

VINES AND SHARECROPPING: THE CASE OF CATALUNA, 1700s-1930s¹

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Although sharecropping was found until recently throughout the Mediterranean region, the contract is usually considered as having been inefficient or as a response to some form of market failure, and is rarely seen as an institution favourable to agrarian development. In Cataluna from the late 17th century, however, sharecropping played a major role in establishing a dynamic agriculture in one of Europe's earliest industrializing regions. Rising export demand for spirits and wines led landowners to enter into indefinite sharecropping contracts (*rabassa morta*), bringing into production previously uncultivated scrub land. What perhaps is surprising is that sharecropping remained in operation for so long, lasting until well into the 20th century. In this paper we first examine the reasons for the long run success of the institution until the late 19th century. From the turn of the 20th century the region's viticulture began to lose competitiveness, and in the last section we attempt to explain why the contract was less successful than it had been previously. Two major arguments appear relevant, namely the changing nature of viticulture as it became more capital intensive, and the breakdown in trust between landowner and cropper.

SHARECROPPING AND VITICULTURE

Problems of monitoring and moral hazard help explain why sharecropping contracts were frequent, especially in viticulture, in the Mediterranean region. Typical of many agricultural activities, was the difficulty landowners had in determining between the effects of variations in the climate and those of labor inputs, on the quantity and quality of the grapes produced (Bardhan 1984:161; Galassi 1992:82). Until the present century, there were few economies of scale in wine production, which made it unprofitable for landowners

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to closely supervise labor. During the 18th and much of the 19th centuries, wage labor was only important in those regions producing quality grapes and wines, such as sherry in Jerez (southern Spain) or clarets in the Bordeaux region, where better prices offset the high monitoring costs of labor. The use of rental contracts would, of course, have overcome the landlord's monitoring problems, allowing tenants to enjoy, in the form of increased output, all the benefits from improved cultivation. Yet rental contracts were rarely found in viticulture anywhere in the Mediterranean. This was because tenants could have increased output, at least in the short term, through heavy pruning, but at the expense of shortening the plant's productive life. Even with long term contracts, the landlord ran the risk of receiving back a dying vineyard. Only indefinite contracts might give tenants along term economic interest in the vineyard. However, indefinite contracts, based on a fixed annual payment, were liable to produce distributional conflicts. Future wine prices were impossible to forecast, so monetary rents were impractical. Although this problem might be solved by using a fixed, annual payment in kind, landlords ran the risk that their relative share of the harvest would decline during periods of high wine prices (tenants maximizing output - but at the cost of shortening the vineyard's life), or losing their tenants during those of falling prices (tenants considering that the rent was higher than the marginal productivity of their labor). Long term, sharecropping contracts therefore helped to overcome both the problems of monitoring, and solved those of moral hazard by providing both parties a direct interest in the long term success of the vineyard.

Recent literature has dwelt on the fact that the harvest in sharecropping contracts is frequently divided between the sharecropper and the landowner in an arbitrary 50:50 (Otsuka, Chuma and Hayami 1992: 1969 and 1977). For critics of sharecropping, the fact that tenants only received half the marginal product of their labor implied that incentives to better cultivation were likely to be seriously reduced. As we shall see, this only appears to have been a problem relatively late in the *rabassa morta's* history. We argue that for an institution to last over several centuries, such as was the case of the *rabassa morta*, there was need for considerable flexibility in the face of changing relative prices and technology. In the rest of this paper we shall examine this flexibility, concentrating on two periods of major significance, namely the initial planting of the vineyards in the late 18th and early 19th centuries, and their replanting at the turn of the 20th century.

