

## Abstract

Firing costs are often blamed for unemployment. This paper investigates this well spread belief. The main points are two. First, firing costs are modelled in an efficiency wage model to capture their effects on employment through wages. Secondly, dismissal conflicts are modelled explicitly. In the context of imperfectly observable effort, a double moral hazard problem can arise and in turn firing costs reduced employment because they increase the rent to be paid to workers. The determinants of the double moral hazard problem such as the imprecise definition of dismissal causes are analysed. The main policy conclusion is that focus should move onto the clarification of the different causes of dismissal to minimise the room of interpretation. If so, then high enough severance payments in case of “unfair” dismissals can actually have a punishment role and prevent the double moral hazard problem.

# **Employment Protection and Unemployment in an Efficiency Wage Model**

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# Employment Protection and Unemployment in an Efficiency Wage Model Michaela G. Übel

## 1 Introduction

Firing costs are often blamed for unemployment in Europe (see OECD (1995), for instance). The aim of this paper is to investigate this widespread belief from a theoretical point of view. The model we build makes two main points. First, firing costs are introduced in an efficiency wage model to capture their effects on employment through wages. Second, dismissal conflicts are modeled explicitly and their cost is derived. In particular, two types of dismissals are considered, redundancies and disciplinary dismissals, where employers and employees have conflicting interests<sup>1</sup>.

Despite the prevalent idea of the (negative) effect of firing costs on employment, especially among policy makers and employers, there are very different views among economists depending on the model used. For instance, according to the insider-outsider theory put forward by Lindbeck and Snower (1988), firing costs are a source of market power for incumbent workers (the insiders) vis-à-vis the unemployed (the outsiders). Insiders use their market power to exercise upward pressure on their wages and thereby generating unemployment. According to this view, the higher the firing costs, the higher the unemployment.

A completely different view of firing costs is the one by Lazear (1990). He shows that if markets are perfect and complete, then flexible wages can undo all the effects of firing costs and, therefore, firing costs are neutral on employment. Workers pay ex-ante a fee which is equal to the severance payment they get in case they are fired. If they keep the job, they get their fee back with higher wages. In such a world, for any level of firing costs, it is always possible to write an optimal contract that undoes all the effects of severance payments.

A third view of firing costs highlights the possibility of firing costs arising endogenously. This approach is motivated by the fact that sometimes firms and workers negotiate severance payments which do not coincide with the ones legally set, or even, some firms offer severance payments in the absence of employment protection legislation. Several authors have investigated this idea in different contexts. For instance, Booth and Chatterji (1989) construct a model of firm-specific training where the returns to training are uncertain as well as the outside options for workers. In such a context, the costs of training are shared between the firm and the worker because there exists the possibility that workers quit. In case of being dismissed, workers are compensated by this cost with a redundancy payment. Alsq Booth (1997) argues that in a two-period model, where it is in the interest of firms

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<sup>1</sup>The firm has to compensate the worker when facing a redundancy while no compensation is required in a disciplinary dismissal.

to have long term employment relationships, if workers are risk-averse they prefer a contract with redundancy payment, and risk-neutral firms find it optimal to offer it. Finally, Saint-Paul (1994) explores how firing costs arise endogenously in a dynamic efficiency wage model. Firms may choose to voluntarily offer firing costs in their labour contracts because these help firms to credibly commit to more stable employment policies in an uncertain environment.

These three views exposed above have radically different ideas of firing costs. One could summarise crudely that firing costs are "bad" according to the first view, "neutral" according to the second view or even "good" according to the third view since they can be an optimal instrument for firms. Consequently, these three frameworks summarise all possible effects of firing costs over employment. The model presented here is an efficiency wage model where dismissal conflicts are costly. As it will be seen, modelling firing costs in this way allows to integrate the three different views mentioned above.

