

Are Judges Sensitive to Economic Conditions? Evidence from UK Employment Tribunals

Ioana Marinescu,
University of Chicago

Abstract

This paper investigates whether judges deciding on unfair dismissal cases are sensitive to economic conditions faced by workers and firms. Using British data and controlling for case selection, I find that both the unemployment and the bankruptcy rates significantly decrease the probability of judges deciding in favor of dismissed employees. A one point increase in the unemployment rate leads to a 7 points decrease in this probability; this effect is however not significant for unemployed workers. These findings are consistent with the idea that judges, while tailoring firing costs to economic circumstances, are somewhat more sensitive to firms' interests.

JEL codes: J52, J65, K31, K41

1 Introduction

The legal regulation of contracts has important consequences for the incentives of economic agents to enter such contracts and abide by the contractual arrangements made. In the area of labor regulation, the legal costs of employment termination affect outcomes such as wages and employment levels. These costs can be particularly high if employers and employees disagree about the terms of the separation. Such disputes arise frequently due to a combination of the incompleteness inherent in employment contracts (Malcomson, 1999) and the institutional arrangements that are supposed to deal with the associated enforcement problems. Guided by the idea that workers' bargaining power is typically lesser than firms', regulators have been especially intent on protecting workers' interests in the event of employment termination. Thus, in most OECD countries, workers have a statutory right not to be unfairly dismissed, and this right can be pursued in front of labor courts. Even in the US, where no such

statutory right exists, there are multiple instances in which workers can dispute the legitimacy of the grounds for the termination of their employment. Examples include anti-discrimination legislation (Oyer and Schaefer, 2000), state-level exceptions to the employment-at-will doctrine (Autor et. al., 2006), and arbitration in unionized firms. Allowing workers to sue their employers over the termination of employment gives rise to firing costs. There is a large body of literature discussing the impact of firing costs and employment protection legislation (EPL) on unemployment (OECD, 2006), but it is also possible for causality to run in the opposite direction, from unemployment to firing costs. Indeed, the costs borne by firms due to the regulation of employment contracts are determined both by the letter of the law and the way in which judges enforce the law (Bertola et al., 1999). Since economic conditions alter the payoffs to firms and workers resulting from the termination of an employment contract, they may influence judges' determination of what is fair in each particular case. Moreover, judges may feel that in a high unemployment context, it is more necessary to protect jobs, and they may thus become more pro-workers; conversely, judges may become more pro-firms if they feel that making firms bear extra costs when economic conditions are bad leads to increased bankruptcy risk.

This paper uses rich datasets from the U.K. to assess whether economic conditions affect judges' decisions in unfair dismissal trials. First, I use aggregate data over the period 1985-2001. Second, I use a representative sample of applications to U.K. employment tribunals in 1990-1992, which contains a very rich set of case characteristics variables, allowing me to examine whether the selection of cases going to trial is influenced by economic conditions.

The literature on the effect of macroeconomic conditions on labor courts' decision has been scarce. Using regional aggregated data, Macis (2001) finds a negative effect of

the unemployment rate on the share of employees winning their unfair dismissal cases. Using both macro data and time-series variation in unemployment rates and micro data and regional variation in unemployment, Marinescu (2003) finds that French workers are less likely to prevail in unfair dismissal trials when the unemployment rate is higher. However, neither of these studies could carefully control for case selection. On the other hand, Ichino et al. (2003) do control for case selection. They use micro data from a large Italian bank combined with Macis' macro data and find a positive effect of the unemployment rate on the probability of an employee winning the unfair dismissal case. They also find that workers whose cases are tried in higher unemployment contexts have weaker cases.

The paper is structured as follows. Section 2 gives some background on British Employment Tribunals, examines why we might expect judges' decisions to be influenced by economic conditions, and describes the data used. Section 3 investigates whether the quality of cases going to trial depends on economic conditions. Section 4 gives the results of the empirical analysis of the impact of economic conditions on judges' decisions. And section 5 concludes.

2 British Employment Tribunals and data used

2.1 British Employment Tribunals and the employment law

Most European countries have specialized labor tribunals to deal with unfair dismissal cases, and labor law cases more generally. It is widely assumed that dealing with these matters requires some knowledge of common practices among firms and workers. Some countries, such as France and the United Kingdom, have decided it is in the best interest of equity to have representatives of employees and employers act as judges and provide the expertise required. In the United Kingdom, the employment

tribunal¹ is composed of one chairperson, a professional judge², and two appointed lay judges, one representing employers and the other representing employees. The lay judges are chosen by the administration from lists of persons proposed mainly by trade unions (for lay judges representing employees) and employer groups (for lay judges representing employers).

The United States have no such specific labor courts, but the Employment Tribunals' setting in the United Kingdom is similar to the arbitration scheme used in unionized firms in the United States to decide on issues where employers and unions disagree³ (Ashenfelter and Bloom 1984). In both cases, the institutional setting is meant to achieve some equitable compromise between firms' and workers' interests. In an experimental study, Farber and Bazerman (1986) find that, when deciding on a wage increase, the arbitrator reacts in an asymmetric way to firms' financial situation. Compared to a medium situation, worse financial conditions lead to a discount in the award made by the arbitrator and better financial conditions lead to a premium. Interestingly enough, the premium is significantly lower than the discount. This shows that arbitrators are particularly sensitive to firms' interests in bad times, and suggests that judges in labor courts may react in a similar fashion.

Although the economics literature on US arbitration has focused on wages issues, issues of discharge and disciplinary action are the most common (see www.fmcs.gov), just as in the case of British Employment Tribunals. In what follows, I am going to

¹ These tribunals were called "industrial tribunals" in England and Wales until 1998.

² To qualify for appointment as a chairperson, candidates must have been qualified as a lawyer for at least seven years. This eligibility criterion also applies to other judges such as District Judges (Courts and Legal Services Act 1990).

³ However, while parties in the US can choose an arbitrator, parties in Employment Tribunal cases get assigned a judging panel.

concentrate on cases concerning dismissal, although I also have data on other types of cases such as unfair deduction from wages, and race and sex discrimination⁴.

Once he/she has been dismissed, the employee can bring a case to court, either to ask for some severance/redundancy payments if those are absent or insufficient, or to ask for compensation for unfair dismissal. It is important to notice that the first category of cases (redundancy and severance payments) is closer to the second one (unfair dismissal) than it may seem at first glance. Indeed, if the employer claims very serious misconduct on the part of the employee, then the employer need not pay any severance payment to the employee. In those cases, the employee, without claiming there was no reasonable ground for his/her dismissal, can still claim that the misconduct was not as severe as to deprive him/her of a severance payment; this is then very close to saying that the dismissal was in some way unfair⁵.

The British law governing unfair dismissal cases is formulated in such a way that it explicitly allows judges to take into account circumstances other than the mere facts pertaining to the case (the “substantial merits of the case”):

“the determination of whether the dismissal was fair or unfair, having regard to the reason shown by the employer, shall depend on whether in the circumstances (including the size and the administrative resources of the employer’s undertaking), the employer acted reasonably or unreasonably in treating it as sufficient reason for dismissing the employee; and that question shall be determined in accordance with equity and the substantial merits of the case.”

⁴ I tested for the influence of economic conditions on those other cases and found similar but less significant effects. The sample however is too small to provide reliable results.

⁵ In the US, a worker who is discharged for cause is disqualified from unemployment benefits. The worker can appeal his disqualification by trying to show that his termination was not a discharge for cause but a layoff.

(Employment Protection (Consolidation) Act 1978 s. 57(3), as amended by Employment Act 1980, s. 6).

Note that the list of circumstances is not explicitly limited and therefore economic conditions could also in principle be included, as workers' misconduct is arguably more costly to firms when economic conditions are worse. Decisions shall also depend on "equity", which suggests that judges should compromise between firms' and workers' interests.

To see how these considerations apply to a specific case, we can take an example from a 2003 Employment Tribunal decision concerning the allegedly unfair dismissal of a truck driver. After an accident resulting in damage to the truck, the employer summarily dismissed the driver without notice for gross misconduct ("reckless driving"). The employer argued that this was gross misconduct as it was a financial disaster for his business: he could not afford to increase insurance premiums by claiming on the insurance policy for the damage to this vehicle. Thus, deciding whether the employee was guilty of a gross misconduct partially depended on judges' view about whether the employee's misconduct was endangering the financial position of the firm; if economic conditions were bad, the argument of the employer would sound more credible. In this case, the worker ended up winning mainly on the grounds that, contrary to the company's policy, the employer had not given him an opportunity to explain himself.

At this point, one might wonder whether appeal courts would allow judges to give their own interpretation of the fairness of the dismissal based on considerations such as economic conditions. As it happens, the Court of Appeals decision in the *Gilham and others v. Kent County Council* case in 1985 leaves tribunals full discretion to decide on matters of facts: "Now whether or not an employer has behaved reasonably

in dismissing an employee is a question of fact, and it is a question upon which different people, looking at the same set of circumstances, may reasonably come to different conclusions. It is therefore endemic in a system where there is no appeal on fact [because of the high costs it would involve] that from time to time different industrial tribunals will give different answers to broadly similar situations [...]”. Thus, the functioning of the British dismissal law does not preclude Employment Tribunals judges from taking into account local economic conditions when deciding on whether or not a firm has acted reasonably in dismissing an employee. I will now discuss how economic conditions may indeed affect judges’ decisions.

2.2 Judges’ decision making and economic conditions

Economic conditions can affect judges’ decisions in two ways:

1. Directly, as an element taken into consideration in judges' decisions.
2. Indirectly, by the influence they may have on the worker’s and the firm’s behavior before the trial, which in turns affects case quality.

Let q be the case quality as perceived by the judges, and u an indicator of economic conditions, such as the unemployment rate. Let q^* be the judges’ standard independently of economic conditions. Higher q indicates better case quality and higher u worse economic conditions. We can assume that the condition for the worker winning the case is:

$$q > q^* - u\alpha \tag{1}$$

The right-hand side expression is the cut-off for the worker winning the trial: when this cut-off goes up, relatively higher quality cases end with a loss for the worker. Hence, a higher right-hand side indicates that judges are more severe on workers. If $\alpha = 0$, then judges do not take into account economic conditions and their standard is

q^* . If $\alpha < 0$, the cut-off goes up with worse economic conditions, i.e. judges are more severe on workers when economic conditions are worse. The opposite holds if $\alpha > 0$.

