Why sharecropping? Explaining its presence and absence in Europe's vineyards, 1750-1950[1]

Juan Carmona and James Simpson (Universidad Carlos III de Madrid)[2]

Introduction

The traditional view that sharecropping was a cause of the low productivity in European agriculture prior to the Second World War has been challenged by economic historians in recent years. Therefore while sharecropping might produce a potential sub-optimal use of labour and capital, as Marshall argued, it is often argued today that the contact was efficient at reducing monitoring costs and allocating risk, especially when capital markets were weak for working capital. Thus rather than a causality which runs from sharecropping to low productivity and poverty, most economic historians today argue that it runs in the opposite direction.

Yet the presence of sharecropping still requires to be explained. If it was a relatively efficient contract, why was it not found more often? European agriculture was highly diverse, but the presence of risk (widely fluctuating yields and prices), low level of human capital, poverty, monitoring costs and the need for work incentives were widespread. Under what conditions can it be said that sharecropping was likely to be the preferred form of tenure, and under what conditions was it likely to be absent?

In this paper we try to identify when sharecropping was preferred to the use of wage labour. To simplify our task we concentrate on the vine and two products: beverage and fine wines. The vine was widespread in Europe and, if sharecropping was

---

[1] To be presented at: *Institutions: Economic, Political and Social Behavior,* 10th Annual Conference, September 21-24, 2006, Boulder, Colorado USA. Panel 3.1: Contracts and Rural Markets in the Long Run.

[2] Financial assistance has been provided by BEC2003-06481. This paper has been shortened to meet the word limit for the Boulder conference. Version 11 August 2006.

found in some regions, it was almost totally absent in others. It has also figured extensively in the current debates on European sharecropping (Hoffman (1984), Epstein (1994), Cohen and Galassi (1990), Galassi (1992 and 2000), Carmona and Simpson (1999), Ackerberg and Botticini (2000 & 2002), Biagioli (1987).

The paper has five sections. The first provides a brief outline of the current debate on sharecropping in European agriculture and its presence in viticulture. This is followed by a discussion on the transformation of viticulture during the period, and how these changed the contractual needs of economic agents. We then attempt to understand its presence (and absence) in three regions of French viticulture. First, in the old traditional areas of production in the Burgundy region; second with the new viticulture associated with the geographical relocation and technological change in grape production and wine making after 1870 (the Midi); and finally its presence in south-west France, an area which combined both polyculture and areas of fine wines (Bordeaux).

We conclude that sharecropping contracts were highly adaptive to changes in factor and commodity markets, and that they appeared and disappeared with frequency over time, suggesting that there were few problems of institutional 'lock-in'. However, the low entry costs in viticulture, in particular the small quantities of marginal land required to create a vineyard, implied that most growers could easily obtain their own vines. In this respect the ease of access to land was crucial in explaining its absence in much of Europe.

Section 1. The debate on sharecropping in European agriculture.

The link between sharecropping and economic stagnation dates from the mid eighteenth century, as contemporaries tried to explain the divergent paths being taken

by English and French agriculture. While perhaps the most prestigious agronomist of this century, Olivier de Serres defended the contract in terms of its efficiency,[3] physiocrats such as Turgot or the Abbé Rozier criticised it in their comparison with the large farms in northern France and England that used rental contracts.[4] Alfred Marshall's criticism has perhaps been the most damaging, arguing that landlords would undersupply capital, and their tenants undersupply labour, because any additional output was divided between the two economic agents.

Marshall's conclusions have been challenged by institutional economists who claim that sharecropping reduces transaction costs in three major areas. First, sharecropping is considered useful for landowners when the quality of work is difficult to monitor, and the damage caused by negligence to capital assets (vines, olives, livestock, etc.) can be extensive. Second, sharecropping reduces the risks associated with specialising in cash crops such as the vine, although attempts to test this empirically have had only limited success.[5] Finally, access to capital markets before the nineteenth century was usually limited to large landowners. Interlinked contracts- such as sharecropping – allowed tenants access to capital which otherwise would not be available. In all cases sharecropping provided the means of matching landlords (who in various degrees could provide land, farms assets, access to capital markets, supervisory and managerial skills) with tenants (who possessed underutilised labour and farming skills).

Yet how important was sharecropping in France? According to writers in the eighteenth and early nineteenth centuries it was widespread. Dupré de Saint-Maur and

[3] Hoffman (1984), Bourde (1967, vol.1, pp. 283)
[4] Turgot (1808-11, vol. 4, pp. 541-551), Rozier, in Myard (1907, pp.118-9). Béaur (2000, p.114).
[5] Allen and Lueck (1992), Ackerberg and Botticini (2000, pp. 253-4), although see also Ackerberg & Botticini (2002).

Turgot suggest it covered 4/7's of farm land; Smith, 5/6's, and Young, 7/8s.[6]. According to Dupré de Saint-Maur, the disappearance of *metayage enfitéutico* (18 dic 1790) led to the decline in the use of the contract during the nineteenth century.[7] By contrast, the official publications of the late nineteenth and twentieth centuries suggest that the contract was much less widespread. For example, the 1892 census, which distinguishes between direct cultivation, leasehold and sharecropping (métayage) shows that on all land in France, 52,7 % was directly cultivated (faire-valoir direct), 36,4 % leased (fermage) and 10,9 % sharecropped (métayage). The official studies for 1929 and 1946 give similar figures for sharecropping, 10,4% and 10,9% respectively.

If all these figures are to be believed, then sometime in the early or mid nineteenth century a massive conversion of land from sharecropping to some other form of cultivation took place. One possible turning point was the French Revolution although the literature, if somewhat contradictory, suggests events were probably favourable to the contract.[8] This would necessarily postpone the period of change to the second quarter of the nineteenth century. No radical change in farm organisation is mentioned in the literature.

