,844	43,100	42,593	31,666	30,758	29,727	29,813	29,919	29,829	30,054	29,189
Criolla Chica	3,913	3,285	1,833	1,645	724	676	640	574	547	539	525	423
Criolla Grande	71,099	65,502	36,837	35,139	24,641	24,080	23,240	22,413	21,848	21,276	20,892	17,080
Moscatel Rosado	21,029	21,542	15,503	17,720	10,656	10,324	9,866	9,397	9,239	8,939	8,720	7,259
Other rose varieties	3,584	3,211	2,095	1,940	1,232	1,188	1,191	1,280	1,343	1,358	1,368	1,149
TOTAL ROSE VARIETIES	**144,963**	**138,384**	**99,367**	**99,037**	**68,918**	**67,027**	**64,665**	**63,477**	**62,896**	**61,941**	**61,560**	**55,100**

Source: our elaboration from INV data

Figure 4 Evolution of hectares of representative rose varieties for vinification



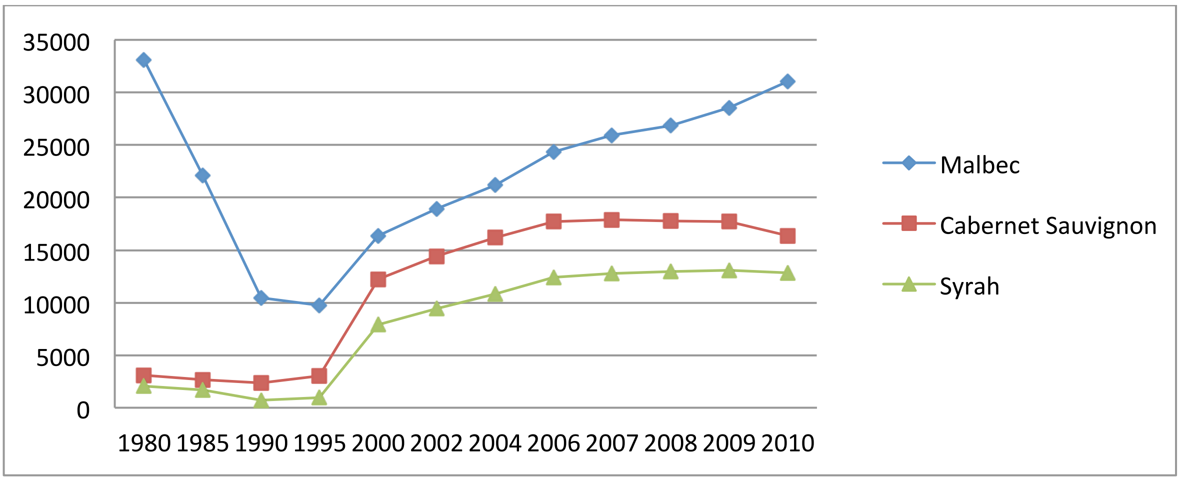
Source: our elaboration from INV data

Table 2 Evolution of cultivated hectares of red varieties for vinification

RED VARIETIES	1980	1985	1990	1995	2000	2002	2004	2006	2007	2008	2009	2010
Bonarda	18,125	15,822	12,186	11,961	14,989	16,079	17,224	18,435	18,611	18,609	18,759	18,127
Cabernet Sauvignon	3,063	2,688	2,347	3,061	12,199	14,442	16,184	17,694	17,918	17,746	17,738	16,372
Malbec	33,126	22,091	10,457	9,746	16,347	18,944	21,183	24,379	25,930	26,845	28,532	31,047
Merlot	2,825	2,535	1,160	1,510	5,513	6,528	7,095	7,414	7,296	7,142	6,985	6,282
Pinot Negro	873	666	232	414	1,047	1,113	1,176	1,318	1,441	1,509	1,681	1,802
Sangiovese	5,409	4,720	3,015	2,805	2,491	2,496	2,467	2,395	2,339	2,319	2,259	2,011
Syrah	2,059	1,678	687	945	7,915	9,453	10,846	12,396	12,770	12,960	13,102	12,810
Tempranillo	11,095	9,352	5,659	5,437	4,335	4,945	5,630	6,385	6,491	6,514	6,568	6,120
Other red varieties	18,792	15,855	6,638	6,774	5,212	5,886	6,331	7,073	7,378	7,673	7,774	8,207
TOTAL RED VARIETIES	**95,367**	**75,407**	**42,381**	**42,653**	**70,048**	**79,886**	**88,136**	**97,489**	**100,174**	**101,317**	**103,398**	**102,777**

Source: our elaboration from INV data

Figure 5 Evolution of hectares with representative red varieties for vinification



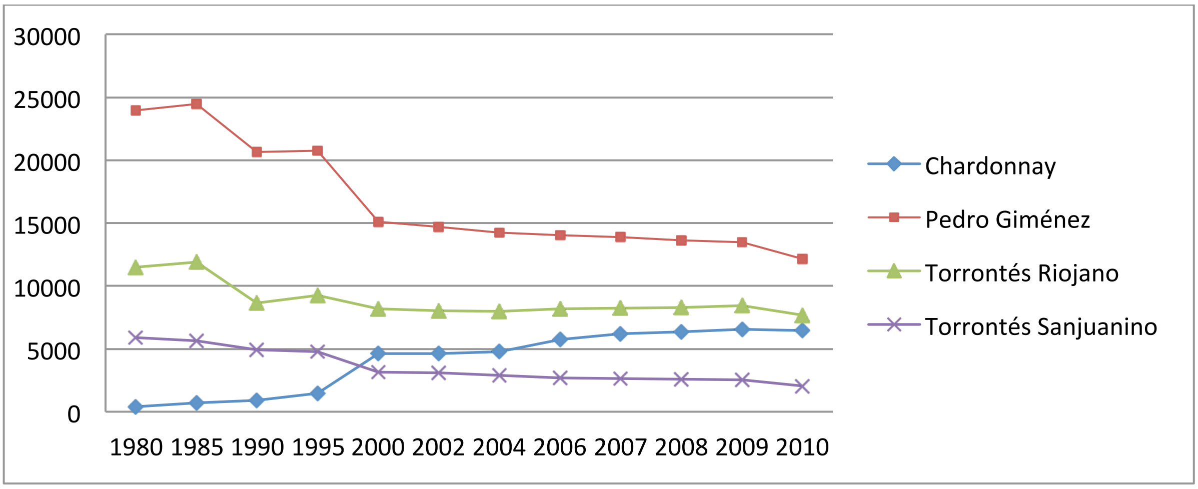
Source: our elaboration from INV data

Table 3 Evolution of cultivated hectares of white varieties for vinification

WHITE VARIETIES	1980	1985	1990	1995	2000	2002	2004	2006	2007	2008	2009	2010
Chardonnay	372	690	908	1,471	4,625	4,634	4,771	5,747	6,201	6,342	6,578	6,473
Chenin or Chenin Blanc	4,803	4,441	4,031	4,292	3,591	3,333	3,052	2,949	2,935	2,908	2,857	2,462
Moscatel de Alejandría	15,664	15,562	10,184	10,243	5,539	5,444	4,964	4,445	4,287	4,193	4,064	2,939
Pedro Giménez	23,981	24,471	20,647	20,763	15,101	14,710	14,245	14,059	13,907	13,647	13,476	12,132
Sauvignon	784	692	278	422	827	899	1,152	1,762	1,968	2,090	2,278	2,296
Tocai	39	138	998	1,055	798	744	710	702	663	659	640	515
Semillón	3,437	2,612	1,255	1,203	1,028	1,003	961	988	974	973	956	855
Torrontés Mendocino	777	736	1,980	1,871	762	782	772	737	721	721	666	713
Torrontés Riojano	11,498	11,920	8,625	9,258	8,181	8,034	7,957	8,196	8,224	8,281	8,443	7,683
Torrontés Sanjuanino	5,891	5,652	4,914	4,780	3,166	3,107	2,878	2,682	2,622	2,578	2,539	2,048
Ugni Blanc	2,831	4,120	2,229	2,928	2,846	2,683	2,639	2,587	2,525	2,478	2,431	1,922
Viognier					151	156	251	616	683	714	748	816
Other white varieties	4,247	4,334	2,611	2,606	1,558	1,508	1,409	1,367	1,359	1,330	1,318	2,052
TOTAL WINE VARIETIES	**74,325**	**75,368**	**60,399**	**62,425**	**49,432**	**48,243**	**46,919**	**47,970**	**48,167**	**48,009**	**48,076**	**42,906**

