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Dismissal conflicts and unemployment

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Abstract

We analyse the institutional sources of dismissal conflicts when workers' effort is not perfectly observable. We build an efficiency wage model with firing costs to capture their effect on employment through wages. In this context, whenever there is a dismissal, a double moral hazard problem can arise. Resolution of this problem by a third party will be imperfect due to asymmetric information. In turn, disciplinary dismissals will not be costless and firing costs will have a negative effect on aggregate employment. The solution to this problem does not necessarily imply the elimination of firing costs. © 2001 Elsevier Science B.V. All rights reserved.

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1. Introduction

Firing costs are often blamed for unemployment in Europe (see, for instance, OECD, 1994), although both theoretical models and empirical studies lead to mixed results when analysing their effect on aggregate employment (see, for instance, Bertola et al., 2000). The goal of this paper is to investigate theoretically the widespread belief that firing costs are responsible for unemployment and to provide some new insights for empirical analysis, adopting a wider view of employment protection legislation (EPL) than is usually taken in the literature.

Typically, European EPL requires firms that fire workers for economic reasons, to compensate them with a severance payment (the fair indemnity).¹ But if firms fire

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¹ The terms economic dismissals and redundancies are used interchangeably here.

workers for disciplinary reasons, no compensation is payable. In all cases, firms are required to provide reasons for the dismissal and if these are considered unfair by court, firms have to pay a higher indemnity (the unfair indemnity).

In this paper, we build an efficiency wage model with firing costs to capture their effects on employment through wages. In this context, whenever there is a dismissal, a double moral hazard problem can arise. When firms face a redundancy, they have an incentive to claim it is a disciplinary dismissal in order to avoid paying firing costs. When workers face a disciplinary case, they have an incentive to claim unfair dismissal in order to get compensation. Our claim in this paper is that the resolution of this problem by a third party (the court) will be imperfect given the information problem. Consequently, some workers fairly dismissed for disciplinary reasons will get severance payments while others made redundant purely for economic reasons will not. As a result, firms will have to pay higher rents to induce workers to provide effort at work and firing costs will have a negative effect on aggregate employment. However, the solution to this problem does not necessarily imply the elimination of firing costs. We derive a Pareto-efficient EPL system in which the gap between the legislated severance payment for those dismissals considered fair and unfair is a relevant feature.

We analyse those individual dismissal conflicts in which agents behave strategically given the structure of EPL and the fact that workers' effort is not perfectly observable.² In the existing literature, redundancies are the only dismissals considered because disciplinary dismissals that are not contested by workers are costless. But, as will be discussed, the empirical evidence suggests that disciplinary dismissals are extensively used in some European countries to fire workers. Agents often disagree and can even take the case to court, implying that this type of dismissals is not always costless. Thus the typical simplification in the literature can be misleading when estimating the actual cost of firing a worker. Moreover, it ignores important undesirable redistribution effects that EPL systems can have. In our model, due to asymmetric information, disciplinary dismissals may be costly while economic dismissals may be costless. The model captures, in a plausible way, some of the important features associated with laying off workers in European countries that existing models cannot capture.

There is a commonly held view that firing costs are high because dismissal conflicts involve large administrative and legal costs and that these in turn lead to higher labour costs (see, for instance, Emerson, 1988). Although this point is often made, it is usually modelled in a simplistic way: firing costs paid by firms are assumed to be higher than the indemnity that firms have to pay to workers (see, for example, Burda, 1992). But this is actually not the case in most European countries, where most cases are settled privately between employer and employee.³ Instead, the source of higher firing costs has more to do with the fact that the EPL generally sets a higher severance pay level for cases taken to court and found to be unfair than for those considered fair by the

²In case of "collective" dismissals, the number of workers made redundant as well as their total indemnities are bargained with a third party (generally, unions). See Booth (1997) and Booth and McCulloch (1999) for a model of firing costs in unionised sectors of the economy.