THE EXPANSION OF CATALAN VITICULTURE, 1700s-1880s

During the 17th and 18th centuries, the growth of viticulture in Cataluna took place near the coast in regions of low population density, and on marginal land. To attract tenants to undertake the arduous task of clearing the land, the planting of the vines, and then waiting the four years or so before a respectable crop was forthcoming, landowners used a sharecropping contract, the *rabassa morta*. In exchange for access to the land, the *rabasser*, undertook to plant vines within a fixed period (usually between two and ten years), cultivate them in accordance with the customs of the region (*us i costum de bon pages*), and to hand over a previously agreed share of the harvest to the owner. The duration of the contract was originally until two thirds of the vines had died, hence the Catalan name *rabassa morta*—dead vine. Because of the length of the contracts, which inevitably involved two or more generations, continuity was guaranteed by the fact that property passed to a single heir (Santamaria 1878:xi and *Institute de Reformas Sociales* 1923: 67). A further incentive for the *rabassers* to cultivate carefully was that they were the legal owners of the vines.

We have argued that indefinite contracts were chosen because they provided incentives to the sharecroppers to maximize output over the life of the vineyard, and protected the share that landlords received. For the sharecropper, the initial investment was heavy, but consisted entirely of labor provided by the family. The sharecropper's limited savings, and difficulties in obtaining commercial loans, were partly offset by the possibility to cultivate subsistence crops until the vines came into production. Finally, and what seems crucial for the success of the *rabassa morta*, there was considerable flexibility in determining the share of the annual harvest that was payable as rent. As inputs were limited almost totally to land and labor in the pre-phylloxera period, the size of the annual payment depended on the estimated labor requirements and potential fertility of the soil. Because of the heavy use of labor in planting, and the modest yields of traditional agriculture in Cataluna, the initial contracts frequently required the *rabasser* to hand over only a small share of the harvest, with a fifth or a third not being unusual (Roig i Armengol 1890: 176). This allowed the sharecropper to receive a significant share of the marginal product of his labor.

Another important factor for the success of sharecropping contracts was that there were few economies of scale in traditional viticulture. In Cataluna, ploughs were rarely used before the late 19th century (making the need to own work animals unnecessary), few hand tools were required (pruning knives,

hoes) and, until the appearance of new diseases from the 1850s, no chemicals. Likewise, the scale of production in wine making was also small, and capital requirements consequently limited, allowing most *rabassers* to make their own wine.

One problem facing landowners in this period was the interpretation of the length of the contract. As we have seen, the traditional *rabassa morta* contracts were supposed to remain in operation until two thirds of the vines had died. However, unless hit by disease, vines were unlikely to die altogether, and it was in neither parties interest to see harvests declining slowly because dead, or dying, plants were not being replaced. Furthermore, the clause that the *rabasser* should follow the good farming practices of the region, was widely interpreted to imply that they should replant dead or dying vines by trailing shoots from a neighbouring plant. Therefore, until the disease phylloxera made its appearance in the region in the 1880s, the vineyard's life was often considered indefinite.

The length of the contracts created a potential problem for both parties because whereas the share of the harvest remained fixed at the level which had been initially negotiated, commodity and factor prices inevitably changed significantly over time. Furthermore, local and central governments' tax policies were also likely to change, presenting new obligations which had to be divided between the two parties. These potential problems appear more significant for the landowner because, whereas the sharecropper had the right to sell the vines, the landowner could only recover full possession of the land only if the sharecropper failed to comply with the conditions stipulated in the contract, and then only after costly legal action (Santamaria 1878:123). The increase in wine prices during the last third of the 18th century made landowners take more serious the question of the vineyard's natural life and, as early as 1765, attempts were made to make the practice of replanting dead vines illegal (Balcells 1980: 42). However, it was not in the landowners' interest to receive back a dying vineyard and consequently their angle of attack changed. In 1778 the Real Audience of Cataluna declared that replanting could take place, but the life of the vineyard was to be taken as 50 years.

However this ruling does not seem to have had much immediate effect. A notary in the Penedes district still drew up some 90% of the new contracts by the natural life of the vines in the 1820s, although by the 1850s the figure had fallen to 55%, and by the 1880s there were none (Giralt 1965). The explanation of this delay can be traced to movements in commodity prices, with the weakness in wine and spirit prices from the second decade of the 19th

century only ending in the late 1840s on account of oidium attacking Europe's vines. Yet before these changes could take effect, most of the region's vines had been destroyed by disease.