Source: our elaboration from INV data

Figure 6 Evolution of hectares with representative white varieties for vinification



Source: our elaboration from INV data

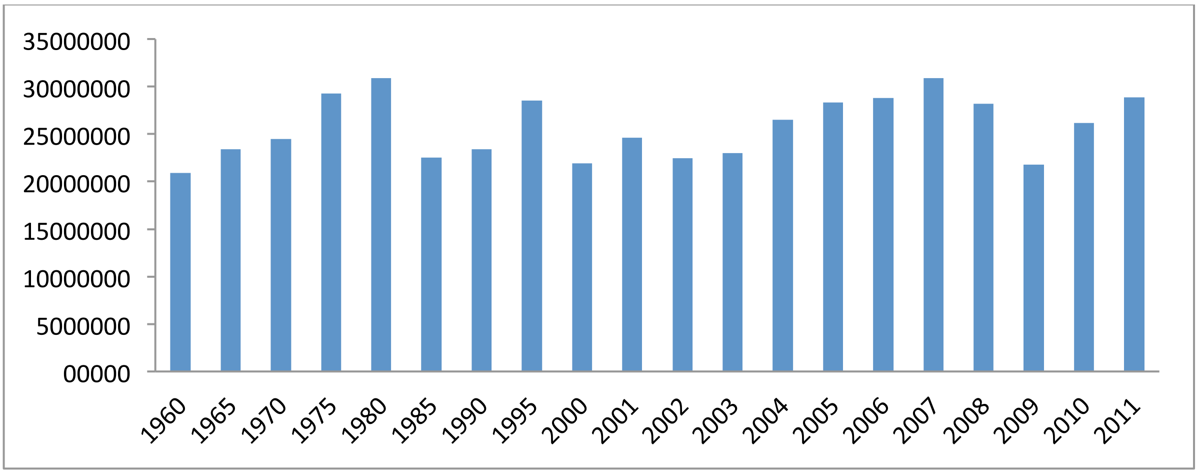
The trend of the national vineyard from the qualitative point of view is evident. Up to 1991 the loss of quality varieties was great, especially of Malbec grapes, losing more than 30,000 hectares. Since 1991 the trend changed: all qualitative superior varieties grew, especially Malbec accounting for more than 30,000 ha in 2010. During the harvest 2012-2013, 33,863 ha with Malbec were registered representing 15% of the national vineyard. More than 85% of hectares with Malbec are located in Mendoza, representing 19% of the province vineyard surface. Pedro Jimenez and Ugni Blanc are decaying while Chardonnay and Sauvignon are growing. The decay of the classic Torrontes Riojana and Torrontes Sanjuanino lasted more than the Malbec one and only in the year 2000 the trend changed when these typical Argentinean varieties became appreciated in the domestic and the international market. Fifteen years later Torrontes follows a similar process to that of the Malbec variety.

As regards the rosé varieties for vinification, a slow but systematic fall started and continues up to the present: from almost 151.000 ha in 1978 to 55.100 ha in 2010. They covered the great demand for concentrated must, while almost no wine is elaborated with these varieties. The qualitative change is firmly established since 2010.

As previously depicted, one of the systematically present problems in the Argentinean wine industry has been the poor diversification of the grape uses. This situation has partially changed: from the 217,750 ha of vineyard in 2010 more than 12,000 ha are devoted to fresh consumption. San Juan is leader in this process in which it has been stimulated since the end of the 80s and 90s decade by means of special investment and tax-breaks programs. The olive cultivation also took advantage of these measures as well as the table grapes and the production of grapes for vinification, although these latter in less proportion. Only 1,200 ha are devoted to raisins, being San Juan the main producer.

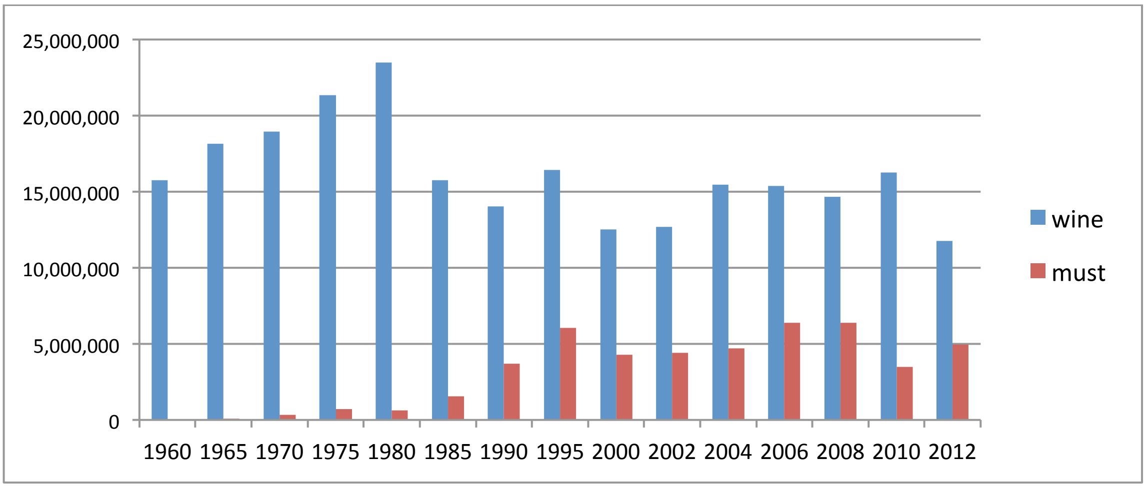
The great transformation of the model is mainly based on three key issues: (a) the important production of sulphited must which is concentrated and exported; (b) the production of quality wines to supply the growing domestic market of quality wines and (c) the international expansion of Argentinean quality wines. All these have caused the dramatic reduction of table wine production though it still represents an important percentage of the national wine production.

Figure 7 Evolution of grape production - hundredweight



Source: our elaboration from INV data

Figure 8 Evolution of wine and must production - hectoliters



Source: our elaboration from Area del Vino data

In 1999 the law 25163 of denominations of origin was passed. This qualitative regulation in accordance with the new reality, establishes a system for the recognition, protection and registration of Argentinean geographical names in order to determinate the origin of wine products and wine spirits. This legal instrument has been scarcely used by producers and wine markets up to the present. In fact, there are only two protected designations of origin (PDO Lujan de Cuyo and PDO San Rafael) and 86 protected geographical indications (PGIs). All of them with very little visibility and use in the markets partially due to the complex administrative requirements demanded by the application authority (INV). Some authors see in this not-fully developed GI approach a flexibility gain, allowing for more experimentation and a better market targeting (Migone & Howlett, 2010).

IV. Present regulatory system and social capital building

a. Mendoza-San Juan Agreement

At the end of 1994 the governments of Mendoza and San Juan decided to create a special regulatory regime for the wine system in both provinces, but with a national scope since it affected more than 95% of the grape and wine production of the country. This Agreement is known as the *Acuerdo Mendoza-San Juan* and it shows many original characteristics considering the historical regulations within the Argentinean wine system as well as for the entire wine world. It is interesting to notice that this regulation of the system took place in a national context dominated by a strong process of deregulation and open economy. The law 2284/91 of economic deregulation had effectively banned a great portion of the public intervention in the market and above all had avoided the appliance of new regulations. In this context the provinces of Mendoza and San Juan by means of its legislative and executive power organized this regulatory system and showed a very important political leadership in relation to the central federal power of the nation.

The Agreement aims at the development of the diversification of the national wine system both in its products (basic wines, quality wines, sulphite must and concentrated must) as well as in their markets (domestic and export markets). It offers the main interested agents (grape growers, wine producers) instruments to keep the market balance, considering over supply and adequate profitability. The Agreement considers the production of must a natural way to keep the balance of the wine stocks and promote the exportation of wine related products.

The law also created the *Fondo Vitivinícola* as a legal person of public right for the promotion of the wine industry and the exportation of its products, establishing a compulsory contribution of 0,001$ for each kilogram of grape turned into wine, to be applied from the 1995 harvest onwards. It also includes a contribution of each province equivalent to the amount collected by the compulsory contribution. The third article of the law is essential as it frees from the contribution to the establishments that elaborate a minimum 20% of grapes as must. It also establishes that the percentage would be considered and varied annually by the provinces of Mendoza and San Juan. Even more, since the regulatory system established gives preference to the grape diversification with the object of avoiding the oversupply of wine, from the administrative point of view it is established that wine exportation could be deduced from the obligation to devote grapes to must.