In fact the statistics given above cannot be taken at face value. The eighteenth century figures are overestimated because feudal dues (such as *champart*), which were common in many parts of France and required the payment of a share of the harvest, were wrongly considered as sharecropping contracts.[9] By contrast, government figures from the mid nineteenth century contain a number of important restrictions which tend to underestimate the importance of sharecropping.[10] For example, that of 1892, which

[6] In Laborderie-Boulou (1905, p.51).
[7] (id, 54-55)
[8] Béaur (2000, p.119).
[9] Beucher (1899, p. 38). Other causes of confusion include rental payments in kind and the farms called 'métairie' which did not necessarily imply sharecropping.
[10] Galassi and Cohen (1994) find a similar problem for Italian viticulture.

was one of the more complete because it linked contracts with crops, classifies all cash payments as rental contracts, even though these were sharecropping contracts on occasions. Another problem is that the 1929 census (as well as that of 1892) classified farms according to their principal crop. A mixed rental-sharecropping classification was not used in these surveys so, for example, this sometimes led to incorrect recording of small areas of viticulture in zones of polyculture. Finally, sharecropping contracts were often oral, and the 1892 survey records all oral contracts as rental contracts. However, and in conclusion, although the information is limited, it seems clear that sharecropping was used much less frequently than writers such as Turgot or Young suggested for the eighteenth century, but the flexibility of sharecropping contracts implies that it was found more, perhaps significantly more, than the figures given in the government surveys from the late nineteenth century. Where there does appear to be some agreement is that those areas where sharecropping was common in late eighteenth century coincide with the areas of greatest concentration in the late nineteenth century.[11]

Contemporaries and historians have often linked sharecropping with viticulture, and one of the difficulties in assessing the extent of its use can be linked to the wide variety of sharecropping contracts found. In particular, a broad distinction can be made between two very different types of sharecropping, those used to plant and bring vines in to cultivation (*complant*), and those used for annual cultivation in the production of grapes. The specific details of the contract varied considerably, as the examples in Table 1 suggest. We can distinguish between the classical sharecropping contract on the one hand, where the landowner contributes the land, and the tenant the labour, to sophisticated labour contracts (*prix-faiteurs*), which cannot really be classified as

[11] Béaur (2000, p.115).

sharecropping contracts, but which did resolve problems of moral hazard and monitoring for landowners.

Table 1

Examples of some sharecropping and labour contracts found in French viticulture

Contract name	Description	Regional location	Objectives
Complant	Sharecropper creates a new vineyard on uncultivated land in a given time. Owner provides land, inputs and supervision. Indemnisation often provided if tenant does not continue to cultivate the mature vines.	Various regions	Establish new vineyards
Vigneronnage à prix d'argent	Part time, fixed labour contract to cultivate 2 hectares using family labour (with 4 annual payments). Annual but renewable, and inherited.	Burgundy (fine wines)	Supply of skilled labour and allows the owner to keep all the harvest, which is matured in his / her cellar.
Prix-faiteurs	Worker carries out a set of fixed task on a given area of land.	Bordeaux (fine wines)	Supply of skilled labour. Worker usually also enjoys other sources of income (often has small vineyard)
Vigneronnage (métayage)	Sharecropper (2 hects. of vines & 2 hects. of pasture). Required to reside on farm, and prohibited from working in other activities. Sharecropper receives half of the wine produced by the owner.	Beaujolais, Maconnais	Supply of skilled labour. Wine made on the owner's premises. Wine quality above average.
Vigneronnage (colonat partiaire)	Similar to Vigneronnage (métayage), but without the obligation of residing on the vineyard. Landowner provides inputs. Usually very small plots.	widespread	Supply of skilled labour.
Ramonetage	Foreman. Responsible for work animals and feeding labourers.	Midi	
Régie	Fixed salary and commissions. Supervises labourers and métayer (when owner absent). A technician, found on large estates.	Midi, Burgundy, Beaujolais	Foreman / manager

TABLE 2. VINES IN SHARECROPPING IN FRANCE.

		Vines in sharecroppping	sharecropping (in %)		
		in 000' has	% sharecroppers	% vines in sharecropping	% land in sharecropping
Gers	South West	23,3	9,7	22,7	27,0
Gironde	South West	12,2	11,8	8,8	16,9
Lot et Garonne	South West	11,9	17,6	21,1	29,2
Saône-et-Loire	Burgundy	7	12,9	27,9	15,2
Aude	Midi	6,6	6,8	5,6	17,0
Rhone	Burgundy	6	11,7	18,7	11,5
Landes	South West	5,6	39,5	27,1	50,9
Garonne, Haute		4,3	12,0	8,5	21,5
Tarn-et-Garonne	South West	4,3	11,1	17,7	19,5
Puy-de-Dôme		3,6	5,1	8,1	10,4
Charente	Cognac	3,5	14,8	20,2	32,7
Indre	Loire	3,5	9,8	23,5	29,1
Tarn		3,4	20,4	23,0	28,8
Loire-Inférieur	Loire	3,3	12,9	10,8	10,1
Dordogne	South West	3	17,8	13,8	33,1
TOTAL 15 DEPARTEMENTS		101,5	14,3	17,2	23,5
TOTAL FRANCE		149	6,2	8,3	10,9

Source: Ministère de l'Agriculture, du Commerce et des Travaux Publiques (1897).
Note: In 1892 figures give 83.7 % of vines as being worked by landowners, 8.0 % of vines leased (fermage) and 8.3 % found in sharecropping.

Table 2 suggests that although sharecropping was found in many areas of viticulture, the greatest concentration was in South-West, a region where it was used even more frequently with other crops, and Burgundy, where it was less frequently found outside viticulture. Although sharecropping contracts were found in these regions over long periods, the nature of the contract often changed to meet new circumstances. Before we examine these changes, we need to consider briefly the transformation that took place in the wine economy itself.