³See Galdón-Sánchez and Güell (2000) for evidence on France, Italy, Spain and UK.

court (see Grubb and Wells (1993) and OECD (1999) for a country comparison). This increases the agreed compensation in private settlements. In our model, we do not assume that the cost of firing an employee is given by the mandated level of severance payment. Instead, we derive the actual cost of firing a worker from the court outcomes of the different types of dismissal cases. These outcomes determine the upper bound of private settlements.

Despite the prevalent idea of the negative effect of firing costs on employment, there are different views in the literature that depend on the model used. On the one hand, some models predict ambiguous results of firing costs on employment. Typically, these are labour demand models that consider the effect of costly redundancies while keeping wages unchanged by firing costs. See, for example, Bentolila and Bertola (1990), Bentolila and Saint-Paul (1994), Bertola (1992), and Nickell (1978). An exception is Bertola (1990). However, their results remain in partial equilibrium.⁴ In contrast, in our model, wages are endogenous and firing exogenous. Firing costs reduce employment because costly dismissal conflicts increase efficiency wages.⁵

On the other hand, among the models that predict unambiguous results of firing costs on employment, there are three different views. Our model can accommodate all the different results of these models depending on the degree of imperfection of court decisions.⁶ To the extent that court decisions are imperfect, our results have the same flavour as the insider–outsider approach (see Lindbeck and Snower, 1988). In our model, if there were no double moral hazard problem and court decisions were not imperfect, then firing costs would also be neutral on employment as in Lazear (1990).⁷ Finally, in Booth and Chatterji (1989) and Saint-Paul (1996) firing costs can arise endogenously. In our model, if court decisions were perfect, firms would include firing costs in their labour contracts.

The rest of the paper is organised as follows. In Section 2, we derive implications for the labour market equilibrium assuming that firing costs generate a double moral hazard problem. Then, we discuss the circumstances under which imposing a bond on workers could solve such a problem. In Section 3, we study how EPL can be modified in order to avoid the strategic behaviour of agents in face of dismissals. In Section 4, we summarise our conclusions.

2. The model

The model is a modified version of the shirking model of Shapiro and Stiglitz (1984) with firing costs. Unlike the standard efficiency wage models, we consider a model

⁴ See Ljungqvist (2000) for a survey on general equilibrium models.

⁵ This highlights another dimension of firing costs which is not captured by standard labour demand models. To focus on the effects of firing costs on wage-setting is particularly important for unemployment models in which the unemployment rate is determined entirely by long-run supply factors (see Layard et al., 1991). Other models of this sort are Díaz and Snower (1996) and Rotemberg (1998).

⁶ Note that in our model, workers are not risk-averse. For a model of this sort, see Booth (1997).

⁷ In a model where wages are set by insiders, Bertola (1990) remarks that such neutrality would not arise in the presence of a (binding) minimum wage legislation.

where there is some shirking in equilibrium. Workers' cost of providing effort is given by $e(p)$, where $p < 1$ is the fraction of time a worker does not shirk. Workers' effort is not perfectly observable and there is a detection technology that catches shirking workers (never erroneously) with some probability q , per unit of time (where $q < 1$). Therefore, workers are dismissed for disciplinary reasons with probability $(1 - p)q$. Workers also face an exogenous probability, b , per unit of time, of being separated from their job for economic reasons. In the following subsection, we describe how firing costs are modelled and the circumstances under which there can be a double moral hazard problem.

2.1. *Redundancies and disciplinary dismissals in conflict*

We consider conflicts generated by each agent's strategic behaviour given the structure of EPL and the fact that workers' effort is not perfectly observable.⁸ Whenever firms need to adjust the size of their workforce, they have an incentive to use disciplinary dismissals to avoid paying firing costs. The difficulty in observing workers' effort implies that there is some chance that firms can get away with such a strategy.⁹ Similarly, in the case of any disciplinary dismissal, workers have an incentive to contest the case and claim compensation, even when they have been fairly dismissed. In this context, both genuine disciplinary cases and hidden redundancies arrive in court as disciplinary cases. Courts' decisions are based on whatever evidence is presented by the agents, which is not perfectly correlated with reality given the information problem. So, in general, courts are not able to distinguish perfectly between genuine disciplinary cases and hidden redundancies. In that sense, the decisions by the third party will tend to be imperfect given the information problem.

