Welfare Reform, 1834

Abstract

The social costs of providing welfare guarantees to the elderly, children, the ill, the idle, and the unfortunate, have long been debated. The English Poor Law Reform of 1834 provides a unique opportunity to estimate the social cost, including such costs as work disincentives, of the extensive social welfare system that existed in England in 1834. Surprisingly there is no evidence that the system before 1834 had ANY social costs, despite the passion of the contemporary denunciation of its ills, and the urgent calls for reforms. The fear of the rising school of Political Economy of the disincentives embodied in social welfare systems seems to have been misplaced.

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Introduction

Up until 1834 England operated an extensive welfare system which guaranteed subsistence to all, provided mainly as cash transfers to the elderly, widows, families with large numbers of children, the sick, and the unemployed. Probably 9% of the population was in receipt of such relief in any year before 1834.[1]

There were fears that this system imposed substantial social costs through reducing work incentives, reduced labor mobility, increasing fertility among the poor, and reducing investment in land improvements. These fears eventually resulted in the Poor Law Reform Act of 1834. This, in one of the more dramatic welfare reforms in history, substantially reduced welfare payments, and the proportions of the population receiving benefits.

This reform, however, also replaced a local system of relief, where levels of generosity and standards of eligibility varied dramatically across nearly 14,000 parishes and townships, with national standards for benefits and for eligibility. The reform thus had no effect in some parishes, but imposed major cuts in others. This paper uses the varying impact of the reforms at the parish level to measure the social cost of the earlier system.

The welfare benefits were paid for by taxes on the owners of land and housing. We estimate the net social cost of the Old Poor Law per £1 transferred to the poor by looking at the net gain in land rents, and in wage payments, in rural parishes after the reform.[2] If the system had no social costs then the reform might change the distribution of incomes in the countryside, but with no net gain. Land rents would rise because of reduced poor rate taxes, and there might be a further rise because of falling wages, but gains to the landlords would be offset by losses to

[1] This was the share of the population that received payments at some point in each of the year 1813-5.
[2] English currency in this period was £1 = 20 s., 1 s. = 12 d. An average weekly laboring wage would be 10 s.

the poor and to wage earners. If the system had large social costs the gains to landlords would greatly outweigh any losses to the poor.

We examine how much land rents rose in rural parishes after the reform as a function of each £1 decline in taxes for the poor.[3] If the rents rose £1 for each £1 reduction, then the old system involved just a pure transfer to the poor. If they rose by more than £1 then there was a social cost to this transfer. If they rose by less than £1 then the poor relief payments were in part just serving as a subsidy to wages.[4]

We can only directly observe land rent changes, but we show below that there is no evidence of any decline in labor supply in parishes with large poor rate cuts that would have raised wage rates. There is no evidence that the poor themselves somehow gained the benefits of the reform.

Poor Law Before 1834

Under the pre-1834 welfare system, "The Old Poor Law," anyone unable to earn a subsistence income had a right to relief from their local parish or township. Each of the 15,000 parishes and townships in turn had the right to levy a local tax on the occupiers of property, called the "poor rate," to fund this. The relief system in each parish was controlled by the parish vestry, composed of occupiers of land and housing who paid poor rates.[5] The vestry typically appointed two of their number as "Overseers of the Poor" to collect the rates, make payments and adjudge eligibility.

[3] English currency in this period was £1 = 20 s., 1 s. = 12 d. An average weekly laboring wage would be 10 s.
[4] The costs of the payments could also have fallen on wages, and we consider below how this possibility would affect our conclusions.
[5] Land and housing owners had no vote in the vestry unless they also occupied property and paid rates.

Local magistrates with jurisdiction over groups of parishes supervised the parishes in their administration of poor relief. Applicants denied poor relief could appeal to them. The magistrate could order an applicant be relieved, and could set the level of relief that parishes had to offer.[6]

The Old Poor Law thus mixed a national right to relief, with local setting of eligibility and relief levels. The Poor Law Report of 1834 and other sources suggest that the same subsistence levels were set for all parishes within the magistrate's jurisdictions. But relief levels varied substantially between districts. Thus in 1832-3 the payment guaranteed to a family of a husband, wife and three children varied from 5.6 s. per week to 13.8 s. per week across 337 parishes supplying data on this.

Workers received payments when they were too old to work, when they were ill, when they were unable to find work, and when their earnings fell below the adjudged subsistence level for their family. Thus in the parish of Todenham in Gloucester in 1832-3 those in receipt of poor relief were:

> "eight efficient Labourers with four Children and upwards, 14s. 8d.; three infirm old Men, 9s. 6d.; three Bastards, 5s. 8d.; eleven Widows, £1. 8. 5d.; three with Families, £1. 0. 9d."[7]

The allowance paid to the working laborers in Todenham was calculated as the difference between their wage and their family need, where this was measured as 1s. 3d. for each person in the family, plus 2s. 6d. extra for the husband and wife. Thus the need of a family of husband, wife and 4 children was estimated as 10s. The allowance from the parish was the difference between the wage of the husband and this amount. In some cases the parish themselves decided

[6] Thus in the parish of Ardleigh, in Essex, in 1795 the overseer's account book notes "Relieved John Lilly on complaint by order, 5 s." (Essex Record Office)
[7] Parliamentary Papers, 1834c, p. 202b.

on the scale of relief, in others the local magistrates fixed the norms. Thus in the parish of Little Rissington in 1832-3 the Rector notes that "The Magistrates scale of relief in this division is thus regulated:…."[8] The need to meet the subsistence wage for each family allegedly caused parish officers to encourage employers to hire married men with families in preference to single men, or childless married men. They also allegedly encouraged employers to allocate any extra earning opportunities to married workers.