Another important issue is the destination of the funds collected, devoted mainly to the promotion of wine exports, must, raisins, fresh grapes, and the promotion of domestic consumption of wine products. From the institutional point of view, the organization of the *Fondo Vitivinícola* meant and important first decision with the participation of the agents of the wine system in their direct consideration of its problems, since the Administrative Council is integrated by 8 members of the private sector and 1 representative of the Mendoza government. It also means a valuable experience for the public sector and for the private one, in their search for agreements in specific policies for the sector.

At the beginning the *Fondo Vitivinícola* and the diversification policies in relation with must were severely questioned (Murgo et al., 2000) but the scheme was slowly established and it meant a positive step in the learning experience of the social capital building in the wine system.

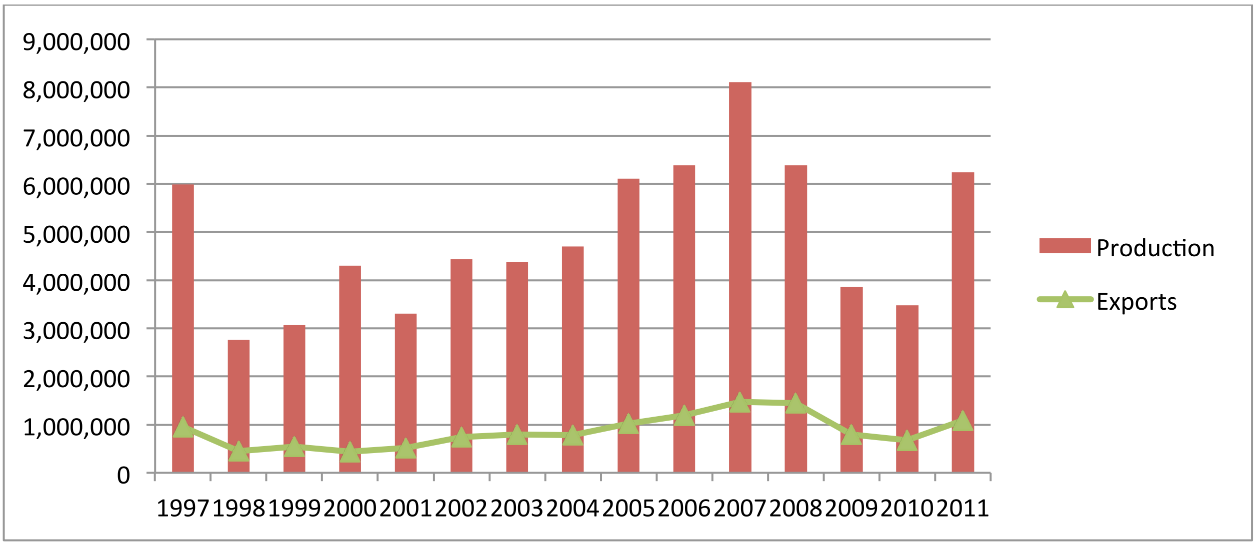
The permanent negotiations between the private actors, among the private sector of each province and the provincial state and between the various provincial states resulted in a intense training for achieving agreements, for defining working methods and above all for building social capital. In Mendoza, the private sector was guided by the *Unión Vitivinícola Argentina* (UVA) and the *Centro de Viñateros y Bodegueros del Este (CVBE)* but partially resisted by the *Centro de Bodegueros de Mendoza.* It is interesting to show that as the *Fondo Vitivinícola* was being organized other decisions related with wine policies were taken place. A fundamental decision of the private sector was the organization of the *Asociación de Exportadores de Vino Fino Embotellado* which is the antecedent of the actual *Wines of Argentina.* This association followed a different path in the support of the wine industry. It was guided by the *Centro de Bodegueros de Mendoza* which then became *Bodegas de Argentina* (after the historial fusion with *AVA*). A process of social capital building has begun by two parallel paths.

The sulfite must production, its later concentration and its exportation in large scale (more than 80% of must is exported) has enjoyed a strong growth in the period of application of the law (since 1995 to the present). This process was particularly favored from 2003 on account of high international prices of grape must. The concentrated must is very much used in fruit juices, on account of its technological characteristics, as well as a substitute for sugar in various uses. The high price cycle of most agricultural commodities has favored grape must acceptance and consolidation.

From the point of view of the national wine system, the decision of devoting a certain percentage of grapes for must production has solved the problem of over production of wine, mainly basic wines, before this problem is actually verified and ulterior requires costly measures. Moreover, under this scheme there is no wealth destruction as present in the distillation measures even if the latter are highly efficient from a technical point of view.

In the following graphics, we can see the development of the production and must exportation showing the results of the regulatory system implemented by the Agreement Mendoza – San Juan.

Figure 9 Evolution of production and must exportation - hectoliters



Source: our elaboration from Area del Vino data

On the other hand, it is important to visualize the evolution of the national vineyard from the point of view of varieties (See Tables 1, 2 and 3). The permanent decrease of the rose varieties for vinification and of the white ones of less enological quality (Pedro Gimenez and Ugni Blanc and in less proportion the different Torrontes) is a result of the evolution of the wine market where there is an evident decrease of demand of basic wines, especially basic white wines and an evident increase of demand of quality wines both in the domestic market but specially in the export market. The rose varieties for vinification are being destined to the elaboration of concentrated must to be exported and there is a slow process of specialization of wine growers and must producers who are following a cost leadership strategy, with high yields, high sugar content and big industrial facilities for must concentration.

In the following table the evolution of the defined percentages of grapes devoted to must are shown. San Juan annually exceeds the obligations of the Agreement devoting a higher percentage to grape must. This fact can be explained by the higher presence of rose varieties in the whole San Juan vineyard, denoting an insufficient reconversion process towards high enological quality varieties. The opposite is true for Mendoza, who complies with the Agreement by putting together must product and wine exports. In this province, the reconversion process towards high quality varieties has been stronger, together with high investments in technological facilities in wineries and a strong promotion of high quality exports.

Table 4 Evolution of grapes percentage devoted to must

Year	Percentage	5 year average	Year	Percentage	5 year average
1995	30.00%	16.6 %	**2005**	32.00%	27.2 %
1996	15.00%		**2006**	24.00%	
1997	10.00%		**2007**	30.00%	
1998	13.00%		**2008**	30.00%	
1999	15.00%		**2009**	20.00%	
2000	20.00%	25.5 %	**2010**	20.00%	28 %*
2001	23.00%		**2011**	30.00%	
2002	30.00%		**2012**	30.0%	
2003	30.00%		**2013**	32.0%	
2004	24.50%				

*Four year average

Source: our elaboration from data of *Camara Argentina de Fabricantes y Exportadores de Mosto* and Diario Los Andes

As depicted in the previous table, the percentage devoted to must has increased along the years, reaching a four-year average of 28%. This situation defines the need to permanently control the grape supply and the situation in export markets.

From an operative point of view, the Agreement on the annual percentage is done through meetings between public ministers of both provinces. In these meetings, information regarding harvest forecast and climate conditions (hail, wind, frost) are taken into account for each province. As this information is vital for the adequate estimation of the percentage of must, meetings take place every year after the harvest forecast done by *INV* which usually take place in January and February. Information regarding the evolution of the domestic and export markets are also taken into account when deciding the specific annual percentage.

The harvest forecast done by the *INV* is based on field observations done by technical professionals and results in a harvest forecast for Mendoza and San Juan. During the first years of the Agreement, when there was still no varietal reconversion, the harvest forecast was of vital importance for the definition of the percentage. As the surface with rose varieties is continuously decreasing and noble varieties are growing in importance (such as Malbec and Cabernet) there is a need for a more detailed harvest forecast. The system needs to evolve from an overall forecast to a specific forecast for regions and for varieties. Moving from the quantitative model to the quality model has defined new challenges and the tools used for the annually agreed percentage of grapes devoted to must also need revision. At the same time, the fact that high quality varieties are included when defining the must percentage is subject to great debate, even if there is a compensation mechanism when these high quality varieties are exported.

b. Strategic Plan for Argentine Wine Industry

From 2000, the main wine organizations together with the government of Mendoza, the National University of Cuyo and the *Instituto Nacional de Tecnologia Agropecuaria (INTA)* began a deliberating process for the design of a strategic plan for the wine industry. The main challenges at the moment were understanding global changes with a long term vision and defining collective strategies to improve competitiveness and sustainability. After an intense consensus building process, the national law 25849 was passed, giving birth to the *Corporacion Vitivinícola Argentina (COVIAR)* who, as a public non-governmental organization, had as its central responsibility the management and coordination of the Strategic Plan for the Wine Industry 2020 (*Plan Estratégico Vitivinícola PEVI*).

