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PHYLLOXERA, PRICE VOLATILITY AND INSTITUTIONAL INNOVATION IN FRANCE'S DOMESTIC WINE MARKETS, 1870-1911.

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Abstract: This paper looks at the response of growers and merchants, first to vine disease and high prices, and then to the problems of overproduction and product adulteration. France produced a large range of wines, but by the early twentieth century most commodity chains were failing to provide accurate information for consumers to discriminate between differences in quality. The paper argues that the different characteristics of individual wines, and the nature of their commodity chains, resulted in the demand for very different solutions to the low prices and profits of the 1900s.

Key Words: wine history, French agriculture, appellations, phylloxera, institutions

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A series of large demonstration in France's Midi in the summer of 1907 culminated in over half a million people protesting in Montpellier against low prices and the sale of artificial wines. At the same time, many of Bordeaux's leading quality wine producers were forced to look to their merchants for help, while growers of ordinary wines lobbied local and national governments to establish a new regional 'Bordeaux' appellation. A few years later, in 1911, troops were needed to stop the destruction of large quantities of wines that had been brought from outside the Champagne region to Reims and Epernay for making into 'champagne'. This paper argues that the causes of these very different events was the natural instability found in wine markets, which had been aggravated by the major domestic shortages caused by the vine disease phylloxera.

During the nineteenth century, falling transport costs produced a growing regional specialisation in viticulture, and urbanisation and rising real wages led to a significant increase in wine consumption. The major domestic wine shortages caused by phylloxera after 1875 forced merchants and even some growers to look for alternative supplies, supplies which they were reluctant to surrender when production recovered in the late nineteenth century. The result was a sharp fall in prices and profitability, which led to debates over various forms of market intervention. Proposals included the removal of surplus wine from the market by distilling, stricter controls on the manufacture of artificial wines, and the creation of regional appellations. None of these could be introduced without the support of the state. However, the heterogeneity of French wines, and the very different commodity chains that had been created to sell wines as diverse as vintage claret and Bordeaux's vin ordinaire, implied that growers and merchants were often divided on the most appropriate policies. Potential division of interests were found not just between growers and merchants, but also between large and small growers, producers of fine wines and ordinary ones, and between growers in different geographical localities.

The paper is divided into four sections. The first examines long run changes in France's domestic wine supply, and in particular the impact of phylloxera. Sections 2, 3, and 4 look at the response of local growers and merchants, first to phylloxera, and then to the collapse in wine prices in three major regions. Section 2 considers the Midi, France's leading producer of cheap, low quality wines, which accounted for two-fifths of national output at the turn of the century. The need to replant after phylloxera reinforced the links between small and large properties, and helped treat the collapse in

prices in the 1900s as a common problem for all the sector. With the state providing a legislative framework for controlling fraud and adulteration, local growers through the creation of the *Confédération générale des vignerons du Midi* established an efficient institution to regulate both producers and merchants and reduce the incentives to cheat. By contrast the much greater diversity of wines in the Gironde (Bordeaux) divided growers and merchants much more (section 3). Here the producers of ordinary wines increasingly found it difficult to compete against the low cost Midi producers, and demanded a regional appellation to reduce competition. This measure was opposed by both those local merchants who blended Bordeaux wines with those from elsewhere to create a more marketable product, and outside growers who saw their markets threatened. By contrast, a regional appellation for Bordeaux was considered as largely irrelevant for producers of quality wines, and the unique nature of their products and their precarious financial situation left many to sign private contracts with merchant houses guaranteeing them markets. Finally, section 4 looks at the Champagne region, where the problem for growers, especially in 1908 and 1910, was the lack of wine, rather than abundant harvests. Difficulties arose because grape prices failed to increase, in part because quality producers already had sufficient stocks maturing in their cellars, and in part because ordinary champagne producers bought cheap wines from outside the region. Conflicts were especially bitter because, and unlike Bordeaux, the 'natural' boundaries for a regional appellation to the Champagne region were much harder to determine.

1. Phylloxera and the volatility in wine markets.

Instability in wine markets was hardly new to the early twentieth century. Labrousse noted that in eighteenth century France, 'the cyclical fluctuations (of wine prices) are .. superior to those of all other products'.[2] Furthermore, not only did the size of harvests fluctuate significantly from one year to another, but so did the quality. In the short term, supply was relatively inelastic. Entry costs to viticulture were low, as the vine was usually cultivated on land marginal to other crops, required high labour inputs (and therefore considered an advantage when the population growth was reducing land:

labour ratios), but demanded little capital. According to Arthur Young's calculations in the late 1780s, a vineyard yielded an annual average of £9 per acre, compared to £6 or

the best land in England, and 'more than sugar pays in the West Indies, which is usually supposed the most profitable cultivation in the World.[3] Vineyards were generally small, and on the eve of the phylloxera epidemic, there were an estimated 1,628,808 growers in France.[4] In the face of weak demand or growing competition, growers were reluctant to uproot their vines, but instead reduced labour inputs. Demand was however more flexible. High transport costs implied that most wine was drunk locally, and per capita consumption fluctuated with local harvests. Because of the poor keeping quality of most wines, stocks played only a very small role in smoothing out supply from one harvest to the next. Indeed, the limited storage facilities owned by most growers implied that any surplus in the autumn was thrown away to leave room for the new, and more valuable wine. In the cities, although merchants were reluctant to dispose of old stock this way, the problems of storage and preserving wines discouraged the building of inventories.[5] Only with the growth in distilling, especially from the seventeenth century, was there a commercial outlet for surplus wines.

The nature of supply and demand was also shaped by local and state legislation. Wines were taxed in a variety of ways, which not only discouraged consumption, but distorted markets. For example, in the Ancien Regime, the church and nobility enjoyed privileges that allowed them to sell wines from their own harvests in cities exempt from taxation. They also encouraged legal measures to restrict the planting of new vines, so that they did not have to compete against the increase in output of cheap, poorer quality wines.[6] The 1577 *arrêt* restricted the sale of wines in Paris to those produced outside a radius of 20 leagues (about 50 miles), which the crown hoped would produce more taxes and better wheat supplies for the metropolis, but indirectly encouraged the growth in production of wines from Orleans, the Loire and 'the vineyards stretching south from

[7] Finally, the Ancien Regime's legislation often restricted the movement

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[2] Labrousse, 1933, 1, pp.269-76, cited in Brennan, 1988, p.97.
[3] Young, 1794, 2, pp.21-2 and 25. Cereal land in England also required an expensive fallow.
[4] Guyot, 1876, tome 3. See also Degrully, 1910, pp.440-1. In late nineteenth century France there were an estimated 1.6 million growers when the active male population was only 13 millions; Loubère, 1978, p.167 and Prestwich, 1988, p.10.
[5] Brennan, 1988, p.96.
[6] Dion, 1977, pp.597-8.
[7] Brennan, 1988, p.94.

of wines, allowing local growers in Bordeaux, for example, to control the access of wines brought down the rivers to both the city and export markets.[8]

Many of these legal restrictions to trade were removed in 1776 or during the Revolution, but the trade in wines remained limited by the high costs of transport, high taxation, and the low levels of urbanization. Improved market integration led to an expansion of trade, and the rail link between the Midi and France's northern industrial cities, encouraged growers to plant high yielding vines on fertile land to produce cheap table wines and undercut traditional suppliers. Per capita consumption grew from an average of 76 litres in the early 1850s, to 140 litres by 1875, when the harvest reached 84.5 million hectoliters, France's largest ever.[9] By the early 1870s there was a growing concern that supply was growing faster than demand, but this threat of overproduction was averted by the vine disease phylloxera, which postponed the problem to the turn of the twentieth century.[10]

Phylloxera was the most important of a number of new vine disease brought to Europe from North America in the nineteenth century, one negative consequence of the decline in the Atlantic shipping times. The first was powdery mildew or oidium. This, during the worst years of 1853/56, caused French production to slump to just 17.6 million hectolitres, and output between 1851 and 1861 only once reached 41.7 million hectolitres, the annual average achieved in 1832/41 **(**Figure 1).[11] If the impact of powdery mildew on supply was severe, it was also short-lived, as it was found that dusting the vines with sulphur checked the spread of the fungal disease, and production quickly returned to normal, albeit involving higher production costs. Phylloxera, which first appeared in 1863, spread much more slowly than powdery mildew, but its long-term economic consequences were greater. The aphid fed on the plant's roots, killing it after several years. In time phylloxera destroyed virtually all of Europe's vines. In France it has been estimated that between 1868 and 1900 some 2.5 million hectares of vines were uprooted at a cost of 15 billion francs, and chemicals, imports of vines, the costs of replanting and grafting accounted for another 20 billion.[12] Wine output, which had averaged 57.4 million hectolitres in 1863/75, fell to 31.7 million in 1879/92, before