By the early nineteenth century, large numbers of workers in many parishes were receiving some wage subsidy under the poor law. Thus in 81 out of 261 rural parishes surveyed in 1832-3 the subsistence level set for a family with three young children was greater than or equal to the wage outside harvest time for farm laborers. In Stradbrooke in Suffolk, for example, a man with a family of 3 children was entitled to 12.25 s. per week, while the weekly wage of farm workers was 8 s.[9] Workers with families in many parishes thus allegedly faced a 100% marginal tax rate. For these workers supposedly the gains from extra effort at work were small, as were the costs of being fired for not performing well.

Although parishes were required to provide subsistence, they could choose how it was provided. Some of the poor, typically the old, the infirm, and children, were in some cases accommodated in Poor Houses. But the great majority were supported in their own homes with weekly stipends and rent and clothing subsidies, as in most modern welfare systems. Many families received a weekly cash allowance from the Overseers.

[8] Similarly in Wellesbourn Mountford in Warwick the overseer noted that "The Magistrates order each family 2s. per head a week; consequently character is not considered." Parliamentary Papers, 1834c, p. 554b.
[9] At other localities the prevailing wage was much above the subsistence level. Thus in Ash next Sandwich in Kent a family of 5 was entitled to 9 s. per week, while the prevailing wage was 14.25 s. per week.

By the early nineteenth century a substantial fraction of English families were in receipt of relief at some point in the year: 9% of the population in 1813-15, for example. In the rural areas of southern England the fraction was higher: 13% or more in these same years.

Poor relief payments per person varied widely across parishes. Figure 1 shows payment per person in 1829-33 by parish. The average was £0.8 per person, compared to a likely average wage income per person of £8 per year per person for laboring families (so poor relief payments on average were 10% or more of the budgets of laboring families). But in 5% of parishes payments were more than twice this average, and in 17% of parishes less than half the average.

We have detailed figures for Ardleigh in Essex for 1821-3 on who was in receipt of relief. Ardleigh at £1.2 per head was in the upper quintile of parishes in terms of relief expenditures. 28% of the population were in families in regular receipt of relief in 1823. In addition at least 22% of men aged 15-59 received unemployment payments at some point in the year 1821.[10]

Using a set of 787 parishes where we have information on average farm wage in 1832 we explored the source of this variation in the following regression:

$$PPN_{1829-33} = a + b_1 W_{1832} + b_2 FLABAG_{1831} + b_3 FCNTYARA + b_4 DEN_{1831} + b_5 DN + b_6 DSE + b_7 DSW$$

where W_{1832} is the estimated annual wage in farming in the parish in 1832, FLABAG the fraction of the men aged 21 and over engaged in farming, FCNTYARA the fraction of the land in the county the parish was in employed in arable farming in 1837, DEN_{1831} the population per acre in 1831, DN an indicator for the parish located in the north of England, DSE and indicator for the parish located in the SE, and DSW an indicator for the parish located in the SW (with the Midlands the omitted category).

[10] Essex Record Office, D/P 263/12/7-8.

Figure 1: Poor Payments per head, 1829-33 (£)