The cost of the existing work on firing costs focuses on labour demand models and the only type of dismissals considered are redundancies<sup>2</sup>. These models are very useful for understanding the effects of firing costs on the dynamic functioning of the labour market. However, the effects on aggregate employment are ambiguous and remain in partial equilibrium. The implicit assumption of labour demand models is that wages are exogenous and do not change in the presence of firing costs<sup>3</sup>. In our model, wages are endogenous and firing exogenous. In this way, the model highlights another dimension of firing costs which is not captured by labour demand models. To focus on the effects of firing costs on the wage setting is particularly important for those unemployment models in which in the long run the unemployment rate is determined entirely by long run supply factors (see Layard et al. (1991)).

There is a commonly held idea that firing costs are high because dismissal conflicts involve large administrative and legal costs and that these lead to higher labour costs. 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<sup>4</sup>. But this is not actually the case in most European countries. Instead, the source of higher firing costs has to do more with the fact that the legislation generally sets a higher severance pay for cases taken to court and declared "unfair" than for those considered "fair" by court. These terms are defined from the worker's perspective. An "unfair" case is when the court considers that the firm is wrong and therefore the worker must receive the ("unfair") firing cost because it is an unjust dismissal. The "fair" severance payment is the default indemnity for a dismissal. When a case is taken to court and is declared "fair", the court considers that the firm is right and the worker simply receives the default

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<sup>2</sup> See, for example, Bertola and Bertola (1990), Bertola and Saint-Paul (1994), Bertola (1990 and 1992) and Nickell (1978).

<sup>3</sup> An exemption of this is Bertola (1990).

<sup>4</sup> See Burda (1992) for a model of this sort.

indemnity. For instance, in Spain<sup>5</sup>, the cost of a redundancy declared "fair" is 20 days' wages per each year worked with a maximum of 12 months' wages. But if the case is declared "unfair", the cost is more than double, 45 days' wages per year worked with a maximum of 42 months. This "unfair" rate also applies to disciplinary cases<sup>6</sup>.

In this paper, we explicitly model dismissal conflicts and derive their cost. Conflicts between employers and employees can arise for very different reasons. In general, whenever firms face a redundancy, they want to use disciplinary dismissals in order to avoid paying firing costs. We model firing costs in a context where worker effort is not perfectly observable. This actually provides a rationale for the existence of workers' right to sue their employers in case of disagreement. In such a context, workers can be in a weaker position because firms can get away with the use of disciplinary dismissals whenever they need to adjust their workforce (i.e. in case of redundancy). Therefore, there is a reason for job protection legislation to include the right for employees to take cases to court. The drawback is that workers will then tend to deny any disciplinary case to get a compensation (specially if the indemnity is higher when the case is declared "unfair"), again, because of the difficulty in observing worker effort. As it will be discussed, a double moral hazard problem could arise. Our claim in this paper is that the resolution of this problem by a third party will be imperfect given the information problem.

The existence of imperfect resolutions of dismissal cases will in turn imply that disciplinary dismissals will not be costless and firing costs will have a negative effect on aggregate employment. As it will be discussed at the end of the paper, the solution does not necessarily imply the elimination of firing costs. Rather, what will appear to be important is the gap between the severance payment for cases considered "unfair" and those "fair".

We concentrate on dismissal conflicts of small/medium firms for which "individual" dismissal regulation applies. In case of large firms, redundancies are generally under the "collective" dismissal regulation which implies that the number of redundancies and their total cost are bargained with a third party (generally, unions)<sup>7</sup>.

In our model, firms will bear a firing cost that is exactly the same as the indemnity received by the worker. As mentioned, this is the case for most European countries. In countries in which the administrative approval processes are very complex<sup>8</sup>, many of the cases are settled by the worker and the firm out of court, precisely to avoid these costs. Therefore, again, firms do not bear a higher cost than the indemnity received by workers. The worker receives a settlement which amount lies between the legal severance payment and the (expected) cost had the case gone to court. In this sense, the firing costs due

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<sup>5</sup> See G rubb and W ells (1993) and O ECD (1999) for a comparison of these indemnities in different O ECD countries.

<sup>6</sup> In this case, the difference in costs of between a "unfair" and a "fair" case is extreme: 45 days' wages per year worked if "unfair" versus no compensation if "fair".

<sup>7</sup> See Booth (1996 and 1997) for a model of firing costs in unionised sectors of the economy.