We assume that firms do not bear a higher cost than the indemnity received by workers. This is not only the case in countries where administrative and legal costs (not transferable to the worker) are negligible. In countries where these costs are very high, most cases are settled out of court, precisely to avoid such costs, and the worker receives a settlement of an amount that lies between the legal severance payment and the (expected) cost had the case gone to court. The cost of firing can be thought of as the upper bound of what a worker could receive from bargaining with the firm.

For simplicity, let m be both the probability that a genuine disciplinary dismissal and a hidden redundancy are declared unfair given the information problem, where $0 < m < 1$. That is, with probability $(1 - m)$ dismissal cases are costless to the firm.¹⁰

⁸ Another general class of conflicts originates from the fact that EPL leaves room for interpretation. In that case, redundancies could be challenged as such and the question would be if the economic situation of the firm justifies the dismissal. See Galdón-Sánchez and Güell (2000) for a model that considers these conflicts. Note that the results on employment derived in this paper would not be modified if this class of conflicts would have been included (see the Appendix).

⁹ Malo (1998, 2000) considers the case where firms use disciplinary dismissals instead of redundancies in a model where, in order to avoid legal costs, firing costs are bargained privately between employer and employee before the case is resolved by the court.

¹⁰ Allowing firms to better prove a true disciplinary case than a hidden redundancy would not alter the results of the paper (see the Appendix).

Table 1
Firing costs for redundancies and disciplinary cases

Reality	Declaration		Expected cost for firm
	Firm	Worker	
Redundancy	Redundancy	Accepts	c
Redundancy	Disciplinary	Denies	mC
Disciplinary	Disciplinary	Denies	mC

The EPL fixes a severance payment of c for redundancies and a severance payment of C for any case taken to court and declared unfair, where $c \leq C$. We assume that there are no costs of going to court for any party. Under this EPL system, it is a dominant strategy for workers to contest a disciplinary case because $mC > 0$. Let us assume that

$$c > mC. \quad (1)$$

Under this assumption, the expected cost of an economic dismissal for the firm is higher if the firm declares it as such than if the firm declares it as a disciplinary dismissal. Therefore, firms will always declare redundancy cases as disciplinary dismissals. There is some evidence that supports this. Disciplinary dismissals are very much used in some European countries to fire a worker, even if they are often declared unfair in court (i.e., their cost is mC). In France, for instance, for the period 1982–1998, as much as 74% of all labour conflicts that arrived in court were declared unfair. Individual dismissal conflicts represented on average 60% of total claims. And as much as 80% of these dismissals that arrived in court involved disciplinary disputes. Unfortunately, at least to our knowledge, no other European country has such detailed data. In Spain many authors have studied how disciplinary dismissals have been widely used instead of redundancies (see Bentolila, 1997; Malo, 1998; Malo and Toharia, 1999). Disciplinary dismissals, even if declared unfair, can be a cheaper way to fire workers than redundancies. During 1986–1998, on average, as much as 72% of cases taken to court were declared in favour of the worker.¹¹

We concentrate on the case in which there is a double moral hazard problem whenever firms dismiss. In our model, firms always declare disciplinary dismissals and workers always deny them. Table 1 summarises the expected cost of firing for each type of dismissal under the assumption given by condition (1).

In the next subsections, we analyse the consequences for the labour market of the double moral hazard problem and consider the conditions under which more complex contracts could solve this problem.

¹¹ Sources: Ministère de la Justice (France) and Ministerio de Trabajo y Asuntos Sociales (Spain), respectively. For more details, see Galdón-Sánchez and Güell (2000, 2001).