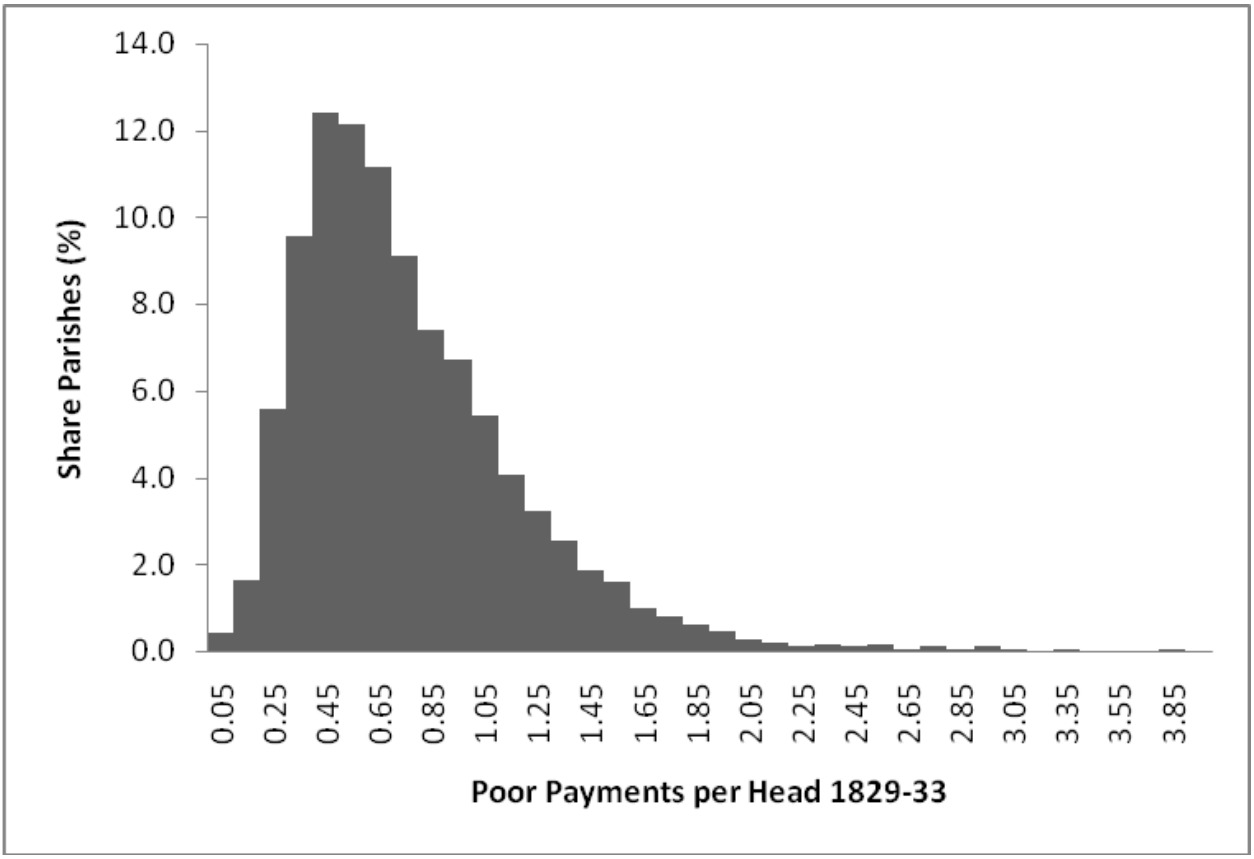


Table 1: Explaining the variation in poor payments per person, 1829-33

Variable	Coefficient estimate	Standard Error
Constant	**0.83**	**0.130**
Farm Wage 1832 (£/year)	**-0.010****	**0.0029**
Fraction of labor in agriculture	**0.559****	**0.059**
Fraction of county acreage arable	**-0.175**	**0.111**
Population density	**-0.012**	**0.009**
In North	**-0.356****	**0.042**
In South East	**0.240****	**0.033**
In South West	**-0.266****	**0.042**

The variables in the regression explain 39% of the variation in poor payments per person across parishes. Most of that 39% of explained variation came from the geographic location of the parish, rather than factors like the local wage, the importance of agriculture, or population density. If we omit these three variables from the regression the R^2 falls to 0.14. The South East of the country was a very high poor relief area, even controlling for wages, and the North a very low relief area. An important component here seems just to have been differences in regional "tastes" for providing welfare payments.

Since the average poor payment per person was £0.8, the difference of £0.6 between the average SE and N parish was very substantial. Rural parishes had substantially higher payments

than urban, again a £0.6 difference, compared to an average of £0.8, though since these parishes were mainly very rural this explains little of the variation. Higher wages had a very modest impact in reducing poor payments. Going from the lowest annual wage of £19 to the highest of £46 reduced poor payments per head by £0.27, which was much less than the regional or rural/urban differences.

The Poor Law Report of 1833

Though the formal elements of the poor relief system in place in 1833 had been established by 1700 or earlier, there was growing dissatisfaction with the system over time. This was in part because the costs and the share of the population relieved rose from a very small fraction of the population to the substantial proportion discussed above by the late eighteenth century. The old poor law was argued by the Poor Law Commission in its 1833 Report to have three significant social costs.

Reduced Work Incentives

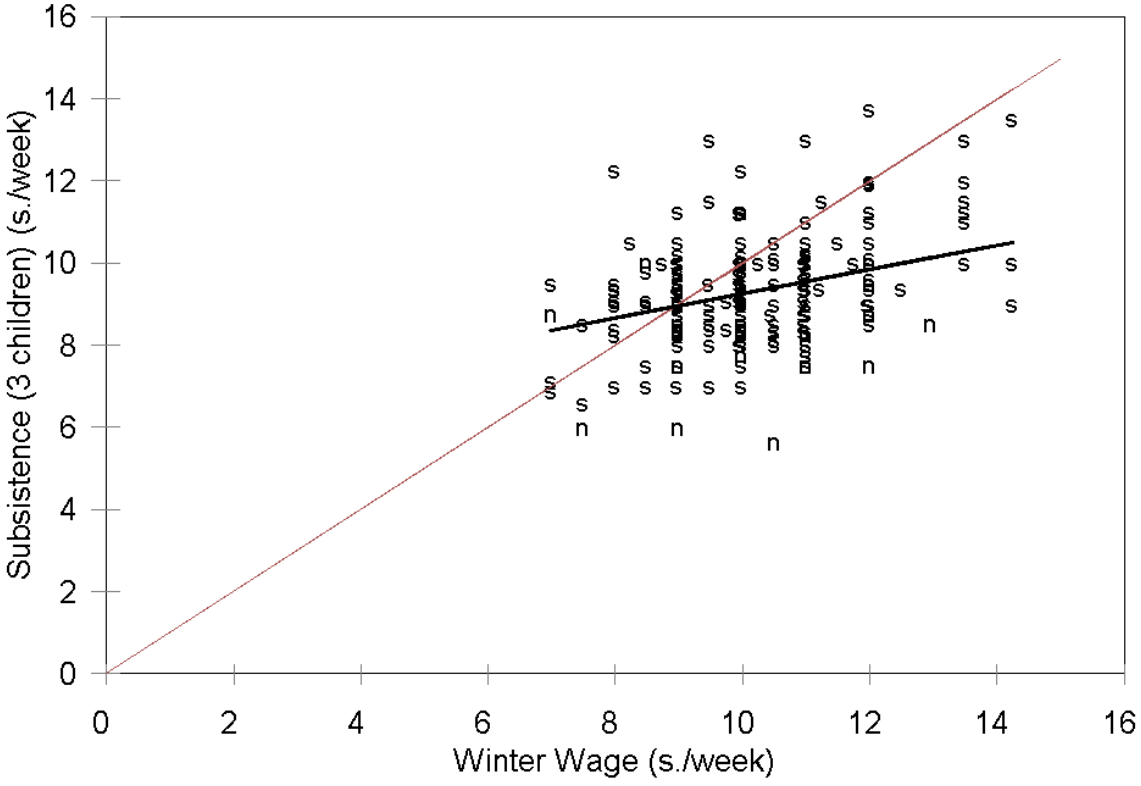
The poor law allegedly destroyed the incentive of workers to work hard at work, and to seek out employment if they were unemployed. In a parish where the market wage rate for a worker was below the guaranteed minimum, the worker faced effectively a 100% marginal tax rate. This seemingly should have reduced labor supply. It would also reduce effort even when at work, since the costs of unemployment were lowered. Both these effects would drive up labor costs per unit of labor supplied.

