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Abstract

The traditional view that sharecropping was a cause of low productivity in European agriculture prior to the Second World War has been challenged by economic historians, and today the contract is often considered as efficient at reducing the monitoring costs associated with labour and allocation of risk between landowners and farmers, especially when capital markets were weak for working capital. Yet if sharecropping was a relatively efficient contract, why was it not found more often? This paper looks at the vine, a crop that was widespread in Europe and that has been central to the current debates. It argues that while the literature has been right to emphasise the importance of the high monitoring costs, it has ignored the equally important costs associated with dividing the harvest. These were sufficiently large to make the contract unattractive, except in the few cases where the landowner was prepared to be actively involved in wine making and its sale, such as was found in Beaujolais or Tuscany.

Keywords: sharecropping, French agriculture, wine history

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

Juan Carmona and James Simpson (Universidad Carlos III de Madrid)¹

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. In particular while Marshall argued that sharecropping encouraged a sub-optimal use of labour and capital, today it is usually emphasised that the contract was efficient at reducing the monitoring costs associated with labour and allocating risk between landowners and farmers, especially when capital markets were weak for working capital. Yet if sharecropping was a relatively efficient contract, why was it not found more often?² European agriculture was highly diverse, and until recently the presence of risk (widely fluctuating yields and prices), low level of human capital, poverty, monitoring costs and the need to provide work incentives for economic agents were found everywhere. However, sharecropping appears to have been relative rare outside a few well-known areas. Under what conditions can it be said that sharecropping was likely to be the preferred form of tenure, and when was it absent? To simplify our task we concentrate on the vine, a crop that was widespread in Europe. The presence of sharecropping in a number of areas of viticulture (Tuscany, Beaujolais, Catalonia, etc.) has been central to the current debates on European sharecropping, but this literature has ignored its relative absence in most other regions.³

This paper has four sections and considers France, where the literature is most extensive, but the conclusions can be extended to other countries. The first section argues that the confusion over the extent of sharecropping in Europe is partly because governments from the late nineteenth century classified it as a land contract (and therefore an alternative to rental contracts or owner-occupiers), while many contemporaries were willing to widen the definition to include those labour contracts

¹ Earlier versions of this paper were presented at at the Tenth ISNIE Annual Conference, Boulder, Colorado, September 21-24, 2006, at the 2007 Annual Conference of the Economic History Society, Exeter, March, 30-April, 1st, 2007, and at the Seventh Conference of the European Historical Economics Society, Lund, Sweden, June, 29- July, 1st. 2007. Comments by participants are gratefully acknowledged. The usual disclaimer applies. Financial assistance has been provided by SEJ 2006-08188/ECON.

² Federico (2005).

³ In particular, Hoffman (1984), Epstein (1994), Cohen and Galassi (1990), Galassi (1992 and 2000), Carmona and Simpson (1999), Akerberg and Botticini (2000 & 2002), Biagioli (2002).

that gave the worker some independence from the landowner in organising the work. The ‘classical’ form of sharecropping, where the principal provides the land and the agent the labour, with the resulting harvest was split between the two, was indeed rare in Europe. The second section discusses the organisation of grape and wine production. In particular, it is argued that while the sharecropping literature has been right to emphasise the importance of the high monitoring costs involved in viticulture, it has ignored the equally important costs associated with dividing the harvest, and that this helps explain the limited presence of ‘classical’ sharecropping. The rest of the article is devoted to explain the exceptions. Section three shows how some growers developed labour contracts to reduce monitoring costs and that allowed them an adequate supply of grapes to benefit from the growing economies of scale in wine production that were becoming available from the late nineteenth century. The final section explains why in certain regions sharecropping existed despite the high costs associated with dividing the harvest.

1. The debate on sharecropping in French agriculture.

Some contemporaries from the mid eighteenth century linked sharecropping with economic stagnation in an attempt to explain the divergent paths being taken by English and French agriculture. While Olivier de Serres, perhaps the most prestigious agronomist of the century, defended the contract in terms of its efficiency,⁴ physiocrats such as Turgot or the Abbé Rozier believed that small farms and sharecropping was a significantly inferior form of organisation to the large farms found in northern France and England which used rental contracts.⁵ Alfred Marshall’s condemnation has perhaps been the most damaging, arguing that with sharecropping landlords would undersupply capital, and their tenants 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

⁴ Hoffman (1984), Bourde (1967), vol.1, pp. 283.

⁵ Turgot (1808-11), vol. 4, pp. 541-55; Rozier, in Myard (1907), pp.118-9. Béaur (2000), p.114.

empirically have had only limited success). Finally, access to capital markets before the nineteenth century was usually limited to large landowners. Interlinked contracts, involving 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). In other words, most economic historians today argue that the causality which runs from sharecropping to low farm productivity and rural poverty needs to be reversed.

Yet how important was sharecropping in France? Writers in the eighteenth and early nineteenth centuries believed it was widespread. Dupré de Saint-Maur and Turgot suggest it covered four-sevenths of farm land; Smith, five-sixths, and Young, seven-eighths.⁶ Dupré de Saint-Maur argued that the disappearance of *metayage emphéothique* (18 dic 1790) led to the decline in its use during the nineteenth century.⁷ Indeed, the official publications of the late nineteenth and twentieth centuries suggest that sharecropping was much less widespread. For example, the 1892 census, which distinguishes between direct cultivation (*faire-valoir direct*), rental contracts (*fermage*) and sharecropping (*métayage*) shows that on all land in France, 52.7 per cent was directly cultivated, 36.4 per cent leased and 10.9 per cent sharecropped. The government statistics for 1929 and 1946 give similar figures for sharecropping, 10.4 per cent and 10.9 per cent 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 historical 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,

⁶ Laborderie-Boulou (1905), p.51.