<sup>8</sup> Typically, this is the case in southern European countries (see G rubb and W ells (1993) and O ECD (1999) for several indicators of the "strictness" of employment protection legislation).



to dismissal conflicts that are derived in the present model can be thought as the upper bound of what a worker could receive from bargaining with the firm.

The rest of the paper is organised as follows. First, shirking costs are described, and their implications for (efficiency) wages and employment are derived. In the last section, we discuss some policy implications.

## 2 The model

The model is a version of the shirking model of Shapiro and Stiglitz (1984) with shirking costs. As in Shapiro and Stiglitz, a worker's effort is not perfectly observable and there is a detection technology that catches shirking workers (never erroneously) with some probability  $q$  (where  $q < 1$ ). When a worker is found shirking he is fired and becomes unemployed. Workers also have an exogenous probability,  $b$ , of being separated from their job for redundancy reasons<sup>9</sup>. In the next section we describe how shirking costs are modeled.

### 2.1 Redundancies and disciplinary dismissals in conflict

Most industrialised countries have a job protection legislation framework that protects workers against redundancies. The idea is that a redundancy is an exogenous event to the worker and imposes a cost to him and thus he must be compensated for it. At the same time, employers are allowed to fire workers for disciplinary reasons without having to pay any compensation.

A framework where worker's effort is imperfectly observable is best suited for considering another common feature of job protection legislation, namely the right for workers to sue employers in case of disagreement.

Whenever firms need to adjust their workforce, they want to use disciplinary dismissals to avoid paying shirking costs. And the difficulty in observing worker effort means there is some chance that firms can get away with such strategy<sup>10</sup>. The right for workers to sue employers in case of disagreement can compensate for this imperfection. But then, similarly to firms, workers will deny any reasons for disciplinary dismissal to get a compensation based on unjust grounds. In such a context, both true disciplinary cases and hidden redundancies arrive to court as disciplinary cases. Court's decisions are based on whatever evidence (if any) is presented by the agents, which is not perfectly correlated with reality given the information problem. So, in general, courts are not able to perfectly distinguish between true disciplinary cases and hidden redundancies. Thus, the resolution by a third party will tend to be imperfect given the information problem.

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<sup>9</sup> The terms adverse economic shocks and redundancies are used interchangeably here.

<sup>10</sup> Mølo (1998) considers the case where firms use disciplinary dismissals in cases of redundancies in a model where shirking costs are bargained in the shadow of the law between employer and employee.

In the model, this is represented by the fact that some (true) disciplinary dismissal cases could be mistakenly considered in favour of the worker (i.e. "unfair") and some hidden redundancies could be mistakenly declared in favour of the firm (i.e. "fair") by court. In other words, in the first case, workers are compensated when they should not. And in the second case, firms avoid paying firing costs when they should have paid them.

We denote  $m$  as the probability that a (true) disciplinary dismissal is mistakenly declared "unfair", where  $m > 0$  given the information problem. That is, with probability  $m$ , disciplinary cases cost the "unfair" rate because they are declared in favour of the worker. Only with probability  $(1 - m)$  there is no court mistake and disciplinary cases are costless to the firm.

We denote  $z$  as the probability that a (hidden) redundancy is declared "unfair", where  $z < 1$  given the information problem. That is, with probability  $(1 - z)$ , there is a court mistake and redundancies are costless to the firm. Only with probability  $z$ , the worker is compensated for a redundancy case.

Firms can better prove that a (true) disciplinary dismissal is indeed disciplinary than to prove that a redundancy is a disciplinary case. That is, the probability that a dismissal taken to court is costless to the firm is higher when it is a (true) disciplinary dismissal than when it is a (hidden) redundancy, or that  $z > m$ . In other words, the probability that the case is declared in favour of the worker is lower when the case is a (true) disciplinary case.

We assume that the legislation imposes a severance payment of  $c$  for redundancies and a severance payment of  $C$  if the case is taken to court and is declared "unfair", where  $c < C$ . Then, given the double moral hazard problem, the firm's expected firing cost of a (true) disciplinary dismissal is  $mC$  and of a (hidden) redundancy is  $zC$ . Table 1 below summarises firing costs described<sup>11</sup>.