SHARECROPPING AND THE LOSS OF COMPETITIVENESS OF CATALAN VITICULTURE 1890S-1930S

The period from the early 1870s to the mid 1880s was one of great prosperity in Catalonia. Wine prices doubled, as France was forced to import heavily to make up the shortfall in its domestic production because of phylloxera, a disease which would in time destroy virtually all of Europe's vines. Just as French production was beginning to recover, the disease hit Spain. Catalan landowners had now to overcome three problems, namely the replanting of the dead or dying vines, the need to adapt to lower wine prices (brought about by both the recovery in French production, and the growth in output in new countries, especially Algeria), and lastly, peculiar to our region, the need for landowners to decide whether to renegotiate contracts with their sharecroppers as phylloxera, which had destroyed the vines, brought to an end the old ones. In general, in the traditional areas of the *rabassa morta*, virtually all vineyards were replanted using sharecropping contracts, although these were now almost all limited in time, even if they continued to be long term. Yet despite the continued use of sharecropping contracts, prosperity in Catalan viticulture was limited in the half century or so before Spain's Civil War. If sharecropping appears to have been an integral part of the regional success prior to phylloxera, to what extent was it now a cause of the difficulties?

One possibility that needs a brief consideration is that land owners and sharecroppers signed the new contracts, not because sharecropping was considered as the most efficient form to work the land, but rather as a compromise, because neither party could get rid of the other. In this case, it would be argued that the landowners would have preferred to work the land directly themselves, using wage labor, but the costs of evicting the sharecroppers was thought excessive; for the sharecropper, their belief that the land was morally, if not legally their own would have been (and indeed was) challenged by the landlords in the courts. A compromise therefore suggests a path dependent argument, in which an inefficient institution was chosen, because an alternative would have involved excessive transaction costs. However, even if this is true, it does not explain why the *rabassa morta* should suddenly become inefficient after several centuries of apparently working well.

Furthermore, the evidence does not suggest that landlords seriously contemplated alternatives, or that sharecroppers were not happy with renewing new contracts, at least in the initial years after phylloxera.

A second, and more likely argument, is that the contracts were less suited to market conditions in the period 1900-1936, than they had previously been. We shall consider two areas where this is appears to have been so, namely the changes in the wine:labor price, and the division of the harvest between the two parties (Carmona and Simpson 1997a).

Traditional viticulture used, as we have seen, primarily inputs of land and labor. With sharecropping, the cropper provided the labor and the landlord the land, with the harvest divided between the two on the basis of a valuation of their respective contributions. We have argued that, despite the indefinite nature of the original *rabassa morta* contracts, changes in the relative prices of land and labor over time, probably did not cause serious distortions in the distribution of profits between the two parties. With the new contracts, this was not the case, as land prices probably declined from the late 19th century, whilst wages rose strongly (Saguer 1996; Garrabou *et al.* 1991). Furthermore, as shown in the Figure 1, wine prices moved in the opposite direction to wages. Given the close proximity of Barcelona, a rapidly growing and prosperous industrial city, which saw its population jump from around 270 thousand in 1887 to a million in 1930, it is not surprising that sharecroppers felt that their living standards were slipping compared to other groups of workers.

Yet there was another, perhaps more important factor, which would now erode the efficiency of the sharecropping contracts. The combination of disease and the more delicate post-phylloxera vines demanded a considerable increase in off-farm expenditure, and changed the nature of viticulture in regions such as Cataluna. First wine diseases required the use of chemicals —sulphur for oidium and copper salts or Bordeaux mixture for mildew. Second, phylloxera led to the use of specialized, rented machinery for removing the dead vines, and ploughs which were drawn by winches and worked at the depth about half a metre to prepare the land for replanting (Aguilo y Cortes 1897: 152). Somebody also had to purchase the american root stock, and the new vines were more susceptible to disease (implying a greater need for chemicals), and required fertilizers. If crop yields were higher, this was offset by the fact that the vine's life was now much shorter, about 20-5 years, instead of 50 or 60 years (Balcells 1980:69). Finally, the rising cost of labor and declining real wine prices from the late 19th century was leading to greater competition between producers everywhere. As a response, growers in France's Midi or