Section 2. The economics of wine production.[12]

[12] This section is based in Simpson (forthcoming).

The vine was highly regarded by contemporaries in the mid eighteenth and early nineteenth centuries at a time when growing population pressure led to falling land: labour ratios. Arthur Young, during his travels through France in the late 1780s, was especially impressed by its potential, as its cultivation depended 'almost entirely on manual labour …demanding no other capital than the possession of the land and a pair of arms; no carts, no ploughs, no cattle'.[13] According to his calculations, vines yielded an annual average of £9 per acre, compared to the £6 or £7 for the best land in England, which in addition required an expensive fallow.[14] His estimates of an annual net return on capital of between 7 and 10 per cent were even higher if the wine could be stored six months after the vintage before its sale. The vine required no fallow, little manure, and adapted to all kinds of soils, including those 'which produce nothing but useless thorns and briers'.[15] In a similar vein, Henry Hobhouse has recently argued that the vine multiplies the 'nett profits from the same area of land by between twenty and two hundred times'.[16] In economies with high levels of underemployment, the vine provided extensive employment opportunities during 'all seasons, to all ages and both sexes'.[17] Therefore it is not surprising that, as the historian Le Roy Ladurie noted, the 'classic response of Mediterranean agriculture to a rise in population' was to 'plant trees or vines on old or new assarts, thereby increasing the returns from agriculture by more intensive forms of land utilization'.[18]

The problems associated with the use of wage labour in viticulture are those that Samuel Popkin has argued 'go to the very heart of agricultural economics – the linkage

[13] Young (1794, 2, p.25).
[14] Young (1794, 2, p.21).
[15] Gasparin (1848, vol.4, p.595)
[16] Hobhouse (2003, pp.x-xi).
[17] Gasparin, 1848, vol.4, p.595.
[18] Le Roy Ladurie (1976, pp.56-7).

of work quality and reward'.[19] In the first instance there are the difficulties associated with measuring labour quality. Viticulture is highly specialized, and not only was output sensitive to the quality and timing of labour inputs, but the vine could be easily and permanently damaged if the pruning, ploughing, and hoeing operations were badly carried out.[20] In the words of one writer in the early nineteenth century, 'no crop suffers more from the omission or poor quality of work, requiring many years to recover from the abuses of a single year'.[21] Close monitoring of wage labour in traditional viticulture - to reduce the risks of opportunistic behaviour of the workers – was costly, and was unprofitable for most landowners because the vast majority of beverage wines were of poor quality and sold cheaply.[22] The difficulties in the supervision of work effort and the fact that there were few economies of scale in traditional viticulture implied that most vineyards were worked by their owners, and only in a few vineyards, such as those that produced fine sherries or claret, did landowners use wage labour.

Although perhaps as a couple of hectares was sufficient to maintain a family, the widely fluctuating harvests implied that most growers needed additional incomes from outside viticulture to smooth consumption.[23] Another factor which discouraged specialisation was the high costs of transportation, especially when vineyards were some distance from navigable rivers or ports. Therefore the 1.6 million vine growers that were reportedly present in France in 1868 included many who worked only very small plots and sold little, or none of their wine.

Wine production was transformed from the mid nineteenth century by a number of exogenous changes. First, the railways helped to integrate national wine markets,

[19] Popkin (1988, p.262).
[20] Galassi (1992, pp.78-83) and Hoffman (1984).
[21] Boutelou (1807, p.66).
[22] See especially Guyot (1868, 3, pp.668-9).
[23] The historian Ernest Labrousse noted that in eighteenth century France, 'the cyclical fluctuations (of wine prices) are .. superior to those of all other products'. Labrousse (1933), cited in Brennan (1997, p.97).

leading to a significant increase in regional specialisation within producer countries. Another major change was the appearance of the vine disease phylloxera, which in time would destroy virtually of Europe's vines, and require growers to replant with disease resistant American root stock. The area of vines in France peaked in 1874 at 2.5 million hectares, and then proceeded to decline to 1.5 million in 1913, before it stabilised until the early 1950s.[24] As Table 3 shows, output remained more stable, as growers introduced new high yielding grape varieties after 1875 (although quality often declined). The shortages brought about by phylloxera led to high prices and prosperity, especially for those in France's Midi. Finally, phylloxera required virtually all landowners to make a number of production decisions which they might not have made, including whether to replant or abandon viticulture; how the replanting was going to be carried out (using machinery or by hand); and by whom, the use of family labour, wage labour or sharecropping.