⁷ Laborderie-Boulou (1905), pp. 54-55.

⁸ Béaur (2000), p.119.

were wrongly considered as sharecropping contracts.⁹ By contrast, the 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 was one of the more complete because it linked contracts with different crops, treats all cash payments as rental contracts, even though on occasions these were actually sharecropping contracts. Another problem is that all farms and land are classified according to their principal crop in the major 1892 and 1929 censuses. A mixed rental-sharecropping classification was not used, which for example often produces an incorrect recording of small plots of viticulture in zones of polyculture. Another difficulty was that sharecropping contracts were often oral, but the 1892 survey records all oral contracts as rental contracts. Finally, many contemporaries treaded as sharecropping those labour contracts which allowed workers the possibility to organise the work in their own time. Consequently it seems likely that sharecropping was much less common than writers such as Turgot or Young suggest 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 the use of sharecropping with viticulture. A wide variety of contracts were used, and in particular a broad distinction can be made between two very different types of sharecropping, namely those used to plant and bring vines into cultivation (*complant*), and those used for annual cultivation in the production of grapes. We can also distinguish between the classical sharecropping contracts on the one hand, where the landowner contributed the land, and the tenant the labour, from the sophisticated labour contracts (such as *prix-faiteurs*), which resolved specific problems of moral hazard and monitoring for landowners. The paper excludes those cases such as the *tiers franc* contract found in Burgundy and Champagne which was used in those cases when the owner physically could not cultivate the vines

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.

¹¹ Béaur (2000), p.115.

themselves.¹² Equally, it omits those in cases of ‘perfect’ information, where the agents could establish a contract which could ignore monitoring costs.¹³ Table 1 summarises some of the main sharecropping and labour contracts found in French viticulture in the late nineteenth century.

¹² ‘En Champagne et en Bourgogne, forme de métayage qui consiste à confier, moyennant un tiers du produit, de petites parcelles de vigne à un vigneron qui complète ainsi les ressources de ses propres parcelles’. *Conseil Economique et Social* (1953), vol.1.

¹³ In theory, the problem of high crop division costs could be significantly reduced in cases where an agent’s reputation discouraged cheating. In particular, Mark Casson (1997, p.279) has stressed that there are two kinds of transaction costs – ‘namely the *ex ante* cost of setting up the contract and the *ex post* cost of ensuring that the contract once set up, is properly fulfilled’.¹³ The two are to some extent substitutes for each other. When the cost of preliminary screening is low, then close monitoring may be unnecessary. This may arise because of the moral integrity of the individual, or because of the strength of community based sanctions. In village communities, principal and agent may well have significant and reliable information on each other, and encouraging (or discouraging) informal, oral contacts. This helps explain why there was always some sharecropping, but is clearly insufficient to explain the widespread use of the contract in a few select areas.

Table 1**Examples of some sharecropping and labour contracts found in French viticulture**

Contract name	Description	Regional location	Objectives	How the contract appear in <i>Enquêtes</i>
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, especially Loire.	Establish new vineyards	As Métayage (Sharecropping) of fermage
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.	As Journalier or fermage (oral contract)
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)	As Journalier or fermage (oral contract)
Vigneronnage (métayage)	Sharecropper (2 hec. of vines & 2 hec. 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, and Chalonais	Supply of skilled labour. Wine made on the owner's premises. Wine quality above average.	As metayage
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.	As metayage or fermage (oral contract)
Ramonetage	Foreman. Responsible for work animals and feeding labourers.	Midi		As journalier
Régie	Fixed salary and commissions. Supervises labourers and métayer (when owner absent). A technician, found on large estates.	Midi, Burgundy, Beaujolais	Foreman / manager	As Owner cultivation with Régie
Métayage multiple cropping	Sharecropper (20-60 hectares of land, some vineyards). Required to reside on farm, and prohibited from working in other activities. Sharecropper receives half of the wine produced by the owner.	Widespread in region with viticulture	Supply of labour. Wine made on the owner's/sharecropper premises. Wine quality below average.	As metayage
Tiers franc	Neighbour cultivates vines in exchange for 2/3 of harvest	Burgundy and Champagne	Usually only when the landowner was ill, a widow, or too young	As metayage

TABLE 2. VINES IN SHARECROPPING IN FRANCE in 1892.

Departement	region	Vines in	sharecropping (in %)		
		sharecropping in 000' has	% sharecroppers	% vines in sharecropping	% land in sharecropping (all crops)
Gers	Armagnac (South West)	23,3	9,7	22,7	27,0
Gironde	South West	12,2	11,8	8,8	16,9
Lot et Garonne	Armagnac (South West)	11,9	17,6	21,1	29,2
Saône-et-Loire	Maconnais/chalonnais (Burgundy)	7	12,9	27,9	15,2
Aude	Midi	6,6	6,8	5,6	17,0
Rhone	Beaujolais (Burgundy)	6	11,7	18,7	11,5
Landes	South West	5,6	39,5	27,1	50,9
Garonne, Haute	South West	4,3	12,0	8,5	21,5
Tarn-et-Garonne	South West	4,3	11,1	17,7	19,5
Puy-de-Dôme	Auvergne	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	South west	3,4	20,4	23,0	28,8
Loire-Inférieur	Loire (included Nantais)	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 some 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 and Beaujolais, where it was less frequently found outside viticulture. Sharecropping in these regions has a long history, but the nature and importance of the contracts changed over time to meet new circumstances. Before we examine these changes, we need to consider the question of why sharecropping was not more widely found in viticulture.

