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Abstract

This article conjectures a parsimonious explanation for the choice of fixed cash rent contracts in late eighteenth- and early nineteenth-century English agriculture. Tenant farmers, it is suggested, bore the brunt of the income risk because they were less risk averse than landowners. The latter's acute risk aversion may have been produced by acute loss aversion brought about by their substantial fixed liabilities, part of which arose from signalling status. Limited quantitative evidence that landlords gave their tenants a risk premium, in the form of a low rent, is presented. Landowners apparently did not make especially frequent use of the formal short-term credit market as an alternative means of smoothing income, perhaps because the transactions costs of doing so were non-trivial.

1. Introduction

A widely recognised stylised fact is that, in late eighteenth- and early nineteenth-century England, most farmland was leased by tenant farmers for a fixed cash rent, the contract often being renewable annually. The pre-existing system of copyhold and lifehold tenures was being run out, albeit slowly (Turner et al., 1997, pp. 24-32; Turner, 1998, p. 3), owner-occupation was uncommon (Thompson, 2002), and sharecropping seemingly very rare (Burchardt, 2002, pp. 23-4; Griffiths, 2004, p. 82). Despite the extensive literature on the economic motivations underpinning contractual relationships, economic historians have not been attracted by the puzzle of explaining the widespread choice of fixed cash rent leases in English agriculture during the period under discussion. This article conjectures a parsimonious explanation, namely that landowners in England were more averse to income risk than tenant farmers. What follows is speculative not definitive in nature and is intended merely to highlight one interpretation of the currently available evidence, and should not be taken to exclude other accounts. If at all accurate, the argument has wider implications for the economic and social history of eighteenth- and nineteenth-century England because it emphasises differences in the entrepreneurial values and attitudes of landowners vis-à-vis farmers.

2. Theoretical considerations

Agency theory is the standard theoretical framework with which to explore contract choice. In this model, a principal (here a landowner) arranges with an agent (a farmer) to utilise a resource (land) to produce output (farm produce). The two parties agree on a contract that best fulfils their respective requirements.¹ In the last few years, scholars empirically investigating contract choice in historical and modern settings have tended to emphasise the importance of explanations based on transactions costs rather than the differing risk preferences of the principal and agent (notably Allen and Lueck, 1995,

1999; Akerberg and Botticini, 2000). Indeed, Allen and Lueck (2002, p. 67) have briefly put forward an explanation of the general choice of fixed rent leases in historical northern European agriculture based on a transactions cost perspective: they argued that sharecropping was not required in this region because the type of husbandry predominantly practised (small grains and grass crops) meant that the landowner's assets were not especially vulnerable to being overexploited by the farmer, unlike the orchard crops of France, Italy, and Spain, where the optimal contract needed to reduce the tenant's incentive to excessively prune vines and trees. Most recently, however, some studies have concluded that the risk preferences of the principal and agent actually can be an influential determinant of contract choice (Akerberg and Botticini, 2002; Hudson and Lusk, 2004). This article, developing the earlier analysis by Offer (1991b), suggests that such a line of contention may also be useful in helping to explain the choice of fixed rent leases in English agriculture between the mid-eighteenth and mid-nineteenth centuries, providing an alternative or complementary account to that advanced by Allen and Lueck.²

It is a commonplace that a farmer signing a fixed cash rent lease is, in contract, exposed to the non-trivial income risks of farming. Stead (2004) has provided empirical evidence for the period under discussion supporting Offer's argument that English tenant farmers were the residual claimants of agrarian income. There appears to have been only limited landlord/tenant risk sharing outside the legal tenancy agreement, for instance by the landlord granting rent remissions or arrears in bad years. The finding that eighteenth- and nineteenth-century landowners apparently wished to avoid income risk in agriculture by as much as was feasible provides an interesting comment on the extent to which they were enterprising capitalists, if only because definitions of an entrepreneur generally emphasise his inclination to take risks (Pollard, 1994, pp. 62-4).³

The stylised facts of the English system, where the tenant farmer bore the brunt of the income risk, but not its entirety, are reminiscent of the predictions of a principal/agent model where the landowner is more averse to risk than the farmer. For the acutely risk averse landowner, letting his property at a fixed rent ensured, in principle, a certain rental income (unlike sharecropping or paying the farmer a fixed wage to cultivate land kept in hand). Yet because the farmer was somewhat risk averse, he is likely to have required from the landlord some limited insurance against, and/or compensation for, being exposed to a fluctuating income stream (Stiglitz, 1974; Currie, 1981; Otsuka et al., 1992). Landowners' granting of limited rent arrears and remissions provided the partial risk sharing element of the predicted agreement; some quantitative evidence that a premium, in the form of a reduced rent, was given to farmers for risk bearing will be provided in section 4 below.

Why did landowners in England seemingly particularly dislike being exposed to income risk? A promising hypothesis for their acute risk aversion invokes the empirically well-established concept of loss aversion, developed in the seminal work of Kahneman and Tversky (1979). In their prospect theory, losses loom larger than gains in the decision-making process: the disutility from giving up some sum of money exceeds the utility received from acquiring the same amount. Loss aversion is conventionally graphically represented by figure 1, which shows a payoff valuation function that is strictly concave for income gains, strictly convex for income losses, and steeper in the domain of losses (Cox and Sadiraj, 2002, p. 14). As Rabin and Thaler (2001, p. 226) conclude, loss aversion therefore 'directly explains why people turn down even very small gambles with positive expected value.' (See also the literature surveys by Edwards, 1996; Starmer, 2000.) Furthermore, loss aversion – and hence risk aversion – can be particularly acute when an economic actor incurs large, and fixed, financial liabilities, assuming that he experiences disutility if he is unable to meet those

obligations. Thus, as Mokyr has written in another context (1983, p. 99): ‘It might be argued that the landlords were more risk-averse than their tenants because of their substantial fixed liabilities (e.g. interest charges, family settlements).’ Such reasoning, then, provides a potential explanation for English landowners’ preference for the stable farm rental income provided by fixed cash rent contracts. (For analogous types of arguments in other historical contexts, including the exploitation of coal seams by the minority of English landowners who had them on their estates, see Lornez, 1991, pp. 918-9; Thompson, 2001, p. 39; White, 2004.)