Table 1: Firing costs for redundancies and disciplinary cases

Reality	Declaration		Expected Cost
	of firm	of worker	for firm
Redundancy	Redundancy	accepts	$c$
Redundancy	Disciplinary	denies	$zC$
Disciplinary	Disciplinary	denies	$mC$

To sum up, given the context described above, there is always an incentive for firms to declare redundancies as disciplinary cases and for the worker to deny any disciplinary case. A further discussion of this double moral hazard problem is done in the last section of the paper.

<sup>11</sup> Let's assume that in case of redundancies presented as disciplinary cases, the firm can never show evidence of the case and the cost is  $zC$ . In the case of real disciplinary cases, if the firm is able to prove the case with probability  $k$ , then the cost is  $mC = (1 - k)zC + kC$ . Thus  $z > m$ .

## 2.2 Non-shirking condition

In this section, we analyse the wage workers must be paid in order that they expend the optimal effort on the job. Workers are risk neutral<sup>12</sup>. Their instantaneous utility function is:  $U(w; e) = w - e$ ; where  $w$  is the wage and  $e$  is the effort. Workers effort choices are discrete. If they shirk, they expend zero effort and production is zero. The effort required to perform in the job is  $e > 0$ .

Workers choose the level of effort that maximises their utility actualised at rate  $r$ . By  $V_E^i$ ; we denote the present discounted utility of an employed worker when shirking ( $i = S$ ) or non shirking ( $i = N$ ). Firms want to offer a contract such that workers expend the optimal effort. In what follows, the condition under which a worker will choose not to shirk is studied (the non-shirking condition, NSC).

When a worker does not shirk, he gets a utility equal to

$$rV_E^N = w - e + b(V_U + zC - V_E^N) \quad (1)$$

while if the worker decides to shirk his utility is

$$rV_E^S = w + b(V_U + zC - V_E^S) + q(V_U + mC - V_E^S) \quad (2)$$

As in Shapiro and Stiglitz (1984), shirking saves the current disutility of effort but it implies a higher risk of becoming unemployed. This risk is proportional to the probability of being caught shirking ( $q$ ). Firing costs also influence the effort decision here because of the imperfect court decisions. With probability  $m$ ; shirking workers may be compensated with a severance payment. This reduces the cost of shirking.

The worker will choose to provide an effort  $e$ ; if and only if  $V_E^N \geq V_E^S$ . We can write this condition using equations (1) and (2) and get the NSC in form of utilities:

$$V_E^S - V_U \geq \frac{e}{q} + mC - K \quad (3)$$

This condition states that in order to provide incentives, the punishment of losing a job must be at least equal to the opportunity cost of shirking denoted by  $K$ . Substituting this condition in equation (1), we get the incentive compatible wage

$$w \geq e + bzC + rV_U + K(r + b) - vb \quad (4)$$

In this wage equation, we can distinguish between the reservation wage (...rst three terms) and the rent linked to the incentive problem (last term). For  $C = 0$ , this condition is the same as in the original Shapiro and Stiglitz (1984). In order to provide incentives, wages need to exceed the reservation wage by a rent,  $K$ : This rent is proportional to the opportunity cost of not shirking weighted by the term  $(r + b)$ . The higher the discount rate, the more a worker values the saving of effort today. The higher the probability of

<sup>12</sup>For a model of firing costs where workers are risk averse, see Booth (1997).

being...red for other reasons than (truly) shirking cases (i.e. shocks), the more costly it is to expend effort today.

For  $C > 0$ , we can distinguish two types of effects of firing costs: those directly related with the incentive problem and those that are not. Firing costs affect the incentive problem because to the extent that (truly) disciplinary dismissals are declared "unfair" (i.e.,  $m > 0$ ), legal severance payments reduce the punishment associated with being...red when caught shirking. This implies that firms have to pay higher rents in order to prevent shirking as can be seen in the above non-shirking condition (see equation (3)). This effect of firing costs has the same flavour as that in the insider-outsider theory, where firing costs increase market power of incumbent workers.