Figure 2 shows for 261 parishes or townships in 1832-3 both the reported weekly wage in winter for an adult male in agriculture, and the level of income at which the parish would start

supporting a family of husband, wife and 3 young children. As can be seen in a large number of parishes, roughly a quarter of the sample, a father of 3 would have his wage subsidized out of the poor rates in winter.

With a poor law minimum income guarantee in place farmers would thus have to boost the wages they offered. They also would get less effort from the workers, further driving up the cost of labor per unit supplied.

Figure 2: Winter Wages versus the Subsistence Allowance, 1832-3



Note: "s" indicates a parish in the south of England, "n" a parish in the north.

Reduced Labor Mobility

Since workers were guaranteed a subsistence income in their place of birth they had reduced incentives to bear the costs and hazards of moving in response to wage differentials. Thus, the poor relief system was alleged to create a misallocation of labor in the economy – slowing migration from the low wage rural parishes to the higher wage urban areas. This would have a reverse effect on labor costs in low wage rural parishes, increasing the labor supply. But it would do so by retaining in these parishes workers whose subsistence cost exceeded their marginal product of labor.

Reduced Investment

Finally, the Old Poor Law should have reduced landowners' incentive to invest capital in land improvement. Although the poor relief levels were set by the magistrates, they were paid out of parish taxes that were assessed on occupiers of housing and farmland according to the estimated rental value of the property. While land value was partly determined by soil fertility, it was also affected by investments in farmhouses, buildings, roads, fences and drainage systems. The tax rate on property under the Old Poor Law was as high as 40% in some rural parishes. In these parishes the required return on investments in land improvement would be correspondingly greater.[11] Thus the Old Poor Law reduced rural labor demand by discouraging investment.

[11] Another cost that contemporaries focused on, but we do not investigate here, was the alleged effects of the system in increasing the fertility of the poor. Since each additional child increased the poor relief allocation to the family the costs of fertility to poor households were thereby reduced.

Increased Fertility by the Poor

Since each additional child received a proportionate allowance it was feared that precisely for the poorest of the population, those in receipt of relief, the normal economic costs of greater fertility had been taken away. Where for richer groups earlier marriage implied more children and a substantial decline in living standards, for the poor earlier marriage had no costs.

The 1834 Reform

Poor Law Amendment Act of 1834 radically reformed the system. The safety net, the legal right to relief, was maintained, but now able-bodied applicants for relief were expected to enter a workhouse to receive it. In the workhouse, the conditions were deliberately planned to be wholesome but monotonous and confining. This was the so-called "Workhouse Test." There was to be no payment to relief to those living independently or as a subsidy to wages, except on a temporary basis in the case of illness. It was known that indoor relief was more expensive than outdoor, but the hope was that the new regime would discourage all but the truly needy from applying. Workers would instead migrate in search of work, limit fertility (through a later age of marriage), or just make do with what the market offered.

To ensure compliance with the reform objectives at the local level parishes were organized into unions, where the decision about who was entitled to relief, and how much relief to provide, was now to lie with the Board of Guardians of the union. The Board of Guardians was composed on the magistrates resident in the Union, along with an elected representative from each parish. In the election for the guardians, however, large occupiers and large landowners were given more votes.

The Effects of the 1834 Reforms on Poor Relief Expenditures

Though the 1834 reform was supposed to end all outdoor relief, there has been debate about how strictly it was actually applied. Local administration of poor relief still lay with the ratepayers and land owners of each parish. While very few able bodied males were listed as receiving unemployment relief or allowances in aid of wages in the early 1840s the numbers of adult males relieved outdoors on account of "illness" was significant, and Digby (1975) argued that this was just a disguised way of continuing outdoor unemployment relief. Apfel and Dunkley (1985), however, argue that in at least some counties such as Bedford the reforms were vigorously applied so that expenditures and particularly payments to the able-bodied fell sharply.