2. Traditional viticulture and the attractions of sharecropping

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’.¹⁴ 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.¹⁵ 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 briars’.¹⁶ 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’.¹⁷ In economies with high levels of underemployment, the vine provided extensive employment opportunities during ‘all seasons, to all ages and both sexes’.¹⁸ 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’.¹⁹

By contrast, contemporaries cited the major disadvantage of the vine as being the widely fluctuating size of the harvests.²⁰ Risk avoidance was widespread in traditional viticultural and included the growing of different grape varieties on the same plot to minimise the risk of disease, or the early harvesting to avoid hail and inclement weather conditions. The classical principal-agent approach to sharecropping links the shifting of risk away from farmers to the supposedly less risk averse landowner. Yet the sharecropping literature has found very little empirical support for this argument, and in

¹⁴ Young (1794) vol. 2, p.25.

¹⁵ Young (1794), vol.2, p.21.

¹⁶ Gasparin (1848), vol.4, p.595.

¹⁷ Hobhouse (2003), pp.x-xi.

¹⁸ Gasparin (1848), vol.4, p.595.

¹⁹ Le Roy Ladurie (1976), pp.56-7.

²⁰ Young (1794), vol. 2, p.. 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.

this paper we assume that both parties were risk neutral.²¹ In traditional viticulture, the advantages that contemporaries such as Arthur Young associated with the crop encouraged its direct cultivation, although the high risk implied that many growers worked their vines only part time. Therefore if a couple of hectares of vines was required to maintain a family, many of France's 1.6 million vine growers in 1868 owned much less. Growers planted new vines when times were good, and sold them when they became difficult, or they needed cash. In the Champagne region in northern France, perhaps Europe's riskiest area for viticulture in the late nineteenth century, the vines were found almost exclusively on small family plots using direct cultivation, and sharecropping was virtually absent.

If risk sharing can be dismissed as a major cause for using sharecropping contracts, 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 of work quality and reward'.²² In order for transaction costs to exist, information must be costly to obtain, and assets variable in their quality or characteristics, and alterable by man.²³ 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.²⁴ As one writer noted in 1807, 'no crop suffers more from the omission or poor quality of work, requiring many years to recover from the abuses of a single year'.²⁵ The large number of different tasks that affect the size and quality of the current and successive harvests explains the absence of rental contracts in European viticulture. Wage labour was also rare, as the close monitoring required to reduce the risks of opportunistic behaviour of the workers was too costly for most landowners, because the vast majority of wine was of poor quality and sold cheaply.²⁶ The difficulties in the supervision of work effort and the limited economies of scale in traditional viticulture implied that most vineyards were worked by their owners, and wage labour was rare outside the harvest.

According to some economic historians, the high labour monitoring costs explain the widespread use of sharecropping in various areas of European viticulture, such as

²¹ Allen and Lueck (1992 and 2002), Akerberg and Botticini (2000), pp. 253-4, although see also Akerberg & Botticini (2002).

²² Popkin (1988), p.262.

²³ Allen and Lueck (2002), p.4.

²⁴ Galassi (1992), pp.78-83 and Hoffman (1984).

²⁵ Boutelou (1807), p.66.

²⁶ See especially Guyot (1868), vol. 3, pp.668-9.

Tuscany, Burgundy, Beaujolais or Catalonia. Yet sharecropping, at least in its 'classic' form was rare in large areas of France, Italy and Spain. Its absence can be explained by the fact that there were also high costs associated with measuring the quantity and quality of the harvest. As Allen and Lueck have written, in agriculture, 'as output becomes more variable, the opportunities for the farmer to underreport (in effect, steal) the crop increases'.²⁷ If the division of the harvest was made in the vineyard, the landowner would need to be present to avoid the theft of grapes, and ensure that the different grape varieties, together with under- and over-ripe fruit, were divided equally between the two parties. The grapes would then have to be transported quickly to the landowner's cellar to avoid fermentation beginning prematurely in the field. This was a difficult and costly task if grapes were being collected from several sharecroppers at the same time. A less time-critical moment for dividing the harvest was after fermentation, but the possibilities for sharecroppers to cheat were perhaps even greater. Wine could be simply stolen, and the small scale of production implied that there were usually plenty of wine-making facilities in a village for dishonest sharecroppers to hide part of the harvest from the landowner. As wine quality varied, sometimes considerably, from vat to vat, and barrel to barrel, good wine could be removed before the division by a dishonest tenant and replaced with poorer wines brought from elsewhere. It was also customary for grapes to be pressed several times, with water and sometimes sugar added to the latter pressings to make inferior wines. Once again the presence of inferior wines in the cellar would have made it relatively easy to cheat landowners, both concerning the quantity and quality of the harvest. Unlike the merchants, who could reject inferior wines when offered to them, landowners were obliged to accept as rental payment the wine produced by their sharecroppers. The problem of dividing the grape or wine harvest explains why sharecropping was actually comparatively rare in viticulture.