In the case where $\alpha \neq 0$, it is not obvious whether α should be negative or positive, i.e. whether, for a given q , judges should be more or less severe on workers when economic conditions are worse. Indeed, bad economic conditions have a negative impact on both firms and workers. They typically affect firms through lower profits and an increased bankruptcy risk, and workers through lower real wage growth and higher unemployment.

Judges can be assumed either to pursue some political or career interests, or to maximize welfare. Given that the judging panel is composed of three members, one lay judge representing employees, another lay judge representing employers and one professional judge, it is likely that the professional judge will be pivotal in most cases. Professional judges in the United Kingdom have a life appointment and scholarly work shows that they are politically independent (Salzberger and Fenn, 1999, Stevens, 1999). Thus, there is no particular reason to expect narrow career concerns or political pressures to play an important role in judges' decisions. Moreover, it is not clear how these motives would determine to what extent economic conditions should influence judges' decisions.

Thus, it may be reasonable to assume that judges try to render what they perceive as being good decisions. If judges try to maximize welfare, they can either try to maximize social welfare, or the welfare of the parties involved in each particular case. If judges try to maximize *social welfare*, they are confronted with the following trade-off. On the one hand, in bad times, financial pressure on firms increases, and so does the bankruptcy risk. Thus, any extra cost imposed on firms could have important

consequences in terms of lost profits and lost jobs. On the other hand, as firing tends to be already high in bad times, being more severe on workers could encourage firms to fire even more, which would have adverse consequences for unemployment and aggregate demand. If the first effect dominates, then $\alpha < 0$, i.e. judges are more severe on workers in bad times compared to good times. If the second effect dominates, then $\alpha > 0$. If judges try to maximize the *welfare of the parties*, they have to consider, in each particular case, whether the dismissed worker or the firm suffers more from degraded economic conditions. Relevant to this evaluation is the employment status of the plaintiff. Indeed, if the dismissed worker has already found a new job, worse or better economic conditions have relatively little effect on his employment prospects. By contrast, worse economic conditions are likely to affect the time it takes an unemployed worker to find a new job, as well as the quality of that new job. Thus, we can conclude that, if judges maximize the welfare of the parties, firms are more likely to be favored when the worker is employed, i.e. α is strictly lower if the worker is employed rather than unemployed at the time when his case reaches judgment.

Overall, there are many reasons why economic conditions could affect judges' decisions, and the impact of economic conditions in a case of given quality is mostly undetermined. The only unambiguous prediction that seems to have some ex ante plausibility is that, if judges maximize the welfare of the parties, then, relative to employed workers, unemployed workers are more likely to win their cases when economic conditions are bad.

Do we expect to see any differences in α depending on whether the bankruptcy rate or the unemployment rate is used to represent economic conditions? The unemployment rate should affect relatively more the well-being of workers and the

bankruptcy rate the well-being of firms. If judges aim at maximizing social welfare, this difference between the two variables does not have any obvious implications for α . If judges aim at maximizing the parties' welfare however, this difference becomes relevant. Workers who are still unemployed suffer more from a higher unemployment rate than from a higher bankruptcy rate, and hence we expect judges to be relatively more likely to decide in favor of the unemployed worker when the unemployment rate is higher rather than when the bankruptcy rate is higher.

2.3 Data used

I have data on individual cases, coming from the 1992 survey of Employment Tribunal Applications in Great Britain (Tremlett Banerji, 1994). This survey was conducted in the following way. First, a random sample of applications completed between January 1990 and October 1991 was drawn; then, employers and employees involved in those cases were interviewed⁶. However, to save on resources, the survey managers decided to interview all employers and only half of the dismissed employees involved in the cases of the sample. To maximize sample size, I therefore use the variables available from the employers' interview: I obtain 1311 cases, of which 471 got to full tribunal hearing. The only variable used in this analysis that was only asked of the worker is the employment status (i.e. whether currently unemployed) of that worker. When both employer and worker answer the same question, they tend to agree with very high probability: there is agreement in 96.5% of the cases about whether the worker won the case, and in 86% of the cases about the specific reason the employer put forward to dismiss the worker. Overall, the sample is constructed to be representative of all cases, withdrawn, settled or heard. Many

⁶ The response rate for employers that could be contacted and were interviewed about unfair dismissal or redundancy payment cases was 77%.

variables are available, including the reason for dismissal, and information on all the stages of the case from application to tribunal hearing, including details of settlements, such as the amounts firms offered to workers for a settlement.

Among the available variables, I pick a set X that will constitute the control variables: they are variables concerning case characteristics, worker characteristics and firm characteristics listed in table 2. I report summary statistics for these variables for the population of surveyed applicants, and for the sub-sample of applicants whose cases end by a full tribunal hearing. Note that I include in particular two dummy variables allowing me to distinguish economic dismissals or redundancy payment claims from other cases, which is crucial as one may fear that the effect of economic conditions, if any, only concerns this type of cases.

All variables in X are potentially correlated with case quality, but two among these variables are most likely to be a good measure of case quality. First, I define a dummy variable for bad misconduct: this dummy is equal to 1 if the reason for the workers' dismissal was misconduct in relation with health and safety (hygiene, smoking, drunkenness), violence or theft. This definition was chosen both on a priori grounds and because these "bad misconduct" cases have a significantly higher probability of being deemed fair dismissals by judges. Second, I use the settlement offer made by the firm to the worker: indeed, as the settlement offer is made by the firm to the worker in order to convince the latter to give up going to full tribunal hearing, it must be that the higher this offer given other characteristics, the more the worker is likely to prevail at trial, i.e. the higher the worker's case quality⁷. Note that the reason why settlement offers are lower for cases that go to full trial is because 80% of dismissed

⁷ In as much as firms anticipate that judges' decisions depend on economic conditions, controlling by settlement offers may dampen the direct effect of economic conditions on judges' decisions. Therefore, finding no effect of economic conditions on judges' decisions when controlling for this variable would not show that there is no effect, whereas finding some effect would consolidate the robustness of the results while indicating that firms may not have perfect information about judges' decision rule.

employees who do get an offer accept it, and therefore there is a high proportion (88%) of employees with no offers among those who go to full trial.

I use two variables to reflect economic conditions: the unemployment rate, which pertains to labor market conditions and therefore should affect workers relatively more than firms, and the bankruptcy rate, which should affect firms relatively more than workers. Both measures are defined as of the time of application⁸. The unemployment rate I used is the claimant count rate in the region and month of application. Therefore, we have both cross-sectional (12 regions) and temporal (monthly) variation. The bankruptcy rate is the yearly bankruptcy rate (VAT deregistration statistics, statistics available on the Small Business Service website, www.sbs.gov.uk) by industry and region; the identification comes from 3 years, 12 regions and 9 industries. As can be seen in Table 1, the variation in economic conditions in the sample is quite substantial, so that prospects for meaningful estimation are good. Moreover, it is important to notice that the average unemployment rate and bankruptcy rate in the sample of applicants who go to full trial does not significantly differ from the average of these variables in the sample of all applicants. Therefore, it does not seem that workers' propensity to go to full trial is correlated with economic conditions. In the next section, I examine in more detail the evidence about the impact of economic conditions on case selection.

3 Evidence on selection

In order to estimate the impact of economic conditions on judges' decisions, one could readily use a probit model, controlling for relevant observables. However, cases judges decide on are doubly selected: first, workers need to be dismissed workers and

⁸ If we define these variables as of the time of the full tribunal hearing for the cases that go to trial, the main results are very similar, which is not very surprising since the mean duration between application and full tribunal hearing is 4 months.

apply to the Employment Tribunal, and second they need to pursue the case until full tribunal hearing instead of settling or withdrawing the case. Through this two-stage selection process, unobserved case quality may come to be correlated with economic conditions, leading to biased estimates. This section examines the evidence for selection at these two stages of the process. In both cases, two questions are answered. First, are cases more likely to proceed to the next stage when economic conditions are worse (or better)? Since it can reasonably be assumed that better quality cases are more likely to go to the next stage, more cases means, all other things equal, a worse average case quality. Second, are the observed characteristics of cases at a given stage, and in particular our two measures of case quality, correlated with economic conditions? If it can be assumed that the impact of economic conditions on unobserved case quality is similar to the impact on observed case quality, this provides a useful further test for selection.

3.1 The selection of the sample of applicants to Employment Tribunals

I use three empirical strategies to examine selection at this stage. First, observations on the total number of applications to Employment Tribunals can shed light on this issue. Assume that workers are fired if their case quality is below some threshold, and that they apply if their case quality is above some other threshold. A higher u makes firms more likely to fire workers for a given level of shirking, which implies that, all other things equal, the number of cases and the average case quality of fired workers both increase. On the other hand, as u increases, workers are less likely to shirk, which implies, all other things equal, that fewer workers are fired and the average case quality of fired workers increases. On balance, it seems reasonable to assume that more workers (and in any case no fewer) get fired when u is higher. If workers' decision threshold for applying does not change, then this will likely result in more

applications, and a higher average case quality. Average case quality would only decrease if the decision threshold for application decreased enough with u^9 to offset the aforementioned positive effects of an increase in u on average case quality; in that case, we would observe even more applications. Thus observing a positive correlation between the unemployment rate and the number of applications is uninformative about the average case quality of applicants, but observing a negative relationship or no relationship is an indication that the average case quality of applicants does not decrease, and probably increases with the unemployment rate. Since Burgess, Propper and Wilson (2001) find that there is no relationship between the number of applications and the unemployment rate, I conclude that the case quality of applicants is unlikely to decrease and probably increases with worse economic conditions.

A second insight into the correlation between case quality of applicants and economic conditions is available using the micro dataset. Once the dismissed worker applies to the Employment Tribunal, the firm can offer an amount of money to the worker in order to settle the case instead of going to trial. It is reasonable to assume that the amount of the offer is roughly proportional to the expected gains of the worker at trial, i.e. the probability of the worker winning multiplied by the monetary award he would get. Thus, the ratio of the settlement offer S to the award A is a very good proxy for the probability of the worker winning according to the firm. Given A and S , we can therefore investigate the distribution of case quality among applicants. The micro dataset contains the amounts firms proposed to workers for a settlement and S is therefore known¹⁰. The awards workers would get if they won at trial are determined

⁹ This could happen if the opportunity cost of filing a case decreases with a higher unemployment rate.