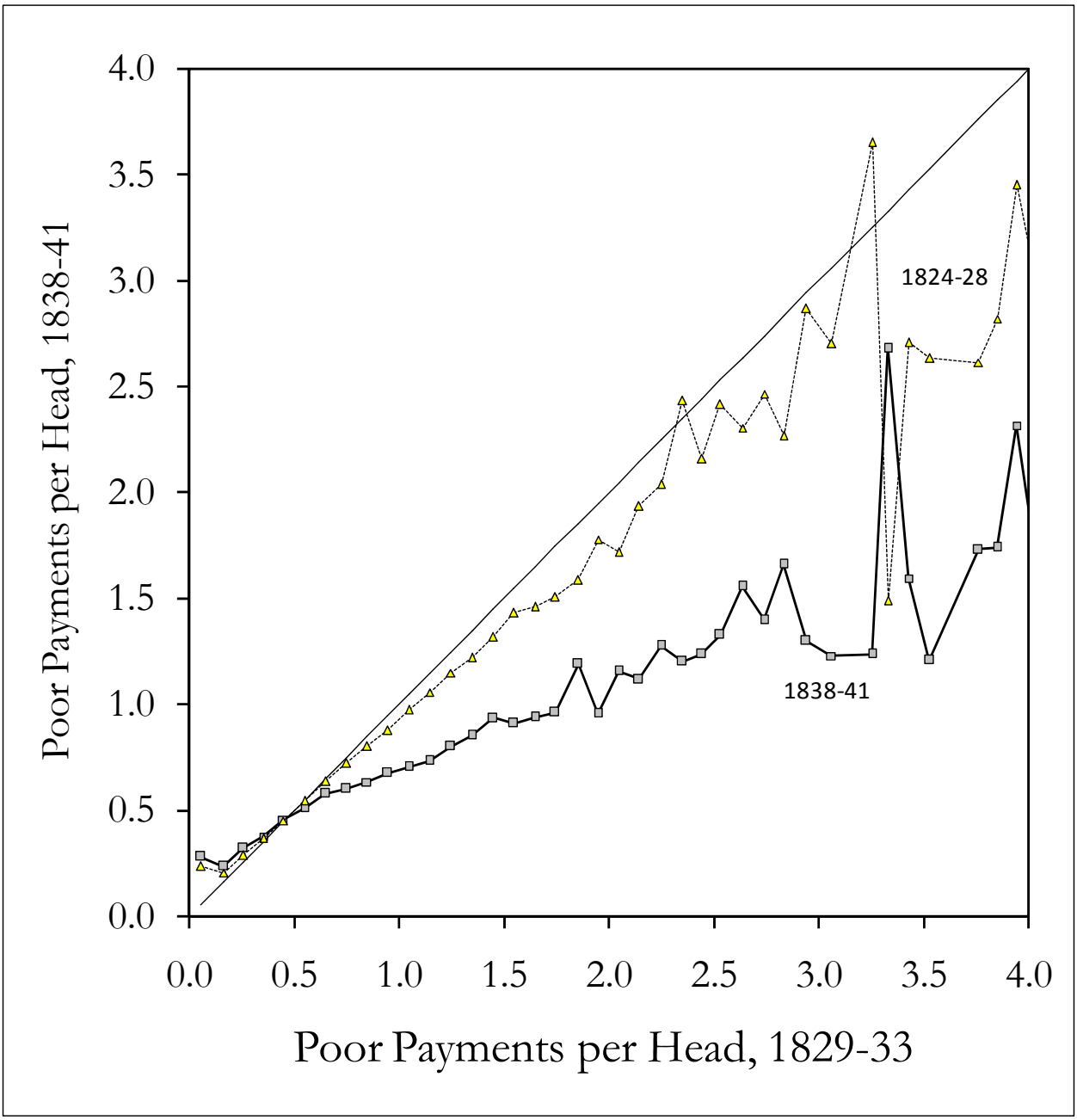
To check that the reforms did lead to cuts, and to examine the pattern of cuts, we have for a sample of 2,803 parishes and townships data on poor payments per person in the population in the five years 1829-33, just before the reform, and in the four years 1838-41 just after the reform. This data is summarized in figure 3 by the average level of payments per head in 1829-33. We looked at what happens to payments per person in 1838-41 and 1824-28 compared to how much was being paid per head in the base year.

In the years before the reform there is a strong correlation between the places with high payments in 1829-33 and those with high payments in 1824-8, with little sign of regression to the mean. The payment pattern across parishes is stable. After the reform the payment pattern is largely unchanged for parishes with payments per head of population of less than £0.60. For these parishes average payments per head went from £0.42 to £0.40. But in the higher paying parishes there is a clear pattern of cuts. The higher the payment the greater the proportionate cut. In our sample parishes paying more than £0.60 per year saw a decline in average payments per head from £1.07 to £0.68. Thus the reforms were imposing real cuts, and they were imposing

them in the areas of the higher relief payments per head.[12] Our interpretation is that in areas of low payments the relief payments before 1834 were principally to the elderly and orphans, and were not affected by the strictures of the New Poor Law. The areas of high payments per capita were those where the payments were subsidies to wages, and thus were cut. The effects found in aggregate also show up if we divide the data into three regions, the North, the South West and

[12] We include the 1824-28 data to show that the relationship between the payments in 1829-33 and 1838-41 cannot be just the result of larger random components in the higher paying parishes in 1829-33. If so the curve relating 1824-28 payments to 1829-33 would show a similar regression to the mean.

Figure 2: The effects of the New Poor Law by the earlier level of payments per head



the South East. In the north average poor payments per head fell from £0.48 to £0.44. In the south east average payments fell from £0.98 to £0.64.

We can explain 58% of the variance in the change in poor payments per head by parish or township between 1831-3 and 1838-41 (*ΔPPN)* with the simple regression specification

$$\Delta PPN = \alpha + \beta_1 PPN_{31-33} + \beta_2 DHIGH \bullet (PPN_{31-33} - 0.6) + \varepsilon \quad ,$$

where $PPN_{1829\text{-}33}$ is the poor relief payments per resident in 1829-33, and *DHIGH* is an indicator variable which is 1 when $PPN_{1829\text{-}33} \geq 0.6$. In contrast if we look at the changes under the old poor law regime between 1824-28 and 1829-33, then the same specification explains just 8% of the variance. Thus the regime change alone explains at least half of the changes in poor payments per head between 1829-33 and 1838-41.[13]

In the tests of the effects of the poor law reform below we will be using as an independent variable poor payments per acre in rural parishes, defined as those with the majority of workers employed in agriculture. Changes in poor payments per acre in rural parishes are even more predictable than changes in poor payments per head. If we translate the equation above into poor payments per acre by multiplying every term by people per acre in 1831 then we can explain 70% of the variance in changes in poor payments per acre between 1829-33 and 1838-41.[14]

[13] Addition of other variables such as indicator variables for local effects, for urban versus rural parishes, and for the poor law the parish belongs to can raise the R^2 to 0.64. But this implies that these other elements explain only a very small share of the variance.