[8] Dion, 1977, cap.11 and Roudie, 1994.
[9] Nourrison, 1990, p.321. The quantity consumed by wine producers and their families (and therefore exempt from taxes) grew from 5 to 9 million hectolitres between 1850/4 and 1900/4, while the increase in off-farm consumption was from 18 to 42 million hectolitres. Calculated from Degrully, 1910, pp.320-1.
[10] Augé-Laribé, 1907, p.86.
[11] Calculated from Lachiver, 1988, p.582. No production figures exist for 1842 to 1849.

recovering to 52.5 million once more in 1899/1913.[13] A number of solutions did slow the rate of infection, but all were expensive. In 1873 the flooding of vineyards was shown to be successful, but required holdings to be compact, relatively large, and on level ground close to good supplies of cheap water. Two chemical solutions were also developed, namely the injection of the vines' roots with liquid carbon bisulphide, and the spraying with sulphocarbonate. These were only temporary measures, and the only permanent cure was the grafting of European scions onto the American phylloxera resistant vine roots. This was technically not difficult, but the scientific work required to find the most suitable vines that were both resistant to phylloxera (and other diseases), and which adapted easily to the soils and cultural conditions found on each vineyard, was immense. A further concern was the quality of the wine from the new plants, although many growers also saw the potential for exploiting the new research to improve yields.

The shortages caused by phylloxera required merchants to look for alternative supplies. One immediate solution was imports, and France switched from exporting the equivalent of 5 per cent of its domestic supply in 1866/75, to importing 19 per cent in 1886/95 (Table 1). Another strategy to augment supply was through the manufacture of wine from raisins and currants that were imported duty free until 1899, and were cheaper to transport than wine.[14] Even more controversial was the use of sugar in wine production. Chaptal had shown that the addition of sugar to wine must in years with poor summers, especially in northern Europe, improved quality, but did not increase

[12] Galet, 1988, cited in Paul, 1996, p.16. Trebilcock (1981, p.157), suggests a 'final bill' in excess of £400 million (10,000 million francs), equivalent to 37% of the average GDP for 1885/94.
[13] Calculated from Lachiver, 1988, pp.582-3.
[14] In 1889 raisins used for wine making were taxed 3 francs per 100 kilos, but those for direct consumption remained untaxed. It was estimated that 300 litres of wine with an alcohol strength of 8 per cent could be produced from a 100 kilos of raisins or currants, at the cost of just 0.15 francs a litre, considerably less than real wine, and there were reportedly twenty factories in Paris. Ordish, 1972, pp.148-50.

Table 1.

French wine supplies, 1886-1895, in thousands of hectolitres.

	1866-1875		1886-1895		1900-1909	
	000 hls.	% of total	000 hls.	% of total	000 hls.	% of total
Harvest	56,931	99.4	30,517	70.7	55,649	88.3
Imports	348	0.6	9,510	22.0	5,620	8.9
Sub total	57,279		40,027	92.7	61,269	97,2
Sugar & raisin wines	?		3,163	7.3	1,840	2.9
Total	57,279	100.0	43,190	100.0	63,109	100.0
Exports	3,229	5.1	2,032	4.8	2,141	3.2
Drunk by producers	28,362	44.4	9,186	21.7	14,833	22.4
Sold by merchants	25,687	40.2	28,794	67.8	44,295	67.0
Vinegar & distilling	5,000?	7.8	681	1.6	2,200?	3.3
Total	62,278	97.5	40,693	95.9	63,469	95.9
Waste (6% of merchants' wine)	1,541	2.4	1,728	4.1	2,658	4.0
Difference	+6,540		-769		+3,018	
Net foreign trade as % of domestic wine stocks*	+5.0%		-18.7%		-5.7%	
Per capita consumption	c.144		c.110		c.162	
Average wine yields						
Average wine price (Paris) hl./fr.	28.5		32.2		18.2	

* calculated as harvest + imports (i.e. sub total above)
Source: 1886/95: Sempé, 1898, p.52 and Degrully 304, 428. Warner, 1960, p.35 .

Table 2.

Changes in wine prices in select French regions, 1840 and 1892.

	1840	1892	Rate of increase
Marne	15.60	286.76	18.40
Gironde	18.44	62.87	3.40
Hérault	6.67	17.55	2.63
Charente M.	7.50	44.42	5.92
Rhône	14.54	49.25	3.39
Saône et Loire	16.73	54.20	3.23
France	11.58	31.15	2.67

Francs per hectolitre

Source: Toutain, 1992, tome 1, p.254.[15]

[15] Nationally output halved between 1840 and 1892, fell to a sixth in the Marne (champagne), and a fifth in the Charentes, but doubled in the Midi.

output.[16] However, sugar can also be added, together with water, to the remains of the grapes after their first pressing, and repressed to produce 'second wines' or *piquettes*. Colouring was then added, with fuchsine being especially popular.[17] This practice was normally limited to produce wines for on-farm consumption, 'in theory by law and in fact by the abundance of good cheap wine and the relatively high price of sugar'.[18] The high wine prices, the desperate situation facing many growers, especially in the Midi because of phylloxera, and the relaxation of laws by the government, encouraged significant quantities of *piquettes* to be sold. By 1890 raisin and sugar wines accounted officially for a sixth of total French consumption, before higher tariffs and taxes reduced their legal production. Therefore if the wine shortage produced by powdery mildew in the 1850s had led to wine prices doubling in France, the price increase with phylloxera was much more modest, about a third between the early 1870s and the early 1880s.[19] Consumption, which had reached 147 litres per capita in 1875/9, fell to a low of 93 litres in 1885/9 (Figure 2 and Table 2).[20]

By the late nineteenth century, French wine production was clearly recovering. The 1893 harvest was the first in fourteen years to be above the long-term average of 1871-1913, and the combination of rising domestic production, large scale imports, and the widespread manufacture of artificial wines, now threatened overproduction. The impact on supply can be seen in Table 1 although some of the figures are only approximate. In the first instance, the easiest recourse was to reduce imports. The tariff war of the late 1880s provided an excuse to increase duties on Italian wines, and from 1892 those on Spanish wines were also increased, although the impact of this measure was initially limited by the use of free-ports and, until 1898, the depreciation of the peseta.[21] Spanish exports to France in the 1890s were still 81 per cent of what they had been in the 1880s, but then fell sharply to 14 per cent in 1900s. However the decline from these markets was partly offset by the growth of Algerian imports, so that total French imports in the 1900s were still 5.6 million hectolitres, equivalent to 60 per cent of the figure in the 1880s.

[16] Output did increase of course, when *chaptalisation* encouraged production in regions which otherwise would have found it impossible.
[17] Ordish, 1972, p.144.
[18] Warner, 1960, p.13.
[19] Nye, 1992, p.12, makes this point.
[20] Nourrison, 1990, p.321.
[21] Sempé, 1898, p.205.

With the recovery in output after phylloxera, it was apparent that a number of important changes had taken place in the wine market. In the first instance average wine quality was probably declining. It is true that the technical advances associated with grape production and wine making were improving quality, but market demand was encouraging growers to specialise in producing large quantities of cheap wines, rather than small quantities of better quality ones. This was caused by the high transaction specific costs associated with classifying wines, which encouraged many merchants to compete on price, and measure quality simply by alcohol content. As the heavy costs associated with replanting vineyards occurred at a time when real wages were increasing, it was not surprisingly that growers in marginal areas gave up production, and by 1914 the area of vines had declined from its peak in 1874 by almost a million hectares, or forty per cent.[22] The new vineyards were more productive, and yields increased from 22 hectolitres per hectare in the 1870s to 33 in the 1900s, allowing domestic output to recover from its pre-phylloxera levels (Table 1).