[figure 1 about here]

The leading historians of English landed society have concluded that landlords did indeed have high fixed costs arising from factors like servicing debts. ‘[C]learly,’ wrote Beckett (1989b, p. 633), ‘[landowners’] unavoidable outgoings could be a very significant item.’ For Habakkuk (1994, p. 260): ‘Fixed charges made it more difficult for landowners to adapt ... to an unfavourable turn of circumstances’, such as a fall in rents. A hitherto neglected implication of such statements is that English landowners might have demanded fixed rent leases. The next section presents more detailed empirical evidence indicating that the weight of landlords’ fixed liabilities was generally heavy relative to their gross annual income during the period under consideration.

3. Landowners’ substantial fixed liabilities

The three-fold categorisation of landowners’ outgoings by Beckett suggests that much, if not most, of their expenditure can be construed as representing some kind of fixed liability (1989b, p. 630). Some spending was outright ‘compulsory’, such as the

payment of taxes (unless the burden could be passed onto the tenantry). 'Necessary outgoings' comprised of expenditure on the maintenance of the estate, spending that was not fixed in an accounting sense but on which it was unwise to significantly economise in the long term. His third category, ' "optional" ', included the 'barely avoidable such as household expenses, portions, and jointures (which were of course compulsory once they had been agreed), together with legacies and annuities payable from an estate as the result of a will'. Such charges typically bore a far from trivial weight on a landowner's gross annual income. Take two examples. Offer (1991b, p. 14) assumed that, after 1790, the costs of estate administration and maintenance (including taxation) absorbed 25 per cent of the yearly gross rent.⁴ The size of jointures (an annual payment made to a widow until her death, settled at marriage) was commonly set at a fixed cash sum equivalent to about 20 per cent of a landowner's total yearly gross income. A combination of the young age of wives at marriage and longer female life expectancy meant that the chances were that dowagers would be long-lived, perhaps surviving their husband for 12-16 years on average (Habakkuk, 1994, pp. 80-9, 258-60).

Beckett believed that many other items of ' "optional" ' outgoings were avoidable in theory but subject to important 'social pressures' in practice. Such status pressures on consumption were the subject of Veblen's ([1899] 1994) famous signalling model. The 'leisure class', he argued, conspicuously consume in order to advertise their wealth and thereby obtain social approbation, since affluence is the most easily recognisable evidence of success. One lesser-known alternative view is that a consumer could instead be living up to a 'character ideal', consuming particular types of goods and services as part of a process of reassuring himself that he possesses some set of desirable personal qualities (Campbell, 1993, 1995). Campbell himself distinguished an eighteenth-century 'aristocratic' ideal of character ultimately derived from the ideal of 'the English gentleman' which, among other things, emphasised displays of nonchalant

accomplishment, refinement, honour, and emotional restraint. Importantly, retrenchment is painful in both Veblen's and Campbell's models, not only because an individual has become habituated to his current levels of consumption, but also because economising entails a loss in social status and/or self-assurance.⁵

Unfortunately such models cannot be rigorously quantitatively tested (in the manner of, say, Basmann et al., 1988; Pellerin and Stearns, 2001) for the period under discussion because the required systematic data on the budgets or attitudes of the gentry and aristocracy are not available. Nevertheless, there is a substantial body of qualitative empirical evidence which suggests that these types of signalling and status considerations were of some general importance in the consumption behaviour of the various ranks of English landed society during 1750-1850, although they do not capture every expenditure decision made by every landowner. This evidence ranges from the novels of Jane Austen to historians' detailed studies of the country house (Girouard, 1978; Wilson and Mackley, 2000) and landscape garden (Williamson, 1995; Mowl, 2000), the Grand Tour (Black, 1999; Dolan, 2001), foxhunting (Carr, 1976; Itzkowitz, 1977), cricket (Birley, 1999; Underdown, 2000), London clubs (Taddei, 1999), the marriage market (Beckett, 1989a; Habakkuk, 1994), and politeness and the English gentleman (Girouard, 1981; Corfield, 1996; Vickery, 1998; Klein, 2002). For the purposes of this article, the importance of any ongoing expenditure on social signalling or personal reassurance – Lord Monson knew that expensive entertaining during the London season 'must be kept up yearly or it has been to no use' (quoted in Thompson, 1963, p. 100) – was that it contributed towards landowners' heavy financial obligations. Such spending effectively directly raised fixed costs over and above those that were fixed in an accounting sense, and indirectly served to increase the size of fixed accounting charges like interest payments (if, say, landowners borrowed to conspicuously consume). In the view of one contemporary (Howitt, 1844, p. 78):

Every man lives now-a-day for public observation. He builds his house, and organizes his establishment, so as to strike public opinion as much as possible. Every man is at strife with his neighbour in the matter of worldly greatness ... shew [sic] is substituted for real happiness; and no man is valued for his moral or intellectual qualities, so much as for the grandeur of his house, the style of his equipage, the richness of his dinner service, and the heavy extravagance of his dinners. The result of this is, that most are living to the full extent of their means, many beyond it