Through a board of 15 members, both private and public, the organization manages the resources generated by the law for the fulfillment of the defined objectives: promote Argentinean wine consumption, in the domestic and in the export market (Ruiz et al, 2011). As a result of the analysis done and after the construction of possible and desirable scenarios, the vision was defined as "Sustainably turn Argentina´s wine industry into one of the most distinguished in the word, by 2020. Reach sales of U$S 2.000 million, get a 10% market share in terms of export volume, and gain consumers´ awareness". In terms of values, the mission was defined as "Argentina will be a highly competitive supplier, with wines attending consumers´ needs and will be valued and identified because of its quality, diversity and naturality". Five strategies and three strategic objectives were defined in order to fulfill the vision and mission, giving place to strategic actions to be implemented by executive entities. For the period 2012-2013 the estimated budget is 94,327,640 Argentinean pesos (equivalent to approximately 18,070,429 U$D).

The first strategic objective is the positioning of fine Argentinean wine in the Northern countries. *Wines of Argentina* was defined as the executive entity responsible for the design and implementation of communication and promotion activities in the main wine markets. The association's focus is marketing and it operates as a complementary initiative to individual wineries promotional activities. For carrying out this task the association receives annual member quotas as well as public funds. The defined markets are: the United States, the United Kingdom, Canada, Brazil and selected Asian countries. The activities to be carried out in each of them depend on the maturity level of wine consumption in each countries and also on the Argentinean position as supplier, both in terms of volume supplied and in terms of awareness. In broad terms, the activities in mature markets are oriented to final consumers as the underlying idea is that the awareness level of Argentina is quite strong and therefore the consumer is ready to receive direct communication stimulus. Whereas, for less mature markets activities are focus on trade and the press, as a way to get into contact with the consumer. It is worth noticing that these types of activities, classified by market maturity, do not exclude themselves, i.e. also in mature markets there are activities focused on trade but the intensity and frequency is reduced when compared to less mature markets. Moreover, hospitality missions or "inverse missions" constitute an omni-present activity in every annual plan of *Wines of*

Argentina. By these activities foreign traders, journalists, buyers, sommeliers, bloggers, wine writers are invited to Argentina with a full agenda of wineries visiting and tastings. For each visit a special program is designed, bearing in mind the country of origin of the guest but also his area of influence, his preferences, contacts, among others. On arrival, the guest will find a proposed agenda of different wine regions and different wineries together with cultural activities such as tango shows, horse exhibitions, polo matches, among others. The greatest demonstration of the hospitality activity done by *Wines of Argentina* is the Annual Argentina Wine Awards (AWA). Every year it brings together a group of highly qualified specialists (in 2013 12 judges from 11 different countries plus 8 national judges) who taste a big sample of Argentinean wine (724 samples in 2013) and offer a comprehensive view of the global wine market. The vast and positive publicity that the event generates is very important for the wine industry but it is also important for providing an intense learning experience for all involved. The Malbec World Day has surged as a perfect combination for the AWA. Celebrated on April 17th since 2011, it includes a wide variety of special events. On its second edition, more than 142 events were organized in 68 cities in 43 countries around the world. Simultaneously, *Wines of Argentina* implements a program that consists in selecting personalities with outstanding professional background to promote and support Argentinean wine in foreign markets. Within this framework, Gustavo Santaolalla, Julio Bocca and Veronica Cangemi have been appointed as Wine Ambassadors. *Wines of Argentina* has offices in Mendoza, New York, London, Sao Pablo and Colombia and as of January 2012 it has an office in the Chinese capital.

The second objective is to develop the Latin American market and to strengthen the domestic one. The *Fondo Vitivinícola* is the association responsible for this and it annually designs multimedia campaigns which aim at increasing consumers' awareness. Quantitative and qualitative research is the starting point for every campaign, with specific identification of consumers' trends and market situation. The results are generic campaigns, not promoting any specific wine or region, but rather promoting overall wine consumption and generating a positive association between wine and consumers. During the last decade the *Fondo Vitivinícola* has designed and implemented numerous campaigns, all financed by the *COVIAR*, such as: Wine for the World; Signed Truth; Argentinean Wine; One wine and a thousand chats; among others. Additionally, *Bodegas de Argentina* as the executive tourism unit carries out a program of tourism consolidation. The program aims to give a strategic vision to the Argentinean wine tourism sector, defining long, medium and short term objectives. Operatively, the institution works in the organization of Wine Routes, Wine Festivals; Music Wine Shows, Food & Wine activities, among others. These activities are financed by the Inter-American Development Bank, the Argentinean National government, the provincial governments and Bodegas de Argentina. An annual report of wine tourism is released every year by Bodegas de Argentina, accounting for the number of visitors in each wine region, in each month, from each nationality, with the average expenses, among other data. According to the 2010 report, the total number of wine tourist has raised 158% in the period 2004-2010, accounting for 1,091,664 visitors in 2010. These wine tourists now account for 2.9% of all visitors while they were only 1.5% in 2004. Other activities done by Bodegas de Argentina include de Annual International Wine Forum, the Wine Harvest Festival Event, the Forum of Technical Exhibitions (SITEVI MERCOSUR), Evaluation of different wines from the harvest (EVICO), among others.

The third objective of the Strategic Wine Industry Plan is to support the development of small producers and integrate them in the wine business. The main scope of this project is increasing small grape producers' profitability and sustainability by integrating them. There are two main working areas in this project. On the one hand, it offers producers financial services for the acquisition of machineries, tools, provisions and professional services. On the other hand, through the *INTA*, fourteen regional centers have been created which are aimed at identifying need, defining strategies and implementing actions for the development of local grape growers and their association. The Inter-American Development Bank has given 50 million dollars to the program for further helping grape growers' integration. Regarding the association objective, up to 2012 more than 3,000 grape growers have established an associative link with wineries. Most of them have properties of less than 20 hectares and they sum up a total of 15,500 ha located in eight provinces. Most financial aid has been devoted to wood renovation (35%), to anti-hail systems (22%), wire replacement (11%), acquisition of agricultural machinery (17%), new irrigation systems (8%) and new plants (4%). In terms of research and development, numerous projects have been developed to provide the industry with technical tools for increasing sustainability, competitiveness and innovation. It is worth mentioning the project for improving the vine conduction system and the elaboration of quality standards for wine grape, both carried out by the *Asociación Argentina de Consorcios Regionales de Experimentación Agrícola* (*AACREA*). Another interesting program is the design of a system for an ecological de-sulphitation of must, carried out by the *Cámara Argentina de Fabricantes y Exportadores de Jugo Concentrado de Uva.* Additionally, the Strategic Wine Plan considers the possible development of specific strategic plans for concentrated grape juice, table grapes and for raisins.

After ten years from the initial definition of the Strategic Wine Plan, the qualitative transformation and the constantly changing international scenario defines new challenges. The harvest forecast is one of the most emblematic ones, requiring nowadays a detailed forecast per region and variety. The high quality wine system and the wine tourism system also require public investments in better access routes, cleaning services, better signaling while wineries invest in lodging and restaurant services, quality landscape, among others.

The whole system is based on a compulsory tax that all registered wine companies must pay for each liter of elaborated wine or must. The participation of all provincial governments, as well as private institutions and the work done for the domestic and export market, wine, must, raisins, small producers, among others has generated high consensus and has created great expectations. The possibility of accessing international funds has been helped by the high degree of organization. The great challenge is now, as well as in the beginning, to keep collective interests above private ones and keep a long-term view over a short-term one.

It should not be left aside the fact that one of the main added values of the creation of the *Corporación Vitinícola* is the increasing negotiation power of the wine provinces towards the National government. This has proven true in the national agenda priorities, in bilateral and multilateral negotiations, in the participation in international forums such as International Organization for Vine and Wine (OIV) and the World Wine Trade Group (WWTG).