[14] Again looking at the change from 1829-30 to 1831-33 the same variables explain only 2% of the variance.

Did the Old Poor Law have significant social costs?

The conclusion of the Poor Law Commission that the old system had significant social costs – through maintaining in the countryside an excess of poorly motivated unproductive workers – has not gone unchallenged. Mark Blaug (Blaug 1963, 1964) argued that poor relief payments under the Old Poor Law were too small to change workers' incentives. The relief payments mainly supported the elderly, and the infirm with little effect on work effort, migration, employment participation or fertility for workers. The Poor Law did involve a transfer from landowners to the poor, but without additional efficiency costs.

More recently George Boyer, has argued further that the Old Poor Law did not even transfer income from property owners to the poor, but instead reallocated labor costs in rural parishes from farmers to non-labor hirers such as the collectors of tithe payments. It persisted because rural landlords, whose tenant farmers operated the poor relief system within parishes, were gaining from the payments.[15]

Boyer pointed to the surprising geographic variation in relief payments under the Old Poor Law, noted above, as support for his argument. Payments per head of population were greater in rural parishes than in urban, and they were greater in the grain growing South East than in the equally poor but pastoral South West. The reason for this, argues Boyer, was that labor-hiring farmers used poor relief to supplement wages. Such farmers operated within a competitive labor market, and needed to pay enough to retain adequate labor in the countryside. By laying-off workers when labor demand was low in winter, and having them supported by the parish, they reduced net labor costs since the occupiers of the houses and the tithe owners paid part of the poor relief. This device was only profitable if there is a period where the marginal

[15]Boyer, 1990.

product of farm workers is very low. This explains more extensive poor relief payments in the grain areas where labor demand was much more peaked in the summer.

Since poor relief payments were being used largely to substitute for wages they would also have no effect on labor migration between country and town. Boyer did find that the poor law enhanced fertility, however.

Boyer's primary empirical support for his theory is data from the Poor Law Commission on a cross section of parishes in 1832-3. He shows that parishes with higher poor law payments were those with more seasonal labor demands, and also those with a larger proportion of ratepayers who were farmers. However, as is shown below in table 2 even entirely urban parishes in the South East paid more per person in poor payments in 1831-3 than urban parishes in the west and north. Poor payments per head in the most urban parishes, those with fewer than two males in 10 listing their occupation as agricultural in 1831 followed the same regional pattern as those in the most rural parishes, those with more than 8 in 10 males employed in agriculture. This evidence starkly conflicts with Boyer's particular political economy story. The pattern of urban poor relief follows fairly closely the pattern in rural areas.

Table 2: Urban and Rural Relief Payments by Region, 1829-33

Region	**Most Urban** Number of Parishes	**Most Urban** Poor Payments per head	**Most Rural** Number of Parishes	**Most Rural** Poor Payments per head
South East	122	£0.78	810	£1.18
Midlands	142	£0.68	683	£0.90
North	340	£0.25	330	£0.77
South West	163	£0.35	421	£0.65

The Social Costs of the Old Poor Law

We can estimate the net social cost of the Old Poor Law per £1 transferred to the poor by looking at the net gain in land rents in rural parishes after the reform.

Assume that the farmland rent in each parish i with poor payments of 0 would be in year t $\psi_t V_i$. When a poor rate is charged the actual rent becomes

$$RENT_{it} = \psi_t V_i - b \bullet POOR_{it} + \varepsilon_{it} \qquad (1)$$

The change in rent between the earlier period and 1842 is thus

$$\Delta RENT_i = \Delta\psi V_i - b \bullet \Delta POOR_i + \Delta\varepsilon_i \tag{2}$$

If the ratio of poor payments to land rents is not too large, then

$$TRENT_{i1842} = RENT_{i1842} + POOR_{i1842} \approx \psi_{1842} V_i \tag{3}$$

Dividing both sides of (2) by $TRENT_{i1842}$ gives us

$$\frac{\Delta RENT_i}{TRENT_{i1842}} \approx \left(\frac{\Delta\psi}{\psi_{1842}}\right) - b\frac{\Delta POOR_i}{TRENT_{i1842}} + \frac{\Delta\epsilon_i}{TRENT_{i1842}} \tag{4}$$

Thus our basic estimation equation is

$$\frac{\Delta RENT_i}{TRENT_{i1842}} = a - b\frac{\Delta POOR_i}{TRENT_{i1842}} + e_i \tag{5}$$

$\frac{\Delta POOR_i}{TRENT_{i1842}}$ measures the change in the tax rate on farm land in each parish between the two periods. b measures the fraction of the reduction in the tax rate which gets translated into higher rental values for land owners.

If poor payments are just a transfer to the needy from landowners, with no effects on investment, wages, or labor efficiency, then changes in wages and capital will be zero, and the estimate of b from the reduced form will be –1. This is the result implied by Blaug's views.