Data on individual landowners, from the landed magnates to the lesser gentry, indicate that fixed charges typically absorbed a high proportion of their gross annual income (although an important caveat is that evidence about total income is inevitably imprecise). When John Beecher inherited property in Renhold, Bedfordshire, in 1751, taxation and repairs absorbed more than 30 per cent of the approximate £1,400 annual rental; for 15 years the estate was also subject to a jointure (Habakkuk, 1994, p. 392). In 1779, taxes, repairs, and family payments took up over 30 per cent of Lord Grosvenor's gross annual income of almost £20,000. He also had to meet interest payments on debts of £151,500, leaving 'little over to meet his personal expenses', let alone his £7,000 yearly spending on racing. By 1795, the burden of fixed charges was even greater (Mingay, 1963, pp. 151-2). And between 1776 and 1806, taxes, repairs, and debt service reduced net income on the Cokes' Holkham estate to between 54-64 per cent of gross (Beckett, 1989b, p. 633). Since these calculations omit current consumption and the other types of fixed costs mentioned above, these landowners' income after 'unavoidable outgoings' would have been even lower than the stated percentages suggest. Of course these and other examples given in the literature may be unrepresentative, even if the most obvious spendthrifts such as the fifth Duke and Duchess of Devonshire and the first and second Dukes of Buckingham are excluded.⁶

Yet, while some landed families did avoid chronic debt, the consensus view is that English landowners were a debtor class, with the borrowing being used to finance a range of expenditures from outright conspicuous consumption to industrial investments and marriage portions (dowries) (compare Cannadine, 1977a, 1980; Spring, 1980; Beckett, 1989a, p. 314; 2000; Allen, 1992, pp. 104, 264-5; Habakkuk, 1994, ch. 4; Spring and Spring, 1996).

Thus national estimates are also indicative of high fixed costs. No contemporary opinion for the eighteenth century is known, but in the first half of the nineteenth century it was ‘commonly believed’ that land was encumbered to half its capital value, or approximately equivalently, that interest payments – perhaps also including some other fixed charges – absorbed half of the annual gross rent roll.⁷ According to Richard Preston, a leading conveyancer: ‘Generally speaking, allowing that there are many exceptions from individual cases, the rental is for the most part burdened with incumbrances to one half of its amount by jointure annuities, the interest of portions and of mortgages, and of general debts, and the expense of management and repairs.’ Other authorities at this time – including Preston on another occasion – put the national fraction at about one half without explicitly including expenditure on estate management and repairs (Habakkuk, 1994, pp. 353-4; Rigg, 2004), and Caird made a similar claim for property in Essex (Caird, [1852] 1968, pp. 134, 417, 495). Mulhall (1884, p. 322) stated that, in 1866, land in England was mortgaged to 33 per cent of its value, with the current figure being 58 per cent. The most secure estimate, for the UK during 1904-14, puts mortgage debt at a substantially lower 27.4 per cent of value (Offer, 1981, tab. 8.1), possibly reflecting greater fiscal prudence amongst that generation of landowners. Tellingly, a figure of encumbrances on land to half of its capital value was seemingly regarded as the maximum that could be sustained. This was, for instance, the benchmark chosen by the House of Lords when amending the

Irish Encumbered Estates Act of 1848 (Habakkuk, 1994, pp. 354, 369). To the extent that these contemporary estimates are accurate, then, early nineteenth-century English landed society appears to have encumbered its estates to near the upper limit of prudence.

The average landowner's reluctance to significantly retrench, even when his financial situation was perilous, is another sign that a high proportion of outgoings were at least perceived as being largely necessary. Since retrenchment cost accustomed personal comforts and social standing, many attempted economy drives were frustrated by a landowner's unwillingness to 'drop out of his class', as Habakkuk has put it (1994, p. 330), by making substantial savings through radical steps like moving out of his country house. Decisions were sometimes taken out of a landlord's hands by placing his property in trust. But even trustees were 'not always successful in restoring the position, and the most common cause of failure was the unwillingness of the [owner] to cooperate' (Mingay, 1963, p. 49). A classic example is the trust set up in 1832 to administer the finances of the first Marquess of Ailesbury, which ended up running his affairs until his death in 1856, a case 'where carefully administered retrenchment was unable to produce any great surplus from income' (Thompson, 1958, p. 122). Those trusts most successful in rescuing a family's financial situation rarely did so quickly and often could only make substantial progress by raising revenue through asset sales, two stylised facts consistent with the hypothesis being tested in this section (Mingay, 1963, pp. 48-9, 125-30, 151-2, 155-6; Sturgess, 1982; Beckett, 1989a, pp. 301-9; Habakkuk, 1994, pp. 304-34, 361-88).

Finally, the supposition that landowners had sizeable fixed liabilities, and hence required a relatively stable flow of income, also predicts that nominal agricultural rents were sticky, especially downwards. A growing body of evidence supports this stylised fact, even for tenants holding under annual contracts, ranging from contemporary

comment – ‘a much longer term runs than fourteen years on an average, between one raising [of a tenant at will’s rent] and another’ (quoted in Tuke, 1800, p. 57; see also Stephens, 1851, p. 510) – to Solar’s (2004) recent careful examination of the national time-series of rent compiled by Turner, Beckett, and Afton (1997) and Clark (2002). (In addition, see the discussions in Offer, 1991a, p. 117; Allen, 1992, pp. 181-6.) Of course, sticky rents are equally consistent with other models of the rent-setting process, notably Allen’s (2001, pp. 63-7) argument that landlords needed to credibly commit to infrequent adjustment of rents to reassure tenants on short-term contracts that they would earn a reasonable rate of return on their capital. Nevertheless it is another piece of evidence, albeit circumstantial in nature, that is supportive of the conjecture.