V. Conclusions

The history of wine regulations in Argentina, as well as in most wine producing countries, is vast and full of regulatory measures. Actions for promoting wine production have alternated with measures to reduce it. Most tax-breaks programs have resulted in over supply as investments were done mostly for profiting the exemption, without any market knowledge. Whereas, measures to reduce oversupply, such as temporary bans on plantations, tax-breaks programs for specific vine varieties, regulations for sales quantity, public acquisition of grapes and wine for ulterior elimination or distillation had short term effects and thus required continuous new measures . When consumption started to decreased, this oversupply situation led to an unprecedented crisis. After one century, it was the end of the "table wine model for the domestic market". Consequences were disastrous: 132,930 hectares were ripped out and almost 21,000 grape growers and numerous wineries were left bankrupt. Perhaps the greatest regret refers to the loss of thousand hectares of the now emblematic and revaluated Malbec grapes: from 72,000 hectares in 1978 to only 10,000 ha in 1990.

A new strategic approach was required to overcome the crisis. Consensus raised on the need to produce high quality wine for the domestic and export market. A process of high investment rates and vines 'reconversion' began in the '90s. The particular macroeconomic situation of the period aided this modernization of agricultural and industrial activities. Specifically, the must regulation was crucial for the successful adoption of this strategy and it helped the general equilibrium of the wine industry. Mendoza and San Juan agreed on yearly devoting a share of total grape production to must production. In a context of high commodity prices, this production has allowed producers a smooth transition from low-quality grape varieties to high-quality ones. For wineries, this regulation has offered a longer time frame for modernizing facilities and for the adaptation to the new quality- based model. Malbec surface has grown accordingly, up to 31,000 ha in 2010 and is can now take its place among the "pantheon of noble wines" (Robert Parker, reported by Stein, 2008). Both transitions are still taking place and the must regulation constitutes a central tool for this. In order to enhance the path for high quality wine, the must regulation needs adjustments such as the modification of grape varieties subject to the regulation.

The Strategic Plan for the Argentinean Wine Industry launched in 2004 was defined for 'sustainably turn Argentina´s wine industry into one of the most distinguished in the word, by 2020'. In this path, measures were taken to change the 'low-quality wine for the domestic market' model for a cost leadership model of table wine and must and to promote a 'high quality wine' model for the domestic and export market, complement by the eno-tourism business. The plan's first decade has almost gone, leaving important lessons and insights for the future. The quality of governance of the system represents a main achievement and it can be considered the key asset for the future success of the industry. The *COVIAR* and *Fondo Vitivinícola* , as main agents of this process, are evidence of the strong social capital built along the years.

It is worth mentioning that the actual system is the result of numerous good decisions and numerous mistakes with high economic and social costs. Current regulations and their acceptance by public (Government of Mendoza, Government of San Juan and National Government) and private actors (*Bodegas de Argentina, Unión Vitivinícola Argentina, Asociación Viñateros de Mendoza, Centro de Bodegueros y Viñateros del Este, Cámara Argentina de Fabricantes y Exportadores de Mosto, Cámara de Bodegueros de San Juan, Cámara de Productores Vitícolas de San Juan, Cámara Riojana de Productores Agropecuarios; Cámara Vitivinícola de San Juan*, among others) are a result of an intense process of negotiation and adaptation. To reach the current situation, each institution has resigned historical positions, concentrating their efforts in the agreements. The effort of big institutions, in resigning their positions was vital for the current situation, especially the efforts of the *Centro de Bodegueros* (now *Bodegas de Argentina*) and the government of Mendoza. In this intense learning process, with more than a century of history, the social capital building has been vital and constitutes the key for future changes in the regulatory scheme and in the whole wine industry.

New challenges are today present for the wine industry. Differentiation through sustainable practices and through geographical indications is certainly the new trend in the highly competitive wine market. An upgrading public-private consensus needs to be achieved on these subjects to allow the positioning of Argentina in the world wine market.

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VII. Appendix I: National Regulations (Source: http://infoleg.mecon.gov.ar)

Number /Organism	Publication Date	Description
Law 25849 NATIONAL CONGRESS	01-mar-2004	**VITIVINICULTURA** Coviar - su creación Crease la corporacion vitivinicola argentina - coviar - como persona juridica de derecho publico no estatal, destinada a gestionar y coordinar la implementacion del denominado plan estrategico argentina vitivinicola 2020 - pevi. Mision, objetivo y funciones. Autoridades. Recursos. Sanciones. Evaluacion. Coordinacion. (nota: boletin oficial 11-4-2005 - pag. 27, se publica resolucion anexa i del acta nro. 2/2004 aprobando reglamentos internos de la corporacion vitivinicola argentina, en pag. 32, resolucion anexa ii - normas de procedimiento de recaudacion).
Law 25163 NATIONAL CONGRESS	12-oct-1999	**VITIVINICULTURA** Vinos - designación y presentación Establecense las normas generales para la designacion y presentacion de vinos y bebidas espirtuosas de origen vinico de la artgentina. Indicacion de procedencia y geografica. Denominacion de origen controlada. Proteccion de las ip, ig y doc. Alcances y obligaciones. Derechos. Autoridad de aplicacion. Consejo nacional para la designacion del origen de los vinos y bebidas espirituosas de naturaleza vinica. Infracciones y sanciones. Disposiciones complementarias.
Law 24566 NATIONAL CONGRESS	13-oct-1995	**LEY NACIONAL DE ALCOHOLES** Normativa aplicable Ley nacional de alcoholes. Materia. Jurisdiccion. Competencia. Financiacion. Industrializacion. Produccion, circulacion, fraccionamiento y comercializacion de alcoholes. Inscripcion y registracion. Fiscalizacion. Infracciones, delitos y penas.procedimientos y recursos administrativos.
Law 23871 NATIONAL CONGRESS	31-oct-1990	**IMPUESTO AL VALOR AGREGADO** Modificaciones Modificase el impuesto al valor agregado. Regimen de promocion de inversiones. Modificacion de impuestos internos y sobre los activos. Modificacion del impuesto sobre las ventas. Compras, cambio o permuta de divisas. Modificaciones a las leyes 11683 y 23771. Promulgada por dec. 2233 del 24-10-90.
Law 23683 NATIONAL CONGRESS	13-jul-1989	**VITIVINICULTURA** Modificacion Ley 23550 *Sustituyese el art. 19 de la Ley 23550 y el art. 10 de la Ley 14878. Promulgada de hecho el 10-7-89.*
Law 23550 NATIONAL CONGRESS	21-abr-1988	**VITIVINICULTURA** Regimen para la actividad vitivinicola *Regimen para la implantacion, reimplantacion y/o modificacion de los viñedos en todo el territorio de la nacion. Excepciones.*
Law 23289 NATIONAL CONGRESS	30-oct-1985	**VITIVINICULTURA** Modificacion de la reconversion vitivinicola *Deroga las disposiciones contenidas en los articulos 1 al 6 de la Ley 22667 de reconversion vitivinicola.*
Law 23149 NATIONAL CONGRESS	12-nov-1984	**VITIVINICULTURA** Fraccionamiento y envasamiento de vinos