The Poor Law Commission interpretation, however, was that poor relief was reducing investment in land improvement by driving up the cost of capital, and raising the effective cost

of labor. In this case when we estimate the reduced form we will find b << -1. For in the reduced form it will pick up also gains in rent after reform from the lower real labor cost and the greater investment in land improvement.[16]

On Boyer's interpretation, where poor relief payments were mainly a replacement for wages, the reduced form estimate of b will actually be positive. For if we assume that wages in each rural parish are set by the wage level in the nearest urban community, then the total of poor relief plus wage payments in each parish will not change after the reform. Thus for every £1 of relief payments avoided wages have to be supplemented by a £1. But since others were paying some of the taxes landowners end up paying an increased wage bill, and hence land rents fall. The system persisted for so long, argues Boyer, because it was in landowners' interests in rural areas where they controlled poor relief policy.

The reduced form estimation above will give a biased estimate of the total effects of poor relief reforms on land rents if the changes in poor relief payments were partially endogenous. Suppose, for example, poor relief payments were cut more in 1829-33 to 1838-41 in parishes close to growing urban areas because of a more buoyant demand for labor. The growing urban areas would also increase land rents. In this case the estimated value of b will be biased downwards from the true value. To rule out this possibility we will also use instrumental variables where, based on the results above, we instrument for cuts in poor payments per unit of value using the 1829-33 poor payments per head to predict the expected poor rate payment reductions in each parish. Since the instrument depends only on features of the parish before the

[16] If the Poor Law reform led farmers to change the day wage for workers it will complicate the interpretation of β. Suppose day wages fell when poor relief was cut, because they were kept artificially high by the need to provide workers with incentives to labor well. Then some of the rent gain from the reform would just be a transfer from workers. In this case β will set an upper bound on the social cost.

cuts in welfare payments it is purged of any endogenous connection between changes in rents and changes in poor rate payments in a parish after 1829-33.

Reform and Labor Allocation

The estimation above does not deal with the second cost of the Old Poor Law alleged by the Poor Law Commission, delaying migration from country to city. Boyer and Blaug, of course, both argue that the system had no effects on migration. In Boyer's view the payment cuts after 1834 were replaced by farmers offering more winter employment. Boyer (1990) following the method of Williamson (1987) also shows that even if poor relief did raise incomes in rural parishes above the market clearing level, the net loss to the economy from this misallocation of labor would have been modest.[17]

If the Poor Law Report is correct, however, there should have been a decline in the relative population of rural parishes which had the largest cuts in poor relief payments between 1831 and 1841. To test for this we estimate the parameters of the expression

$$\left(\frac{N_{41}-N_{31}}{N_{31}}\right)_i = a + b\Delta PPN_i + \sum_j c_j CONTROLS_{ji} + e_i \qquad (6)$$

where N_{31} and N_{41} are the parish populations in 1831 and 1841, and *PPN* are poor payments per head of population. If Boyer or Blaug are correct *b* should be zero. If, however, the Old Poor Law was supplementing the wages of the able bodied above the market wage rate in the countryside, rural parishes where the Poor Law Reform saw large payment reductions will experience population losses. In the *CONTROL* variables will be included soil type, the

[17] Though the loss as a fraction of poor payments would have been greater.

percentage growth of population from 1821 to 1831, the population density in 1831, the fraction of labor in 1831 in agricultural employment and measures of parish location relative to urban centers.

As with the change in rents the issue of the exogeneity of ΔPPN again arises. Suppose parishes are subject to shocks in labor demand in a way not controlled for by the *CONTROL* variables. Then a parish which experienced a positive labor demand shock between 1833 and 1841 could see both a decline in relief payments per head and a larger than expected population relative to 1831. We will deal with this again by using an instrument for ΔPPN. In this case it is

$$DHIGH \bullet (PPN_{31-3} - 0.6)$$

The correlation of this instrument with ΔPPN is 0.71, which is again very good. Again since the instrument depends only on features of the parish before the cuts in welfare payments it is purged of any endogenous connection between changes in poor rate payments in a parish after 1831-3 and changes in population.

Data

Because of the intense public debate about reforming the poor law, the English collected a great deal of information about poor payments, population and occupations by parish in the years 1803-1842.

For the tests outlined above we will measure farmland rents in 1842 from the tax valuations for this year. The rental value for properties let within 7 years of the assessment (i.e. 1835-42) was the contracted value. For properties on longer leases it was the assessed market value. Thus the land rents measured in 1842 all stem from the post reform period. We added any tithe payments to the rents, so that the 1842 measure is for all rental claims on the land.

Only parishes with at least half the male labor force in farming in 1831, and more than 2/3 of the property value coming from land in 1842 were included so that we are dealing with largely rural parishes.

There is no parish level data available on land rents before the reform. To get rental values in the years before the reform we use data collected by Clark on newly formed rents (and tithes) on individual plots within parishes in the years 1820-1834. From these we estimate parish rental values before the reform. From 5,739 plot rentals we estimate 2,430 rural parish land rentals before the reform. To get the parish rental we multiply the rent per acre of the plot by the total parish land acreage. This introduces some error. Even for rural parishes there were some where a large part of the land was not used for agriculture, being too hilly. Thus this procedure will tend to overestimate the earlier parish rentals by an amount that is greater for less densely populated parishes. Since this error is occurring on the RHS of the estimating equation is will not bias the results, as long as we include controls for things like population density which will influence the size of the error.