This section has provided some, inevitably limited, qualitative and quantitative evidence which is very suggestive that English landed society in the late eighteenth and early nineteenth centuries had ‘expensive habits’ (Habakkuk, 1994, p. 301). If fixed liabilities were a heavy burden on gross annual income, then it may not be surprising that England’s landowners preferred a steady rental income to a fluctuating one, and hence offered fixed cash rent leases to tenant farmers. The next section explores how equilibrium in the market for tenancies might have been achieved.

4. Farmers’ supply of fixed rent contracts

Why did so many farmers across England sign contracts that handed them the substantial risks of agricultural cultivation? Offer (1991b, pp. 10-2) highlighted the bargaining advantages landowners possessed over their tenants which gave them control over various aspects of the tenancy agreement, including the allocation of risk. For example, once a bargain had been struck, and the farmer had committed to the land, exit was more costly to him than to his landlord. The tenant’s higher withdrawal costs – such as the loss of specialist knowledge of a particular acreage – locked him into the

relationship and provided the landlord with the chance to act opportunistically. The generally relatively low rate of tenants' turnover is one piece of evidence consistent with this analysis (Stead, 2003). An open question, however, is to what extent the bargaining strengths of the two parties were less unequal before the farmer had committed to the holding. There may well have been an excess supply of applicants for vacant tenancies, effectively allowing the landlord to dictate the terms of the contract. Yet Mingay (1962, p. 473) has generalised that, in the eighteenth century at least, tenants endowed with the physical and human capital necessary to successfully run a large farm tended to be scarce: 'Normally ... the landlord's choice was very restricted: usually very few suitable farmers were to be found'.⁸

A detailed analysis of competition for vacant tenancies is beyond the scope of this article. Some scattered new evidence gives only an inconclusive picture. In Northumberland apparently sometimes just a single farmer applied for a holding (Bailey and Culley, 1805, p. 24). In 1814 the Reverend Middleton confessed 'some Difficulty' in letting the rectory farm at Brize Norton in Oxfordshire, but put this down to a fall in the price of corn.⁹ Estate archives do not contain many lists of applicants for vacant tenancies. Eight men applied for the lease of Bottom farm (perhaps 165 acres) on the Drake family's Buckinghamshire estate (year unknown), and in 1842, one of the Duke of Bedford's agents listed eight 'general applicants I have for a farm of this size' (possibly 138 acres), four of whom had been on his waiting list for some time. Only two of Bedford's eight aspirants could be easily ruled out, and the list was 'long enough & good enough to choose from, without waiting for more applicants'. If representative, such evidence may well point to the excess supply of farmers needed to give landlords some control over contract terms. But these documents are a dangerous indicator to the extent that they were only compiled in cases of unusually numerous applications. Furthermore, only one of Bedford's eight hopefuls was said to be soon without a farm,

suggesting that at least some applicants possessed outside options and hence a degree of bargaining power.¹⁰

If more research is required on relative landowner/tenant bargaining power before a tenancy agreement was signed, interestingly there is some limited evidence to support the conjecture in section 2 above that equilibrium was achieved by risk averse landlords compensating their less risk averse tenantry for bearing most of the income risk by payment of a risk premium. Any premium is most likely to have taken the form of a low rent that provided the farmer with an additional return on capital over and above the risk-free market rate, with the farmer using these implicit payments to build up a capital reserve to fall back on in bad years. Certainly on the Dudley estates it was recognised that the tenant should receive sufficient remuneration for 'his labour, risk and capital employed' (quoted in Turner et al., 1997, p. 21). Providing persuasive quantitative evidence of the existence of a risk premium is not a straightforward exercise. For instance, at the turn of the nineteenth century farm profits were perhaps twice the level available from low risk investments such as consols. Although tempting, it cannot be concluded that the gap indicates the presence of a risk premium because the involvement of other factors cannot be ruled out (Stead, 2004, pp. 355-6).

A more useful method of attempting to isolate a risk premium is to compare rents under different estate management regimes. While some landlords did not share risks with their tenantry by allowing rent arrears, others were more willing to do so. The hypothesis is that landlords who never shared risk through arrears gave a higher risk premium to their tenants than those who did share some risk via arrears. As a pilot test, comparisons were made of rent per acre on matched pairs of estates owned by the same family, where on one estate the family never granted arrears over a substantial run of years, whilst on the other property during exactly the same time period arrears were allowed.¹¹ Rent data collected by Turner, Beckett, and Afton allow pair wise

comparisons to be made between two estates owned by the Leveson-Gower family, and six estates owned by the Pierrepont family, for various sub-periods between 1751 and 1850. The estates are Lilleshall in Shropshire; Trentham in Staffordshire; Adwick in the West Riding of Yorkshire; Beighton in the West Riding and Derbyshire; Bradford in Wiltshire; Holme Pierrepont in Nottinghamshire; Lincolnshire, Crowle, and Basingthorpe in Lincolnshire and the East Riding; and Thoresby in Nottinghamshire.¹² The representativeness of these eight estates largely located in the pastoral northern counties, and the two aristocratic families that owned them, is open to question (for information on the sample, see Mingay, 1963; Wordie, 1981, 1982; Beckett, 1989a; Habakkuk, 1994), but no other data were easily available.