¹⁰ In a certain number of cases, we only observe B if the offer was indeed accepted by the worker. Treating these cases separately in the analysis does not change the main results; hence, for simplicity, we ignore this distinction.

by the law and are a function of tenure, wage and age¹¹; I can compute these amounts using the dataset and get A¹².

One can thus assess how the distribution of applicants' case quality as perceived by firms changes with economic conditions. If judges are not influenced by economic conditions ($\alpha = 0$) or if firms believe that such influence does not exist, then the impact of economic conditions on the distribution of S/A can be interpreted as the direct impact of economic conditions on the case quality of applicants as perceived by firms. More generally, the impact of economic conditions on the distribution of S/A reflects firms' beliefs about the net impact of economic conditions on judges decisions when taking into account both the direct impact and the impact on parties' behavior. Empirically, I will plot and compare the smoothed distribution of S/A in high unemployment versus low unemployment conditions, and high bankruptcy versus low bankruptcy conditions. This will give an indication of how the distribution of applicants' case quality is affected by economic conditions.

In **Figure 1**, I plot separately the distributions of case quality for high and low unemployment. As we can easily see, they are almost identical. As settlement offers are concentrated at 0, we may want to plot the settlement offers conditional on their being greater than 0 (Figure A-1, appendix 1). Again, the distributions for high versus low unemployment are essentially the same. We then plot the distribution of case quality in low versus high bankruptcy conditions, for all cases (Figure 2) and for cases

¹¹ The basic award is calculated by adding up the following amounts, but only continuous employment within the last 20 years can count: one and a half weeks' pay for each complete year of employment when an employee was between the ages of 41 and 65 inclusive; one week's pay for each complete year of employment when an employee was between the ages of 22 and 40 inclusive; half a weeks' pay for each complete year of employment when an employee was below the age of 22. As it happens, the basic award can be reduced or increased by the judge due to the specificities of each case. In fact, the award is almost never reduced, but rather increased. Thus, the basic award represents a good lower bound approximation for what the worker would get if he won at trial.

¹² The average award workers who won their cases actually received was 2204 pounds, i.e. 3857 dollars in 1993 PPP dollars. At the same time, employers spent on average 3435 pounds on cases that went to full tribunal hearing.

with positive offers (Figure A-2, appendix 1). Although the distributions in high versus low bankruptcy rate are not as close to identical as in the case of the unemployment rate, they are still very similar so that it cannot be concluded that there is any significant difference, be it positive or negative. Thus, overall, one can conclude that firms believe that the probability of workers' winning does not change with economic conditions¹³.

Third, one can examine the Spearman rank correlation between measures of economic conditions and case characteristics in the sample of applicants. Columns 1 and 5 in Table 2 show that individual characteristics are generally uncorrelated with either the unemployment rate or the bankruptcy rate. In particular, the best available measures of case quality (firm's settlement offer and severe misconduct) are not correlated with economic conditions¹⁴. Among the remaining characteristics, only the weekly wage is consistently negatively correlated with economic conditions in the sample of applicants (columns 1 and 5). It will therefore be important to control for this variable. In conclusion, the tests performed are broadly consistent with the hypothesis that *applicants'* case quality does not depend on the unemployment rate or the bankruptcy rate. We can therefore now concentrate on the selection of cases for trial *within* the sample of applicants.

3.2 The selection of applicants' cases to trial

Assume that workers go to full trial instead of settling or withdrawing their case if their case quality is above some endogenously determined threshold (this is discussed

¹³ As a further robustness check, I regressed the firm's settlement offer as a share of the workers' legally determined award on unemployment rate, bankruptcy rate, and the set of control variables. The results (not reported here) confirm the graphical analysis, showing no significant effect of either the unemployment or bankruptcy rate on case quality.

¹⁴ The correlation of the bankruptcy rate and the severe misconduct dummy is significant at the 6.5% level before Bonferroni correction, but it falls well below the 10% level of significance after correction (column 5). Moreover, severe misconduct and the bankruptcy rate are not correlated among the cases that go to trial (column 6).

formally in a mathematical appendix available on request). The more costly it is to go to trial, the higher the threshold, and hence the higher the average quality of cases that judges have to decide on. Economic conditions may influence the workers' time costs of litigation¹⁵, and hence the overall costs of going to trial. A higher unemployment rate and thus worse employment prospects may induce the worker to search harder for a job, or to search less hard, depending on the specifics of the job search model. If unemployed workers search harder when unemployment is higher, then they have fewer resources available to litigate and the cost of going to trial increases, while the opposite holds if they search less hard. Thus, case quality at full tribunal hearing may increase or decrease with economic conditions. Once a worker has found a new job, the unemployment rate does not affect the time costs of litigation. Thus, unemployment rate should have less of an effect on employed workers' willingness to proceed to full trial.

Overall, the impact of economic conditions on workers' willingness to go to trial is ambiguous because it depends on the impact of the unemployment rate on the costs of litigation, and the direct impact of economic conditions on judges' decisions, both of which are ambiguous.

Table 2, column 1, shows that there is no significant correlation between the unemployment rate and a case going to trial¹⁶, and this is also true for unemployed workers (column 3). The bankruptcy rate is not correlated with a case going to trial either (column 5). Finally, one can examine if the characteristics of cases that go to trial are correlated with economic conditions. Columns 2, 4 and 6 of Table 2 show that there is no correlation between economic conditions and most characteristics. A

¹⁵ In the sample, workers who go to full trial spend on average 22 days on their case.

¹⁶ If one runs a probit regression of the trial dummy on economic conditions and the full set of controls X, one still does not find a significant effect of either measure of economic conditions on the probability of a case going to trial.

few variables show a significant association in some cases: firm's settlement offer (column 4, i.e. for unemployed workers only), severe misconduct (column 2), internal procedure followed (column 2), age (column 4), female (columns 2 and 6)¹⁷. Only the first three variables have a relatively straightforward interpretation in terms of case quality. The fact that there are fewer cases involving severe misconduct when the unemployment rate is higher suggests that case quality may be higher. The negative correlation between the unemployment rate and the firm's internal procedure being followed also suggests that case quality increases with the unemployment rate. Firms' settlement offer is lower for unemployed workers who go to trial in high unemployment contexts, which could indicate lower case quality in this case. Generally, it will be important to control for these variables when examining trial outcomes.

To summarize, there is at best weak evidence that the case quality of applicants varies with economic conditions. Moreover, economic conditions do not affect applicants' propensity to go to full tribunal hearing instead of settling or withdrawing their case. There is some weak indication that cases going to trial in a high unemployment context may be positively selected. Overall, it seems therefore that there is not much ground to worry about selection on unobservable case quality when estimating the impact of economic conditions on trial outcomes, and thus a simple probit model with adequate controls may be used.

¹⁷ One can also regress each characteristic on the unemployment rate and the bankruptcy rate, clustering standard errors by region, similar to the specification in Table 3. This procedure finds the same characteristics to be significantly associated with economic conditions; the only exception is that economic conditions fail to be significant when explaining the female dummy. Additionally, this procedure finds tenure on the job and manager to be sometimes associated with economic conditions. Interestingly, none of these associations between characteristics and economic conditions is robust to the addition of the whole range of fixed effects used in Table 3.

4 The impact of economic decisions on judges'

decisions: empirical results

4.1 Macro data

Assuming that there is no effect of economic conditions on case quality (observed or unobserved) at trial, one can use a macro time-series. The macro data we use only covers a period of two years. To get a broader picture, we plot the yearly win rate in unfair dismissal cases (from Burgess et al., 2001) against the unemployment rate on the period 1985-2001 (Figure 3). The graph shows a negative relationship between the percentage of workers' victories and the unemployment rate, which is confirmed by the corresponding OLS regression. Thus, a one-point increase in the unemployment rate is significantly associated with a one-point decrease in the proportion of workers prevailing at trial.

4.2 Micro data

Assuming that the effect of economic conditions on case quality, if any, is captured by our control variables, we can estimate the impact of economic conditions on workers' probability of winning by a probit¹⁸ model (Table 3). Coefficients on control variables are reported in tables A-1 and A-2 of appendix 1 and, for the sake of brevity and focus, they will only be partially discussed here.

The negative effect of worse economic conditions on workers' probability of prevailing at trial is consistent across all estimations in Table 3¹⁹. In Panel A, all

¹⁸ The results are not sensitive to the use of a linear probability model.

¹⁹ Additional specifications were run using different definitions for the unemployment rate: all rates in the range of 6 months before and after application were tried successively. The coefficients on the unemployment rate are generally most significant for the unemployment rate 3 months after the date of application, but the difference in significance level is very small (for example, in the specification from Panel A, column 2, the P-value decreases by .002 percentage points). Still, it is reassuring to see that unemployment rates before application do not yield more significant results than unemployment rates at the date of application, which suggests that results are not driven by the selection of the sample of applicants.

observations on trial outcomes are used, while in panel B, the unemployment rate is interacted with the worker's employment status, which reduces the sample to those observations where the employment status of the worker is known. In *column 1*, Panel A, where no controls are added, the effect of being in a month and region with an unemployment rate higher by one point is to significantly diminish the probability of the workers' winning by 2 points. Similarly, the effect of being in an industry-region-year with a bankruptcy rate higher by one point is to decrease the worker's probability of winning by 2.7 points. Adding individual characteristics controls in column 2²⁰, panel A does not change the point estimates much. Therefore, assuming that there is no selection on unobservables, the results obtained on the macro series and reported on Figure 3 give a reasonable approximation for the effect of the unemployment rate on judges' decisions.

Column 3 adds region effects: the effect of the unemployment rate is now identified from variation over time (months), and the effect of the bankruptcy rate is identified from variation in year and industry. In panel A, the addition of region effects has little impact on the coefficient on the bankruptcy rate, but, interestingly enough, it more than *doubles* the coefficient on the unemployment rate, implying that a worker applying to the Employment Tribunal in a month where the unemployment rate is higher by one point sees his probability of prevailing at trial diminish by 7.7 points. This result is important as one may have been worried *ex ante* about the fact that unobserved differences across regions drive the results. Instead, in both macro and micro data the *time* variation in unemployment does make a difference to Employment Tribunals outcomes.