2.2. No-shirking condition

We consider a continuous-time model. Firms cannot always prevent workers from shirking given the nature of the workers' cost function for providing effort.¹² Workers are risk neutral and their instantaneous utility function is: $U(w, p) = w - e(p)$, where w is the wage and $e(p)$ is their cost of providing effort, where $e'(p) > 0$, and $e''(p) > 0$. First we analyse the workers' decision as to how much effort to provide for a given wage. Then, we analyse the incentive-compatible wage.

Workers choose the fraction of time that they provide effort such that it maximises their utility discounted at rate r . Let V_E be the present discounted utility of an employed worker,

$$rV_E = w - pe(p) + p_f(V_U + mC - V_E), \quad (2)$$

where $p_f = b + (1 - p)q$ is the probability of being fired either for a redundancy (b) or a disciplinary case ($(1 - p)q$).

Firing costs influence effort because of imperfect court decisions. With probability m , workers fairly dismissed for disciplinary reasons may be compensated with a severance payment. This reduces the cost of shirking. The first order condition of the workers' problem is given by

$$V_E - V_U \geq \frac{e(p^*) + p^*e'(p^*)}{q} + mC \equiv K, \quad (3)$$

where $0 < p^* < 1$. This is the No-Shirking Condition (NSC) which states that in order to provide incentives, the punishment of losing a job must be at least equal to the opportunity cost of shirking (K). Substituting this condition in Eq. (2), the incentive-compatible wage for which the worker will provide effort for a fraction p^* of time becomes

$$w \geq p^*e(p^*) - p_f^*mC + rV_U + K[r + p_f^*] \equiv \hat{w}, \quad (4)$$

where $p_f^* = b + (1 - p^*)q$.

In this wage equation, it is possible to distinguish between the reservation wage (the first three terms) and the rent linked to the incentive problem (the last term). For $C = 0$, this condition is the same as in Shapiro and Stiglitz (1984). For $C > 0$, it is possible to distinguish two types of firing cost effects: those directly related to the incentive problem and those not. Firing costs affect the incentive problem: to the extent that genuine disciplinary dismissals are declared unfair (i.e., $m > 0$), legal severance payments reduce the punishment associated with being fired when caught shirking. This implies that firms have to pay higher rents in order to prevent shirking.

At the same time, independently of the incentive problem, the introduction of mandated severance payments allows employers to reduce wages by exactly the same

¹² In Albrecht and Vroman (1998), the heterogeneity of workers drives the existence of shirking in equilibrium. Different workers have different costs of providing effort. For a given wage, some workers in a firm will provide effort (those whose cost is low enough) while the others will shirk. In our model, workers are homogeneous, but they do not provide effort all the time.

proportion that the present discounted utility of an employee is increased, without affecting incentives (see Eq. (4)). The idea is that lower wages today, together with compensation when being fired, leave the present discounted utility of being employed unchanged.¹³

To summarise, if a contract satisfies the *NSC*, that is, if the worker is paid at least \hat{w} , he will choose to expend $e(p^*)$. Let V_E be the expected utility in equilibrium. The firm chooses the minimum wage at which the worker will not shirk, so that in equilibrium the *NSC* is binding and $w = \hat{w}$.

2.3. Hiring decisions

All firms in the model are identical and infinitely lived. They chose the level of their employment so as to maximise the expected present value of profits discounted at the rate r . When workers shirk, production is zero. Let Π be the present discounted value of marginal profits. Then

$$r\Pi = f'(p^*L) - w - p_f^*(mC + \Pi),$$

where $f(pL)$ is the production function with $f'(pL) > 0$ and $f''(pL) < 0$.

In the presence of firing costs, the marginal cost of hiring a worker is given by the wage plus the expected cost of firing. There is no cost of posting vacancies, so firms hire workers to the point where $\Pi = 0$. Labour demand in the steady state is given by

$$f'(p^*L) = w + p_f^*mC. \tag{5}$$

This equation shows that, for given wages, firing costs reduce labour demand proportionally to their expected present value.