The simple exploratory regression model is:

$$\ln(R_{it}) = \alpha_1 + \alpha_2 D_{it} + \beta_1 T + \beta_2 (D_{it} \cdot T) + e_{it}$$

where R_{it} is rent per acre (measured in pounds) on estate i at time t ; D is a dummy variable equal to one if tenants on estate i did not receive arrears over the entire sample period, and zero otherwise; T is a time trend; and e an error term. If tenants to whom landlords never allowed arrears received a larger risk premium than tenants who were granted arrears, then α_2 should be negative, indicating that rent per acre on non-arrears estates was lower than on estates where arrears were given. It is also interesting to test if β_2 is negative, such that for some reason (possibly as part of the risk allocation deal) rent per acre rose more slowly on non-arrears estates. Following Clark (2002) and Solar (2004), the regression has the logarithm of rent as the dependent variable in order that the estimated coefficients on the dummy variables can be interpreted as showing the percentage difference in the level of rent.¹³

Lack of data on other potentially important right-hand-side variables means that the regression equation makes absolutely no claims for sophistication or completeness. Another problem is that, due to the possible endogeneity of the dummy variables, it must be assumed that the decision to have been a non-arrears estate was predetermined (i.e., the landlord had credibly committed not to grant arrears despite any subsequent requests from the tenantry). The model assumes that the decision not to allow arrears caused (perhaps) low and slowly rising rents, but conceivably the causation can be reversed (tenants never required arrears because of a soft rent regime). Practical problems preclude controlling for possible endogeneity, yet perhaps the assumption of a predetermined arrears regime is not completely outrageous. The sample sub-periods for the non-arrears estates range from 12-36 years. With so long a time without a single pound of rent arrears being received on the entire estate, it is perhaps difficult to argue that this regime was not predetermined. Suppose the landlord had not predetermined to always refuse arrears. Considering the risks of agriculture, it was a very fortunate tenantry that over as long as a generation did not experience at least one farmer suffering at least one exogenous loss deemed worthy of a small amount of arrears. Finally, interpretation of the coefficients is further complicated by the possibility that the rent set included an element for expected default on arrears, in effect a means of landlord risk sharing additional to the granting of arrears with full payment in time (Stead, 2004, p. 352). A useful exercise, therefore, is to estimate the regressions for rent actually received as well as for rent due, since the former incorporates actual defaults.

[tables 1 and 2 about here]

Table 1 presents the results of 12 pair-wise comparisons of rent due per acre on matched pairs of arrears and non-arrears estates in various sub-periods; table 2 shows

the same comparisons when the analysis is repeated using rent received. Prais-Winsten estimates were used because the Durbin-Watson d-statistics indicated the presence of serial correlation. The limitations of the data and model mean that the results of this exercise cannot be conclusive, and anyway there is only mixed support for the existence of a risk premium. Exactly half of the estimated values of α_2 in table 1 are negative and statistically significantly different from zero, in accordance with the hypothesis, with rent per acre on a non-arrears estate being set up to 53 per cent lower than on an arrears estate. The results for rent received are similar suggesting that, where landlords set higher rents on arrears estates, this was typically done not just to take into account expected defaults on arrears, but also because the granting of arrears *per se* had an insurance value (assuming that the extent of default was not systematically overestimated). Thus five of the 12 calculated values of α_2 in table 2 support the hypothesis, with the largest gap being put at 52 per cent. There is also some tentative indication from the estimates of β_2 that rent per acre on non-arrears estates rose more slowly compared to estates where arrears were given. The safest conclusion to be drawn from tables 1 and 2, and this section more generally, is that additional research is required to establish why so many English tenant farmers signed fixed cash rent contracts.

5. The credit market counter-argument

English landowners, it has been conjectured, desired a steady rental income stream to ensure that they were able to meet their sizeable fixed liabilities. This broadbrush supposition is open to numerous objections, caveats, and counter-arguments, and this article cannot address them all. This penultimate section considers just one of the most obvious objections, namely that landowners could instead have smoothed their consumption using the short-term credit market (see Melton, 1986). A first cut at the

historical record, though, does not provide a great deal of support for this alternative hypothesis. Much evidence from the formal capital market – unsatisfactorily focused on here due to space constraints and the far superior sources – suggests that the bulk of the debts incurred by landowners were long-term, especially mortgages. This is, for instance, the general impression given by the profile of loans by insurance companies to members of English landed society (Dickson, 1960, ch. 12; Supple, 1970, pp. 73-5, 312-30; Trebilcock, 1985, pp. 618, 630-54, 727-43).

One simple test of the credit market counter-argument is whether landowners regularly received short-term bridging loans. Individual examples can be found, as when the Duke of Beaufort borrowed £24,000 from Hoare's Bank on 14 February 1842 and repaid the sum four days later (Cannadine, 1977a, p. 636). Yet a reading of the literature suggests that many landowners' loans were renewed rather than being swiftly repaid, turning what was ostensibly a short-term credit into an instrument of long-term finance. Indeed, a popular act was to consolidate short-term debt into a long-term mortgage. (See the studies cited in this section together with Joslin, 1954; Brunt, 2004.) Some support for such arguments is provided by new data derived from a sample of 260 loans made to 99 titled customers by Child's Bank in London during 1745-92.¹⁴ This sample provides a good proxy for aristocratic landowners but unfortunately does not capture the behaviour of lesser landowners.