Algeria, were improving yields, and achieving economies of scale through heavy capital investment. For example, in the Midi, there was an increase in the size of vineyards, with those of more than 40 hectares (producing over 2,000 hectolitres of wine) accounting for 48% of the harvest by 1897-1902 (Pech 1975: 142 and 149). Although the area under vines in this region was similar in the late 1920s as it had been in the early 1870s, yields increased by two thirds (Pech 1975: 496-8).

The increase in capital requirements in viticulture, caused by both the more demanding nature of the new vines and the attempts by growers to increase yields, highlighted a serious shortcoming of the *rabassa morta* contract. In theory, these new inputs might have been provided jointly by both parties, but in practice most sharecroppers lacked capital. Instead, it was frequently provided by landowners, but at the cost of raising their share of the harvest. Therefore in a period of rising wages, sharecroppers were required to work the land for a smaller share of total output. Furthermore, yields were at least a third less than in the Midi, although labor inputs appear roughly similar, due to the fact that sharecropping remained small scale, and capital investment relatively low (Carmona and Simpson 1997a).

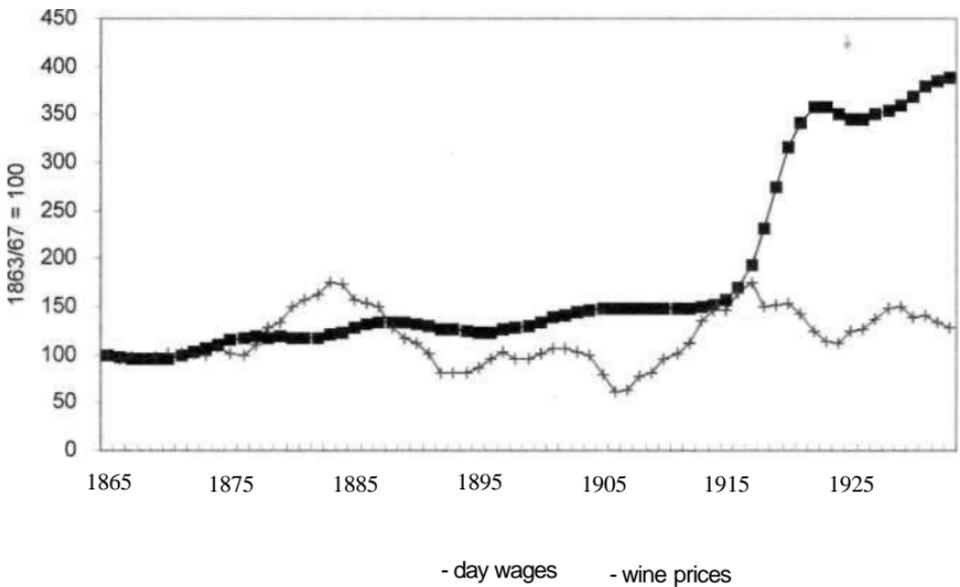
The declining share of the harvest that the sharecropper received, caused by the changing nature of viticulture after phylloxera, reduced their incentives to work more efficiently the land. However there was another factor which links directly the question of institutional failure and the loss of competitiveness, and that was the breakdown of trust between the landowner and the cropper (Carmona and Simpson 1997b). This was caused by widespread changes in Catalan society, and turned what essentially was an economic problem of distribution, into a political one of landownership. In complete contrast with France's Midi, where the problems of low wine prices helped cement the interests of *the propriétaires* (large estate owners) and *cultivateurs* (small growers who often worked part of the year for the *propriétaires*) in 1907 in a pressure group for the sector, *Confederation generale des vignerons du Midi* (Smith, 1978), in Cataluna they divided landowners and rabassers into two conflicting political groups. Whereas the legal grounds for most sharecroppers to full ownership of their property was small, the growing conflicts with Catalan society encouraged the *rabassers* to look for a distributional solution —namely the full ownership of the land, rather than a sectorial one— incentives to limit wine fraud, reduced taxation, etc., as was the case in France. This polarization of Catalan society inevitably has

important consequences for the efficiency of sharecropping and greatly encouraged opportunistic behavior on the part of the cropper.