²⁰ The control variable that is most often missing is weekly wages.

Adding industry dummies in *column 4*, Panel A, does not affect the size of the coefficient on the unemployment rate, although significance is reduced, falling slightly below the 10% level. However, the inclusion of industry dummies doubles the coefficient on the bankruptcy rate: thus, a worker applying to the Employment Tribunal in a year where the bankruptcy rate is higher by one point sees a 2.7 point decrease in his probability of winning his case. This implies that for the bankruptcy rate as for the unemployment rate, time variation has larger effects on trial outcomes than cross-sectional variation.

In *column 5*, Panel A, at last, we also include a year dummy to account for time variation. This does not have any dampening impact on the estimates of the effect of economic conditions: on the contrary, both coefficients are still significant and higher in absolute value, with the coefficient on the unemployment rate even doubling again. Panel B controls for the employment status of the worker²¹. First, note that the coefficient on the unemployed dummy is large and significant in all specifications. The coefficient on the interaction between the unemployed dummy and the unemployment rate is positive (columns 1-5, Panel B), indicating that the effect of the unemployment rate is less negative for unemployed workers relative to employed workers. This interaction effect is always significant, and becomes larger when adding fixed effects (columns 3-5). To check whether the unemployment rate has a significant effect on unemployed workers, we can use a Wald test for the sum of the coefficients²² on the unemployment rate and the interaction of the unemployment rate and the unemployed dummy being 0. The test rejects the null hypothesis for the specification in columns 1-2, but not for specifications in columns 3-5. In other terms,

²¹ One concern is that the employment status of the worker may be correlated with the unemployment rate. While this has to be true for a representative sample of workers, there is no significant correlation between the unemployment rate and the unemployed dummy among workers who proceed to full trial.

²² The test is done on the raw coefficients in the probit model. This is the appropriate test here, as one can verify by using the formula for the interaction effect given by Norton, Wang, Ai (2004).

once we add region dummies, the estimates indicate that the unemployment rate has no effect on unemployed workers' probability of winning. It is worth noticing that if we perform the specification in column 2 on the set of unemployed workers only (28 observations available), thus allowing the coefficients on control variables to differ for the unemployed, we find a significant positive coefficient on the unemployment rate, the magnitude of the coefficient being very similar (0.058) to the effect found in column 2. If instead we interact the unemployed dummy with the bankruptcy rate, results are weaker and often insignificant (results not reproduced here). This confirms our hypothesis about the difference between the unemployment rate and the bankruptcy rate taken as measures of economic conditions when judges are maximizing the parties' welfare: as unemployed workers are more affected by the unemployment rate than by the bankruptcy rate, a change in the unemployment rate has a differential effect for them while a change in the bankruptcy rate does not.

Let us now comment on the coefficients on the economic conditions indicators in Panel B. Overall, the inclusion of different sets of fixed effects has an effect on the coefficients that is very similar to the one observed in Panel A²³. Noticeably, coefficients on both economic conditions variables tend to be higher in Panel B than in Panel A. However, this is not due to the explicit inclusion of the employment status variable, but rather to the sub-sample used: indeed, performing the regressions in Panel B on the same sample but excluding the employment status dummy and the interaction of the latter with the unemployment rate yields very similar estimates.

Although, due to the small sample, some doubt about the precise magnitude of the

²³ The only noticeable difference is the very sizeable jump in the coefficient on the unemployment rate when moving from column 4 to column 5 in panel B (adding the year dummy), whereas the jump from column 4 to column 5 in panel A was less important (though still big). I explored this issue to find out that the main jump in the coefficient is due to including together region and year dummies. I do not have a good explanation why this jump should be so important and hypothesize that it is simply a random variation due to the small number of observations (93).

coefficients in Panel B is permitted, using the employment status of the worker has allowed us to confirm that, assuming that there is no selection on unobservables, worse economic conditions decrease more the probability of winning for employed relative to unemployed workers.

Before concluding this section, let us make a few comments on the effects of control variables reported in appendix 1, Table A-1 and A-2. First, the variables we thought proxy best for case quality do indeed yield consistent results: a higher settlement offer is generally associated with a higher probability of the worker winning, and the bad misconduct dummy always has a negative and significant effect on the worker's probability of winning. Second, we do distinguish dismissals for economic reasons, and we find that these cases usually lead to a lower probability of the worker winning the case²⁴. Third, contrary to what the formulation of the law would make us expect (section 2.1), it does not seem that the size and administrative resources (personnel department) of the firm have a significant impact on trial outcomes. Fourth, consistent with the lesson from the trucker's example (section 2.1), the use by the firm of an internal procedure makes it more likely for the firm to prevail at trial. Finally, all other things equal, workers with higher wages in their lost job are more likely to lose at trial than workers with lower wages. We hypothesize that this is due to the fact that workers with higher wages would get higher awards if they were to win, and judges may be more demanding with cases implying higher payments from the firms to the workers, i.e. judges' threshold may increase with the worker's (past) wage²⁵.

Given the above discussion, our favorite set of estimates is to be found in Panel A of Table 3. Indeed, controlling for the employment status of the worker does not change

²⁴ Note that excluding altogether economic dismissals from the whole analysis does not change the basic results.

²⁵ Alternatively, workers with higher wages may have a greater incentive to sue, and hence a lower unobserved case quality.

the basic probit estimates of the effect of economic conditions on judges' decisions, but only forces us to work with a smaller sample; it is only interesting to control for the worker's employment status to determine the specific effect on unemployed workers, but not to compute the overall average effect.

5 Discussion and conclusion

This study has shown that economic conditions such as the unemployment rate and the bankruptcy rate affect the implementation of Employment Protection Legislation. In the United Kingdom, judges tend overall to decide more frequently in favor of firms when unemployment or bankruptcy rates are higher. However, judges' decision pattern is different depending on the dismissed worker's employment status: the unemployment rate has a negative effect on the probability of dismissed workers who have found a new job winning their cases, whereas the effect for unemployed workers is typically not significant. The sign of the overall effect of the unemployment rate of judges' decisions in the UK is the same as the one found by Macis (2001) for Italy and Marinescu (2003) for France, suggesting that employment tribunals respond similarly to economic conditions across countries with different legal traditions and levels of EPL. On the other hand, the results found here disagree with Ichino et al. (2003), the only previous study that carefully controls for case selection. One possible explanation for this discrepancy is that the dataset used by Ichino et al. (2003), coming from one single large firm, may not be representative of cases brought to trial in Italy. Another potential explanation is that Italian institutions differ from French and British institutions. While important institutional differences do exist²⁶, this does not explain why Macis (2001) and Ichino et al. (2003) find different results for Italy

²⁶ In particular, Italian workers have a right to be reinstated in their job if they win an unfair dismissal trial, while French and British workers typically get a monetary compensation.

using macro and micro data respectively. This discrepancy is even more puzzling in that, for France and the U.K., micro and macro datasets give concordant results. The issue would deserve further investigation in future work on how the impact of economic conditions on judges' decisions varies with institutional settings.

Among the theories of judges' decision discussed in section 2.2, the empirical results mostly support the theory that judges' objective is to maximize the joint welfare of the parties involved in each case. The results do not rule out that judges also try to maximize social welfare, but make this objective less likely. Indeed, given judges' overall tendency to rule more often in favor of firms when economic conditions are worse, one may infer that judges find pro-cyclical firing costs to be socially optimal. But then it is not quite consistent for them to decide more often in favor of unemployed workers when unemployment is higher. Indeed, the higher the unemployment rate, the more likely it is that dismissed workers will remain unemployed. Therefore judges would tend to be less and less favorable to firms as economic conditions get worse, which would defeat their initial purpose by making firing costs less pro-cyclical. Therefore, I conclude that the observed behavior of judges is mostly consistent with their maximizing the joint welfare of the parties involved in each case²⁷.

However, judges' maximizing the joint welfare of the parties may generate a negative externality. Indeed, judges' behavior implies that in an economic downturn, effective firing costs are lower: this would all other things equal encourage firms to fire and hence amplify the economic cycle, at least up to the point where most dismissed workers stay unemployed, in which case worse economic conditions make no difference. In particular, sophisticated firms wishing to fire a worker would wait until

²⁷ Other explanations may be advanced for the results, but this is the one that seems most plausible among the class of explanations that have been considered here.

economic conditions get worse in order to minimize litigation costs. Thus, one would expect that, for large firms with expert legal and personnel departments²⁸, there would be a spike in dismissals when economic conditions get worse, and this would be true even controlling for the firm's own financial situation.

More generally, the results of this study should be taken into account by legislators when framing unfair dismissal legislation, since the impact of the legislation is altered by its enforcement. For social scientists, the finding of this paper indicates that one should take into account enforcement when assessing the efficiency of unfair dismissal legislation, and EPL in general. For example, high firing costs may reduce productivity by slowing down job reallocation during recessions, but this effect will be less strong if effective firing costs are pro-cyclical. Additionally, this paper shows that economic conditions matter in judicial decisions, and not just the letter of the law. One could speculate that, more generally, judges will consider economic conditions when making a decision on a case. This can have far-reaching consequences. Consider, for example, the decisions of the Supreme Court in the United States in tax cases, which greatly affect the state's ability to raise revenue. It has recently been shown that the Supreme Court's decisions in tax cases are influenced by economic conditions (Brennan, Epstein and Staudt, 2009a and 2009b). Indeed, Supreme Court judges tend to decide more often in favor of the government when economic conditions are good; this is only reversed during the period of the Great Depression, when worse economic conditions lead to more pro-government decisions. This suggests that economic conditions may affect judicial decisions in a much broader set of contexts than the one examined here. This paper is a key contribution to this emerging literature as it carefully examines the issue of case selection.

²⁸ In the dataset used in this paper, only 18% of firms have a personnel department: thus, most firms studied here would find it difficult to keep track of judges' decision patterns and react strategically.