The majority of the loans from Child's were made on the security of a personal bond (58.5 per cent of loans), followed by mortgage (15.1 per cent), and then promissory note (13.6 per cent), although unsurprisingly the most substantial sums were borrowed on mortgage: the mean thus lent was £9,092 compared to £2,726 on bond. Of all the loans, 83.5 per cent were recorded as being repaid in full, with the mean duration of a repaid loan being 2.7 years (median one year); 14.2 per cent of all loans were repaid within three months, and 27.3 per cent were repaid within six months. These

repayment statistics, though, must be interpreted with caution because a number of debts were repaid only through consolidation, as when the Duke of Bridgewater obtained a £15,000 mortgage on 19 June 1765 and the next day repaid five loans, totalling £15,000, which Child's had made to him on bond over the previous eight years. Of the 16.5 per cent of all loans still owed, these had been outstanding for a mean of 8.8 years (median 7.6 years), with the longest owing for more than 39 years. In similar vein, the ledgers of Drummond's Bank (another London bank with a significant aristocratic clientele) for the sample years of 1751, 1773, and 1815, list a number of loans outstanding from titled customers: in 1815, there were 93 such loans (mean amount £1,969), with a mean duration to date of 8.7 years and the longest owing for over 44 years.¹⁵

On 110 occasions the originally intended length of the Child's loans was stated. Their mean duration was supposed to be 5.1 months (median six months). In practice, 72.5 per cent were not paid on time, with the mean time overdue being 2.7 years (median 1.1 years), more than six times the originally specified length. An extreme example was a £12,000 loan to the Duke of Manchester, supposedly for six months, which was taken out in August 1757 but not repaid until February 1766. Moreover, Child's titled customers did not regularly take out loans from the bank. A loan was given every 4.1 years (median 2.1 years), and tellingly only 22.4 per cent of customers took out more than one loan a year. For instance, Sir James Dashwood obtained just one loan from Child's between June 1764 and June 1766. Aristocratic landowners' use of overdrafts was also apparently relatively infrequent. The fifth Earl Cornwallis' totalled annual balances with Hoare's during 1814-43, for example, were never negative.¹⁶ Some systematic evidence was assembled from a sample of 57 titled customer's bank accounts at Child's in 1751 and 63 at Drummond's in 1773. Of the 170 observations on

bank balances (that year's opening and closing balances at Drummond's, and mid-year balances at Child's), just 13 were in the red.¹⁷

Some speculations can be made as to why landowners seemingly did not make more frequent use of the formal short-term credit market. On the demand side, it is conceivable that they had concerns over the possibility of loans being suddenly and inconveniently called in (for actual or threatened examples, see Cannadine, 1977a, p. 635; Beckett, 1989a, p. 310; Habakkuk, 1994, pp. 515, 531). Supply side restrictions on the issue of credit must have been more influential. In particular, strict settlement limited the ability of an owner to encumber the family estate except for specified purposes, such as paying for marriage portions, and at least 50-70 per cent of land in England was subject to strict settlement during the period under discussion (Habakkuk, 1994, pp. 47-8). Landowners thus constrained had to borrow on their personal credit, but here on at least some occasions they must have felt the sharp end of conditions conducive to credit rationing: a legal maximum nominal interest rate and substantial government borrowing to fund wartime expenditure (Joslin, 1960; Clark, 2001; Temin and Voth, 2005). Hence Drummond's records contain examples of loan requests by landlords 'not consented to', even in peacetime years.¹⁸

Perhaps, then, most landowners at most times were able to obtain credit, but often it took some trouble to obtain the full sum desired: the transactions costs of borrowing on the short-term capital market may well have been non-trivial. To raise sufficient sums, landlords might have had to tap multiple sources, a speculation consistent with the limited repeat borrowing at Child's Bank and also with the long lists of creditors on many debtor's records.¹⁹ It is tempting to claim that, faced with the prospect of incurring non-trivial transactions costs by smoothing income through the short-term credit market, landlords instead preferred to force, or pay, tenant farmers to bear the income risk.

6. Conclusion

This article has suggested one explanation for the widespread, but not universal, choice of fixed cash rent contracts in English agriculture during 1750-1850. Landowners, it has been conjectured, disliked a fluctuating rental income because they incurred substantial fixed liabilities such as mortgage interest payments and family charges, part of which arose from conspicuous consumption to signal wealth (following Veblen) and/or reassurance of conformation to an aristocratic/gentlemanly character ideal (Campbell's claim). One possibility is that landlords compensated tenants for bearing risk by giving them a risk premium in the form of a low rent. Landowners apparently did not make especially frequent use of the formal short-term credit market as an alternative method of smoothing income, perhaps because of the non-trivial transactions costs of borrowing in a period where conditions were ripe for credit rationing. The various steps in the argument rely on limited and sometimes circumstantial empirical evidence, and are subject to a wide variety of caveats and counter-arguments. If at all accurate, though, the claims in the preceding pages cast important light not only on the business of farming in England but also on the entrepreneurial attitudes of English landed society.