TABLE 3
Area and production of wine in France

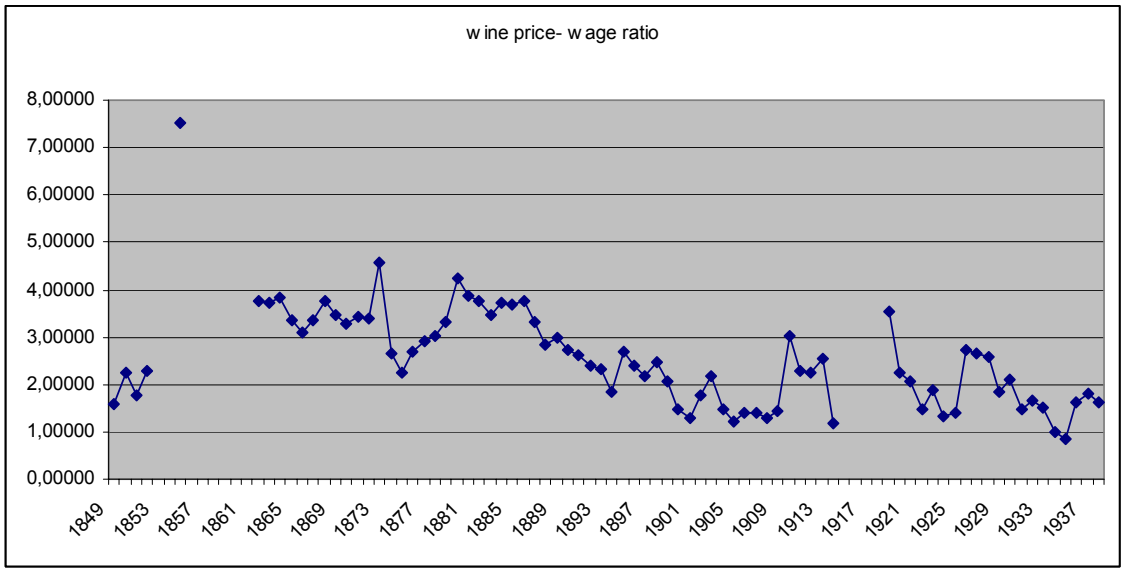
	Area of vines 000s hectares	Millions of hectolitres	Hectolitres per hectare
1786-8	1,576	27,176	17.2
1823-41	1,985	38,279	19.5
1862	2,321	48,630	21.0
1890s	1,763	36,214	20.5
1930s	1,531	58,759	38.4
1950s	1,353	52,935	39.1

Source: Lachiver (1988, pp.616-19)

[24] It then started a new, although slower decline, falling to below a million hectares for the first time in 1985.

Economic growth and the greater integration of factor markets changed the negotiating position of landowners and labourers in the vineyards. In particular, the growth in real wages during the second half of the nineteenth century led to labour scarcity and the 'disappearance' of the labourers in French agriculture. Therefore, if the domestic wine shortages caused by phylloxera benefited growers (at least those still in production), from the late 1880s the balance of power had shifted significantly because of falling wine prices as domestic wine output recovered, and the growth in labour costs and militancy (Figure 1).

FIGURE 1. RELATIVE WINE/WAGE PRICES, 1849-1938



SOURCES: wages: Bayet, A. (1997); wine prices: Annuaire Statistique (vol. 1933, pp.62-3) and Pech (1975, pp. 511-3).

The late nineteenth century saw considerable technological and organisational changes in some wine regions. Biotechnological advances allowed growers to increase grape yields (although at the expense of quality), and vineyards were reorganized to cut labour inputs and reduce monitoring costs, thereby encouraging the use of wage labour. Technological change in wine making and transportation also increased the potential

economies of scale in production and marketing. By 1900 the new vineyards in the Midi were described as large scale industrial organisations, although labour continued to represent about half total costs. However, if market and production changes shifted power along the commodity chain towards the larger grower and merchants, the growing political voice of small producers after 1900 led to the state implementing legislation for the creation of regional appellations, and financial help to form co-operatives, allowing small growers to capture the economies of scale associated with wine production and marketing. The result was that the number of growers in all France in 1950 was identical to those of 1868 (1.68 million), implying that the averaged holding had declined in size by two-fifths. We shall now look at the nature of sharecropping in three very different regions: Burgundy, the south-west and Bordeaux, and the Midi.

Section 3. Burgundy.

Burgundy, in eastern France is a collection of vineyards running along a narrow strip of land from Dijon in the north, to Lyon in the south.[25] The most important region is the Côte d'Or. The other vineyards of note in this region are Chalonnais, Mâconnais and Beaujolais. Burgundy wines had a reputation for quality in the Middle Ages, and were both exported and sold in Paris. Rising prices for beverage wines during the nineteenth century encouraged many growers to try and exploit the reputation of fine burgundies and expand cultivation on unsuitable land, especially in the Côte d'Or.[26] The area of vines increased from 77 thousand hectares in 1788 to peak at 124 thousand in 1875, before declining to just 56 thousand in 1921.[27]

[25] Chablis is considered today as the northern tip of the Burgundy region.
[26] Laurent (1957-8, p.
[27] Departements of Côte-d'Or, Saone-et-Loire and Rhône. Galet (1956-64, p.881).

Sharecropping was common in Burgundy from an early date, although the exact area involved is unknown. However, while producers of fine wines abandoned its use by the mid nineteenth century, the producers of the cheaper wines from Beaujolais and Macon continued to use the contract into the twentieth century.

Upper Burgundy (Côte-d'Or) for the eighteenth century offers, in the words of Thomas Brennan, 'the classic example of vineyards so isolated from markets that they were forced to develop superior and expensive wines'.[28] There were few large holdings, and most of these were broken up during the Napoleonic period.[29] Landowners usually owned a large number of scattered holdings involving potentially high monitoring costs if worked with wage labour, and the pinot noir grape used in fine wine yielded only about 15 hectolitres the hectare. Sharecropping was used until the mid nineteenth century, with the landowner being heavily involved in the winemaking and marketing.[30] Growers in theory received half the harvest, but in practice the landowner often claimed all of it in exchange for the money and goods that had been advanced to the tenant during the year.[31] With the increase in wine prices after 1850, first on account of powdery mildew, and then phylloxera, fine wine producers switched from sharecropping contracts to a simple labour contract, the *vigneron a prix d'agent*.[32] This was similar to the prix-faiteurs, which we shall meet on the large Bordeaux estates, and involved employing skilled workers to cultivate a fixed area of vines. The labourers often owned vines of their own, but wage payments and paternalistic help from landowners allowed them to diversify and obtain a guaranteed annual income. For landowners the advantage was that they did not have to split the increasingly valuable

[28] Brennan (1997, p.11). See also Dion (1977).
[29] One old estate that had been owned by the Church, the Clos de Vougeot, was broken up and its 50 hectares of vines today are divided among 80 growers Johnson and Robinson. ( )
[30] Laurent (1957-8, p. 279-80).
[31] Id., p.278.
[32] Id. 280.