		Establecese que el fraccionamiento de vinos en envases menores de 930 cc. Y mayores de 1500 cc. se deberá realiza en los lugares de origen del producto.
Law 23106 NATIONAL CONGRESS	02-nov-1984	**VITIVINICULTURA** Reconversion vitivinicola - excepciones a productores *Exceptuase a la zona productora de vino en las provincia de Rio Negro y Neuquen del cumplimiento del artículo 14 de la Ley n° 22667 de reconversión vitivivícola.*
Law 23154 NATIONAL CONGRESS	01-nov-1984	**VITIVINICULTURA** Regimen para contratistas de viñas *Restablecese la plena vigencia de la Ley nº 20.589 sobre regimen de los contratistas de viñas. Derogase la Ley nº 22163.*
Law 22667 NATIONAL EXECUTIVE POWER	02-nov-1982	**RECONVERSION VITIVINICOLA** Industria Vitivinicola-medidas *A partir de la vendimia 1983 la autoridad de aplicacion fijara para cada año el cupo nacional de produccion de vino.*
Law 21764 NATIONAL EXECUTIVE POWER	22-mar-1978	**VITIVINICULTURA** Ley 14878 - Modificacion *Introducense modificaciones a la ley de creacion del Instituto Nacional de Vitivinicultura.*
Law 21657 NATIONAL EXECUTIVE POWER	05-oct-1977	**VITIVINICULTURA** Ley 14878 - Modificacion *Sustituyese el articulo 24 de la Ley nº 14878 modificada por Ley nº 17849.*
Law 19756 NATIONAL EXECUTIVE POWER	04-ago-1972	**VITIVINICULTURA** Ley 18976 - Modificacion *Modificase el articulo 1º de la Ley 18976, modificatoria del articulo 9º, inciso A) de la Ley 14878 y del artìculo 1º de la Ley 16773.*
Law 18976 NATIONAL EXECUTIVE POWER	20-abr-1971	**VITIVINCULTURA** Ley 14878 - Modificacion. *Elevanse los recursos del Instituto Nacional de Vitivinicultura.*
Law 18905 NATIONAL EXECUTIVE POWER	19-ene-1971	**VITIVINICULTURA** Politica Nacional Vitivinicola *Politica Nacional Vitivinicola. Reglamentacion.*
Law 18600 NATIONAL EXECUTIVE POWER	18-feb-1970	**VITIVINICULTURA** Contratos de elaboracion de vinos *Normas que regiran los contratos de elaboracion de vinos por los sistemas "contrato de elaboracion por cuenta de tercero", "a maquila" o por "cuenta exclusiva del viñatero".*
Law 17849 NATIONAL EXECUTIVE POWER	20-ago-1968	**VITIVINICULTURA** LEY 14878 - Modificacion *Multas. - Actualizacion de los montos de las multas fijados por la Ley 14878, y se incluyen a los vinos manipulados entre los productos sujetos a decomiso.*
Law 16773 NATIONAL CONGRESS	23-dic-1965	**VITIVINICULTURA** Ley 14878 – Modificase el artìculo *Modificase el articulo 9º, Inciso a) de la ley 14878.*

Law 14878 NATIONAL CONGRESS	25-nov-1959	**VITIVINICULTURA** LEY GENERAL DE VINOS *Ley general de vinos. Instituto Nacional de Vitivinicultura. Derogación de las leyes 12372 y*

		14799. Decreto de promulgación 14872/59 b.o. 25/11/59.

VIII. Appendix II: Mendoza's Regulations (Source: http://www.senadomza.gov.ar)

Law	Description
47	Prohibición fabricación vinos artificiales sanciones vitivinicultura multas dirección general industrias.
55	Creación centro vitivinícola.
2051	Ratificación decreto acuerdo 1325/52 contribución gobierno provincia congreso antifilexerico sanidad vitícola vitivinicultura salubridad.
2080	Impuestos contribución directa multas deudas Nación provincia inmuebles dirección general rentas nombres junta reguladora vinos vitivinicultura financiero bancario impositivo
2220	Creación instituto investigaciones vid vino vitivinicultura ministerio economía instituto nacional viticultura filoxera enfermedades problemas estudios enología fomento
2245	Régimen actividades vinicultura régimen actividades técnicas Ley nacional de vinos industrias vitivinicultura enología vid vino establecimiento vinícola elaboración expendio fraccionamiento registro técnicos enología profesionales junta profesional vinícola bodegas
2458	Prórroga contratos cultivo cuidado viñas parrales frutales Ley 1578 régimen judicial estatuto contratista uvas frutas trabajadores laboral vitivinicultura
1215	Creación sección antifiloxérica patología vitícola dependiente dirección industrias vitivinicultura vinos vid uvas
2641	Ley levantamiento cosecha 1959 1960 uvas viñas parrales vinos vitivinicultura producción
2532	Edulcorantes artificiales naturales registro inscripción dirección industrias fomento agropecuario comercio excepciones prohibiciones reglamentación industrialización elaboración vinos vitivinicultura
2550	Prorroga año 1960 ampliación disposiciones Ley 2458 termino contratos viñas frutales cultivo cuidado parrales contratista uvas frutas trabajadores laboral vitivinicultura
2800	Autorización poder ejecutivo garantía banco nación préstamo suma dinero pesos acuerdo bodegas viñedos Giol S.A.I.C. financiero bancario vitivinicultura gobierno administración
2914	Autorización bodegas expendio ventas vinos damajuanas vitivinicultura dirección industrias circulación envases botellas abastecimiento
3013	Vino turista vitivinicultura fomento productos vitivinícolas promoción precio venta dirección industrias provincia registro general bodegueros dirección provincial turismo difusión producción
3718	Beneficios terrenos plantaciones especiales propiedades rurales fracciones tierra plantación cultivo vid variedades elaboración exención contribución directa impuesto vinos vitivinicultura
4525	Créditos productores vitícolas cosecha 1981 Banco Nación Argentina prestamos productor vitícola cosecha diversificación poder ejecutivo autorización gobierno condiciones garantías plazos intereses uva productores vitivinicultura
4748	Eximición impuestos aplicación Ley 22667 compraventa vinos política tributaria ingresos brutos beneficios tributarias sellos vitivinicultura
4767	Diversificación cultivos promoción cultivos agricultura viticultura productores vitícolas diversificación agricultores dirección agropecuaria exención impuestos cánones riego agua sustitución vid unidades productivos vitivinicultura
4777	Autorización ventas vinos exterior convenio trolebuses unión soviética vitivinicultura vinos compraventa exportaciones transporte automotor trolebuses acuerdos comerciales unión soviética repuestos
5014	Liberación vinos bloqueados vitivinicultura bodegas viñedos Giol empresas del estado bancos cancelación deudas bancarias bloqueo liberación mosto permuta acta federal reconversión vitivinícola
5102	Premio provincial fomento investigación uva usos diversificación autores obras jurado instituto nacional vitivinicultura centro regional científicas técnicas importes gastos centro bodegueros
5284	Poder ejecutivo adquisición compra volumen vino común sano apto libre circulación cantidad Instituto Nacional Vitivinicultura grado alcohólico existencias vínicas licitación publica precios emisión títulos deuda publica provincial tenedores destinos abastecimiento, emisión de bonos de la deuda pública para compra de excedentes vínicos (tidavidem) fondo de amortización.
1578	Estatuto contratista viñas frutales uvas frutas trabajadores laboral regímenes vitivinicultura
1489	Autorización poder ejecutivo transferencia junta reguladora vinos fraccionadores bodegas vid provincias Mendoza córdoba santa fe vitivinicultura economía industrial producción
1310	Ejercicio profesionales representantes bodegas vitivinicultura matricula dirección industrias fomento agrícola
1362	Creación sección antifiloxérica patología vitícola dependencia dirección industrias fomento agrícola sección patología vitícola vitivinicultura vid parásitos viveros viñedos
1371	Modificación Ley 1078 articulo 2 cooperativa ventas directa vinos consumidor requisitos emblemas bodegas vitivinicultura uvas administración
1227	Modificaciones leyes 1148 1078 presupuesto cumplimiento gobierno administración cooperativa oficial venta vinos