Of course, much additional testing of this broadbrush conjectural explanation is required in regard to, among other things, regional nuances, the role of the estate steward, differences between large and small landowners, and the size of the farmer's fixed costs. The model also ought to be able to help to explain general changes over time in contract choice, notably the gradual shift away from copyhold and lifehold contracts from the early eighteenth century, and the move to short – increasingly annual – fixed rent leases that was in progress by the turn of the nineteenth century. Previous work has already suggested that considerations of risk were an influential element in the abandonment of long leases: experience of the years of fluctuating and then falling

prices during and after the French Revolutionary and Napoleonic Wars naturally led both landlord and tenant to prefer a short agreement to a long-term commitment (Beckett, 1989a, p. 187; Overton, 1996, p. 156). It is less straightforward to use the explanatory framework to help account for the shift away from, say, leases for three lives, where the tenant paid a nominal annual rent and much higher entry and renewal fines (levied when a new lease was granted or when another name was added to the agreement). One very speculative suggestion draws on Allen's research (1992, pp. 102-4), and interprets fine-based contracts as a compromise between landowners' desire to avoid risk (tenants were the residual claimants but the landlord experienced a fluctuating income because revenue from fines was irregular) and to borrow long-term using land as security (since fines in effect served as loans from tenant to landlord). The late seventeenth-century development of the mortgage market made the credit function of the fine-based lease unnecessary, allowing landowners to run out such agreements and shift to letting their property on contracts that provided a more stable flow of rental income. Such an argument might perhaps complement other explanations for the change (e.g., Clay, 1981; Nicolini, 2004, pp. 139-40).

Another crucial test is whether the model stands up to international comparisons. Landed elites on the European continent also conspicuously consumed and their estates could be heavily mortgaged, the same sorts of expensive habits that arguably drove a demand for fixed rents in England, yet such contracts were far less common (Blum, 1978). Open questions here are whether English farmers were for some reason better able to manage price and output risk than their continental counterparts, and to what extent landed society in England was especially addicted to conspicuous consumption, for example because competitions for approbation were particularly intense in a society that was open to new entrants, unlike in the rest of Europe (Thompson, 2002, p. 126). Further investigation of these and other lines of inquiry may well entirely disprove the

suggestions made in this article. Yet economic historians, like English tenant farmers, sometimes need to take a risk.

¹ Formal presentations of the model abound. All references to ‘he’ or ‘his’ should be read as including ‘she’ and ‘her’.

² For simplicity, what follows abstracts from the issue of whether or not farmland was enclosed. See Bekar and Reed (2003).

³ The literature debating the extent to which the values of English landed society inhibited the drive for economic growth is very extensive. Wiener (1985) was an influential text; Thompson (2001) provides an excellent recent critical survey.

⁴ Compare the estimates for individual estates in Mingay (1963, pp. 81-3, 178-9); Thompson (1963, pp. 226-7, 235-7); Beckett (1989a, pp. 198-204); Clark (1998, pp. 71-3). Also see Mingay (2000b).

⁵ For examples of ideas of habit or signalling social status through consumption incorporated in the economics literature, see Bagwell and Bernheim (1996); Hodgson (1998); Cooper et al. (2001).

⁶ For other examples, see York City Archives, M31/458, financial statement, probably of Sir William Robinson, 1764; Bateman (1879, pp. xxiii-xxv); Thompson (1958, tab. 1); Mingay (1963, pp. 128-30); Cannadine (1977a, tab. 2; 1977b); Beckett (1981, p. 37; 1989a, pp. 307-8); Wordie (1981, p. 238); Sturgess (1982, pp. 183-4); Habakkuk (1994, chs 4-5); Spring and Spring (1996, pp. 385-6).

⁷ Equivalent assuming land was capitalised at 30 years’ purchase and mortgages yielded 3 per cent. Habakkuk (1994, pp. 368-9).

⁸ Similar generalisations have been made for the periods 1660-1750 (Wrightson, 2000, p. 284) and 1850-1914 (Mingay, 2000a, p. 765).

⁹ Christ Church Archives, Oxford, MS Estates 64, fo. 86, Rev. B. Middleton to R. Morrell, 28 September 1814.

¹⁰ Bedfordshire and Luton Archives and Record Service, Bedford, R2/4, map reference book, c. 1830, fo. 16; R3/4574/1-2, letter from Mr Bennett, 18 June 1842; Centre for

Buckinghamshire Studies, Aylesbury, D/DR/2/195, 219, 227, list of applicants and farm particulars, undated and 1766.

¹¹ Why such a difference in regimes occurred is an interesting issue for future investigation.

¹² Turner et al. bear no responsibility for the following analysis and interpretation of their data.

¹³ Qualitatively similar results were obtained from a linear specification.

¹⁴ The Royal Bank of Scotland Group archives, London [hereafter RBS], GB CH/203/1-5, profit and loss ledgers. Titled customers include Earls, Dukes, and Sirs, and exclude the vague Esquire and Gentleman.

¹⁵ RBS, GB DR/427/30, 67, 251, customer ledgers.

¹⁶ Centre for Kentish Studies, Maidstone, U24/A59, bank pass books. For another example (for a much shorter time-series), see Pressnell (1956, tab. 20).

¹⁷ RBS, GB CH/194/16, GB DR/427/66 (surnames A-H), customer ledgers. The Child's bank balances were calculated at various dates depending on when was most convenient from each customer's entry. Both balance observations were not available for Drummond's customers who had opened or closed their account.

¹⁸ RBS, GB DR/320/4, memorandum book, 1833-47, fo. 24, entry for 7 March 1836.

¹⁹ York City Archives, M31/458, financial statement, 1764; Beckett (1989a, p. 314); Healey (1992, p. 208); Muldrew (1998, pp. 104, 288). Although see a contrary statement by Beckett (2000), p. 753.