2.4. Market equilibrium

Equilibrium occurs when each firm, taking as given all other firms' wages and employment levels, finds it optimal to offer the going wage. The key market variable that determines individual firm behaviour is the present value of the utility of an unemployed worker, V_U . Let a be the rate of exit from unemployment. To simplify, suppose that unemployment benefits are zero. Then, $rV_U = a(V_E - V_U)$. Given that the *NSC* is satisfied, in equilibrium

$$rV_U = aK. \tag{6}$$

The exit rate of unemployment can be derived from the steady state flows condition. In steady state, inflows to unemployment are given by p_f^*L , and outflows are given by $a(N - L)$, where N is the total number of workers in the economy. Thus

$$a = \frac{p_f^*L}{N - L}. \tag{7}$$

¹³ This effect of firing costs is the same as that proposed by Lazear (1990). So, if $m = 0$, the two models would have the same predictions. If that is the case, in a dynamic efficiency wage model, it is in the interest of firms to voluntarily offer a severance pay to workers (see Saint-Paul, 1996). A more stable workforce allows firms to reduce wages since it lowers the “firing premium” that has to be paid to prevent shirking. See Katsimi (1998) for a more detailed derivation of this mechanism in a fully stochastic model.

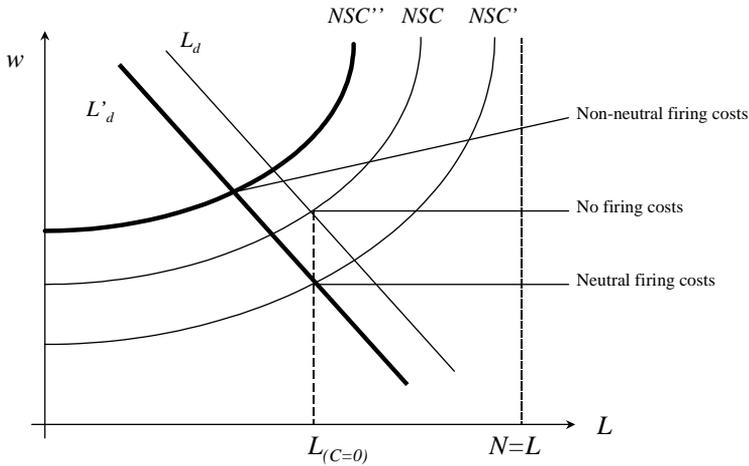


Fig. 1. Market equilibrium with neutral and non-neutral firing costs.

Combining Eqs. (6) and (7), we can obtain the utility of an unemployed in equilibrium, which we can substitute in Eq. (4) to obtain the aggregate NSC. That is

$$\hat{w} = p^*e(p^*) - p_f^*mC + K \left[r + \frac{p_f^*N}{N - L} \right]. \tag{8}$$

Proposition 1. *If $c > mC$, then an increase in C unambiguously reduces employment.*

Proof. Equilibrium employment can be derived combining Eqs. (5) and (8). This implies

$$f'(p^*L) = p^*e(p^*) - p_f^*mC + K \left[r + \frac{p_f^*N}{N - L} \right] + p_f^*mC. \tag{9}$$

The second and the fourth elements of the right-hand side of condition (9) cancel out. As is standard in this literature, $\partial L/\partial K < 0$. Moreover if $c > mC$, then $\partial K/\partial C = m > 0$ (see Eq. (3)). Therefore, it follows that $\partial L/\partial C < 0$. \square