As second fact was distilling. Prior to phylloxera, distilling was widespread in years of overproduction, or when quality was poor. The increase in wine prices caused by phylloxera saw a sharp decline in distilling, with production falling from an annual average of eight million hectolitres in 1865/9, to one million in 1895/9.[23] At the same time technical developments in commercial distilling and the appearance of cheaper raw materials (grains, beets and potatoes) produced a significant fall in the price of 'industrial' alcohol. When wines supplies recovered and overproduction threatened in the late 1890s, the market to distil surplus wines had practically disappeared. Some of the industrial alcohol produced was used in the manufacture of new types of beverages, often drunk in the *assommoir* or dram shops. However cheap alcohol was also used to produce artificial wines. The exact size of this trade is naturally impossible to establish, but was generally believed to have been extensive. For example, official wine consumption in Paris in 1903 was 185 litres per capita, half the 354 litres found in its suburbs. To avoid taxation, wines were often strengthened with alcohol to the legal maximum required before being bought into the city, and then watered down and adulterated with industrial alcohol.[24] One report to the Chamber of Deputies in 1905, suggested that 20 million hectolitres of manufactured wine were circulating nationally,

[22] The area reached 1.66 million hectares in the mid 1930s, before declining once more slowly.
[23] Degrully, 1910, p.325.
[24] Degrully, 1910, p.356.

while another suggested a figure of between 10 and 12 millions. In the same a year the municipal laboratory in Paris randomly tested 617 wine samples, and found that 500 had been doctored or adulterate.[25] Imports were also affected, as adulterated wines in Spain accounted for perhaps a quarter of that market in the late 1880s, and industrial spirits were frequently used to strengthen wines for export to France.[26]

Finally France, as noted, changed from being a net exporter to being a net importer when. With the recovery in domestic production, merchants found that many of its old markets were now protected by tariffs, restricting demand for French wines, despite their considerably lower prices.[27]

By the turn of the century it was clear that reducing imports had not solved the problem of low prices and low profitability, which were producing serious unrest in a number of France's wine producing regions. Among the potential solutions that were debated was the need to remove wine surpluses by distilling, a greater control over wine adulteration, and some sort of institutional innovation which would reduce grading costs, and thereby encourage growers to produce smaller quantities of better quality wines. All these measures required state intervention, either to provide capital in the case of distilling, or to reduce organisational costs with regional appellations.

The causes of overproduction, and the most suitable policies to resolve the problems of low prices, were much debated by contemporaries. Not only were there often divisions of interest between small and large growers, and between growers and their merchants, but also sometimes between growers in different wine producing regions, and between quality and ordinary wine producers in the same region. Indeed, it is necessary to talk about wine markets rather than just one, as the market organisation for wines such as fine clarets, vintage champagnes, or cheap *vin rouge*, were very different. To help understand better the demands for intervention, it is necessary therefore to consider the commodity chain, which linked producer with consumer, according to the nature of the different wines. Government legislation aimed at encouraging workers' associations (1884) and consumer protection (1905) made it easier for individuals to co-operate formally, and provided incentives to look for regional or sectorial solutions to problems such as phylloxera or low prices. Table 3 summaries some key variables in the three regions considered in this paper. Only in the

[25] All cited in Warner, 1960, p.37.
[26] Simpson, 1995, p.97.
[27] For French exports, see Pinilla and Ayuda, 2002, and Simpson, 2004.

Midi did the interests of both large and small growers encourage co-operation in their fight against phylloxera, a useful rehearsal for the regional response to low prices in the summer of 1907. By contrast, the producers of quality wines in both Bordeaux and Champagne found that they had little in common with the smaller growers in their respective regions, as their wines were marketed by using the brand of the château or *maison*, and looked for an individual, rather than a group response. We shall now consider the responses of the three regions to low prices in the 1900s in greater detail.

Table 3.

a. Co-operation between large and small growers against phylloxera.

	Level of co-operation
Midi	High
Bordeaux	Small
Champagne	Small

b. Wine production and the nature of production difficulties in the early twentieth century.

	Number of growers/ producers	Homogeneity of wines	Strength of brands	Ease of entry for new growers	Perceived level of fraud	Need to restrict local output
Midi *vin ordinaire*	150,000	Relatively high	Average	Easy	High	Yes
Bordeaux, *vin du cru*	80	Very low	Strong	Hard	Low	Yes
Bordeaux, *vin ordinaire*	67,000	Low	Weak	Easy	Low	Yes
Vintage champagne	30 ?*	Very low	Strong	Hard	Low	No
Cheap champagne	300?*	Average	Weak	Easy	High	No
Champagne grape production (Marne)	27,000	Very low	Weak	Easy	High	No

* Refers to champagne houses

Sources: see text.

3. Adjusting to dis-equilibrium: the Midi.[28]

High transport costs and taxes severely restricted access to national markets for growers in the Midi in the early nineteenth century, leaving many to specialise in the less profitable production of spirits (3/6 liqueur) rather than wine. This changed, even before phylloxera, as the railways encouraged a rapid growth in the area of vines and a shift towards high yielding intensive viticulture.[29] The Midi was the first major region to be devastated, and the area of vines fell from its peak of 450 thousand hectares in 1872, to 268 thousand in 1886, before recovering to 462 thousand in 1900.[30] State involvement was sought, both to help growers financially, and to find a scientific solution to the disease. Local institutions, such as the University in Montpellier and the *Ecole nationale d'agriculture* (La Gaillarde), played a major role in the introduction of American vines.[31] The Midi's large landowners were closely involved with these institutions and, through formal and informal labour contracts, provided a steady flow of information to the smaller growers. Inequality in regional land ownership probably increased in the second half of the nineteenth century, and by 1892 some 28.9 per cent of vines were found on holdings of more than 40 hectares, compared to 29.8 per cent on holdings of less than 5 hectares.[32] However small properties were considered as being complementary to the larger ones, as these required skilled part-time labourers, especially for pruning.[33] Phylloxera therefore encouraged growers to look for common solutions, with large owners lending equipment, money, the use of their wineries, and providing advice and often the vines themselves, in exchange for labour service.[34]

Being the first to suffer from phylloxera had the advantage that replanting took place at a time of wine shortages and rising prices, which attracted large quantities of outside capital to be invested in the region.[35] New large vineyards were established on

[28] The Midi includes the departements of Aude, Gard, Hérault and Pyrenees-Orientales.
[29] After 1858 the cost of transporting a *muid* of wine from Montpellier to Lyon fell from 50 to 7 francs. Degrully, 1910, p.324. The specialization in spirit production encouraged some growers to use high yielding vines even earlier.
[30] Pech, 1975, pp.496-7.
[31] Paul, 1996, p.23.
[32] Pech, 1975, p.68 and Augé-Laribé, 1907, p.136.
[33] This was not true only of the period under discussion. Augé-Laribé, 1907, p.136.
[34] Frader, 1991, p.69. Informal co-operation should not be exaggerated, as the decline in monitoring costs associated with the post-phylloxera viticulture encouraged the use of labour from outside the region. The presence of landless labour led to strikes, especially in years of high wine prices such as 1903. Frader, 1991, pp.75, 92-3 and 121-5.
[35] The Credit Foncier lent an estimated 20 million francs to growers between 1882 and 1902, equivalent of approximately 10 per cent of the total cost of replanting in the department, assuming a cost of 1500 francs per hectare. The bank favoured larger producers for economic and technical reasons. Postel-Vinay, 1989, p.169.

the fertile plains rather than the hills, and growers used large quantities of pesticides, fungicides, artificial fertilisers, and even irrigation to improve yields. The vines were grown on wire trellises in straight lines, which facilitated the use of work animals, reduced labour requirements, and cut monitoring costs.[36] As only a limited number of grape varieties were now found, harvests were not only larger, but had to be collected in a shorter time than previously, requiring new, larger wineries to crush the grapes and ferment the wine. The heavy capital spending led one writer to describe viticulture in the Midi's as 'une agriculture industrielle.'[37]

The Midi specialised as a producer of low quality wines. When the black rot appeared in 1887, it 'was so frightening that vignerons turned from vines grafted on *Vitis vinifera* to direct – producing hybrid vines, which scientists had singled out because of their resistance to diseases.'[38] It was also argued that consumers demanded first and foremost wine, regardless of its quality, which encouraged growers to maximise yields.[39] The hybrids produced large quantities of poor quality wine to be blended with imported Spanish and later, Algerian wines. But disease was not the only factor. Rising production costs, the low opportunity cost of traditional hillside vineyards, and the difficulties to obtain sufficiently high prices to offset the lower yields from their better vines also drove many traditional growers to plant hybrids instead.[40]

Table 4. Wine production in the Midi and France, 1824/8 to 1900/9

	Midi			Rest of France			Midi as % of France		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1824/28	209	5,331	26	1527	32,948	22	12	14	+16
1862	394	9,713	25	1927	38,917	20	17	20	+18
1870/79	410	15,064	37	1968	36,515	19	17	29	+70
1880/89	295	8,946	30	1734	20,943	12	15	30	+106
1890/99	401	14,861	37	1361	21,354	16	23	41	+80
1900/09	452	22,225	49	1247	33,608	27	27	40	+50

Area in 000s of hectares; production in 000s hectolitres; and yields in hls. per hect.