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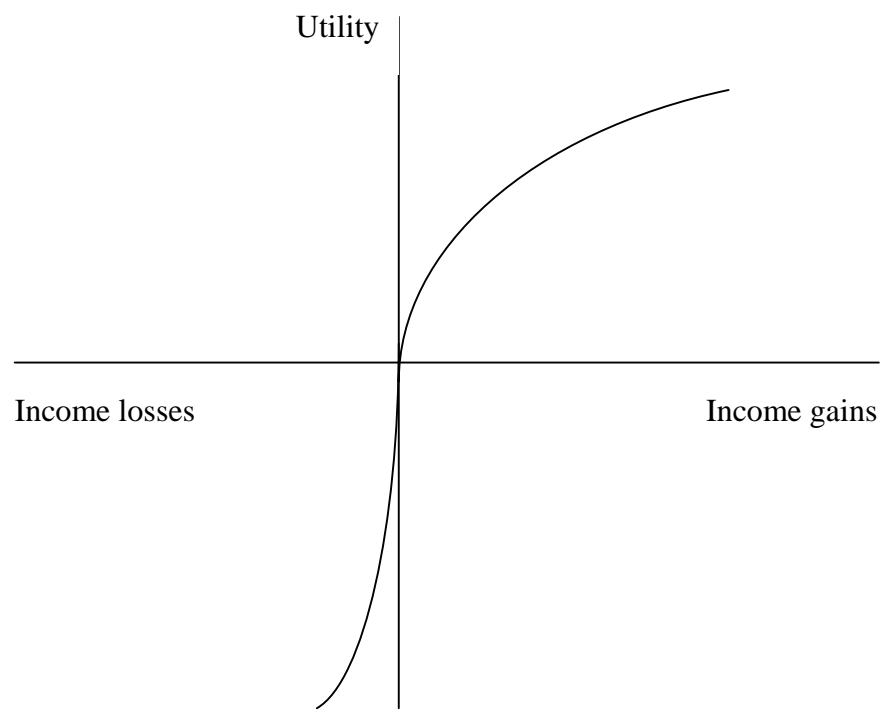


Figure 1. *A graphical representation of loss aversion.*

Table 1. *Regression estimates of the rent due per acre differential on pairs of the same family's non-arrears and arrears estates, 1751-1850.*

Comparison ^a	Period	α_2	β_2	R^2	S.E.	N
Lilleshall/Trentham	1754-1789	-0.194** (-3.14)	-0.005 (-1.56)	0.700	0.027	72
Adwick/Beighton	1751-1770	-0.330** (-43.9)	-0.002** (-2.57)	0.997	0.004	40
Adwick/Holme Pierrepont	1751-1770	-0.083** (-7.64)	-0.005** (-5.44)	0.958	0.005	40
Lincs (etc.)/Beighton	1759-1770	-0.533** (-30.4)	0.002 (0.78)	0.996	0.008	24
Lincs (etc.)/Holme Pierrepont	1759-1770	-0.305** (-19.0)	-0.002 (-1.0)	0.990	0.008	24
Holme Pierrepont/ Beighton	1799-1833	0.073 (0.30)	0.006 (0.54)	0.478	0.082	70
Holme Pierrepont/ Lincs (etc.)	1799-1833	0.418 (1.56)	0.005 (0.38)	0.739	0.073	70
Holme Pierrepont/ Thoresby	1799-1833	0.521 (2.03)	0.003 (0.24)	0.792	0.069	70
Bradford/Beighton	1827-1850	0.075 (1.21)	-0.003 (-0.60)	0.320	0.031	48
Bradford/Holme Pierrepont	1827-1850	-0.076* (-1.71)	-0.014** (-4.37)	0.800	0.029	48
Bradford/Lincs (etc.)	1827-1850	0.365 (5.74)	-0.010** (-2.27)	0.625	0.032	48
Bradford/Thoresby	1827-1850	0.417 (8.11)	-0.006 (-1.56)	0.830	0.029	48

Source: UK Data Archive dataset 3691, deposited by Turner, Beckett, and Afton.

Notes: T-values in parentheses. ^a Non-arrears estate listed first. ** Indicates coefficient negative and statistically significant at the 5% level. * Indicates coefficient negative and statistically significant at the 10% level.

Table 2. *Regression estimates of the rent received per acre differential on pairs of the same family's non-arrears and arrears estates, 1751-1850.*

Comparison ^a	Period	α_2	β_2	R^2	S.E.	N
Lilleshall/Trentham	1754-1789	-0.206** (-4.66)	-0.005** (-2.20)	0.813	0.044	72
Adwick/Beighton	1751-1770	-0.332** (-77.8)	-0.001** (-3.76)	0.999	0.009	40
Adwick/Holme Pierrepont	1751-1770	-0.058 (-0.97)	-0.006 (-1.15)	0.360	0.126	40
Lincs (etc.)/Beighton	1759-1770	-0.521** (-44.3)	0.001 (0.68)	0.998	0.012	24
Lincs (etc.)/Holme Pierrepont	1759-1770	-0.176* (-1.88)	-0.017 (-1.30)	0.719	0.156	24
Holme Pierrepont/ Beighton	1799-1833	0.074 (0.30)	0.008 (0.69)	0.473	0.087	70
Holme Pierrepont/ Lincs (etc.)	1799-1833	0.680 (1.53)	-0.003 (-0.12)	0.671	0.115	70
Holme Pierrepont/ Thoresby	1799-1833	0.521 (2.04)	0.003 (0.25)	0.800	0.068	70
Bradford/Beighton	1827-1850	0.115 (2.75)	-0.003 (-0.97)	0.508	0.054	48
Bradford/Holme Pierrepont	1827-1850	-0.071* (-1.70)	-0.014** (-4.73)	0.812	0.031	48
Bradford/Lincs (etc.)	1827-1850	0.399 (7.35)	-0.011** (-2.92)	0.722	0.036	48
Bradford/Thoresby	1827-1850	0.447 (10.6)	-0.006* (-2.02)	0.889	0.044	48

Source and notes: as table 1.