wine with their tenants. The appearance of phylloxera did not lead to a return to sharecropping because, as one contemporary argued, it made no sense for the landowner to share the harvest when two-thirds of its value was based on the wine's reputation.[33] Nevertheless, high salaries after the Second World War produced a revival in interest in sharecropping, although now the tenant received a cash payment rather than a share of the harvest.[34]

The vineyards of Beaujolais and Maconnais were closer to navigable water than those of upper Burgundy, and from the seventeenth century grew rapidly in response to the Parisian market. The grape variety used was the gamay, which produced an inferior wine to the pinot noir, but yields were considerably greater, at 50 hectolitres / hectare. Sharecropping was dominant in Beaujolais and Maconnais, representing between 30 and 40 per cent of all vines in 1882.[35] Landowners did not produce fine wines (as in upper Burgundy or Bordeaux), and the low grape prices implied that they could not resort to labour contracts such as the *prix-faiteur*. Neither did they benefit from the economies of scale that some of the producers of cheap beverage wines in the Midi were enjoying by the 1860s, and which encouraged a similar close integration between large and small properties (see below). Instead sharecropping was used in the highly fragmented vineyards. Tenants were given about two hectares of vines and one and half hectares of pasture for livestock, sufficient to keep a family and domestic servant fully employed. The sharecropper was required to reside on farm, and prohibited from working in other activities.[36] The livestock was owned by the tenants, and the milk and butter provided an alternative source of income. As in Tuscany, the landowner who

[33] Caziot (1914, 386-8).
[34] Conseil Economique et Social (1953, vol.2, p.143-5).
[35] It was widely cited by contemporaries. For example, Cochard & Aigueperse (1830, [quoted in Myard, 1907, p.213], Jules Guyot (1867, vol. 7, p.11), Comte de Tourdonnet (1879-80, p.179-80), Myard (1907), Ministère de l'Agriculture (1912), Société des agriculteurs de France (1939, pp. 97-101), and Conseil Economique et Social (1953, vol.2, pp.414-5).
[36] Chatillon (1906, p.67).

made and marketed the wine, sometimes from a considerable number of sharecroppers.[37]

The appearance of phylloxera forced growers and sharecroppers to reconsider the contract. Some growers replanted their vines in long rows and used trellises to facilitate the mechanisation. However in many areas this was not easy because of the nature of the terrain.[38] Furthermore the weakening of wine prices and increase in wage costs discouraged a massive switch away from the contract, allowing it to survive until the mid twentieth century. Contracts were renewed so often that land was passed from one generation of sharecroppers to another.[39] Landowners also appear willing to advance loans and help to tenants. One example of collaboration between the economic agents was that by the end of the nineteenth century some 12,000 landowners and tenants had established jointly owned co-operatives to purchase inputs.[40] As a result, the labour problems in the Burgundy vineyards appear much less than elsewhere at the turn of the twentieth century.[41]

Section 4. The south-west and Bordeaux

The basis of Bordeaux's reputation as a region of fine wines rested on the production of less than hundred growers. The vines on these estates were almost never leased and sharecropping was very rare. Instead the high-value of their vines and the ease by which they could be damage led growers to employ *prix-faiteurs*, a labour contract that was exclusive to the sector. Skilled workers (*prix-faiteurs*) were responsible for the skilled operations on a fixed area of vines, which in the Médoc was

[37] Guyot mentions that estates were rarely more than 20 hectares (4-5 sharecroppers), but some could reach 100 or 150 hectares (Guyot, Myard, 1907, p.5).
[38] Myard (1907, p.)
[39] Tourdonnet (1879-80, p. 176).
[40] Chatillon (1906, p. 35)
[41] Souchon (1914, p.245).

usually slightly less than three hectares, in exchange for accommodation, heating, drink, a small garden and a salary.[42] The prix-faiteurs had secure employment, organised the work for themselves, and had enough free time to tend their own vines, or earn extra wages doing piece work. Workers had to be trusted, and at Château Latour, for example, many had worked there for decades, with a son following his father as vigneron.[43] The contract however could not insulate vineyard owners completely from adverse movements in wine prices and labour costs, and in the 1930s there were complaints about the work quality of some prix-faiteurs.[44]

Another wine producing area in south-west France was Armagnac, found mainly in the departaments of Lot-et-Garonne and Gers in Southwest France, saw the area of vines increase from 112 to 170 thousand hectares between 1826 and 1875.[45] Sharecropping was widely found in this region and, unlike Burgundy, was common to all forms of agriculture and not just viticulture, being officially found on 28 per cent of all land 1892. Farms were medium sized (*métairies*), and a single tenant carried out a wide variety of activities including cereals, livestock and viticulture.[46] Vines were often intercropped, and the wines distilled to produce armagnac. Viticulture was often not the principle activity of tenants, and when mildew and black-rot appeared (1880s), they were reluctant to spend money on chemicals, preferring instead to use their labour for other farm activities.[47] Landowners were forced either to pay for the chemicals, or to take back their land and turn to direct cultivation. However landowners were also encouraged to end sharecropping because the region received a major stimulus in the

[42] Féret (1878, p.461) gives a salary of 225 francs, compared the 150 francs given by Bowring four decades earlier. The operations include pruning, collection of cuttings, putting down vine props and laths, fastening the vines, and twice drawing the cavaillons. Bowring (1836, p.150).
[43] Higounet (ed.), p.101).
[44] Ministère de l'Agriculture (1937, p.163).
[45] Galet (1956-64, p.2331).
[46] Loré (1912, p.22)
[47] Loré (1912, p. 84-7).

1880s when phylloxera devastated the vines in Cognac which increased the price of armagnac. Many landowners turned instead to *brassiers*, a type of labour contract similar to the *prix-faiteur*.[48] However prosperity was temporary, and out-migration and rising labour costs implied that sharecropping never disappeared, although landowners were obliged to increase their contributions of off-farm inputs, or compensating if the cereal harvest was poor.