3. The development of the wine estate and labour organisation

When wine quality was inconsistent, conservation difficult, and economies of specialisation limited, there were few reasons for wine producers to try and secure large supplies of grapes. Yet from the seventeenth century a small number of growers in

²⁷ Allen and Lueck (2002, p.116), According to their work on United States in the late twentieth century, 'cropshare contracts are more likely when crop division costs are low and where the ability of farmers to adversely affect the soil is high' (ibid., p.68). See also Popkin (1988).

Bordeaux were able to produce better wines which commanded significantly higher prices and were sold in distant markets. The basis of Bordeaux's reputation as a region of fine wines rested on the production of less than hundred growers. Wine prices were much higher but unstable, and could fluctuate by a factor of ten between one vintage and the next. Certainly Bordeaux's Médoc region was blessed by excellent soil, climate and good communications, but the owners of the leading châteaux had also to dedicate large quantities of capital and time to maintain the status, and hence price, of their wines. There were considerable economies of specialisation and although the vineyards were not excessively large, Château Lafitte for example being only about 65 hectares, they required considerable quantities of labour.²⁸ Although this in theory might have encouraged the use of sharecropping, these contacts were in fact very rare. Instead the high-value of the vines and the ease by which they could be damaged led growers to develop a labour contract that was exclusive to the sector and created incentives for good work. Experienced workers (*prix-faiteurs*) were responsible for the skilled operations on a fixed area of vines, which in the Médoc were usually slightly less than three hectares, in exchange for accommodation, heating, wine, a small garden and a salary.²⁹ The *prix-faiteurs* had secure employment, organised the work for themselves, but also had enough free time to tend their own vines, or earn extra wages doing piece work. The delicate work required labourers who could be trusted, and at Château Latour for example many *prix-faiteurs* had worked there for decades, with a son following his father as *vigner*.³⁰ As a result labourers developed considerable knowledge that was specific to a small area of vines, knowing for example exactly how many leaves to remove in a particular year to guarantee that the grapes received neither too much, nor too little, direct sunlight. During the *vendange*, harvesters passed several times through the vines so that only ripe fruit was collected, leading to much higher costs than those found on neighbouring vineyards producing cheaper wines.³¹ In Bordeaux, high levels

²⁸ Shaw (1864), p.263.

²⁹ 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.

³⁰ Higounet (ed., p.101). 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*. Ministère de l'Agriculture (1937), p.163.

³¹ Allen (1924), pp.14-7, for a description of harvesting. Harvesting costs on one large Bordeaux estate for example were roughly double those found in Beaujolais in the early twentieth century. Chatillon (1906), p.122.

of supervision were required, not so much to control trusted workers, but to produce the high quality grapes for fine wines.

Bordeaux, or more correctly the Médoc, was unique in that large estates producing fine wines existed from a relatively early date, and it was the grower and not the merchants that were primarily responsible for quality.³² By contrast, port, sherry and champagne were all heavily blended wines, and this was done by the *négociant-éleveur* or the wine producer-exporter. The disadvantages for these merchants of having to purchase wine from hundreds of small producers was more than compensated for by the fact that the costs associated with labour monitoring and the risks of a deficient harvest were born by the small grower. By contrast, fine wines from Burgundy, which had become increasingly important in the second half of the nineteenth century, switched from using sharecropping contracts to specialised labour contracts, as discussed in section four.

Fine wines however accounted for a miniscule part of Europe's wine production and, as noted, the high labour monitoring costs made the use of wage labour unprofitably in the traditional vineyard producing ordinary beverage wines. However, exogenous changes from the mid nineteenth century began to transform wine production. First, there were important demand side changes, as the railways helped to integrate national wine markets, and rising wages and urbanisation led to a major increase in consumption.³³ On the supply side, the appearance of the vine disease phylloxera, which in time would destroy virtually of Europe's vines, required 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.³⁴ Output remained more stable, as some growers introduced new high yielding grape varieties after 1875, even if wine quality often declined (Table 3). Phylloxera forced many growers to abandon viticulture, but those who remained now had to decide how to replant their vineyards (and in particular whether to use family labour, wage labour, sharecroppers, or contract-out for

³² Although Salavert (1912, p.66) notes that most wine was sold under the merchants name before 1860, this was considered an additional guarantee to the châteaux 'brand'. The 1855 Bordeaux Classification provided 'league tables' that were widely used among consumers of the best wines. Connoisseurs were aware of course that the vintage was as important, if not more so, than the 'growth'. Simpson (2004).

³³ Nourison (1990).

³⁴ It then started a new, although slower decline, falling to below a million hectares for the first time in 1985.

machinery), and to what extent they should redesign their vineyards to take advantage of new labour-saving technologies that were becoming available for annual cultivation.