	consumidor vitivinicultura
1069	Zonas libres alcoholeras centros vitivinícolas autorización vitivinicultura centros destilerías funcionamiento industrias expropiación vinos bodegas licores venta costos establecimientos
1072	Reglas venta vinos consumidor expendio botellas vidrio envases mil centímetros cúbicos un litro consumo estampilla contaduría general vitivinicultura etiqueta productos precios cascos reglas
1078	Cooperativa venta directa vinos consumidor sociedad cooperativa emblemas ventas agencias oficiales marcas envases capital bodegas vitivinicultura requisitos formación precios locales administración carácter oficial.
5446	Cooperación técnica reconversión diversificación agrícola agricultura convenios Instituto Nacional Tecnología Agropecuaria INTA Facultad Ciencias Agrarias UNC Secretaria Agricultura Ganadería Pesca Desarrollo Regional Vitivinicultura vitícola cooperativas
6059	Ratificación tratado interprovincial defensa vitivinicultura vinos consumidores provincias Mendoza San Juan salida traslado realización envases excepciones comisiones fraccionamiento en origen abastecimiento
6110	Derogada por Ley 6946 creación registro contratos movimientos vinos mostos anotación elaboración compraventa permuta propiedad maquileros terceros vitivinicultura
6161	Ministerio Economía Instituto Nacional Vitivinicultura fiscalización productos adulteración prevención caldos vínicos vinos vitivinicultura convenios cosechas ingresos Mendoza
6301	Aprobación acuerdo La Rioja Salta Rio Negro Mendoza creación COFEVI Consejo Federal Vitivinícola Vitivinicultura
6450	Ratificación decreto 514/94 acta acuerdo Consejo Federal Vitivinícola COFEVI Instituto Nacional Vitivinicultura
6598	Ratificación decreto 417/97 aprobación acta vitivinícola Mendoza San Juan Instituto Nacional Vitivinicultura control cosecha disminución porcentaje uvas mostos
6717	Solicitud préstamo fondo transformación crecimiento adelanto vitivinícola aporte estatal vitivinicultura vinos fondos financiamiento inversiones públicas privadas transformación crecimiento social económico
6873	Autorización poder ejecutivo créditos prestamos Banco Nación asistencia productores emprendimientos gastos cosecha vitivinicultura vendimia 2001 agrícolas vinos acarreos
6946	Creación ámbito ministerio economía registro contratos movimientos vides vinos mostos anotación contratos precontratos elaboración permuta uvas compraventa deposito cesión título gratuito vitivinicultura declaración jurada operaciones datos personales CUIT cantidad tipo tenor azucarino derogación leyes 6311 6110
6985	Autorización poder ejecutivo operativo compra venta vinos mostos vitivinicultura cosecha 2001 exportación caldos vínicos
6990	Autorización poder ejecutivo ministerios economía hacienda constitución fideicomiso asistencia financiera productores emprendimientos agrícolas gastos cosecha acarreo uva vendimia vitivinicultura fondo provincial transformación crecimiento
7013	Ratificación acta acuerdo vitivinícola vitivinicultura provincias Mendoza San Juan aprobación decreto 1195/01
7097	Autorización Poder Ejecutivo crédito Banco Nación Argentina asistencia financiera productores producción vitícolas gastos cosecha uva vitivinicultura vendimia 2003 fideicomiso
7101	Registro contratos movimientos vinos mostos vínicos vitivinicultura elaboración industria uvas Instituto Nacional inscripción
7106	Incorporación enseñanza vitivinicultura educación curricular primer años nivel polimodal sistema educativo provincial Dirección General Escuelas
7122	Autorización autoridad aplicación Ley 6071 implementación líneas créditos Ley 6990 asistencia financiera productores producción titulares emprendimientos vitícolas vitivinicultura vinos bodegas
7216	Ratificación decreto 198/03 acta testificación Mendoza La Rioja San Juan acuerdo mutuo practicas enológicas grupo mundial comercio vinos vitivinicultura
7274	Aprobación ratificación decreto 541/99 acta acuerdo vitivinícola Mendoza San Juan vitivinicultura
7478	Ratificación decreto 2903/04 acta acuerdo complementaria tratados Mendoza San Juan contribución obligatoria imposición establecimientos vitivinícolas Instituto Nacional Vitivinicultura
7501	Autorización autoridad aplicación Ley 6071 administradora provincial fondos inversiones fondos financiamientos privadas transformación crecimiento socioeconómico creación publicas social económico provincia Mendoza constitución fideicomiso adquisición uva vitivinicultura vides mostos
7505	Ratificación decreto 906/05 acta acuerdo vitivinícola vitivinicultura tratado Mendoza San Juan Ley 6216
7506	Ratificación decreto 606/04 acta acuerdo vitivinícola vitivinicultura Mendoza San Juan
7563	Ratificación decretos 1315/04 ratificación acta acuerdo complementaria tratado Mendoza San Juan modificaciones contribuciones obligatorias establecimientos vitivinícolas Instituto Nacional Vitivinicultura
1123	Autorización Poder Ejecutivo abonos primas mayor exportación vinos artículos Ley 1068 gobierno administración vitivinicultura economía promoción desarrollo
1128	Ley regulación vitivinícola vitivinicultura vinos uvas economía promoción desarrollo
1130	Fijar normas liquidación primas franquicias Leyes 1067 1068 levantamiento cosecha uvas vinos defensa vitivinícola vitivinicultura
1131	Aplicación impuestos suplementarios uvas vinos financiar financiamiento plan solucionar problemas vitivinícolas vitivinicultura economía industrial producción desarrollo

1139	Modificación Ley 1069 implantación zonas libres alcoholeras vitivinicultura vinos uvas bodegas economía industrial producción desarrollo
1148	Modificación Ley 1078 cooperativa oficial venta vinos consumidor uvas bodegas vitivinicultura economía promoción desarrollo industria producción
1006	Derogar impuesto uva vitivinicultura creación Ley 866
1066	Suspender patentes destilerías alcohol vínico vinos vitivinicultura
1067	Levantamiento cosecha uva vitivinicultura vinos
1068	Creación comisión automática defensa vitivinícola vitivinicultura vinos bodegas
1071	Construcción bodegas ayuda oficial vinos vitivinicultura economía promoción desarrollo industria producción
1073	Franquicias cooperativas vitivinícolas agrícolas frutícolas vinos frutas uvas vitivinicultura fruticultura acuerdo Leyes Nacionales 11380 11388 economía promoción desarrollo
1076	Autorización Poder Ejecutivo medidas legales derogación derogar impuestos circulación consumo vinos país vitivinicultura bodegas economía producción industrial
1091	Levantamiento elaboración cosechas uvas vinos bodegas industria producción vitivinicultura
7839	Ratificación decreto 453/04 convenio suscripción Mendoza San Juan Consejo Federal Inversiones Instituto Nacional Vitivinicultura municipalidad ciudad VI concurso internacional vinos vinandino 2003
7843	Autorización aplicación Ley 6071 avales creación fondo provincial transformación crecimiento productores vitícolas vitivinicultura ayuda financiera entrega otorgamiento
7904	Ratificación decreto 375/08 acta acuerdo complementaria tratado Mendoza San Juan Ley 6216 vitivinicultura elaboración mostos
8088	Ratificación decreto 394/07 acta acuerdo complementaria Mendoza San Juan Ley 6216 uva vino vitivinícola vitivinicultura
8110	Autorización administradora provincial fondo autoridad aplicación Ley 6071 organización fideicomiso financiamiento productores producción industriales agropecuarios adquisición maquinas maquinarias vino vitivinicultura Mendoza fiduciaria 7378 ayuda
8328	Ratificación decreto 922/06 convenio cooperación técnica asistencia financiera producción vitivinícola vitivinicultura La Rioja
8444	Ratificación decreto 140/2011 acta acuerdo complementaria tratado Mendoza San Juan industria vitivinícola vitivinicultura

IX. Appendix III: Statistical Data

Table 5 Evolution of vineyard surface and annual difference - hectares

Year	Surface	Difference	Year	Surface	Difference
1949	171.394	0	**1981**	321.904	2.273
1950	175.013	3.619	**1982**	324.407	2.503
1951	180.018	5.005	**1983**	321.975	-2.432
1952	187.687	7.669	**1984**	305.981	-15.994
1953	193.701	6.014	**1985**	294.821	-11.160
1954	201.048	7.347	**1986**	283.673	-11.148
1955	210.258	9.210	**1987**	274.705	-8.968
1956	216.367	6.109	**1988**	268.385	-6.320
1957	222.228	5.861	**1989**	260.199	-8.186
1958	228.231	6.003	**1990**	210.371	-49.828
1959	234.778	6.547	**1991**	209.268	-1.102
1960	242.524	7.746	**1992**	208.752	-516
1961	253.782	11.258	**1993**	208.863	111
1962	259.783	6.001	**1994**	209.838	975
1963	265.357	5.574	**1995**	210.391	553
1964	271.009	5.652	**1996**	210.639	248
1965	276.052	5.043	**1997**	209.057	-1.582
1966	281.372	5.320	**1998**	210.448	1.391
1967	286.964	5.592	**1999**	208.137	-2.311
1968	294.167	7.203	**2000**	201.113	-7.024
1969	294.167	0	**2001**	204.133	3.020
1970	297.316	3.149	**2002**	207.986	3.853
1971	299.664	2.348	**2003**	210.530	2.544
1972	311.647	11.983	**2004**	212.659	2.129
1973	316.503	4.856	**2005**	218.590	5.931
1974	329.858	13.355	**2006**	223.034	4.444
1975	345.727	15.869	**2007**	225.846	2.812
1976	347.896	2.169	**2008**	226.450	604
1977	350.680	2.784	**2009**	228.575	2.124
1978	349.718	-962	**2010**	217.750	-10.824
1979	316.355	-33.363	**2011**	217.750	-
1980	319.631	3.276			