[36] Génieys, 1905, p.38, notes '1890 à 1900 ce fut le triomphe de l'Armon, planté dans l'anciennes prairies arrosables, conduit sur fil de fer selon les procédés des tailles de See also Gide, 1901, pp.218-9, and for monitoring costs, Carmona and Simpson, 1999.
[37] Augé-Laribé, 1907, p.19.
[38] Paul, 1996, p.14.
[39] Génieys, 1905, p.38.
[40] See Gide, 1907, pp.226-7.

Sources: Calculated from Lachiver, 1988, pp.582-609, 616-8.

By the early twentieth century the Midi was responsible for two fifth's of French output and half of taxed wines sold. The area under vines increased by 15 per cent and production by 130 per cent compared to before phylloxera (1862), and wine yields were now 50 per cent higher than the national average (Table 4). The Parliamentary commission established in 1907 to look into the causes of the national wine crisis, noted that the Midi and Algeria were the worst affected regions in France.[41] Wine prices collapsed, and between 1900 and 1906, growers in the Midi had to sell at cost or below in five out of the seven harvests.[42] Yet the causes of *la mévente* were not obvious. As many commentators suggested, the net supply of wines in France in the early 1900s was not so different from the level immediately prior to phylloxera (Table 1). But the financial difficulties faced by many of the Midi's growers because of phylloxera, had led to the authorities tolerating, if not encouraging, the production of artificial wines. After the Brussels Sugar Agreement of 1902, which reduced taxes from 60 to 25 francs per 100 kilos, there followed what one writer has described as 'an orgy of fraud' in the Midi.[43] For example in 1903 official wine production in thirty–five communities in Hérault totalled 1,004,915 hectolitres, but they sold 2,284,848 hectolitres, the difference being supposedly fraudulent wines. Nationally there was reported to be over 15 million hectolitres, equivalent to some 40 per cent of the official harvest.[44] Yet this high level of fraud in 1903/4 was caused by two very specific features, namely the poor wine harvest of that year, which led to prices reaching their highest since 1887, and the very low tax on sugar. Wine output quickly recovered, pushing prices to very low levels once more, and the government restricted the use of sugar that growers could use and increased taxes once more. Unless growers could obtain sugar illegally, the profitability of *sucrage* was now greatly reduced.

If fraud declined with the recovery in harvests (and drop in wine prices), three other problems remained. First, the knowledge that any recovery in prices was likely to result in a return of the problem. This was especially important when prices were low and failed to cover production costs. One calculation suggested that a local wine price of 10.7 francs the hectolitre was needed to cover variable costs, and 14.3 francs to cover

[41] Chambre des députés (1909), p.2307. It was headed by Cazeaux-Cazalet a deputy from the Gironde.
[42] Warner, 1960, p.18.
[43] Warner, 1960, p.14 and 40.
[44] Degrully, 1910, pp.350 and 353. Atger (1907, p.73) suggests a figure nearer 8 million hectolitres.

fixed costs, but this second figure was reached only twice in the Midi during the 1900s.[45] As many of the large vineyards had borrowed heavily, interest payments had to be met and land prices collapsed.[46] A second complaint was the poor quality of information available on wine stocks and the true size of the harvest. Finally, if low wine prices now discouraged growers from carrying out fraud, others in the commodity chain still found it profitable. Thus the 1907 Commission argued that low prices were caused not by overproduction, but by the poor wines that had previously been distilled. Since 1903 this was being treated by "la chimie vinicole" and sold very cheaply in urban areas, reducing the demand for sound, ordinary wines and forcing the prices of these wines down to that of the manufactured wines.[47]

As the state had helped to deal with phylloxera, it was not surprising that growers looked to it once more for a solution to low prices and financial losses. Because growers in the Midi competed on price rather than quality, one solution was to increase consumption by lowering taxes and rail tariffs. The reduction in rail tariffs in 1896 had already allowed the Midi's wines to compete more successfully with those of Spain and Algeria in Bordeaux or Paris, which were transported by boat.[48] The *Loi des Boissons* in 1900 lowered taxes on wines, and that of 1901 removed the *octroi*, halving the tax revenues from wine.[49] Yet with per capita consumption at 168 litres in 1900/04 there were obvious limits to a demand side solution, and growers were forced to look instead at supply side solutions, and most growers in the Midi believed the cause of the problem was the widespread sale of adulterated wines.[50]

The problem of controlling fraud was made difficult for three reasons. First, and as noted**,** high taxes encouraged adulteration, especially in urban areas and, until the law of August 6, 1905, the authorities normally only prosecuted those cases linked to tax evasion.[51] Furthermore, what actually constituted adulteration was controversial, as the blending of wines, whether to adapt them to consumers' taste, or to help preserve a barrel that was becoming unstable, was a necessary part of a wine merchant's work. It was not unusual therefore for merchants and growers to have sharply divergent opinions

[45] Atger, 1907, pp.23-27. and, for prices, Pech, 1975, p.512.
[46] Postel-Vinay (1989, pp.171-7) has shown the high level of debt of the large vineyards that made them as anxious as the workers, with their small plots of vines, for a solution.
[47] Chambre des députés (1909), pp.2307-8.
[48] Sempé, 1898, pp.175-7.
[49] Warner, 1960, p.32.
[50] Not all however. Some believed it was because of overproduction, while others that the high tariff protectionist policies restricted export markets. Warner, 1960, chapter 3.

on what was acceptable, and what was not. A second problem was that there was an estimated 154,954 growers in the Midi,[52] and many were themselves heavily involved in making artificial wines. Finally, and as noted, the lack of statistical information on production and stocks made it difficult to know the supply of genuine wines.

Starting on March 24 with a meeting of 300 people in Sallèles-d'Aude, Sunday protests in 1907 quickly grew in size, and by May 5 80,000 took to the streets in Narbonne. A week later the numbers were 120,000 in Béziers, followed by 170,000 in Perpignan. By May 26, the figures had reached 220,000 in Carcassone, almost 300,000 marched in Nimes seven days later and, finally, over half a million in Montepellier on June 9.[53] Demonstrations of this scale were previously unknown in France, and can be explained both by the large numbers of people in the Midi who depended directly or indirectly on viticulture, and by the fact that the sector was united in its demands against the government in Paris.