An interesting avenue for future research would be to extend the analysis to countries such as the United States who, while not possessing any widespread dismissal legislation, operate similar institutions. Specifically, in the United States, one could investigate whether economic conditions influence committees and judges when deciding on appeals against unemployment benefits disqualification, or arbitrators when deciding about the regularity of dismissals in unionized firms. Given the similarity in institutions, one would expect to find similar results to those found for the decisions of judges in labor courts in the United Kingdom.

To get a deeper understanding of the causes and consequences of the results reported in this paper, one should also examine to what extent firms and workers are aware of judges' decision rules and how such awareness affects their decisions. This, combined with a closer analysis of the reasons behind judges' sensitivity to economic conditions, would allow further examining whether judges' behavior is efficient in maximizing social welfare and, armed with this knowledge, suggesting some suitable changes in the regulation. More generally, examining the influence of the socio-economic context in judges' decisions in other areas of law would likely permit to uncover interesting yet undiscovered patterns.

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Table 1 Descriptive statistics (no employment status)

<i>Variable</i>	<i>All applicants</i>					<i>Applicants proceeding to trial</i>				
	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
<u>Judges' decision</u>										
Worker wins	471	0.43	0.50	0	1	471	0.43	0.50	0	1
<u>Economic conditions</u>										
Unemployment rate (%)	1288	6.03	1.67	2.40	10.10	459	6.01	1.62	2.40	10.10
Bankruptcy (deregistration) rate (%)	1289	0.12	0.02	0.03	0.18	459	0.12	0.02	0.04	0.18
<u>CONTROLS: X</u>										
<u>Case characteristics</u>										
Settlement offer/legal award	1073	0.22	0.51	0	5.20	392	0.05	0.29	0	3.61
Severe misconduct	1311	0.15	0.36	0	1	471	0.18	0.38	0	1
Economic dismissal	1311	0.29	0.45	0	1	471	0.25	0.43	0	1
Redundancy payment	1311	0.09	0.29	0	1	471	0.09	0.29	0	1
Internal formal procedure followed	1311	0.29	0.46	0	1	471	0.34	0.47	0	1
Firms' settlement offer (thousands of pounds)	1311	0.75	1.98	0	30	471	0.13	0.71	0	10
<u>Worker characteristics</u>										
Manager or professional	1311	0.21	0.40	0	1	471	0.24	0.42	0	1
Weekly wage (hundreds of pounds)	1173	2.02	1.25	0.15	15.38	423	2.11	1.29	0.30	12.50
Tenure at dismissal (years)	1278	7.00	6.45	0.08	41.00	460	7.42	6.50	0.08	35.00
Age (tens of years)	1227	4.02	1.19	1.70	7.10	445	4.11	1.15	1.80	6.40
Female	1311	0.32	0.47	0	1	471	0.28	0.45	0	1
<u>Firm characteristics</u>										
Size (hundreds of employees)	1271	2.30	9.20	0.01	240	459	2.47	7.71	0.01	80
Personnel department	1311	0.18	0.39	0	1	471	0.21	0.41	0	1

Source: 1992 survey of Employment Tribunal Applications in Great Britain, UK National Statistics, claimant count series and Small Business Service, VAT Deregistration.

Table 2: Spearman rank correlations between economic conditions and case characteristics

	(1)	(2)	(3)	(4)	(5)	(6)
	Unempl. rate	Unempl. rate	Unempl. rate	Unempl. rate	Bankrupt. rate	Bankrupt. rate
	All applicants	At trial	All applicants	At trial	All applicants	At trial
	All workers	All workers	Unempl. workers	Unempl. workers	All workers	All workers
<u>Case characteristics</u>						
Trial	0.002 <i>0.948</i>		-0.079 <i>0.518</i>		-0.016 <i>0.606</i>	
Firms' settlement offer/ Legally determined award	-0.032 <i>0.302</i>	-0.062 <i>0.232</i>	0.176 <i>0.146</i>	-0.309* <i>0.097</i>	0.008 <i>0.791</i>	0.026 <i>0.620</i>
Severe misconduct	-0.028 <i>0.376</i>	-0.139* <i>0.007</i>	-0.048 <i>0.694</i>	-0.155 <i>0.413</i>	0.065* <i>0.036</i>	0.000 <i>0.999</i>
Economic dismissal	0.004 <i>0.904</i>	0.004 <i>0.933</i>	0.029 <i>0.812</i>	-0.286 <i>0.125</i>	-0.045 <i>0.153</i>	-0.013 <i>0.801</i>
Redundancy payment	-0.006 <i>0.843</i>	-0.033 <i>0.521</i>	-0.015 <i>0.903</i>	0.031 <i>0.871</i>	-0.034 <i>0.281</i>	-0.064 <i>0.220</i>
Internal formal procedure followed	0.009 <i>0.784</i>	-0.092* <i>0.074</i>	0.052 <i>0.669</i>	-0.146 <i>0.443</i>	0.045 <i>0.151</i>	0.075 <i>0.147</i>
<u>Worker characteristics</u>						
Manager or professional	-0.054* <i>0.086</i>	0.009 <i>0.862</i>	-0.107 <i>0.379</i>	0.154 <i>0.416</i>	0.006 <i>0.856</i>	0.061 <i>0.237</i>
Weekly wage (hundreds of pounds)	-0.127* <i>0.000</i>	-0.065 <i>0.211</i>	-0.291* <i>0.015</i>	-0.110 <i>0.563</i>	-0.105* <i>0.001</i>	-0.076 <i>0.144</i>
Tenure at dismissal (years)	-0.041 <i>0.190</i>	-0.016 <i>0.756</i>	-0.135 <i>0.265</i>	-0.294 <i>0.114</i>	-0.009 <i>0.766</i>	0.036 <i>0.486</i>
Age (tens of years)	-0.080* <i>0.010</i>	-0.016 <i>0.762</i>	-0.314* <i>0.008</i>	-0.538* <i>0.002</i>	-0.001 <i>0.977</i>	0.031 <i>0.547</i>
Female	-0.027 <i>0.388</i>	-0.093* <i>0.074</i>	0.008 <i>0.949</i>	-0.213 <i>0.259</i>	0.124* <i>0.000</i>	0.122* <i>0.018</i>
<u>Firm characteristics</u>						
Size (hundreds of employees)	0.006 <i>0.837</i>	-0.017 <i>0.738</i>	-0.106 <i>0.384</i>	-0.291 <i>0.118</i>	-0.047 <i>0.131</i>	-0.044 <i>0.394</i>
Personnel department	-0.035 <i>0.266</i>	-0.030 <i>0.561</i>	-0.045 <i>0.714</i>	-0.045 <i>0.812</i>	-0.012 <i>0.703</i>	-0.008 <i>0.885</i>
Observations	1029	375	70	30	1030	375
P-values in italics. * significant at 10% after Bonferroni correction.						

Note: The Bonferroni correction is based on the number of hypotheses tested in each column.

Source: 1992 survey of Employment Tribunal Applications in Great Britain, UK National Statistics, claimant count series and Small Business Service, VAT Deregistration.

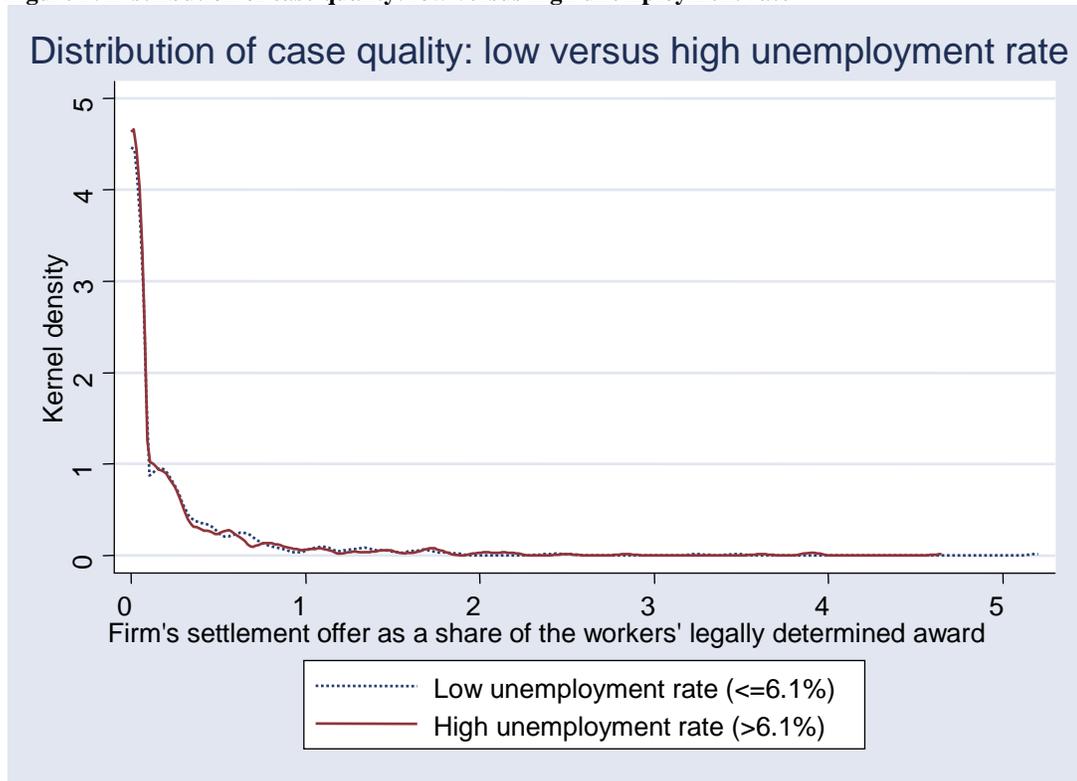
Table 3: probit estimation for trial outcomes