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

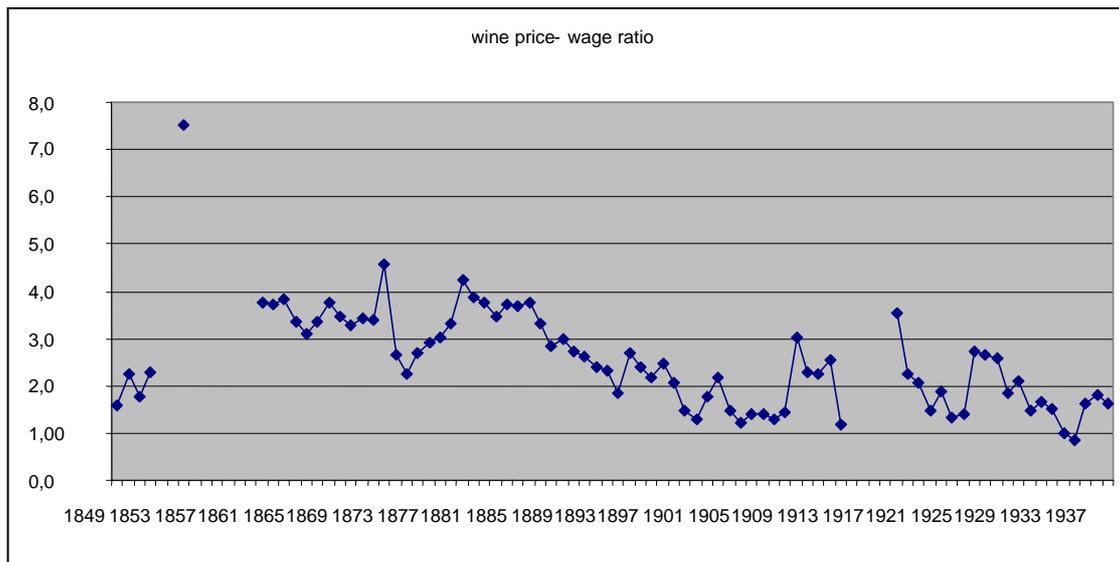
Source: Lachiver (1988, pp.616-19)

A second factor was that the opportunities for technological change both in the vineyard and cellar, increased considerably from the late nineteenth century. As already noted, bio-technological advances allowed growers to significantly increase output, but at the expense of quality. Perhaps more importantly, there were major advances in knowledge related to producing wines in hot climates, which led to a major shift in production to new regions, such as the Midi, Algeria, La Mancha and the New World. By 1900 the Midi and Algeria produced half of all the wines consumed in France. These technologies created growing economies of scale in wine-making, and producers needed to secure large quantities of grapes.³⁵

Finally, shifts in factor and product prices changed the negotiating position of landowners, sharecroppers 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 labourers in French agriculture. Therefore, if the phylloxera induced domestic wine shortages benefited growers because of the higher price (at least those that remained in production), from the late 1880s the balance of power had shifted significantly as wine prices fell as domestic wine output recovered, and labour costs and militancy increased (Figure 1).

³⁵ Simpson (forthcoming).

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 Midi was the French region most affected by these changes, as the area of vines increased from 209 thousand hectares in 1824/8 to 394 thousand in 1862, and 452 thousand in 1900s and 1950s.³⁶ 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 opened up the national market to southern growers and acted as a catalyst to local viticulture. As the area almost doubled between the late 1820s and early 1860s, yields changed little. Sharecropping was probably found on little more than 10 per cent of the vines, being used on the eve of phylloxera to bring new vineyards into production (*complant*)³⁷, and more rarely on small isolated plots or 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 outside capital to be invested in the region.³⁸ The term *la viticulture industrielle* was

³⁶ Lachiver (1988), pp.616-8. The four departments of the Midi are Aude, Gard, Hérault and Pyrénées-Orientales.

³⁷ Tenants cleared the scrub and planted vines, keeping half the harvest during the first 10 years or so, before returning the vineyard to the landowners.

³⁸ 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

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 annual ploughings were considered essential if the new, post-*phylloxera* vines were to produce high yields, and this required expensive steam ploughs, which were impractical on small or fragmented holdings. A distinction developed in some areas between ‘intensive’, high-yielding ‘capitalist’ viticulture, against lower yielding, labour intensive peasant farming.³⁹

The need to replant after *phylloxera* allowed landowners to redesign vineyards and grow the vines 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.⁴⁰ 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.⁴¹ As Guyot, perhaps the leading writer on viticulture in the mid-nineteenth century noted:

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.⁴²

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.⁴³ Yet despite the industrial nature of these vineyards, labour inputs remained very high, accounting for approximately half production costs in 1900. Sharecropping (*complant*) was used in some cases to replant vineyards destroyed by *phylloxera*, or to establish new estates on the *phylloxera*-resistant coastal plain.

francs per hectare. The bank favoured larger producers for economic and technical reasons. Postel-Vinay (1989), p.169.

³⁹ For Catalonia, see Carmona and Simpson (1999), p.307.

⁴⁰ Génieys (1905), p.38, and Gide (1901), pp.218-9.

⁴¹ The use of secateurs instead of pruning knives reduced the work skills required.

⁴² Guyot (1861), p.19.

⁴³ 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.

However one contemporary suggests it was disappearing by 1900.⁴⁴ This was perhaps because of the appearance of specialised equipment for planting new vineyards reduced labour requirements, but more likely because the flooded wine market had caused prices to collapse, 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 the high wine prices in the phylloxera years benefited both capital and labour producing considerable regional prosperity. As both land and labour costs were increasing, the contribution of the principal and agent remained more or less equal. From the very late nineteenth century wine and land prices slipped, and then collapsed, but wages continued to increase. By 1900 the combination of a heavily depressed wine market and the growing militancy of labourers were 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 annual cultivation costs.⁴⁵ For labourers, sharecropping also offered the possibility of increasing their incomes, as the quality of their work and effort would be better rewarded. 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.⁴⁶ The owner provided all the inputs, and crucially was responsible for making the wine and controlling 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'.⁴⁷ Gide calculated that a wage labourer in the region earned approximately 800 francs a year compared to the 1,400 francs that the sharecropper would enjoy, assuming yields of 140 hectolitres of wine per hectare, and a price of 10 francs a hectolitre.⁴⁸ Gide

⁴⁴ Vigouroux (1906), p.105.