CONCLUSION

In this paper we have argued that the long term success of the *rabassa morta* contract was that it balanced the need to provide incentives to the sharecropper, while at the same time protected the landowner's share of the harvest. These conditions were met, in general from the late 17th to the late 19th centuries. With the development of a more capital intensive viticulture, which increasingly provided opportunities to achieve economies of scale, and the more demanding nature of the new vines after phylloxera, these favourable conditions began to be eroded. First, the share of the harvest that growers received declined, and therefore their incentives to cultivate carefully the vine. At the same time, wine prices in real times decline, and real wages soared, which increased the opportunity cost of sharecroppers labor. Finally, wider changes in Spanish, and in particular, Catalan society, led to a radicalization of politics, and the claim by the *rabassers* for full ownership of the land. With such a climate the important element of trust disappeared, increasing problems of monitoring and moral hazard for the owner.

APPENDIX

Figure 1. *Movements in wine prices and wages. Barcelona, 1865-1930.*

Nominal wine prices and wages are used.

Sources: Balcells (1980: 375-9) for wine prices in Cataluna; Garrabou *et al.* (1991: 40-2) for male agricultural wages.

REFERENCES

- Aguilo y Cortes, I. (1897), *La tierra labrantiay el trabajo agricola en laprovincia de Barcelona*. Barcelona
- Balcells, A. (1980), *El problema agrario en Cataluna. La Cuesstion Rabassaire (1890-1936)*. Madrid: MAPA.
- Bardhan, P. (1984), *Land, labor, and Rural Poverty. Essays in Development Economics*. New York: Columbia University Press.
- Carmona, J. and J. Simpson (1997a), "Why sharecropping contracts are not found in 'modern' agriculture: the evidence from Cataluna," Universidad Carlos III de Madrid, working paper.
- (1997b), "Institutional response and conflicts in agriculture: wine production in Cataluna, La Mancha and the Midi, 1900-1929," Universidad Carlos III de Madrid, working paper.
- Galassi, F. (1992), "Tuscans and their farms: the economics of share tenancy in 15th century Florence," *Rivista di storia economica*, 9, pp. 77-94.

- Garrabou, R., J. Pujol and J. Colome (1991), "Salaris, us i explotacio de la forca de treball agricola (Catalunya 1818-1936)," *Reerques*, 24, pp. 23-51.
- Giralt y Raventos, E. (1965), "El conflicto rabassaire y la cuestion social agraria en Catalufia hasta 1936," *Revista del Trabajo*. 7, pp. 51-72.
- Instituto de Reformas Sociales, (1923). *La rabassa morta y su reforma*. Madrid
- Otsuka.K., H. Chuma. and Y. Hayami (1992), "Land and Labor Contracts in Agrarian Economies: theories and facts," *Journal of Economic Literature*, 30. pp. 1965-2018.
- Pech. R. (1975). *Entreprise viticole et capitalisme en Languedoc-Roussillon. Du phylloxera aux crise de mevente*. Toulouse: Presses de l'Universite de Toulouse.
- Roig y Armengol. R. (1890), *Memoria acompanatoria al Mapa Regional Vinicola de la provincia de Barcelona*. Barcelona.
- Saguer. E. (1996) *La consolidacio de la propietat pagesa a Catalunya (el Bai.x Emporda, 1850-1940)*. Universitat de Girona, Ph.D. thesis, unpublished.
- Santamaria, V. (1878), *La rabassa morta y el deshaucio aplicado a la misma*. Barcelona.
- Smith, J.H. (1978), "Agricultural workers and the French wine-growers' revolt of 1907," *Past and Present*, 79, pp. 101-25.