	(1)	(2)	(3)	(4)	(5)
	P(win=1)	P(win=1)	P(win=1)	P(win=1)	P(win=1)
Panel A					
Unemployment rate (%)	-0.020 (0.012)*	-0.033 (0.013)***	-0.077 (0.044)*	-0.073 (0.048)	-0.144 (0.064)**
Bankruptcy (deregistration) rate (%)	-0.027 (0.011)**	-0.016 (0.008)*	-0.012 (0.010)	-0.027 (0.013)**	-0.036 (0.016)**
Observations	459	387	387	387	387
Pseudo R squared	0.0164	0.092	0.101	0.123	0.126
Panel B					
Unemployment rate (%)	-0.037 (0.030)	-0.068 (0.031)**	-0.183 (0.130)	-0.149 (0.106)	-0.591 (0.236)**
Bankruptcy (deregistration) rate (%)	-0.030 (0.016)*	-0.001 (0.014)	-0.007 (0.022)	-0.106 (0.053)**	-0.156 (0.050)***
Worker unemployed	-0.614 (0.091)***	-0.638 (0.087)***	-0.683 (0.123)***	-0.825 (0.128)***	-0.796 (0.157)***
Unemployment rate* worker unemployed	0.129 (0.038)***	0.132 (0.045)***	0.157 (0.079)**	0.168 (0.077)**	0.212 (0.148)*
Observations	131	112	108	93	93
Pseudo R squared	0.062	0.187	0.261	0.321	0.360
Individual characteristics		X	X	X	X
Regional dummies			X	X	X
Industry dummies				X	X
Year dummy					X
* significant at 10%; ** significant at 5%; *** significant at 1%					
Robust standard errors clustered by region in parentheses; marginal effects reported					

Notes: The marginal effect of the interaction term is calculated using inteff. Controls for individual characteristics include case characteristics (settlement offer/legal award, severe misconduct dummy, economic dismissal dummy, redundancy payment dummy, dummy for internal procedure having been followed, firm's settlement offer), worker characteristics (manager or professional dummy, weekly wage, tenure at dismissal, age, female dummy), and firm characteristics (size, dummy for personnel department). In Panel B, the sample is reduced because whether the worker is unemployed or not is only known for a subsample of cases (see text for more explanations).

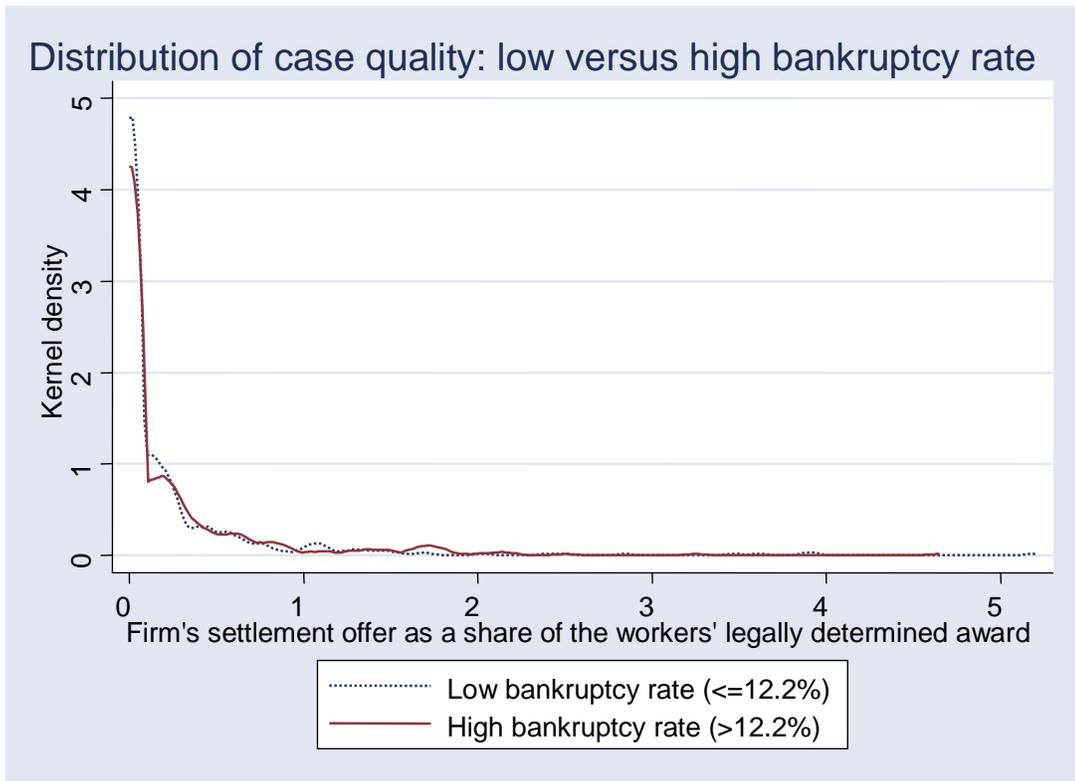
Source: 1992 survey of Employment Tribunal Applications in Great Britain, UK National Statistics, claimant count series and Small Business Service, VAT Deregistration.

Figure 1: Distribution of case quality: low versus high unemployment rate



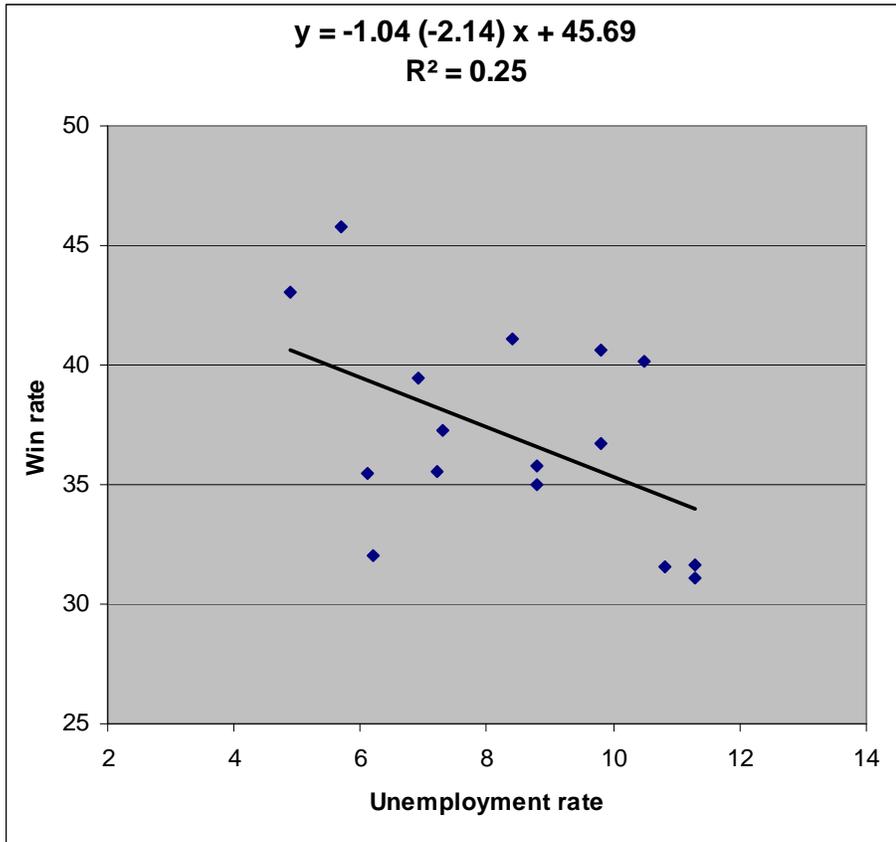
Source: 1992 survey of Employment Tribunal Applications in Great Britain, UK National Statistics, claimant count series.

Figure 2: Distribution of case quality: low versus high bankruptcy rate



Source: 1992 survey of Employment Tribunal Applications in Great Britain, and Small Business Service, VAT Deregistration.

Figure 3: yearly win rate in unfair dismissal cases and unemployment rate (1985-2001)



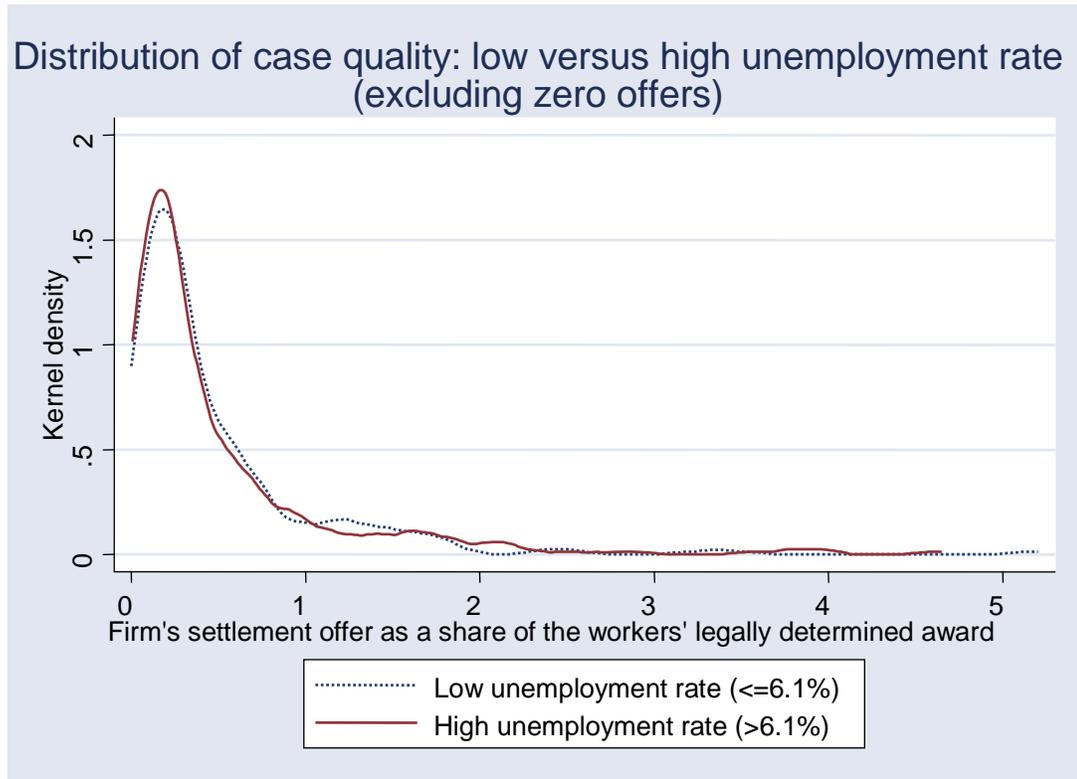
Source: Burgess et al. (2001) and UK National Statistics

Note: in the regression equation, the t-statistic is in parentheses.