⁴⁵ 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.

⁴⁶ Labour might have to be hired by the sharecropper for the harvest.

⁴⁷ Gide (1905), p.88.

⁴⁸ 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 sharecropper would keep the produce of one of the three hectares of vines. The *métayer* would have to employ some extra labour at harvest time. Yields fluctuated significantly (in 1904 they reached 192 hectolitres a hectare!), but the major problem was low wine prices as noted in the text below. Gide (1905), pp.88-9.

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’.⁴⁹ 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.⁵⁰ In years of poor harvests of low prices, sharecroppers might be forced to look to the landowner, and in the example given by Gide, the owner Pierre Causse was obliged to provide the sharecroppers with a guaranteed salary of 1,000 or 1,100 francs during the *mévente* of the early 1900s. Gervais therefore argued that sharecropping was unlikely to be found extensively in viticulture in these conditions.

Despite the re-organisation of the vineyards which facilitated the use of wage labour, sharecropping did not disappear from the Midi. 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).⁵¹ 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.⁵² Therefore if sharecropping was never the predominate form of cultivating vines in the Midi, it was nevertheless present, and the nature of the contract adapted to the changing circumstances.

4. When was sharecropping found in viticulture?

This paper has argued that the high risk and low entry costs found in viticulture can explain the widespread presence of small-scale family plots, sharecropping was unknown (in the classical form) on the large wine-estates of Bordeaux, and relatively unimportant on the major ‘industrial’ wine complexes that were becoming common in the Midi by the late nineteenth century. Yet in 1892 at least eight per cent of French

⁴⁹ Gide (1905), p.91. Other contemporaries talked of the association of capital and labour (Convert, 1904, p.578).

⁵⁰ Gervais (1908), p.138.

⁵¹ 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 *métayer* 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.

⁵² *Études et Conjoncture* (Juin 1955), p.535.

vines were officially cultivated using sharecropping contracts, and in a number of important regions, such as Beaujolais, south-west France or the Loire, the figure reaches a quarter. If, as has been argued here, there were often good economic reasons for not using the contract, what explains the presence sharecropping in these areas? It is argued here that landowners used sharecropping to cultivate vines, as oppose to simply planting them, in two distinct cases: when the wine was produced in the landowner's cellar and when wine was only one of several crops produced on the same piece of land. We shall examine each briefly in turn, starting by looking at wine production in Beaujolais and Burgundy.

The vineyards of Beaujolais and Maconnais were closer to navigable water than those of upper Burgundy, and viticulture from the seventeenth century grew rapidly in response to the Parisian market. Sharecropping was dominant, representing between 30 and 40 per cent of all vines in 1882.⁵³ The grape variety used was the gamay, which produced an inferior wine to Burgundy's pinot noir, but yields were considerably greater, at 50 hectolitres / hectare. Wine quality was high, although it was not as good as in Burgundy, and large land owners obtained prices that were at least double what small, owner-occupiers achieved in the same region, with the difference increasing between 1850 and 1940.⁵⁴ In the light of this paper, two questions seem especially pertinent: how did landowners monitor the division of the harvest, and why did they prefer sharecropping to some other form of labour contract such as the *prix-faiteur* found in Bordeaux?

A typical property of between 12 and 40 hectares of vines was sub-divided and cultivated by between five and fifteen sharecroppers in standard units called *vigneronnage*.⁵⁵ 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

⁵³ The importance of sharecropping was widely recognised by contemporaries. For example, Cochard & Aigueperse (1830, [quoted in Myard, 1907, p.213], Jules Guyot (1867), vol. 7, p.11, Comte de Tournonnet (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.

⁵⁴ Burel (1941), pp.71-2. Other references increase this difference: *Enquete de 1866* (vol. 27), p.570, gives a figures of between 40 and 85 francs for fine wine; 25 and 40 for ordinary one; and 16 and 25 for poor wines (p.570). It is similar in Maconnais (ranging from between 60-75 40 and 60, and 20 and 40 francs respectively (*Enquete de 1866*, vol. 14, p.329). Growers failed in their attempts to increase wine quality to the level of the best in Bordeaux or Burgundy, and it was called, together with Maconnais's wine, "*le grand ordinaire de France*". See, for example, and Vermorel and Danguy (1894), pp.15-7.

⁵⁵ Myart (1907); Garrier (1984, p. 137) estimates that large estates which accounted for 60 per cent of the wine area in the region of Brouilly, each had at least six sharecroppers.

working in other activities.⁵⁶ Livestock was owned by the tenants, and the milk and butter provided an alternative source of income. Vineyards were compact, which helped landowner's supervise the work, and they were responsible for all the major production decisions, including the choice of grape varieties and pruning methods used, when and how to replant after phylloxera (1875-90), the degree of mechanisation, or when to begin the vendange.⁵⁷ Unlike Bordeaux or Burgundy, the harvest was carried out rapidly in only three or four days, and sharecroppers made the wine using their own equipment. To avoid cheating by the sharecropper, this equipment was always located within the landowner's winery. For example, the Delèche estate near Villefranche-sur-Saône, received grapes from about 28 hectares, and the winery had 12 different wine presses, one for each of its *vignerons*.⁵⁸ Wine-making was managed personally by the land owner or by their agent, and after fermentation had finished the wine from each vat was divided by somebody considered independent, with the owner and sharecropper both present, and the same operation repeated with the 'second' wines.⁵⁹ Only then could the sharecropper take their wine home for storage and maturing.⁶⁰ By the turn of the twentieth century this form of organisation was considered unique to the Beaujolais (and Maconnais),⁶¹ but while it helped reduce monitoring costs associated with dividing the harvest, it increased production costs. Wine making at Château Malescot in Bordeaux in the late nineteenth century for example cost 437 francs / hectare, against 657 francs on the Deleche estate.⁶²