Section 5. The Midi.

The area of vines in the Midi increased from 209 thousand hectares in 1824/8 to 394 thousand in 1862, and 452 thousand in 1900s and 1950s.[49] The region's comparative advantage was originally in the production of spirits, but the high wine prices caused by the appearance of powdery mildew in the 1850s and the major drop in transport costs produced by the railways acted as a catalyst to local viticulture, and opened up the national market to southern growers. Yet if the area almost doubled between the late 1820s and early 1860s, yields changed little. Sharecropping was always present, but probably found on little more than 10% of the vines. On the eve of phylloxera it was used to bring new vineyards into production (*complant*)[50], and occasionally on small isolated plots and on the large new wine estates which were beginning to appear on the fertile coastal plains. The use of sharecropping contracts with mature vines was rare and used to guarantee a supply of skilled labour for specific tasks on the landowners' vineyards.

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

[48] Id, p.88-89.
[49] Lachiver (1988, pp.616-8). The four departments of the Midi are Aude, Gard, Hérault and Pyrénées-Orientales.
[50] Tenants clears scrub and plants vines, keeps half the harvest during the first 10 years or so, before returning the vineyard to the landowners.

outside capital to be invested in the region.[51] The term *la viticulture industrielle* was coined by Augé-Laribé, and was made with reference to the large wine estates, first in the Midi and then later in Algeria. New vineyards were established on the fertile plains rather than the hills, and growers used large quantities of pesticides, fungicides, artificial fertilisers, and irrigation to improve yields. Yields were further increased by a light pruning and by the use of significant quantities of artificial fertilisers. Steam ploughs prepared the land for planting, producing a considerable saving to what it would have been in the work was done by hand. Deeper ploughing was considered essential if the new, post-phylloxera vines were high yielding, and this required expensive steam ploughs, which were impractical on small or fragmented holdings. This resulted in a distinction in some areas between 'intensive', high-yielding 'capitalist' viticulture, against lower yielding, labour intensive peasant farming.[52]

The need to replant after phylloxera allowed landowners to redesign vineyards and vines were grown on wire trellises in long straight lines so that ploughs and horse-drawn sprays could move between them with ease, thereby cutting labour inputs and reducing monitoring costs associated with wage labour.[53] As supervisors could easily walk between the rows to check an individual's work, they achieved greater control over the speed and the quality of operations such as pruning, spraying, cultivation and harvesting.[54] As Guyot, perhaps the leading writer on viticulture in the mid-nineteenth century noted:

[51] 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).
[52] Carmona and Simpson (1999, p.307).
[53] Génieys (1905, p.38) and Gide (1901, pp.218-9).
[54] The use of secateurs instead of pruning knives reduced the work skills required.

> A simple glance along the line of vines, permits the owner to spot the skill or the negligence of his vinedressers, just as the foreman can control with the same ease the quantity and quality of work of each of his workers. [55]

According to one study at the turn of the twentieth century, economies of scale began to be important on vineyards of over 30 hectares, and reached their maximum at between 60 and 80 hectares, with diseconomies appearing on those estates of over 90 or 100 hectares.[56] Yet despite the industrial nature of these vineyards, labour inputs remained very high, accounting for approximately half production costs in 1900. Sharecropping (*complant*) continued to be used in some cases to replant vineyards destroyed by phylloxera and extend the cultivation on the phylloxera –resistant coastal plain, although one contemporary suggests it was disappearing by 1900.[57] This might have been because of the development of specialised equipment of planting new vineyards was reducing labour requirements, but more likely it can be explained by the fact that the wine market was flooded and prices had collapsed, removing any incentives to plant or replant vines at this time.

Yet just as interest in *complant* was declining, growers were looking at other forms of sharecropping to reduce annual labour costs. As early as the 1860s Jules Guyot had complained of the high cost of labour in the Midi, but high wine prices had produced considerable prosperity to the region, benefiting both capital and labour. By 1900 the combination of a heavily depressed wine market and the growing militancy of labourers was creating problems for growers. Following the strikes of 1903/4, which raised wages and cut the work day, some growers looked to sharecropping as a means of reducing

[55] Guyot (1861, p.19).
[56] Cited in Augé-Laribé (1907, pp.119-22). The estates needed to be compact, as the potential economies of scale were quickly lost if the vineyard was fragmented into a number of small plots.
[57] Vigouroux (1906, p.105).

costs.[58] The experiment by Pierre Causse on his highly mechanised and irrigated vineyard (Mas de Bony at St-Laurent d'Aigouze, Gard) was widely reported at the time. There were around fifty sharecroppers on the estate and the land was split into plots of three hectares, which was considered the optimal for a husband and wife to work.[59] The owner provided all the inputs, made the wine and controlled the timing of the farm operations, and in exchange received two-thirds of the wine, leaving a third for the métayer. As Charles Gide noted, 'in truth, the sharecropper here is nothing more than the old day labourer carrying out the same tasks'.[60] Gide calculated that a labourer in the region could earn approximately 800 francs a year, while a third of the 420 hectolitres of wine produced selling at 10 francs a hectolitre provided the sharecropper with an income of 1,400 francs.[61] Although yields fluctuated significantly (in 1904 they reached 192 hectolitres a hectare!), the problem during the first decade of the twentieth century was low prices, and the owner here was obliged to provide a guaranteed salary of 1,000 or 1,100 francs.