Under the assumption given by condition (1), the cost of firing is mC , so that increases in C reduce employment. Fig. 1 shows this result. Labour demand (Eq. (5)) and the NSC (Eq. (8)) are represented in the (w, L) space. The intersection of L_d and NSC represents the labour market equilibrium in the absence of firing costs, where $L_{(C=0)}$ is the employment level. Firing costs reduce labour demand by the expected cost of firing. This is represented by L'_d . Firing costs have two effects on wage-setting. On the one hand, any firing costs that can be anticipated can be neutralised if markets are complete and perfect (see Lazear, 1990). The wage is reduced in exactly the same proportion as labour demand is (see second element of Eq. (8)). This situation is characterised by the curve NSC' . The intersection of the latter and L'_d represents the

market equilibrium with neutral firing costs, where the level of employment is again $L_{(C=0)}$. On the other hand, under the assumption given by condition (1), firing costs increase the rent K . The effects of severance payments on efficiency wage setting have no counteracting effects through the non-wage component of the shadow cost of labour. Therefore, the original wage schedule moves to NSC'' . The intersection of L'_d and NSC'' is the market equilibrium with non-neutral firing costs. Note that even if the wage is set by the firm, it is not possible to endogenise fully the severance payments in workers' wages. This is because firing costs have a real effect since they reduce the cost of shirking.

So far, we have ruled out the possibility of more complex contracts that could remove the payment of efficiency wages to workers, including the additional rent due to firing costs. For example, the firm and the worker could agree on a bond to be paid by the latter. The feasibility of this solution depends crucially on workers' liability as well as the existence of minimum wages (see Katz, 1986). In our model, it also depends on the level of severance payments. Under condition (1), the higher C , the larger the rent and thus the higher the bond required. Moreover, this solution may reinforce the undesirable redistribution effect of EPL. To the extent that firms would cheat ex-post, then unfairly dismissed workers would recover the bond with probability $m < 1$, while fairly dismissed workers would recover it with probability $m > 0$. In other words, if this bond were feasible, it would mitigate the higher unemployment that the double moral hazard problem generates, but it would not eliminate the strategic behaviour of agents. Reductions in C would generate similar effects. In the next section, we analyse the design of a Pareto-efficient EPL.

3. Policy implications

The consequence of the double moral hazard problem analysed above is that some workers do not get compensation when they should while some other workers are compensated when they should not be. Moreover, labour costs are higher. The goal of this section is to discuss some possible policy implications to solve such a problem.

Most EPL systems set higher severance payments for cases being declared unfair than for those considered fair. The idea behind this regulation seems appropriate since it tries to punish unfair dismissals. For large enough values of C , the incentive for firms to cheat could be removed (see condition (1)). However, such a policy may not be sufficient in itself. If C is not high enough, it encourages cheating which inevitably leads to imperfect court decisions. Moreover, this does not seem to be the most efficient policy since it does not have any punishment role for the worker when he lies. A large C implies that the incentive from the workers' perspective is larger (mC becomes even larger).

A more efficient policy would be one that punishes any agent found to be cheating. That is, on the one hand, to set a severance payment that firms have to pay, C_F , when the court considers a case to be a hidden redundancy. On the other hand, to set a penalty for workers, C_W , whenever the court considers that they are contesting a fair

Table 2
Firing costs: A policy proposal

Reality	Declaration		Expected cost	
	Firm	Worker	Firm	Worker
Redundancy	Redundancy	Accepts	c	
Redundancy	Disciplinary	Denies	mC_F	
Disciplinary	Disciplinary	Denies		$(1 - m)C_W - mC_F$

disciplinary dismissal. Table 2 summarises the expected costs of firing for the firm and worker under such policy proposal.

Proposition 2. *If there is a high enough gap between C_F and c , and a large enough penalty to workers, C_W ; then truth-telling by both agents is an equilibrium.*

Proof. The truth-telling conditions of both agents are

$$c - mC_F \leq 0, \quad (10)$$

$$mC_F - (1 - m)C_W \leq 0. \quad (11)$$

For a given m , a large enough $C_F - c$ is a necessary condition in order for (10) to be satisfied. Similarly, a large enough C_W implies that (11) is satisfied. \square

This policy highlights the fact that for an employment protection system to work, especially when workers' effort is not observable, two things are important. First, to prevent firms' strategic behaviour, the difference between the levels of firing costs set for cases declared unfair and fair has to be high enough. Second, to prevent workers' strategic behaviour, they have to incur in some sort of loss when the case is deemed fair. Here we have considered that workers might pay a penalty to the government (for instance, a reduction in unemployment benefits). See Appendix A for the case where the workers' penalty is a transfer to the firm.