The government had in fact already begun to respond, and the laws of August 1905 and June 1907 significantly reduced the amount of sugar that could be used in winemaking, made it easier to prosecute fraudulent wine producers, and introduced measures to record grower's production.[54] In September 1907, the growers formed the *Confédération générale des vignerons du Midi* (CGV), whose objective was to identify fraud and initiate legal proceedings against those involved.[55] From 1912 it had the direct backing of the Ministry of Agriculture, and enjoyed a membership of 20,000 in 425 winegrowing villages. The broad base of its support within the wine communities was crucial to its success, and the CGV's 30 agents in 1911/2 carried out 3,042 investigations that led to 601 successful prosecutions for fraud.[56]

The believe that the collapse in profitability in the sector was caused by market failure went further than just the control of fraud. A number of influential commentators, including Charles Gide, Augé-Laribé and Adrien Berget, looked to co-operatives as a solution to the problems of small growers, who were often forced to sell their wines at lower prices than the larger growers, and in some years had difficulties at selling at any price. The first co-operatives of the region were therefore initially

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[51] Warner, 1960, p.43. Taxes in real terms increased significantly during periods of low prices, such as the early 1900s, encouraging adulteration. See, for example, Degrully, 1910,
[52] Refers to 1900/09. Lachiver, 1988, pp.588-9.
[53] Frader, 1991, p.141 and Lachiver, 1988, p.468.
[54] Warner, 1960, p.41 and Frader, 1991, p.145.
[55] The provision for this was found in the law of August 1, 1905. Warner, 1960, p.46.
[56] Warner, 1960, pp.46-7.

established as marketing institutions, although the potential to exploit the growing economies of scale in wine production quickly became apparent. Gide in addition argued that co-operatives would be able to classify wines and guarantee quality for consumers better than private merchants, and thereby provide an incentive for growers to plant quality vines.[57] However, as Hoffman and Libecap have argued in a different context, co-operatives were unlikely to succeed in raising prices unless the product was relatively homogenous, stocks were difficult to accumulate, and a significant number of individual growers agreed to output cuts, which could be easily monitored.[58] Not only were wine co-operatives too small to influence market prices, but quality did not improve as Gide had hoped, as growers off-loaded on them their worst grapes, keeping their better ones to sell privately.[59]

Two much more ambitious attempts at market intervention were proposed, by Bartissol in 1905, and Palazy in 1907. [60] Bartissol envisaged a commercial marketing board, selling 20 million hectolitres of wine a year in their own branded bottles, directly to consumers. In case of overproduction, all growers would absorb the costs of distilling to reduce supply. However, many growers were reluctant to sign long term contracts with an independent company and, if the size of the trust might have allowed it to influence prices sufficiently, the capital requirements (300 million francs) and logistics of such a huge operation, led to it remaining just a project. Palazy's proposal was much more modest, involved the direct participation of growers, and wine was to be sold to wholesalers and retail merchants. With a capital of just 50 million francs, growers were required to enter into 5 year agreements, and the company hoped to control 12 million hectolitres of wine. This proposal also failed to materialise, in part because it was undercapitalised, but also because of the free-rider problem. There were costs of joining, but the possible benefits of any higher prices would be enjoyed by all growers, both inside and outside the association.

3. The Gironde.

The level of co-operation in the Midi, especially among the growers, was not present in Bordeaux, as although the Gironde produced considerably less wine, there

[57] Gide, 1907, pp.230-5.
[58] Hoffman and Libecap, 1991.
[59] Simpson, 2000.
[60] This section based on Atger, 1907, pp.116-22. See also Degrully, 1910, pp.375-85.

was a much greater diversity in its quality.[61] The success of the Bordeaux Classification of 1855 (which listed the region's top 57 red wine producers in five categories, and 22 white producers in a further three), and the rapid growth in British imports after the reductions of duty in the early 1860s, allowed a growing quantity of wine to be sold under the name of an individual vineyard.[62] However most of the Gironde's wines were ordinary ones. The producers of both fine and ordinary wines faced serious problems at the turn of the century, although for very different reasons. Consequently we need to look at both segments of the market, starting with quality wines.

Phylloxera was officially noted in the Gironde in 1869, reaching the high quality wine region of the Médoc in 1875. Its subsequent spread was much slower than in the Midi, in part because growers and négociants were worried that the new American vines would ruin wine quality, and growers therefore spent heavily protecting their vines until they were convinced that this was not the case.[63] According to Pijassou, wine from the leading Médoc growers was still being produced from the old French vines until about 1900, and it was only after 1920 that it came predominantly from the new grafted ones.[64] This had two important implications. First, the leading growers did not play an important role in the diffusion of information concerning replanting as they had done in the Midi, as they only started using American vines themselves when they had already been extensively tested on the ordinary vineyards. In addition, the heavy use of chemicals obliged growers to use five or six times more manure then previously, which produced higher yelds.[65]

For the leading Bordeaux growers, income was determined primarily by harvest quality rather than its size. In the first two thirds of the nineteenth century, except for the years 1808/10 and 1835/9, there was at least one 'good' harvest every three years, and each decade, with the exception of 1820/9, enjoyed a minimum of 'four' good harvests.[66] This pattern was interrupted by mildew, a disease that reduced the wine's

[61] Guyot, 1876, p.429.
[62] Salavert, 1912, p.66, argues that until about 1860 even the best quality wines were sold under the shipper's brand.
[63] Treatment was generally limited to the best vineyards. In 1894 the Gironde had only 7.6% of France's land under vines, but 45% of the area being treated with sulfocarbonates, 27% of the area flooded and 14% of the area treated with carbon disulfide. Calculated from Pouget, 1990, pp.98-7. This was also true within the Gironde itself. For example in 1898 the villages of Cussac, Cantenac, Margaux, St.Estèpe and St. Julien, which accounted for 2.5 per cent of the vines, had 4 per cent of the area flooded, 37 per cent of the vines treated with sulfocarbonates, and 12 per cent of those treated with carbon disulfide. Arch. Gironde 7 M 219.
[64] Pijassou, 1980, p.763.
[65] Quantities were later reduced, but remained significantly higher than prior to phylloxera.
[66] Petit-Lafitte, 1868, Table C. In 1820/9 there were three good harvests.

1,400 hogsheads in 1903 of “indifferent” or “bad” quality wine. Higounet (ed) 1993, p.297 and *Ridley*s, April 1903, p.675.

[69] Simpson, 2004, p.96.

the 30 or 40 years prior to the First World War by up to 80 per cent in the Médoc.[70] Therefore, although the plight of Bordeaux's leading growers in the early 1900s was almost as desperate as those in the Midi, the nature of the problem, and consequently its solution, was very different. In particular, the fact that the Midi's growers and merchants competed on price and not quality, and that the wines were relatively homogenous, encouraged a group response, whereas those associated with the leading Bordeaux wines looked for individual initiatives. Because of low prices, most growers found it difficult to limit output and invest in their vineyards, in order to rebuild reputation. The problem was finally resolved by the merchants who, especially in 1906 and 1907, established contracts with at least 60 growers, including half the Classed Growths, to sell all their production at fixed prices over the following for five or more harvests. Clauses were inserted into the contracts that limited production and the use of American vines.[71] Backward integration also took place, with a number of the leading properties being bought by négociants, or by their families. There were also the first limited attempts to promote the region's wines. In 1909 a proposed "Trust" between growers and merchants to raise money to promote Bordeaux's wines was debated, but came to nothing. More successful was the *Fête des vendanges*, which helped promote not just the wines, but also the Bordeaux 'marque'.[72]

Bordeaux was also France's major export port for cheap table wines on the eve of phylloxera. In years of poor local harvests, the négociants had traditionally brought supplies from outside the region, allowing them to sell cheap wines in London or Paris at stable prices. The decline in the Gironde's production because of phylloxera and mildew led to a rapid expansion in these activities, and the local British consul noted in 1889 that 'about 50 per cent of all wines shipped from here to British ports in wood' were made using wines from outside the Bordeaux region.[73]

As domestic harvests began to recover after phylloxera, pressure from growers resulted in import duties being increased in 1892, although a system of free ports briefly allowed merchants to continue to import foreign wines for the sole purpose of mixing

[70] *Ministère de l'Agriculture*, 1937, p.159. Third growth Château Malescot-Saint Exupéry, for example was sold in April 1901 for 155,000 francs against the 1,076,000 it had reached in 1869, or the second growth Château Monrose, which was sold for 800 thousand francs in 1896, against 1.5 million in 1889. Pijassou, 1980, pp.815-6.
[71] Cocks and Féret, 1908, pp.xvii-xxii and Higounet (ed),1974, p.335. The négociants insisted for Château Latour that 'the vineyard can in no way be increased during the period of the contract, and grafted American vines must be excluded, save those that are already there.' Higounet (ed.), 1993, pp.276-7.
[72] Roudié, 1988, pp.217-9.
[73] PP 1889, no. 501, p.9.

with local ones for export.[74] However, not only were these exports from Bordeaux little more than 200,000 hectolitres a year, but poor quality wines were often sold in countries which were also major markets for fine wines, and created bad publicity there.[75] The closure of the free port in 1899, and Hamburg's more competitive free port all contributed to Bordeaux's decline as an international centre for cheap wines.[76] As Figure 4 suggests, exports drift downwards from the late 1880s, just when domestic production was recovering.