At the same time, independently of the incentive problem, the introduction of mandated severance payments allows the employer to reduce the wage exactly by the same proportion that the present discounted utility of an employee is increased, without affecting incentives. This can be seen in the firing cost element of the reservation wage (see equation (4)). The idea is that lower wages today, together with compensation when being...red for shocks, leave the present discounted utility of being employed unchanged. This effect of firing costs is the same as that proposed by Lazear (1990)<sup>13</sup>.

Although this last mechanism is not directly related with the incentive problem, it has very interesting links with efficiency wages in models in which firing is not exogenous. As mentioned, in the standard efficiency wage model without severance payments, workers are paid a "firing premium" in order to prevent shirking because expending effort is more costly the higher the probability of being...red due to adverse economic shocks. When a severance payment is imposed, firms face two opposite effects in the presence of shocks: they have to pay an implicit firing cost to avoid shirking (the "firing premium"), but they can lower wages because workers are being compensated when...red after a shock<sup>14</sup>. An important further insight is made by Saint-Paul (1996): in a dynamic efficiency wage model, it is in the interest of firms to voluntarily include a severance pay in the labour contract that they offer. This is one possible way for the firm to credibly commit to have a more stable employment policy when facing shocks, which then allows the firm to reduce directly the "firing premium" to be paid. The optimal severance payment is such that the "firing premium" of the efficiency wage is completely compensated. In the present model, the imperfect court resolutions imply that firms do not want to offer severance payments to workers<sup>15</sup>.

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<sup>13</sup>So for  $m = 0$ , the two models have the same predictions (see section (2.4) where the market equilibrium is solved).

<sup>14</sup>See Katsimi (1998) for a more detailed derivation of this mechanism in a fully stochastic efficiency wage model.

<sup>15</sup>If  $m = 0$ , firms would offer firing costs in the present model. In the case of  $m = 0$ , for  $C = e-q$  the two models would coincide. Still, in the present model, severance payments are set legally while in Saint-Paul they are endogenous. See Booth (1997) for a discussion where the level of mandated firing costs may differ from those bargained.

Back to the No-Shirking Condition, if a contract satisfies the NSC, that is, if the worker is paid at least  $w$  or, if being unemployed is a sufficiently large punishment ( $V_E^S > V_U$ ), the worker will choose to expend the effort. We denote  $V_E$  as 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  $V_E = V_E^N = V_E^S$ :

### 2.3 Hiring decisions

All firms in the model are identical and infinitely lived. They choose employment so as to maximise the expected present value of profits discounted at rate  $r$ . We denote by  $l$  the present discounted value of marginal profits. We have

$$rl = f'(L)l - w - b(zC + l)$$

where  $f(L)$  is the production function with  $f'(L) > 0$  and  $f''(L) < 0$ :

In the presence of hiring costs, the marginal cost of hiring a worker is given by the wage plus the future expected cost of being hired. There is no cost of posting vacancies, so firms hire workers to the point where the marginal profit is zero, i.e.  $l = 0$ . Labour demand in steady state is given by:

$$f'(L) = w + bzC \tag{5}$$

This equation shows that, for given wages, hiring 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, finds it optimal to offer the going wage rather than a different wage. The key market variable that determines firm individual 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, we suppose that unemployment benefits are zero.

We have

$$rV_U = a(V_E - V_U)$$

Given that the NSC is satisfied, we have that in equilibrium:

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

Now, substituting equation (6) in equation (4), we get the efficiency wage curve in equilibrium:

$$w = e_j - bzC + K(r + b + a) \quad (7)$$

In equilibrium, the incentive compatible wage is higher the higher the exit rate from unemployment. This result is also found in Shapiro and Stiglitz (1984). The rent linked with the incentive problem is weighted by  $a$  because the higher  $a$ , the less becoming unemployed is a penalty.