Gide talked of 'a form of production co-operative', which was able to benefit from the low monitoring costs associated with 'la petite culture' and the economies of scale with 'la grande culture'.[62] Yet as Henry Gervais pointed out, the problem of using sharecropping as a simple labour contract was that although it guaranteed employment, wages were only paid annually, and income varied significantly.[63] In years of poor harvests of low prices, sharecroppers might be forced to look to the landowner such as

[58] Gervais writes that if the 1892 census figures show that sharecropping was unusual in the region, the situation had changed by when he was writing. Gervais (1908, p.139).
[59] Labour might have to be hired by the sharecropper for the harvest.
[60] Gide (1905, p.88).
[61] The calculation assumes 100 winter days employment at 2fr. 50; 100 summer days employment at 3 fr., and 50 days harvest labour at 5 fr. The métayer would have to employ some extra labour at harvest time. Gide (1905, pp.88-9).
[62] Gide (1905, p.91). Other contemporaries talked of the association of capital and labour (Convert, 1904, p.578).
[63] Gervais (1908, p.138).

Pierre Causse to provide help. For this reason, Gervais believed that sharecropping was unlikely to be found extensively in viticulture in these conditions.

Sharecropping did not disappear from the Midi however. In the government survey of 1929 around 5 per cent of Hérault's vines were cultivated using this contract (compared to 0.5 per cent in 1892).[64] The situation was not so different in the early 1950s, when 4 per cent of the Midi's vineyards on the plain and 6 per cent on the slopes were officially worked by sharecroppers. However, among the vineyards of more than 25 hectares (the largest category used in the survey), the figures are 7 and 19 per cent respectively).[65] In conclusion, although sharecropping was never that important in the Midi, but it continually reinvented itself to meet new circumstances.

Conclusion.

In this paper we argue that sharecropping was more widespread than the official statistics suggest in the century before 1946. The success of the contract can be seen by how it adapted to different types of wine production, and to changes in factor prices and the wine market over time. The contract adjusted to the conditions of polyculture in south-west France, fine wines in Burgundy, traditional beverage wines in Beaujolais and highly capital intensive viticulture in the Midi. However, it is also clear that sharecropping contracts, were NOT found on the majority of vineyards. Most growers, perhaps three-quarters in all, preferred to cultivate their own vines, usually using family labour and hiring labour at peak seasons. We need therefore to return to the original

[64] Two sorts of contracts are described. The first type of contract had the landowners provide the chemical inputs, and the tenant the labour, with the produce being split between the two. Contracts were for 3, 6 and 9 years. The second allowed the métayar two thirds of the crop, but the vineyards were in a state of neglect. Contracts could be ended with three months notice by either side. The survey was also pessimistic about the future of the contract, arguing that towards the end of the lease the sharecropper 'tries to increase profits at the expense of the land'. Ministère de l'Agriculture (1937, pp.284-94).
[65] *Études et Conjoncture* (Juin 1955, p.535).

question in the title of this paper: why was sharecropping not found more often in viticulture?

Two, related factors were the main reason why labourers preferred (and were able to obtain) to move straight to direct cultivation, without having first to be sharecropper: the low entry costs to viticulture, and the limited economies of scale found prior to 1950 or even later in grape production. In particular, the high labour requirements and the marginal nature of land that was suited to the vine made the crop ideal for smallholders. Viticulture required skilled labour, but these talents were widely found in wine growing areas. Vineyards could be tendered when a labourer was seasonally unemployed, and the extended family employed for the harvest. Some economies of scale had been achieved on large estates, but holdings were often dispersed, limiting mechanisation even in the Midi. One detailed survey in the 1950s shows that the average plot in the Midi was 0.7 hectares, and only 2 per cent of all vines were found on plots of more than 3 hectares.[66] Employment still averaged 498 hours a hectare, implying that a single worker could manage only four hectares per worker year.[67] Many growers did not sell their wine, except in years of high prices. The possibility of cultivating even a small plot gave labourers the opportunity to become a property owner.

In areas of commercial wine production (upper Burgundy, Médoc, areas of the Midi) large and small estates were closely integrated. Responsible workers with the necessary skills could be attracted using part-time labour contracts such as the *prix-faiteur*, giving them the necessary time to cultivate their own vines. The contracts were flexible and landowners adjusted them to market conditions by offering a variety of incentives, such as allowing labourers to keep vine cuttings, loans of work animals on

[66] *Études et Conjuncture* (juin 1955, pp.524 and 526).
[67] *Études et Conjuncture* (, p.45).

Sundays, the use of landowner's winemaking facilities, etc. Labourers were therefore able to mix the benefits of a secure wage income with the risks associated with being a small owner-occupier.

From the turn of the twentieth century these two categories were joined by another group of small growers who dedicated most, if not all their time to viticulture, and who sold their wines to the local co-operative. The co-operative advanced working capital, purchased chemical cheaply, and released grower from the dependence on intermediaries for wine production and its marketing. By 1950 a quarter of France's wine was made in co-operatives.[68]

In conclusion, sharecropping was not a necessary rung on some farm ladder which labourers were required to use on their way to becoming property owners. In theory, sharecropping could have allowed labourer and small farmers extend their vineyards, and thereby increase the scale of their production. This was the case with the *métayage* contract used in cattle farming in France, which freed tenants from the need to own their land and allowed them to dedicate their financial resources to purchasing more animals and increase productivity.[69] However in viticulture there were few advantages in increasing the scale of vineyards.

[68] Simpson (2000).
[69] Carmona (2006).

Bibliography

Ackerberg, D. and M. Botticini, (2000), 'The Choice of Agrarian Contracts in Early Renaissance Tuscany: Risk Sharing, Moral Hazard or Capital Market Imperfections?', *Explorations in Economic History* 37, 241-257.

Ackerberg, D. and M. Botticini (2002), "Endogenous Matching and the Empirical Determinants of Contract Form" *Journal of Political Economy*, Vol. 110, No. 3, pp 564-591.

Allen, D. and D. Lueck, (1992), 'Contract Choice in Modern Agriculture: Cropshare versus Cash Rent', *Journal of Law and Economics* 35, 397-426.