By the late nineteenth century Bordeaux's growers were also becoming increasing uncompetitive in the domestic market for ordinary table wines. Lower rail freight rates negotiated in 1896 made wines from the Midi cheaper, not just in Paris, but also in Bordeaux. In the 1900s, the Midi's yields were over 70 per cent greater than those in the Gironde, but production costs were lower. The 1907 Parliamentary commission noted that the wine crisis in the Gironde was caused not so much by overproduction ('fraude par multiplication'), but rather by low cost competitors ('fraude

[77] In 1902 and 1903, the Midi sold the equivalent of 28 and 32 per cent of the Gironde's local harvest, with other wines accounting for a further 36 and 51.8 per cent. However when the average for the period 1902/06 is taken, the figures fall to 21.5 and 26.6 per cent respectively, and two thirds of the wines sold in the Gironde were produced locally (Table 6). Yet the Gironde's growers were quite correct to identify the threat from the Midi as very real. Local harvests in 1902 and 1903 were just 82 and 60 per cent of the average between 1902/06, but French wines prices were 5 and 47 per cent higher. If the presence of the Midi's wines in the Gironde was less in the other years, it was simply because prices were so low. Competition from the Midi effectively placed a price ceiling on what the Gironde's vin ordinaire could be sold at and, with its higher production costs, this made production unprofitable in most years. For local producers of cheap wines the solution was to regulate the market by restricting the use of the 'Bordeaux' brand to their own wines, and excluding those of their competitors, regardless of their quality.

[74] Roudié, 1994, pp.212-3 and Gallinato-Contino, 2001.
[75] Audebert, 1918, p.15 in Arch.Gironde, 8 M 13.
[76] Faurou, 1907, pp.7-12. Phylloxera in Cataluña and Navarra also created difficulties in obtaining wines from Spain. By contrast, Hamburg merchants bought wines from the cheapest producers, whether in Portugal, Greece, Turkey or Hungary, and were more efficient at creating wines, and even enjoyed lower freight rates to Buenos Aires than Bordeaux.
[77] *Revue Agricole, Viticole et Horticole Illustrée*, 15 Juin 1907, no. 183.

The 1905 law provided the legal framework to establish regional appellations, as it made illegal the mislabelling the origin of products such as wine. Local growers naturally believed that their wines were better than those from the Midi and elsewhere, and realised that consumers required information and a guarantee of quality so that they would pay more for their wines. Although growers and merchants from outside the Gironde complained, the major opposition came from merchants within Bordeaux itself. They were opposed to the idea for three major reasons. First, because they thought it would be harder for them to maintain stable prices and quality after poor local harvests as they could no longer use wines from other regions for blending, and still sell them as 'Bordeaux'. Likewise it was argued that many of the wines from Entre-Deux-Mers, Palus and Réole required blending with the stronger Roussillon and Dordogne wines if they were to be transported.[78] A second reason was the new appellation increased merchants' operating costs, precisely at a time of low prices. Merchants, who brought wines from outside the Gironde, were obliged to keep two sets of books and the government took the opportunity to levy new taxes on the necessary labels which showed the origin of the wine (0,05 francs on a bottle). A final factor was their concerns over the implementation of the appellation. The law of June 1907 required growers to declare the size of their harvests to reduce fraud, and this figure was now the maximum that they could sell but, according to the *Syndicat du Commerce en gros des vins et spiriteux de la Gironde*, growers greatly exaggerated the size of their harvests in 1907 and 1908.[79]

For the producers of fine wines the establishment of a regional appellation was unlikely to resolve their own financial difficulties. They were primarily concerned with protecting their own brands, and their consumers were usually both rich and well informed. Nevertheless the leading growers and their négociants signed a joint agreement in July 1908 to find a solution to the sale of fraudulent wines. Although the négociants questioned the need for the introduction of controls of their stocks, they agreed to support the measures so long as they were not 'inconvenienced', and that they were accompanied by a strict monitoring of growers' harvests. The *Ligue des Viticulteurs*, which represented Bordeaux's small growers, strongly criticised this joint agreement, and claimed that the (1905 and 1907) legislation required merchants to

[78] Vitu, 1912, p.70.
[79] Arch.Gironde 7 M 190.

control their stocks, rather than apply voluntary controls.[80] For these producers, the cause of low prices was seen as the influx of cheap wines, which they believed was the responsibility of merchants, rather than themselves.

Opposition to the regional appellation was also strong from outside the region. Although historically a number of different wines had been sent down the Garonne and Dordogne rivers to be sold in Bordeaux, the commission in charge of establishing the appellation concluded that these were now 'negligible', so only wines produced in the Gironde were included.[81] This was rejected by outside growers and their merchants, who claimed that the regional appellation had nothing to do with quality, but rather was an attempt to restrict competitive markets, and represented a return to the privileges of the Ancien Regime. According to one writer, 'with this system France will no longer be a country of free trade, such as was achieved with the Revolution, but a cluster of provincial monopolies protected by excise officers. We shall return slowly to the Middle Ages'.[82]

Finally, and as Mestrezat noted, a geographical appellation also had a number of potentially negative consequences for local growers.[83] First, if merchants were not able to mix wines with those from elsewhere, they might be reluctant to buy from local growers after a poor harvests. Second, if the regional identity became associated only with expensive wines, this might lead to higher taxes for 'Bordeaux' wines in France, or in other countries.[84] Finally, growers in the restricted appellation might now be tempted to increase production by planting on soils previously considered as unsuitable for the vine. We shall return to this last point later.

[80] Arch. Gironde 7 M 169.
[81] Cazeaux-Cazalet, 1909, pp.4-10, in Arch. Gironde 7 M 187.
[82] Cited in Vitu, 1912, pp.55-56.
[83] *Feuille Vinicole*, 12 May 1910.
[84] Champagne, for example, attracted higher import duties than ordinary wine in a number of countries at this time.

Table 6

Wine supply in the Gironde, 1902 –1906.

	1902-3	1904-6	1902/6	1902/6
Local harvests	2478	4144	3478	67.6%
Wines purchased from :				
Midi	746	750	747	14.5%
Other areas of France	358	277	309	6.0%
Foreign imports	700	557	614	11.9%
Total	4282	5728	5148	100%

Figures in thousands of hectolitres

Source: Chambre des députés (1909), p.2352.

5. Champagne

Phylloxera was first discovered in Champagne in 1890, making it the last major wine-producing region to be infected. Despite this delay, the appearance of the disease created fierce conflicts in the local community. Like the leading growers in Bordeaux, the big champagne houses were concerned over the quality of wine produced from grafted vines, and therefore wanted to do all that was possible to preserve the traditional French rootstock. Unlike the Bordeaux growers however, they were usually not major producers of quality grapes themselves, but depended on hundreds of small growers. As a result, the leading houses were instrumental in establishing the *Association syndicale autorisée por la défense des vignes contre le phylloxéra* to fight phylloxera. With dues from the members, and subsidies from the government, the organisation tried to slow infection by destroying vineyards which showed signs of the disease with heavy doses of chemicals, and prohibited the introduction of American rootstock. But a policy limited to just the elimination of vines was unpopular with small growers because, and as one petition put it, 'Phylloxera is at our doors and a large part of the vines are anaemic and sterile. We need to regenerate our vines … and to profit from the experience of others before we lose everything'. [85] In the face of widespread opposition, the association was quietly disbanded in 1895, and in 1898 the *Association viticole champenoise* (AVC) was established, whose activities included the

[85] Letter from growers to the mayor of Epernay, cited in Guy, 2003, p.110.

experimenting with American rootstock and replanting, and the purchase of chemicals and insecticides. Only 24 négociants participated, and their organisation, the *Syndicat du commerce*, played no role in it until 1909.[86]

These conflicts over the best policy to deal with the threat of phylloxera had been largely absent in both the Midi and the Gironde, but growers in the Marne were united in their demands for a regional appellation. Champagne had to be bottled at source and, although fraud was a major concern in the late nineteenth century, significant advances had been made by the leading champagne producers' pressure group, the *Syndicat du commerce des vins de Champagne*, in controlling the illegal use of brand names and the appropriation of the word 'champagne' for other sparkling wines in France.[87] However if after 1889 other producers could no longer legally use the terms 'champagne' or 'vins de champagne', it was not illegal for the champagne houses to buy wine from outside the region, to be bottled in Reims, for example, and then sold as the real product. The *Syndicat du commerce* attempted a voluntary code of conduct, requiring members to only sell as 'champagne' those wines produced from locally grown grapes, and which had been made in the region. When Mercier refused to stop the sales of wines to Germany and Luxembourg, where they underwent their second fermentation, the firm was expelled from the Syndicat.[88] However, not only was this decision not made public, but there was also a significant number of houses outside the Syndicat supplying a growing market in cheap champagnes.