4. Conclusion

Most existing theoretical and empirical studies of the effect of firing costs on employment summarise the different dimensions of EPL in one parameter. However, there is little theory suggesting how these different dimensions should be taken into account in such a parameter. Here we have proposed a theoretical link between fair and unfair dismissal indemnities and how their interaction affects the actual cost of firing. Our model highlights that when workers' effort is not perfectly observable, the gap between fair and unfair severance payments can explain some strategic dismissal conflicts and therefore plays an important role in determining the cost of labour.

In this paper we have ignored other types of conflicts, such as those related with interpretations of the law. More theoretical and empirical research is needed along these

lines. In Galdón-Sánchez and Güell (2000) we consider these other types of conflicts and we endogenise the double moral hazard problem proposed here drawing some implications for court outcomes and testing them empirically for different countries.

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Appendix A

Let $m \in (0, 1)$ be the probability that a genuine disciplinary dismissal is mistakenly declared unfair and $z \in (0, 1)$ the probability that a hidden redundancy is declared unfair. For a given dismissal case, the probability of winning in court is higher for the party that does not lie than for the one that does. Thus, the probability that a dismissal taken to court is costless to the firm is higher when it is a genuine disciplinary dismissal, than when it is a hidden redundancy, i.e. $z \geq m$. This modifies equations (1), (2), (4), (5) and (8) of the model in the following way:

$$c > zC, \tag{A.1}$$

$$rV_E = w - pe(p) + b(V_U + zC - V_E) + (1 - p)q(V_U + mC - V_E), \tag{A.2}$$

$$w \geq p^*e(p^*) - [bz + (1 - p^*)qm]C + rV_U + K[r + p_f^*] \equiv \hat{w}, \tag{A.3}$$

$$f'(p^*L) = w + [bz + (1 - p^*)qm]C, \tag{A.4}$$

$$\hat{w} = p^*e(p^*) - [bz + (1 - p^*)qm]C + K \left[r + \frac{p_f^*N}{N - L} \right] \tag{A.5}$$

and implies that condition (9) can be rewritten as

$$f'(p^*L) = p^*e(p^*) - [bz + (1 - p^*)qm]C + K \left[r + \frac{p_f^*N}{N - L} \right] + [bz + (1 - p^*)qm]C. \tag{A.6}$$

The second and the fourth elements of the right-hand side of condition (A.6) cancel out as in condition (9). This implies that the assumption on z is innocuous for the effect of firing costs over employment (but note that the reduction in the reservation wage

would depend on z). The intuition is simple: z only affects the cost of redundancies, which has no effect on employment (Lazear, 1990).

The employment results would not have changed either if we had considered other types of dismissal conflicts. In particular, those related to the interpretation of the law. The intuition is that the effect of redundancies taken to court due to an interpretation conflict would be similar to that captured by z ; and the effect of disciplinary cases taken to court due to an interpretation conflict would be similar to that captured by m .

Regarding the policy implications of the paper, if $z \geq m$, condition (10) is modified to

$$c - zC_F \leq 0, \quad (\text{A.7})$$

while condition (11) remains unchanged. We have assumed that only C_F is transferable from the firm to the worker. Consider now that both C_F and C_W are transferable to the other agent. It could be the case, following the *English Rule*, that the agent who loses the case pays the court fee of the other agent (in the UK, there is a policy that goes along these lines, see Barnard et al. (1995)). Then condition (A.7) is modified to

$$c - zC_F + (1 - z)C_W \leq 0 \quad (\text{A.8})$$

and condition (11) remains unchanged. These two conditions are met as long as $(z - m)(C_F + C_W) > c$. For this to hold, it would be necessary that $z > m$.

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