Our earlier estimated parish rent per acre for 1824-33 is clearly linked to rents per acre in 1842.[18] Thus if we regress the average rental value per acre of holdings in the years 1820-1834 ($rent_{20\text{-}34}$) in the sample of rural parishes on the rental value per acre of the parish as a whole in 1842 ($rent_{42}$) the estimate is

$$Rent_{20\text{-}34} = \underset{(.047)}{1.011} + \underset{(.031)}{0.560}\, rent_{42} \qquad R^2 = 0.13$$

The 1831 census supplies information for each parish on the population, the number of resident farmers hiring labor, the number of resident farmers not hiring labor, and the numbers of

[18] We use rents per acre since parish sizes varied greatly, so that regressing the total rent in 1820-34 versus 1842 would include a spurious correlation.

agricultural laborers. We can thus identify rural parishes where most employment in 1831 was in agriculture. Clark formed a database for all the parishes of England giving the location of the parish, the soil and subsoil characteristics, and the enclosure history (based on Tate's work). This database can be augmented by the information on land use in the years 1838-45 from the Tithe Survey of England and Wales that has been coded by Kain and Prince. Thus we have a fairly rich set of variables to draw from to control for influences on rent movements other than taxes to pay for poor rates.

The Gains to Landowners from the Poor Law Reforms

Table 4 shows the results of estimating equation (5) using both Ordinary Least Squares and Instrumental Variables. We include also three control variables in the regression. Another change that was occurring in English agriculture in this period was the conversion of land from common status to private status. This change was accompanied by an increase in rents. We know fairly well the fraction of land that was still common in parishes in 1842. We know also the fraction of the plots that was used for the earlier rent estimate that was common. Thus we can construct a measure of the change in the fraction of common between our estimates for these two dates. This variable is included as a test, since we know the magnitude of this coefficient should be around -0.18 for this period based on earlier work on the gains from enclosure of common land in this period.[19] We also include measures of population density in 1831 and the share of males aged 21 and over who were farm workers in 1831 as controls for differential rent trends in more urbanized parishes and more fertile land.

[19] Clark, 1998, p. 88.

Table 4: Estimate of the Effects of Poor Payments on Land Rental Values

Independent Variables	OLS	OLS	IV	IV
ΔPoor Rate/Property Value	-0.154 (.236)	0.300 (.265)	-1.036** (.286)	-0.248** (.326)
ΔShare land common	-	-0.390** (.091)	-	-0.391** (.091)
Population per acre, 1831	-	1.376** (.194)	-	1.295** (.196)
Fraction of farm workers, 1831	-	0.823** (.161)	-	.806** (.161)
County dummies?	No	Yes	No	Yes
Number of parishes	2,207	2,207	2,207	2,207

The main result that emerges is that the decline in poor rate payments did very little towards increasing property values. The results are stronger with the instrumental variable estimates, but even there the implication is that each £1 saved in poor rate payments increased rents by only £0.25. We can certainly rule out with confidence the idea that poor rate payments imposed more burden on rents than the actual amount collected. The most plausible interpretation is that the poor payments which were being cut were largely serving as a subsidy

to wages, and that farmers had to increase wage payments to compensate for the decline in these payments.

This interpretation is supported by Table 5, where we report OLS and IV estimates of the parameters of equation (6) linking population change to changes in poor payments pr head. Population rose in the predominantly rural parishes in our sample by an average of 8% in the 1830s, which is much less than for England as a whole so that most of them were experiencing significant out migration.[20] The average poor payment per head in 1829-33 was £0.8, which represented more than 10% of the income of rural laboring families. With the OLS estimation there is a significant negative association between the change in poor relief payments per head and the population change. This is because parishes where poor payments per head fell saw greater population growth. Thus the 15% of parishes which saw poor payments per head fall £0.5 or more had a population growth of 12% on average between 1831 and 1841, while the others had an average population growth of only 8%. But this association seems to come mainly from unobserved shocks on labor demand that both increased population and reduced poor relief payments. For with the instrumental variable estimation this association disappears. Poor payment cuts had no statistically significant association with population growth.

[20] We excluded parishes where less than 50% of males were employed in agriculture in 1831, and where the population in 1831 was less than 50 people.

Table 5: Estimate of the Effects of Poor Payments on Population Changes, 1831-41

Independent Variables	OLS	OLS	IV	IV
ΔPoor Expense/Person	-0.138** (.008)	-0.172** (.009)	-0.003 (.011)	0.018 (.013)
Population Density, 1831	-	-.123** (.028)	-	-.090** (.029)
Fraction agricultural, 1831	-	0.069** (.021)	-	0.059** (.021)
$(N_{1831}-N_{1801})/N_{1801}$	-	0.053** (.008)	-	-.070** (.023)
County dummies?	No	Yes	No	Yes
Number of Parishes	6,948	6,948	6,948	6,948

Note: * Statistically significant at the 5% level. ** Statistically significant at the 1% level.

Indeed the best estimate from table 5 is that a reduction of poor payments in a parish equivalent to about 5% of annual wage income for all workers, which would be twice the average decline, would lead to a decline in population between 1831 and 1841 of 0.7%. Thus whether the population movements induced by the poor law reform were statistically significant or not, they would have an imperceptible impact to the average person in England in 1834.

The failure of population to adjust is consistent with the possibility advanced above that farmers had to compensate workers for the decline in poor relief payments, and that the labor market was actually in equilibrium before the reform of the poor law. The population

movements after the reform of the Old Poor Law are inconsistent with the law having large efficiency effects through misallocation of labor. This result is consistent with Boyer's theory of the law, and also with the idea that poor relief was a transfer mainly to the truly indigent.

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