APPENDICES

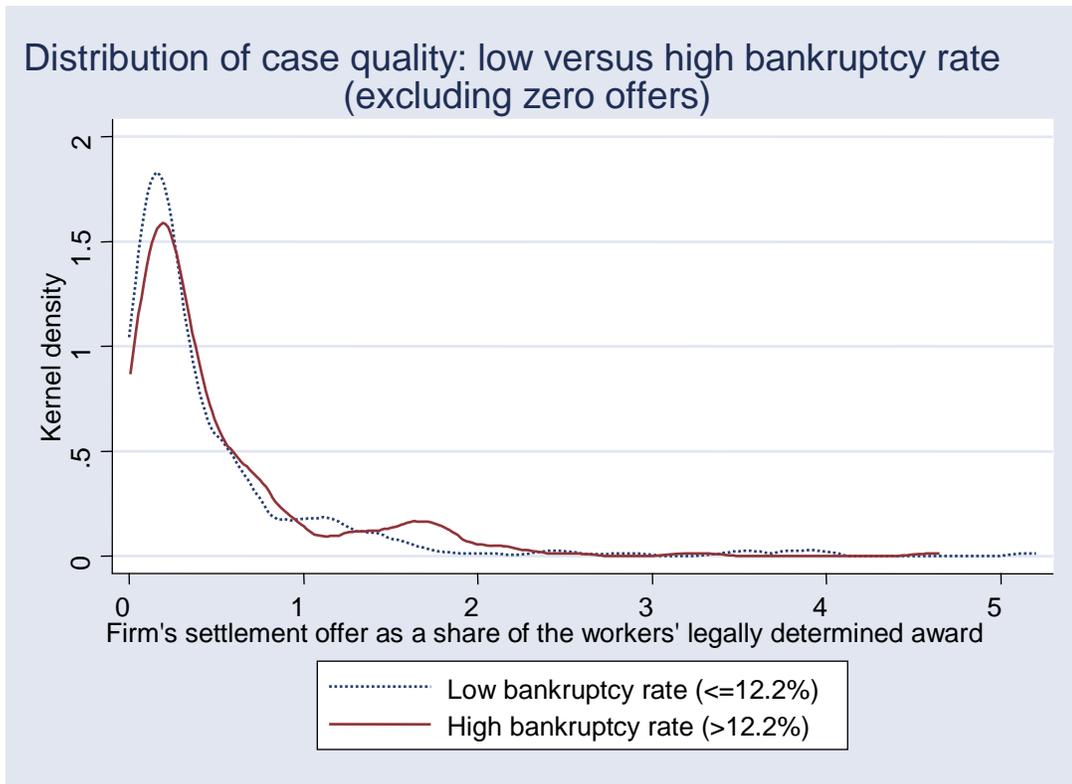
Appendix 1: additional empirical results

Figure A-1: Distribution of case quality: low versus high unemployment rate (excluding zero offers)



Source: 1992 survey of Employment Tribunal Applications in Great Britain, UK National Statistics, claimant count series.

Figure A-2: Distribution of case quality: low versus high bankruptcy rate (excluding zero offers)



Source: 1992 survey of Employment Tribunal Applications in Great Britain, and Small Business Service, VAT Deregistration.

Table A-1: probit estimations for trial outcomes: full results

	(1)	(2)	(3)	(4)
	P(win=1)	P(win=1)	P(win=1)	P(win=1)
<u>Economic conditions</u>				
Unemployment rate (%)	-0.033*** (0.013)	-0.077* (0.044)	-0.073 (0.048)	-0.144** (0.064)
Bankruptcy (deregistration) rate (%)	-0.016* (0.008)	-0.012 (0.010)	-0.027** (0.013)	-0.036** (0.016)
<u>Case characteristics</u>				
Severe misconduct	-0.252*** (0.058)	-0.250*** (0.061)	-0.266*** (0.066)	-0.260*** (0.067)
Economic dismissal	-0.074 (0.050)	-0.068 (0.051)	-0.094* (0.049)	-0.095** (0.048)
Redundancy payment	0.145 (0.122)	0.134 (0.123)	0.133 (0.123)	0.122 (0.120)
Internal formal procedure followed	-0.091** (0.044)	-0.097** (0.045)	-0.104** (0.048)	-0.102** (0.050)
Firms' settlement offer (thousands of pounds)	0.041* (0.022)	0.044* (0.023)	0.053** (0.023)	0.050** (0.022)
<u>Worker characteristics</u>				
Manager or professional	0.101* (0.057)	0.098* (0.058)	0.086 (0.066)	0.093 (0.069)
Weekly wage (hundreds of pounds)	-0.059** (0.025)	-0.056** (0.027)	-0.057** (0.026)	-0.059** (0.024)
Tenure at dismissal (years)	-0.005 (0.005)	-0.005 (0.006)	-0.004 (0.006)	-0.004 (0.006)
Age (tens of years)	-0.013 (0.021)	-0.011 (0.020)	-0.011 (0.020)	-0.011 (0.020)
Female	0.063 (0.053)	0.051 (0.060)	0.036 (0.062)	0.036 (0.063)
<u>Firm characteristics</u>				
Size (hundreds of employees)	-0.001 (0.004)	-0.001 (0.005)	-0.001 (0.005)	-0.001 (0.005)
Personnel department	-0.115 (0.073)	-0.117 (0.082)	-0.133 (0.085)	-0.130 (0.086)
<u>Regional dummies (default=East Midlands)</u>				
East		-0.063 (0.050)	-0.075 (0.056)	-0.162** (0.079)
London		-0.010 (0.037)	0.008 (0.057)	0.027 (0.061)
North East		0.278 (0.170)	0.255 (0.195)	0.466*** (0.146)
North West		0.034 (0.100)	0.012 (0.111)	0.164 (0.147)
South East		-0.151** (0.060)	-0.158** (0.069)	-0.267*** (0.087)
South West		0.046* (0.024)	0.078* (0.042)	0.027 (0.055)
Scotland		0.061 (0.126)	0.033 (0.130)	0.193 (0.159)
West Midlands		0.074 (0.053)	0.059 (0.048)	0.096** (0.046)
Wales		-0.033 (0.076)	-0.012 (0.085)	0.103 (0.104)
Yorkshire and the Humber		0.112 (0.071)	0.085 (0.078)	0.183** (0.090)
<u>Industry dummies (default=Agriculture)</u>				
Catering			0.457*** (0.104)	0.498*** (0.087)
Construction			0.244* (0.127)	0.294** (0.129)
Finance			0.212*** (0.068)	0.250*** (0.072)
Other services			0.286** (0.118)	0.362*** (0.129)
Production			0.252** (0.109)	0.307*** (0.111)
Retail			0.081 (0.123)	0.153 (0.125)
Transport			0.105 (0.125)	0.184 (0.124)
Wholesale			0.276 (0.184)	0.346** (0.173)
<u>Year dummy (default=1990)</u>				
1991				0.123* (0.072)
Observations	387	387	387	387
Pseudo R squared	0.092	0.101	0.123	0.126

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Robust standard errors clustered by region in parentheses. Marginal effects reported.

Source: 1992 survey of Employment Tribunal Applications in Great Britain, UK National Statistics, claimant count series and Small Business Service, VAT Deregistration.

Table A-2: : probit estimations for trial outcomes controlling for employment status: full results

	(1)		(2)		(3)		(4)	
	P(win=1)		P(win=1)		P(win=1)		P(win=1)	
<u>Economic conditions and employment status</u>								
Unemployment rate (%)	-0.068	(0.031)**	-0.183	(0.130)	-0.149	(0.106)	-0.591	(0.236)**
Bankruptcy (deregistration) rate (%)	-0.001	(0.014)	-0.007	(0.022)	-0.106	(0.053)**	-0.156	(0.050)***
Worker unemployed	-0.638	(0.087)***	-0.683	(0.123)***	-0.825	(0.128)***	-0.796	(0.157)***
Unemployment rate*worker unemployed	0.132	(0.045)***	0.157	(0.079)**	0.168	(0.077)**	0.212	(0.148)*
<u>Case characteristics</u>								
Severe misconduct	-0.263	(0.066)***	-0.303	(0.081)***	-0.463	(0.064)***	-0.419	(0.089)***
Economic dismissal	-0.045	(0.116)	-0.097	(0.141)	-0.087	(0.203)	-0.052	(0.202)
Redundancy payment	-0.133	(0.188)	-0.232	(0.135)*	0.025	(0.337)	0.163	(0.376)
Internal formal procedure followed	-0.123	(0.088)	-0.104	(0.120)	-0.142	(0.140)	-0.136	(0.151)
Firms' settlement offer (thousands of pounds)	-0.019	(0.174)	0.008	(0.186)	0.241	(0.265)	0.212	(0.250)
<u>Worker characteristics</u>								
Manager or professional	0.026	(0.124)	0.027	(0.133)	-0.098	(0.172)	-0.141	(0.164)
Weekly wage (hundreds of pounds)	-0.100	(0.054)*	-0.159	(0.080)**	-0.133	(0.071)*	-0.143	(0.060)**
Tenure at dismissal (years)	-0.025	(0.012)**	-0.025	(0.015)*	-0.041	(0.017)**	-0.042	(0.018)**
Age (tens of years)	0.013	(0.037)	-0.001	(0.047)	-0.022	(0.049)	-0.020	(0.041)
Female	-0.021	(0.094)	-0.103	(0.138)	-0.189	(0.144)	-0.184	(0.135)
<u>Firm characteristics</u>								
Size (hundreds of employees)	-0.184	(0.135)	-0.006	(0.008)	-0.004	(0.011)	0.001	(0.014)
Personnel department	-0.180	(0.122)	-0.081	(0.182)	0.086	(0.255)	-0.002	(0.285)
<u>Regional dummies (default=East Midlands)</u>								
East			-0.134	(0.156)	0.202	(0.286)	-0.322	(0.162)**
London			0.267	(0.158)*	0.345	(0.172)**	0.449	(0.124)***
North East			0.736	(0.169)***	0.623	(0.230)***	0.856	(0.077)***
North West			0.308	(0.320)	0.256	(0.229)	0.809	(0.106)***
South East			0.094	(0.345)	0.176	(0.358)	-0.393	(0.107)***
South West			0.336	(0.128)***	0.269	(0.142)*	-0.007	(0.196)
Scotland			0.076	(0.322)				
West Midlands			0.354	(0.126)***	-0.059	(0.129)	0.209	(0.138)
Yorkshire and the Humber			0.470	(0.145)***	0.431	(0.107)***	0.753	(0.065)***
<u>Industry dummies (default=Agriculture)</u>								
Construction					-0.518	(0.029)***	-0.475	(0.141)***
Finance					-0.520	(0.044)***	-0.457	(0.176)***
Other services					-0.612	(0.059)***	-0.338	(1.062)
Production					-0.945	(0.032)***	-0.444***	(0.147)
Retail					-0.575	(0.057)***	-0.450	(0.414)
Wholesale					-0.476	(0.025)***	-0.362	(0.504)
<u>Year dummy (default=1990)</u>								
1991							0.651	(0.254)**
Observations	112		108		93		93	
Pseudo R squared	0.187		0.261		0.321		0.360	

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Robust standard errors clustered by region in parentheses. Marginal effects reported; the marginal effect of the interaction term is calculated using inteff. The sample is reduced compared to

table A-1 because whether the worker is unemployed or not is only known for a subsample of cases (see text for more explanations).