Source: our elaboration from INV data

Table 6 Evolution of grape production - hundredweight

Year	Hundredweight	Year	Hundredweight	Year	Hundredweight
1930	9.445.279	**1958**	18.758.945	**1986**	25.632.352
1931	10.712.171	**1959**	22.889.059	**1987**	36.935.458
1932	3.585.145	**1960**	20.941.340	**1988**	31.917.249
1933	3.637.933	**1961**	21.742.094	**1989**	29.705.861
1934	13.274.071	**1962**	24.599.397	**1990**	23.423.491
1935	10.460.901	**1963**	26.784.642	**1991**	20.816.147
1936	13.509.353	**1964**	25.438.497	**1992**	21.266.181
1937	13.438.314	**1965**	23.418.722	**1993**	19.409.814
1938	13.872.488	**1966**	27.773.316	**1994**	24.973.598
1939	9.963.906	**1967**	36.823.316	**1995**	28.548.135
1940	10.529.286	**1968**	25.903.903	**1996**	20.398.936
1941	11.422.926	**1969**	23.539.977	**1997**	24.819.084
1942	10.324.206	**1970**	24.491.124	**1998**	20.016.728
1943	15.107.658	**1971**	28.857.714	**1999**	24.249.860
1944	12.519.461	**1972**	25.401.765	**2000**	21.911.342
1945	9.868.672	**1973**	28.585.898	**2001**	24.598.560
1946	12.466.545	**1974**	33.591.187	**2002**	22.443.688
1947	13.503.887	**1975**	29.280.710	**2003**	23.014.807
1948	16.039.738	**1976**	36.753.032	**2004**	26.509.729
1949	14.483.991	**1977**	32.160.441	**2005**	28.297.115
1950	17.440.694	**1978**	27.371.230	**2006**	28.809.275
1951	15.896.166	**1979**	34.525.050	**2007**	30.925.094
1952	15.347.017	**1980**	30.867.717	**2008**	28.216.964
1953	18.416.343	**1981**	29.299.140	**2009**	21.815.672
1954	15.116.121	**1982**	34.918.856	**2010**	26.196.906
1955	24.405.152	**1983**	35.044.704	**2011**	28.902.962
1956	18.461.010	**1984**	26.385.090		
1957	12.036.058	**1985**	22.528.730		

Source: our elaboration from INV data

Table 7 Evolution of wine and must production – hectoliters

Year	Must	Wine	Year	Must	Wine
1960	**45.191**	**15.775.248**	1987	**2.441.627**	**26.017.800**
1961	**65.201**	**16.671.215**	1988	**3.835.981**	**20.629.467**
1962	**46.369**	**19.077.153**	1989	**2.611.067**	**20.317.507**
1963	**55.045**	**20.650.378**	1990	**3.679.173**	**14.036.300**
1964	**146.702**	**19.322.701**	1991	**1.483.675**	**14.500.272**
1965	**93.681**	**18.134.840**	1992	**2.642.144**	**14.350.745**
1966	**174.864**	**21.701.588**	1993	**762.887**	**14.470.842**
1967	**248.164**	**27.839.817**	1994	**1.576.059**	**18.172.910**
1968	**748.326**	**18.702.410**	1995	**6.055.747**	**16.443.055**
1969	**579.200**	**17.292.970**	1996	**3.377.195**	**12.681.006**
1970	**323.508**	**18.943.387**	1997	**5.992.603**	**13.500.292**
1971	**208.848**	**21.810.250**	1998	**2.766.756**	**12.673.382**
1972	**688.919**	**19.267.224**	1999	**3.060.647**	**15.887.696**
1973	**332.935**	**22.209.132**	2000	**4.303.596**	**12.536.820**
1974	**937.386**	**26.189.926**	2001	**3.299.750**	**15.835.184**
1975	**722.194**	**21.345.664**	2002	**4.428.335**	**12.695.145**
1976	**1.134.725**	**27.057.313**	2003	**4.377.465**	**13.225.275**
1977	**1.458.752**	**23.220.186**	2004	**4.699.549**	**15.464.289**
1978	**1.067.889**	**20.175.350**	2005	**6.103.513**	**15.221.556**
1979	**809.036**	**26.347.050**	2006	**6.387.417**	**15.396.350**
1980	**632.849**	**23.489.975**	2007	**8.106.205**	**15.045.915**
1981	**976.853**	**21.798.813**	2008	**6.381.524**	**14.676.415**
1982	**2.017.343**	**25.180.703**	2009	**3.859.949**	**12.135.467**
1983	**1.813.346**	**24.719.156**	2010	**3.481.045**	**16.250.768**
1984	**760.192**	**18.808.326**	2011	**6.243.322**	**15.472.635**
1985	**1.569.193**	**15.740.838**	2012	**4.944.299**	**11.778.029**
1986	**875.854**	**18.570.601**			

Source: our elaboration from INV data

Table 8 Evolution of total consumption and per capita consumption

Year	Total Consumption (Hl)	Per capita Consumption (l)	Year	Total Consumption (Hl)	Per capita Consumption (l)	Year	Total Consumption (Hl)	Per capita Consumption (l)
1930	5.542.590	46,32	**1958**	10.917.802	53,76	**1985**	18.551.963	60,05
1931	5.177.060	42,36	**1959**	13.308.307	64,15	**1986**	18.557.309	59,17
1932	5.104.060	32,89	**1960**	16.047.749	79,88	**1987**	18.382.681	58,11
1933	4.461.600	35,15	**1961**	16.005.035	78,62	**1988**	17.861.149	55,89
1934	5.492.546	42,51	**1962**	16.808.329	77,9	**1989**	17.229.606	53,67
1935	6.171.503	46,99	**1963**	18.124.134	82,91	**1990**	17.714.062	54,15
1936	6.619.257	49,56	**1964**	19.269.176	86,83	**1991**	17.083.505	52,39
1937	7.225.123	53,18	**1965**	19.180.031	85,79	**1992**	16.194.862	49,53
1938	7.026.588	50,84	**1966**	18.332.050	80,2	**1993**	14.558.474	44,43
1939	7.213.970	51,52	**1967**	19.222.210	82,81	**1994**	14.179.544	43,2
1940	7.245.768	50,78	**1968**	20.657.614	87,47	**1995**	13.491.779	41,08
1941	7.568.471	52,14	**1969**	21.221.907	88,49	**1996**	13.541.825	41,09
1942	7.498.247	50,84	**1970**	21.447.002	91,79	**1997**	13.435.515	40,29
1943	7.959.092	53,09	**1971**	20.215.113	85,3	**1998**	12.928.170	38,83
1944	9.038.642	59,25	**1972**	19.076.705	79,74	**1999**	12.807.990	38,69
1945	8.617.538	55,54	**1973**	17.754.454	72,54	**2000**	12.491.263	37,73
1946	8.013.672	50,8	**1974**	19.189.560	77,2	**2001**	12.036.444	35,51
1947	9.178.213	57,08	**1975**	21.124.037	83,68	**2002**	11.988.496	32,9
1948	10.478.487	63,44	**1976**	21.748.263	84,76	**2003**	12.338.416	33,68
1949	11.242.467	66,26	**1977**	23.158.163	88,45	**2004**	11.112.578	29,87
1950	11.416.563	65,54	**1978**	21.911.068	81,59	**2005**	10.972.454	29,18
1951	8.339.351	46,72	**1979**	20.664.486	76,32	**2006**	11.103.938	29,23
1952	8.841.679	48,5	**1980**	21.071.880	76,28	**2007**	11.165.998	29,08
1953	11.095.014	59,73	**1981**	21.022.645	74,67	**2008**	10.677.191	27,79
1954	12.636.770	66,73	**1982**	21.003.872	73,64	**2009**	10.342.267	26,7
1955	13.341.802	69,11	**1983**	20.549.958	71,11	**2010**	9.753.081	24,85
1956	14.698.777	74,68	**1984**	19.811.956	66,32	**2011**	9.793.546	24,41
1957	10.652.873	53,11						

Source: our elaboration from Area del Vino data

Table 9 Evolution of wine and must exports – thousand U$D

Year	Must	Wine
1998	54.252	140.005
1999	72.399	117.334
2000	54.079	124.878
2001	51.125	148.767
2002	51.052	128.338
2003	55.774	169.150
2004	73.626	231.481
2005	100.322	302.414
2006	117.792	379.397
2007	173.876	482.325
2008	222.168	621.990
2009	132.281	630.836
2010	125.902	733.878
2011	199.235	834.161
2012	175.262	913.622

Source: our elaboration from INV and Area del Vino data