We derive employment,  $L$ , from the steady state flows condition: in steady state inflows to unemployment are given by  $bL$ . Outflows are given by  $a(N - L)$ , where  $N$  is the total of workers in the economy. Thus,

$$a(N - L) = bL \quad (8)$$

Therefore,

$$L = \frac{aN}{a + b}$$

Combining equations (5) and (7), we get that the equilibrium outflow rate of unemployment,  $a^u$ , is given by:

$$f^0(L) = e_j - bzC + K(r + b + a^u) + bzC \quad (9)$$

In equation (9), it can be seen that the second type of effect of severance payments mentioned before can be fully undone: the second and the fourth element of this equation cancel out. The idea is that if markets are complete and perfect, and training costs are fully transferred to workers, then they are neutral on employment because the wage is reduced by the same proportion as the increased shadow cost of labour (see Lazear (1990)).

However, in this model, even if training costs are fully received by workers, they are not neutral because they affect the rent,  $K$ . The effects of severance payments on the efficiency wage setting have no counteracting effects through the non-wage component of the shadow cost of labour. Therefore, the wage schedule is shifted to the left and it has a negative impact effect on employment. It is interesting to note that even if the wage is set by the firm, it is not possible to fully endogenize the severance payments in the workers' wage. As mentioned, this result is due to the presence of a double moral hazard problem that can only be resolved imperfectly by a third party. This implies that training costs have a real effect because they reduce the cost of shirking.

The aggregate NSC can also be written in terms of the unemployment rate,  $u$ . Replacing equation (8) into equation (7), we get

$$\begin{aligned}
 v_b &= e_i b z C + K \left[ r + \frac{bN}{N - L} \right] \\
 &= e_i b z C + K [r + b=U]
 \end{aligned}$$

where  $U = (N - L)/N$ .

This expression can be represented in the  $(w, L)$  space. Figure 1 shows the labour market effects of neutral and non-neutral firing costs. The case where firing costs are neutral corresponds to the case where there is not such a double moral hazard problem<sup>16</sup>. A further discussion on this problem and some policy implications is developed in the next section.

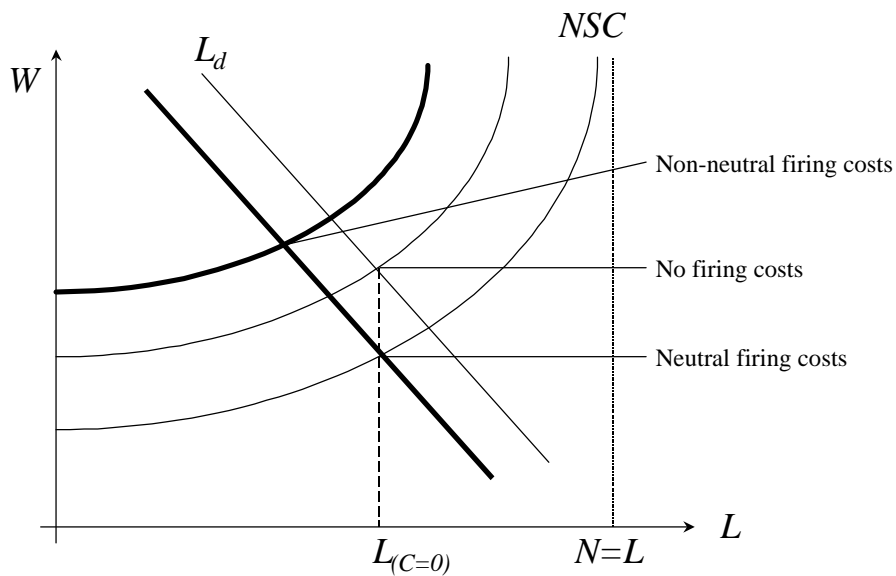


Figure 1: Market equilibrium with neutral and non-neutral firing costs

<sup>16</sup>In such a case, disciplinary dismissals have zero cost and therefore they do not affect the rent to be paid to workers. Consequently, firing costs are neutral on employment.