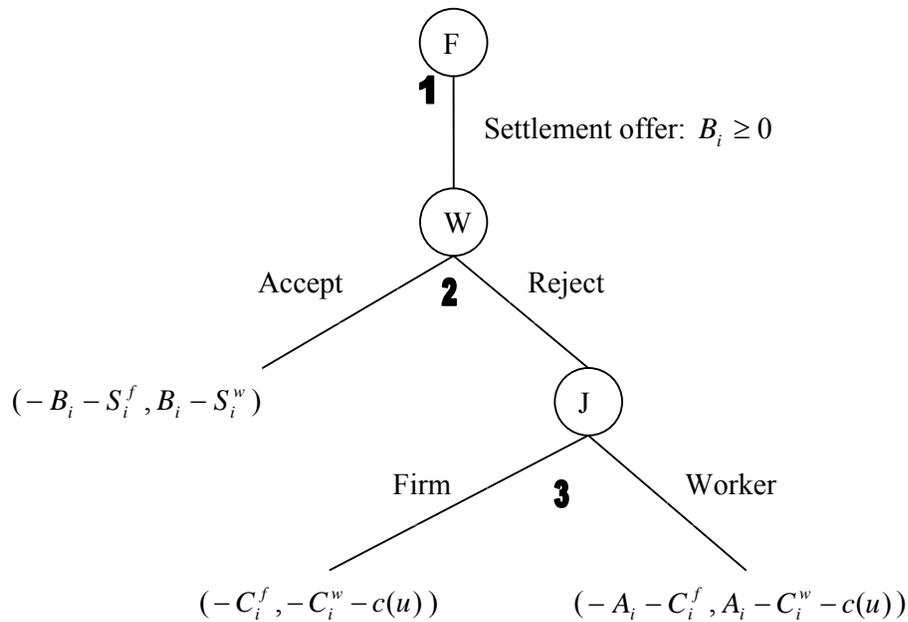
Source: 1992 survey of Employment Tribunal Applications in Great Britain, UK National Statistics, claimant count series and Small Business Service, VAT Deregistration.

Appendix 2: a model of settlement

To address the potential selection bias, I investigate the typical process a case goes through before reaching trial in the United Kingdom: thus, Figure 4 illustrates the decisions taken by parties from application to trial. Each circle determines a decision point for an agent, F being the firm, W the worker, and J the judges. If the worker applies, the firm decides on the amount of the settlement award it wishes to offer (node 1). Finally, if the worker rejects the firm's offer at node 2, the case proceeds to trial (node 3). These decisions will influence the distribution of quality among the cases reaching trial.

I now discuss the likely effect of economic conditions on decisions taken at each node in Figure 4, looking at the quality of cases that proceed towards trial. I assume that whichever effect economic conditions have on case quality at each decision node, the effect on unobserved case quality goes in the same direction, or is null.

Figure 4: parties' behavior before trial



I build a simple model of the selection process of cases in the United Kingdom to determine how economic conditions can affect unobserved case quality through parties' decisions before trial. The assumptions of the model are, as in Ichino et al.(2003), divergent expectations (Priest and Klein, 1984), to which I add an element of asymmetric information (for a review of selection issues in legal cases, see Cooter and Rubinfeld, 1989). The basic idea is that workers and firms start off with different beliefs about case quality because they have different information. The actions of each one of them act as signals and allow the other to update his beliefs. Economic conditions do not alter the information each party gets about case quality, but rather the pay-offs associated with different decisions; thus, they modify the optimal decisions taken by agents and therefore the distribution of case quality for cases reaching trial.

First, we have to define the parties' beliefs about case quality. The belief of the worker involved in case i is then represented by a normally distributed random variable Q_i^w and the belief of the firm involved in case i is represented by a normally distributed random variable Q_i^f ; because the beliefs of the parties are about the same quantity, i.e. case quality q_i , Q_i^w and Q_i^f are positively correlated. Assume, moreover, that the best subjective estimate of the value of a variable about which the individual holds such a probabilistic belief, i.e. Q_i^w , is the expectation of that belief, i.e. $E(Q_i^w)$. Finally, assume that all workers on the one side, and all firms on the other side, have the same degree of uncertainty in their beliefs, the only variation in beliefs coming from different expected values.

Because each party updates her beliefs to incorporate what she learns from the other party's behavior, we need to define beliefs about beliefs. Thus, Q_i^{wf} is the firm's

belief about the worker's belief, $Q_i^{wf^w}$ is the worker's belief about the firm's belief about the worker's belief, etc.

In this framework, subjective probabilities of the worker's winning can be defined as follows:

$$P_i^w = P(Q_i^w > q^* - \alpha u) \quad (2)$$

$$P_i^f = P(Q_i^f > q^* - \alpha u) \quad (3)$$

The firm makes an offer $B_i \geq 0$ to the applicant. If the applicant accepts this offer, the parties' payoffs are:

$$U_i^{fS} = -B_i - S_i^f \quad (4)$$

$$U_i^{wS} = B_i - S_i^w \quad (5)$$

where S_f and S_w are settlement costs, and the superscript S stands for settlement.

Assuming that the parties are risk neutral, we can define their expected utilities if they go to trial as follows:

$$U_i^{fT} = -P_i^f A_i - C_i^f \quad (6)$$

$$U_i^{wT} = P_i^{w2} A_i - C_i^w - c(u) \quad (7)$$

where the superscript T stands for trial, P_i^{w2} is the belief of the worker about his probability of winning given the offer B_i , C_i^f and C_i^w are litigation costs for the firm and the worker respectively, and A_i is the size of the stake, or award the worker would get if he won. $c(u)$ is a cost or benefit incurred by the worker if he litigates, and it is assumed to be a function of economic conditions. Indeed, at first, the dismissed worker is unemployed. A higher unemployment rate and thus worse employment prospects may induce the worker to search harder for a job, or to search less hard, depending on the specifics of the job search model. If unemployed workers search

harder when unemployment is higher, then they have fewer resources available to litigate so that $c(u)$ increases with u , while the opposite holds if they search less hard. Once a worker has found a new job, it is a reasonable simplification to assume that current economic conditions have no effect on his decision to go to trial, so that $c(u)=0$ for employed workers.

How is P_i^{w2} , the updated belief of the worker about his probability of winning defined? First, note that for the firm to make an offer $B_i \geq 0$ to the applicant, it must be true that the value of a settlement for the firm is higher than the value of going to trial:

$$U_i^{fs} \geq U_i^{ft} \Leftrightarrow B_i \leq P_i^f A_i + C_i^f - S_i^f \Leftrightarrow P_i^f \geq \frac{B_i - C_i^f + S_i^f}{A_i} \quad (8)$$

Therefore, relying on the above observation, the updated probability of the worker's winning according to the worker is:

$$P_i^{w2} = P\left(Q_i^w > q^* - au \mid P_i^f \geq \frac{B_i - C_i^f + S_i^f}{A_i}\right) \quad (9)$$

Let Q_i^{w2} be the updated belief of the worker about the quality of his case. Q_i^{w2} is defined by its cumulative distribution function:

$$F_{Q_i^{w2}}(x) = P\left(Q_i^w < x \mid P_i^{fw} \geq \frac{B_i - C_i^f + S_i^f}{A_i}\right) = P(Q_i^{w2} < x) \quad (10)$$

The formation of Q_i^{w2} explains why many firms choose to make an offer equal to zero. Indeed, when the worker's case quality is relatively low, any positive offer will result on average in the worker updating his belief upwards to a considerable degree, which in many cases will lead him to decline the firm's offer and go to trial. Anticipating this, the firm does not make any positive offer in the first place.

In general, the worker decides to reject the firm's offer and go to trial if:

$$\begin{aligned}
U_i^{wS} < U_i^{wT} &\Leftrightarrow B_i - S_i^w < P_i^{w2} A_i - c(u) - C_i^w \Leftrightarrow P_i^{w2} > \frac{B_i - S_i^w + c(u) + C_i^w}{A_i} \\
&\Leftrightarrow P(Q_i^{w2} > q^* - \alpha u) > \frac{B_i - S_i^w + c(u) + C_i^w}{A_i}
\end{aligned} \tag{11}$$

Remember that probability distributions of Q_i^{w2} only differ among workers by their location. We can hence define a function h such that condition (11) for going to trial can be rewritten as:

$$E(Q_i^{w2}) > h\left(\frac{B_i - S_w + c(u) + C_w}{A_i}, q^* - \alpha u\right) \tag{12}$$

The above condition gives says that if the plaintiff's best estimate of case quality is above a certain threshold²⁹, then the plaintiff proceeds to trial. As h is increasing in its two arguments, we can straightforwardly sign the partial derivative of h with respect to any variable. Thus, workers are more willing to go to trial the lower the settlement offer, the higher the costs of settlement, the lower the costs of trial, the higher the award at trial, the lower $c(u)$ and the higher α . The sign of the effect of u on h is ambiguous, as it depends on the sign of the derivative of $c(u)$ with respect to u , and on the sign of α .

²⁹ If we did not assume that all workers have beliefs with the same shape and scale, this threshold would also depend on the distributional form of each worker's belief, and not only on the specified variables.