Champagne sales increased almost five times from the late 1840s to the 1900s, partly as a result of an increase in the area of vines and better wine making skills, but also because of the use of outside wines.[89] The best champagnes, sold under the manufacturer's brand name and including the vintage, were not adulterated, although this market was perhaps in decline. André Simon, writing in 1905, noted that, 'the 1889 and 1892 vintages being excellent wines, and sold on the market at a highly favourable time, mark the apogee of the vintage Champagne boom from the point of view of the public'.[90] However, an increasingly critical press which argued that poor quality grapes were being used in champagne production was responsible, at least in part, in the slump

[86] Quoted in Guy, 2003, p.115.
[87] The Syndicat was established in 1882 with the primary aim to promote champagne in foreign markets.
[88] Guy, 2003, p.79.
[89] The decline in the production of red wines freed some land and better control of the secondary fermentation reduced wastage.
[90] Simon, 1905, p.146.

in sales of the cheaper wines in the important British market.[91] However, if foreign sales stagnated at between 20 and 23 million bottles, domestic champagne sales in the 1900s jumped from 7 to 15 million bottles.[92] By contrast total wine output in the Marne at the same time increased by just 19 per cent, from 369 thousand hectolitres in the 1890s to 439 thousand in the 1900s. As Alphonse Perrin, the secretary of the *Fédération des syndicats viticoles de la Champagne*, a lobby group of local growers founded in 1904, noted, 'la misère du vigneron' was not from overproduction, but rather from wine shipments from outside the region.[93]

Champagne was a blended wine and, especially when the quality of the local harvest was poor or insufficient, the temptation for producers of ordinary wines to seek supplies from outside the region was strong. Indeed, as in Bordeaux, merchants argued that without the flexibility to choose the most suitable grapes regardless of where they had been produced, neither they nor the growers, would be able to sell their wines in bad years.[94] The decline in prices from the mid 1890s (Figure 5), and the atrocious harvest of 1908 to 1910, led to significant discontent in the region, and the *Fédération des syndicats viticoles de la Champagne* lobbied for champagne to be only produced from local grapes, and made in the region. But unlike Bordeaux, there was a considerable dispute over what constituted the natural region of Champagne. The modern department of the Marne contains Epernay and Rheims, the two major centres of production, but the old province of Champagne was much more extensive, taking in also the modern departments of Aube, Haut-Marne and Ardennes. Growers in the Aube were particularly incensed at being excluded from the first boundary proposal, as they claimed they had replanted after phylloxera with low yielding varieties to guarantee quality, namely half pineau and half gamay.[95] If they could no longer sell their wines for making champagne, they would be uncompetitive against the high yielding producers of sparkling white wines in the Loire and elsewhere. The *Fédération des syndicats viticoles* argued, however, that the Aube vineyards remained low cost producers of inferior wines (Table 7). Production costs were much higher in the Marne because the greater density of the vines made the use of ploughs impossible. Although no figures are given for the Aube in the Table 7, production costs were notably smaller because of the

[91] Simpson, 2004, pp.99.
[92] Guy, 2003, p.123.
[93] *Le vigneron champenois*, 14 mars 1906.
[94] Vitu, 1912, p.64.

use of the plough. As a compromise, the final decree of June 1911 created two zones, the Marne and L'Aisne, areas which had been initially included in the 1908 proposal, and another including Aube, Haut-Marne and Seine-et-Marne, whose growers could still sell their grapes to the champagne houses, although this information had to be given on the bottle.[96]

Table 7

Production costs of grapes in Marne and Aube

		Yields per hectare	Production costs per hectare	Production costs per hectolitre*	Farm gate price per hectolitre
Marne	Grands crus	20-25	3000-3500	144	
Marne	Moyens & petits crus	40-45	2000-2500	53	
Aube		80-100			20-25

* Yields and production have been averaged

Source: Cited in Vitu, 1912, p.62.

Conclusion

This paper looks at the response of growers and merchants, first to vine disease and high prices, and then to the problems of overproduction and product adulteration. Commodity chains had to deal not just with the volatility in supply, but also from changes in the quality of each vintage. Although France produced, and produces, a large range of wines, by the early twentieth century most commodity chains were failing to provide accurate information for consumers to discriminate between differences in quality. This weakness encouraged the widespread planting of high yielding, low quality grape varieties, especially in the Midi. However, it also encouraged the production of 'artificial' wines, which were sold even more cheaply. In the Midi, the collapse in prices in the early 1900s was attributed to widespread fraud and united large and small growers, together with large sections of the local community, to participate in massive demonstrations and the demand for state intervention. However, although this

[95] Vitu, 1912, p.58. Pineau is a word as a synonym for the pinot family of grape varieties and better quality wines, while the gamay as a high yielding variety.

allowed the Midi's wines to become competitive once more, their cheapness threatened growers elsewhere. In the Gironde, the producers of ordinary wines also demanded intervention, but this time to establish a regional appellation under which only local wines could be sold using the Bordeaux name. It did little however to help producers of quality clarets, who looked to their merchants for help, shifting bargaining power forwards along the commodity chain once more. Finally, in the Champagne region, the problem for growers was a shortage of grapes, and the fact that houses were importing wines into the region to make champagne. The better champagne producers and growers were in agreement on the need to prohibit this practice by establishing a regional appellation, but considerable controversy arose over the drawing up of its boundaries.

The establishment of the geographical appellation can be interpreted in two very different ways, either as an attempt to improve quality by excluding inferior wines from outside the region, or by creating a regional monopoly. As merchants frequently commented, a regional appellation could at best only guarantee origin, but not quality. In particular, if the regional appellation was successful in raising local wines prices, this was likely to be only temporary, as growers would be encouraged to increase output by planting less suitable soils and /or use high yielding vines. After 1907 wine prices increased once more, and many growers experienced considerable prosperity keeping France's soldiers supplied during the First World War. The boom was short lived, and by the 1930s attempts began to introduce the *appellation contrôlées*, which placed restrictions on grape varieties and cultivation practices used.

[96] Vitu, 1912, p. 36. For the conflicts, see especially Bonal, 1994, Faith, 1988, Forbes, 1967, and Guy, 2003.