The fact that tenants were required to produce the wine in the landowners' cellars helps explain why sharecropping was possible, but does not tell us why the contract was more attractive to landowner than the labour contracts found, for example, in Bordeaux or the Midi, or why sharecroppers did not attempt to become owner-occupiers as elsewhere in France. The key to understanding these questions lies in the wine quality and volatility of the wine markets, and can be illustrated by examining briefly the events around the turn of the twentieth century.⁶³

⁵⁶ Chatillon (1906), p.67.

⁵⁷ Myart (1907), pp. 208-9.

⁵⁸ Château de L'Éclair by contrast had 16 wine presses. Ferrouillat and Charvet (1896), pp.381 and 389.

⁵⁹ Ferrouillat and Charvet (1896), p.380 and Myart (1907), p.193.

⁶⁰ Sharecroppers were not allowed to have wine making equipment in their own cellars. Ferrouillat and Charvet (1896), p.380 and Cheysson (1899).

⁶¹ See especially the study French wineries at the end of the nineteenth century by Ferrouillat and Charvet (1896). In addition Tourdonnet (1879-80) p.176, Myard (1907), p.193. For the Maconnais, Goujon (1989), pp.132 and 198.

⁶² Ferrouillat and Charvet (1896), pp.360 and 388.

⁶³ A detailed discussion can be found in Carmona and Simpson, in preparation.

Viticulture in this region was especially labour intensive, because the hills and the high density of vines made mechanisation more expensive. One attraction for land owners was that these costs were born by the sharecropper, although they were forced to compensate for the increase in real wages after 1850 by contributing other inputs (chemicals, taxes, etc.) or by reducing the rent on housing. When harvesting was expensive, landowners preferred to give up their share of the pomace or marc, rather than to make a direct contribution.⁶⁴ This contrasts with sharecropping in other farming activities in France, where landowners sometimes had to pay part of the harvesting costs or those associated with farm servants.⁶⁵ Yet the poor harvests and low prices of the 1900s ruined many sharecroppers, and growers had to resort to a new contract (*grands gagés*) which guaranteed a salary instead.⁶⁶ These contracts were similar to the *prix-fait* found in Bordeaux, but for the sharecropper there were limited incentives for good work and the low prices discouraged effective monitoring by the landowner. They were clearly an inferior contract for both principal and agent except in conditions of *mévente*, and although they continued to be offered in the interwar period, advertisements for employment in the *Bulletin de l'Union Beaujolaise* in 1923 gave workers the option of choosing between sharecropping or *grands gagés*. While both landowners and tenants might have preferred sharecropping contracts, fixed wage contracts were an acceptable substitute when market conditions were especially volatile, and tenants required a guaranteed income.

Many sharecroppers presumably would have preferred to be owner-occupiers themselves, but they had limited opportunities to plant their own vineyards as most of the suitable land in the region was already under vines. However, a brief discussion of what was happening to small owner occupiers also suggests that there were disadvantages in direct ownership. In the first instance, the high costs associated with the substituting the phylloxera diseased vines, and the low prices at the turn of the twentieth century, ruined many small independent producers, increasing the relative importance of large holdings. Second, there were increasing economies of scale associated with the manufacture and selling of better quality wines such as those of Beaujolais.⁶⁷ The small growers lacked both the skills to produce consistently good wine, and the capital to establish a cellar and to tie them over after a poor harvest. One

⁶⁴ Burel (1941), p.47.

⁶⁵ Carmona (2006).

⁶⁶ Vermorel (1893), p.17. On occasions landowners also had to provide work animals.

⁶⁷ Clique (1931), pp.97 and 141.

possibility for them was to switch into the production of poorer quality wines, which also had the advantage of requiring less labour. Humbert Chatillon noted in 1906 for example that planting a lower density of vines per hectare hung on trellises to facilitate the use of ploughs, helped reduced grape diseases and produced higher yields, but the grapes were of poorer quality.⁶⁸ On the plains of the Bas-Beaujolais, which were well suited to mechanisation and producing large quantities of poor wines, sharecropping was less extended and disappeared after 1900, but the area of vines also declined. Production costs remained high compared to those of the Midi for wines that were sold primarily by their alcohol content. Sharecropping, with the mutual help of labour and capital, allowed better quality wines to be produced, and explains why sharecropping remained as common in mid twentieth century, as it had on the eve of phylloxera in the Haut Beaujolais. For example, in a typical village such as Ste. Etienne la Varenne, 113 of the 140 vine-growers were still sharecroppers in 1939, and these were responsible for 212 of the 267 hectares of vines.⁶⁹ Yet the northern Beaujolais was an exception: its wines were superior to most, but inferior to those of Bordeaux or Burgundy where direct cultivation was practiced. Landowners were highly active in monitoring both the grape and wine making process, as well as in the selling of the wines. Finally, in times of difficulties, they also had to be prepared to change contracts to provide sufficient guarantees for their workers.