Augé-Laribé, Michel (1907) *Le problème agraire du socialisme : la viticulture industrielle du Midi de la France*, Paris.

Bayet, A. (1997), "Deux siècles d'évolution des salaires en France", Insée, Document de travail.

Beucher, René (1899), *Du bail à complant dans le département de Maine-et-Loire*, Paris

Béaur, Gérard (2000), *Histoire agraire de la France au XVIIIe siècle*, Paris.

Boutelou, E. (1807) *Memoria sobre el cultivo de la vid en Sanlúcar de Barrameda y Xerez de la Frontera*, Madrid.

Bourde, André J. (1967) *Agronomie et agronomes en France au XVIIIe siècle*, 3 vols. Paris.

Brennan, Thomas (1997) *Burgundy to Champagne. The wine trade in early modern France*, Baltimore and London.

Carmona, Juan and J. Simpson (1999) 'The "Rabassa Morta" in Catalan Agriculture: the Rise and Fall of a Long Term Sharecropping Contract, 1670s-1920s', *Journal of Economic History*, 59, pp.290-315.

Carmona, Juan, (2006), 'Sharecropping and livestock specialization in France, 1830-1930', *Continuity and Change*, 2, [forthcoming].

Caziot, Pierre (1914) *La Valeur de la terre en France*, Paris.

Chatillon, Humbert (1906), *Le Beaujolais viticole*, Paris.

Cocks, Charles and Édouard Féret (1883) *Bordeaux and its wines classed by order of merit*, Paris and Bordeaux, 2nd edition (translation of French 4th edition of 1881.

Cohen, J.S. and F.L. Galassi (1990), 'Sharecropping and Productivity: 'Feudal Residues' in Italian Agriculture, 1911', *Economic History Review*, 43, 646-56.

Conseil Economique et Social (1953), *Les diverses forme de métayage*, Paris

Convert, F. (1904) 'Le vigneronnage dans le Midi', *Revue de Viticulteur*, pp.578-80.

Dion, Roger (1977) *Histoire de la vigne et du vin au France*, Paris.

Epstein, S.R. (1994), 'Tuscans and Their Farms', *Rivista di Storia Economica*, 11, 111-23.

Galassi, Francesco (1992), "Tuscans and their farms: the economics of share tenancy in fifteenth century Florence." *Rivista di storia economica*, 9, p. 77-94.

Galassi, F. and J.Cohen (1994), 'The Economics of Tenancy in early Twentieth-Century Southern Italy', *Economic History Review,* 47, 585-600.

Galet, Pierre (1956-64), *Cépages et vignobles de France*, Montpellier, 4 vols.

Genieys, Pierre (1905) *La Crise viticole méridionale*, Toulouse.

Gervais, Henry (1908) *La Rémunération du travail dans la viticulture méridionale*, Paris.

Gide, Charles (1905) 'Un nouveau système de métayage dans la viticulture', *Le Musée Social, Annales, mars*, pp.87-91.

Guyot, Jules (1860) *Culture de la vigne et vinification*, Paris, 1st edition.

Guyot, Jules (1876) *Etude des vignobles de France pour servir a l'enseignement mutuel de la viticulture et de la vinification françaises*, Paris, 9 v. (Reprinted 1982).

Hoffman, Phil (1984), 'The Economic Theory of Sharecropping in Early Modern France', *Journal of Economic History*, 42, 155-62

Laborderie-Boulou, Pierre (1905), *Le Métayage, particulièrement en Périgord*, Thèse pour le doctorat, Bordeaux.
Labrousse, Claude-Ernest (1933) *Esquisse du mouvement des prix et des revenue en France au XVIIIe siècle* (Paris), vol.1.

Labrousse, Claude-Ernest (1943) *La Crise de l'économie française à fin de l'Ancien Régime et au début de la Révolution*, Paris.

Lachiver, Marcel (1988) *Vins, vignes et vignerons. Histoire du vignoble français*, Paris.

Laurent, Robert (1957-8) *Les vignerons de la "Côte d'Or" au XIXe siècle*, Paris.

Loré, M (1912), *Le métayage dans le Bas-Armagnac*, Paris.

Ministère de l'Agriculture, du Commerce et des Travaux Publiques (1897), *Résultat de l'enquête décennal de 1892*, Paris.

Ministère de l'Agriculture (1912), *Enquête sur les salaires agricoles*, Paris.

Ministère de l'Agriculture (1937), *Statistique agricole de la France. Annexe à l'enquête de 1929, monographie du département de la Gironde*, Paris.

Ministère de l'Agriculture (1937), *Statistique agricole de la France. Annexe à l'enquête de 1929, monographie du département de l'Hérault*, Paris.

Myard, François (1907), *Le vigneronnage en Beaujolais*, Lyon.

Pech, Rémy (1975) *Entreprise viticole et capitalisme en Languedoc-Roussillon*, Toulouse.

Pijassou, R. (1980) *Le Médoc: un grand vignoble de Qualité*, Paris, J. Tallandier, 2 v.

Postel-Vinay, Gilles (1989) 'Debt and agricultural performance in the Languedocian vineyard, 1870-1914', *Research in Economic History*, supplement 5, pp.161-86.

Simpson, James (2000) "Cooperation and Cooperatives in southern European Wine Production", in Kauffman, K. *Advances in Agricultural Economic History*, 1, pp.95-126.

Simpson, J. (forthcoming) The emergence of the modern wine industry, 1850-1914. Technology, product development and market institutions.

Société des agriculteurs de France (1939), *Congrès du métayage*, Paris.

Souchon, A. (1914), *La crise de la main d'oeuvre agricole en France*, Paris.

Turgot, A.R.J. (1808-1811), *Œuvres*, Paris, 9 volumes.