Figure 1
French wine market, 1831-1913

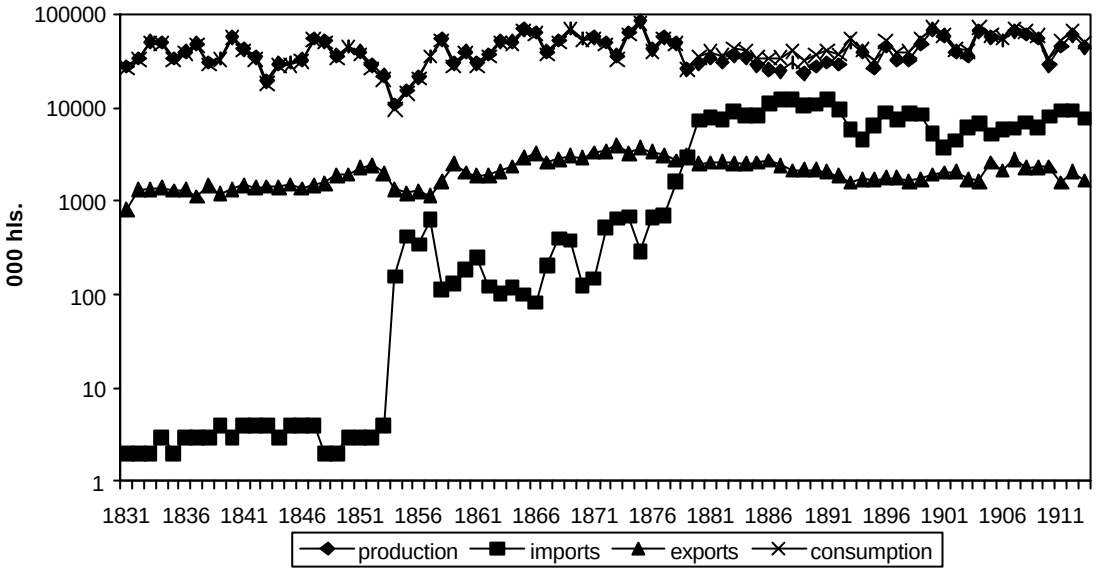
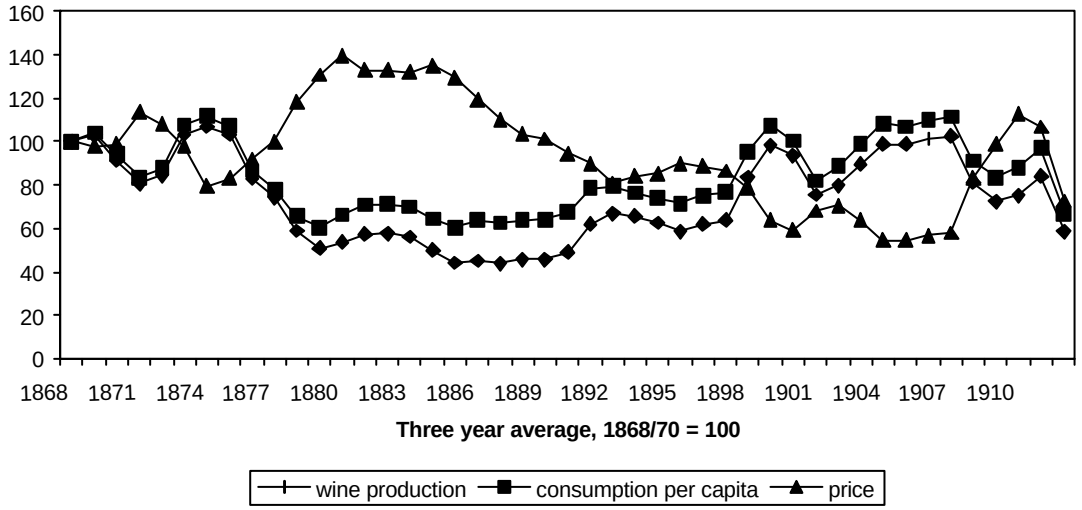
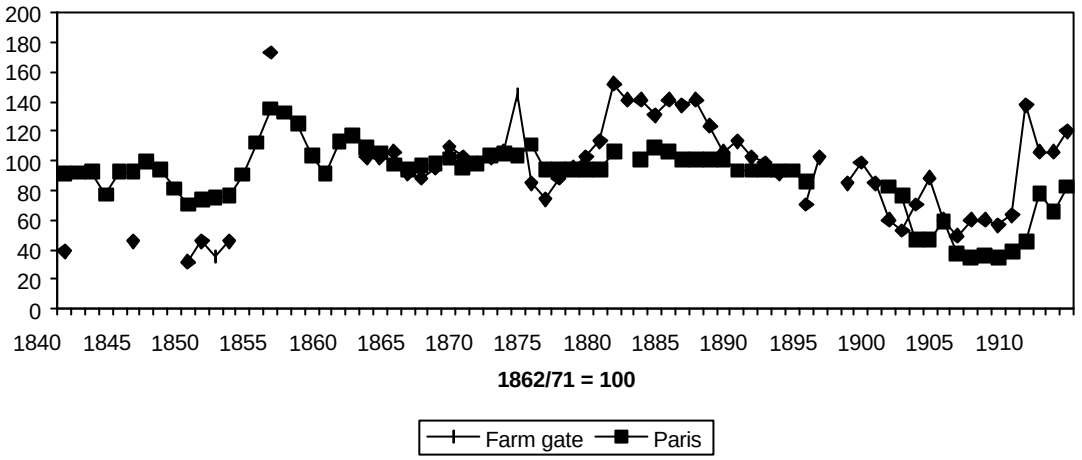


Figure 2
French wine producion, consumption and prices



Source: *Annuaire Statistique*, 1933, pp.62-3 and 179-80.

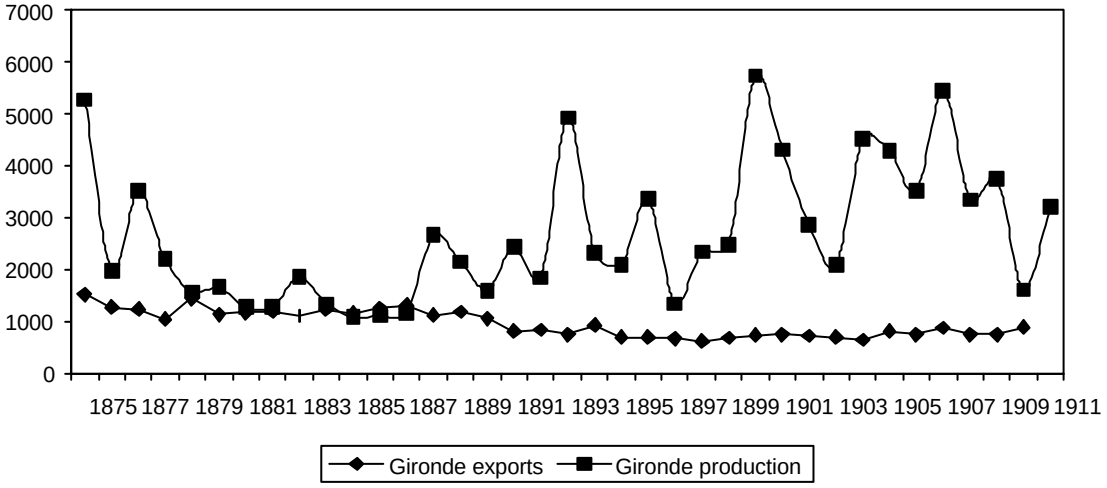
Figure 3
Movements in French wine prices, farm gate and Paris



Sources: *Annuaire Statistique*, 1933, pp.62-3 and Singer-Kérel, 1961, .

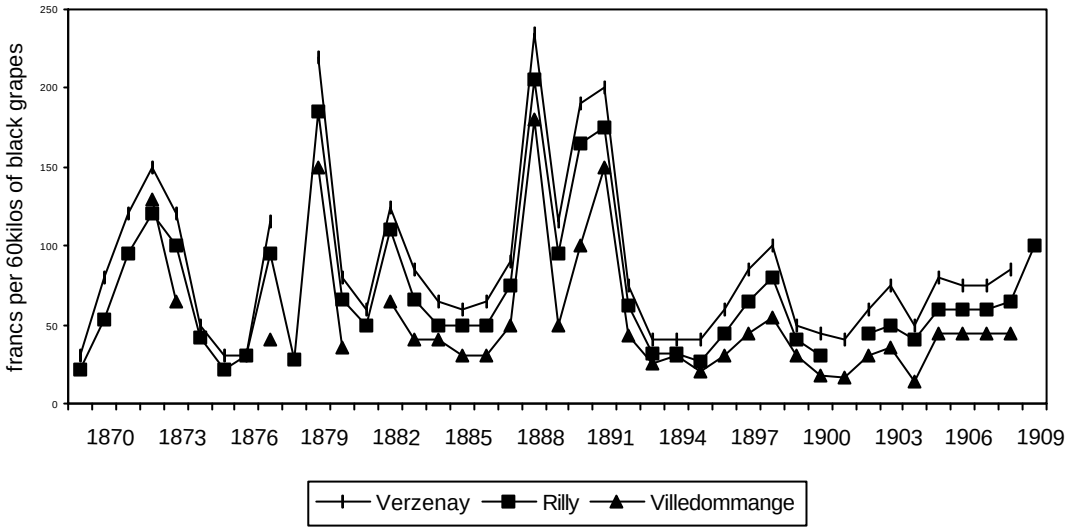
Figure 4

Gironde wine production and exports, 1875-1910, in thousands of hls.



Source: Salavert, 1912, p.187.

Figure 5
Grape prices in the Champagne region



Source: *Le vignerons champenois*, 7th April and 23 August, 1911.

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pp.481-512.

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