Burgundy wines had a reputation for quality and in the words of Thomas Brennan, Upper Burgundy (Côte-d'Or) in the eighteenth century offers 'the classic example of vineyards so isolated from markets that they were forced to develop superior and expensive wines'.⁷⁰ There were few large holdings, and most of these were broken up during the Napoleonic period.⁷¹ 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 widespread until the mid nineteenth century, and again it was the landowner who was involved in the winemaking and marketing.⁷² Sharecroppers in theory received half the harvest, but in practice the landowner often

⁶⁸ Chatillon (1906), pp.63-4 and 74.

⁶⁹ Burel (1941), p.43.

⁷⁰ Brennan (1997), p.11. See also Dion (1977).

⁷¹ 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. ()

⁷² Laurent (1957-8), pp. 279-80.

claimed all as they had advanced money and goods to the tenant during the year.⁷³ With the increase in wine prices after 1850, fine wine producers switched from sharecropping contracts to a simple labour contract, the *vigneron a prix d'argent*.⁷⁴ This was similar to Bordeaux's *prix-faiteurs*, and involved employing skilled workers to cultivate a fixed area of vines. The labourers often owned vines of their own, but depended on wage payments and paternalistic help from landowners to obtain a guaranteed annual income. For landowners the advantage was that they did not have to split the increasingly valuable 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.⁷⁵ 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.⁷⁶

Sharecropping was also common in regions where the several crops were grown on the same piece of land, such as in Tuscany or south-west France (essentially the départements of Lot-et-Garonne and Gers). Sharecropping in the Armagnac region of south-west France accounted for 23,000 hectares, or about 28 per cent of the area of vines in the 1892 census. Farms were medium sized (*métairies*), and a single tenant carried out a wide variety of activities including cereals, livestock and viticulture.⁷⁷ As the wines were distilled to produce armagnac, they were relatively few problems associated with wine quality and dividing the harvest. The area of vines increased from 112 thousand to 199 thousand hectares between 1826 and 1890, growing by a third between 1877 and 1886, as growers took advantage of the destruction being caused by phylloxera in the Cognac region.⁷⁸ This change in the relative importance of the vine within the *métairie* created several problems. First, many of the other crops were less intensive in the use of labour, and growers therefore less interested in dedicating as much time to viticulture as landowner wanted. When mildew and black-rot appeared (1880s), they were reluctant to spend money on chemicals and their distribution, preferring instead to use their labour for other farm activities.⁷⁹ Landowners were forced

⁷³ Laurent (1957-8), p.278.

⁷⁴ Laurent (1957-8), p.280.

⁷⁵ Caziot (1914), 386-8.

⁷⁶ *Conseil Economique et Social* (1953), vol.2, p.143-5.

⁷⁷ Loré (1912), p.22.

⁷⁸ Galet (1956-64), p.2331,

⁷⁹ Loré (1912), p. 84-7.

either to pay for the chemicals, or cultivate directly the land themselves. Many landowners turned instead to *brassiers*, a type of labour contract similar to the *prix-faiteur*.⁸⁰ 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 provide compensation if the cereal harvest was poor.

A second problem was that growing specialisation in viticulture threatened to change the relationship between the landowner and the *métayer*: while the agent wished to conserve their independence, the vine, as we have seen, required an active intervention on the part of the landowner.⁸¹ Large scale viticulture implied an increase in the management responsibilities for the owner implied important organisational changes such as those found in Beaujolais. However viticulture declined in the region from the late nineteenth century, as phylloxera destroyed the vines and prices fell because of the replanting in Cognac. By 1913 the area of vines just 40 per cent of what it had been in 1893.⁸²

Conclusion.

This paper has argued that the high costs of monitoring labour found with a crop such as the vine are not sufficient to explain the use of sharecropping contracts, as the transaction costs associated with the division of the harvest between principal and agent were equally important. When these are taken into consideration with viticulture, it is the presence of sharecropping, rather than its absence, which needs to be explained. Most of Europe's vines were worked by their owners, wage labour was rarely used outside the harvest, and a significant concentration of sharecropping was rare. In particular we argue that there were two main cases when sharecropping contracts might be expected in the cultivation, rather than just the planting of vines and when landowners played a major role in wine production and when there was multi-cropping on the same piece of land. Sharecropping contracts were highly adaptive to changes in factor and commodity markets over time, suggesting that there were few problems of

⁸⁰ Id, p.88-89.

⁸¹ 'Ces travaux demandent d'ailleurs une intervention très active du propriétaire et les *métayers* d'Armagnac n'aiment point les cultures où ils ne peuvent avoir d'initiative et qui rapprochent leur condition de celle des salariés'. Loré (1912), p.106.

⁸² Galet (1956-64), p.2331.

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, and the high costs associated with dividing the harvest, were crucial in explaining its absence in most of Europe's vineyards. When the definition of sharecropping is extended to include labour contracts, where workers were responsible for cultivating a fixed area of vines in their own time, then the contract was much more common.

To what extent was viticulture representative of other crops? Sharecropping was rare in cereals, a fact that can be explained by the presence of economies of scale and the low monitoring costs associated with labour.⁸³ By contrast, sharecropping was relatively common with livestock farming because labour monitoring was high and managerial expertise important, but the sale of animals could be easily monitored by both principal and agent in the local markets.⁸⁴

⁸³ Allen and Ó Gráda (1988) and Grantham (1991). Labour militancy, especially at harvest time, encouraged some landowners in Andalucía to use sharecropping contracts in the 1920s. Carmona and Simpson (2003).

⁸⁴ Carmona (2006), p.252

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