## 2.5 Policy implications

In the model presented above, the existence of job protection legislation in a context in which worker effort is not perfectly observable implied that firing costs had a negative effect on employment. As explained, the problem in such a system is that there is always an incentive for conflict between employer and employee, i.e. for the employer to claim any dismissal to be disciplinary and for the worker to deny any disciplinary case. This, in turn, implies imperfect resolutions by third parties. The goal of this section is to discuss some possible policy implications derived from the model above.

The mechanism that generates such double moral hazard problem is that, for firms, the expected cost of a redundancy is higher than the expected cost of declaring it a disciplinary dismissal. And in turn, for workers, the expected benefit of denying a disciplinary dismissal becomes positive. Following the model presented above (see Table 1), when firms declare redundancies as disciplinary cases and workers deny all disciplinary cases, the court is not able to perfectly detect all the true disciplinary cases. The court is able to catch a hidden redundancy only with probability  $z$ . And it is able to discover true disciplinary cases only with probability  $(1 - m)$ . Therefore, firms find it worth it to declare disciplinary cases when facing redundancies if:

$$C_s > zC \quad (10)$$

If firms misuse disciplinary cases, then workers have an incentive to deny any of them because

$$m < C_s / 0 \quad (11)$$

If these two conditions are met, then the double moral hazard is an equilibrium. That is, all dismissals are taken to court as disciplinary cases. As shown in the previous section, in such a case, firing costs are not neutral on employment. As can be seen from conditions (10) and (11), policies that concentrate on undoing the double moral hazard problem do not necessarily imply the complete removal of severance payments.

As mentioned, in general, most employment protection legislation systems set higher severance payments for cases being declared "unfair" than for those considered "fair". The idea behind this goes in the right direction in the sense that it tries to punish for unjust dismissals. For large enough  $C$ , the incentive of firms to cheat could be undone (see equation (10)) and therefore, there would be no double moral hazard<sup>17</sup>. In such a case, high severance payments for "unfair" dismissals have a punishment role for firms who would use disciplinary dismissals when facing a redundancy. However, such a policy may not be sufficient. If  $C$  fails to be high enough, it motivates cheating from both agents which in turn generates imperfect court decisions. And the resulting average cost of firing is higher

<sup>17</sup>If the firm does not cheat, then the worker does not cheat either since such strategy would be self-revealing



because some dismissals are paid at the “unfair” rate. Moreover, this does not seem to be the most efficient policy since it does not have any punishment role for the worker when he denies true disciplinary cases.

A more efficient policy would be one that punishes any agent found lying. That is, on the one hand, to set a severance payment that firms have to pay,  $C_F$ , when the court catches a hidden redundancy. On the other hand, to set a penalty for workers,  $C_w$ , whenever caught denying a true disciplinary dismissal. Table 2 summarises the expected costs of firing for the firm and worker under such policy proposal.

Table 2: Firing costs: a policy proposal

Reality	Declaration of firm	Declaration of worker	Expected Cost for firm	Expected Cost for worker
Redundancy	Redundancy	accepts	$c$	
Redundancy	Disciplinary	denies	$zC_F$	
Disciplinary	Disciplinary	denies		$m C_w$

Under such a policy, taking  $m$  and  $z$  as given, truth-telling of both agents is an equilibrium if the following two conditions are satisfied:

$$c_j \geq zC_F \cdot 0$$

and

$$j \geq m C_w \cdot 0$$

Note that for any given  $m$  and  $z$ ; a high enough gap between severance payments for cases declared “unfair” and cases declared “fair”, that is for a large  $C_F \gg c$  and for any positive penalty to the worker, that is  $C_w$ , the above conditions would hold.

This policy highlights that for an employment protection system to work, specially when worker effort is not observable, two things are important. First, the difference between the level of firing costs set for cases declared “unfair” and “fair” has to be high enough. Second, different indemnities should be set for “unfair” cases depending on whether it is considered that it is the worker’s or the firm’s initiative.

### 3 Conclusion

Firing costs are often blamed for depressing employment levels. But there are very different views of firing costs among economists: some models indeed predict that firing costs reduce employment while in other contexts firing costs have no effect on employment. Aiso

in some other environments, firing costs are actually instruments chosen voluntarily by firms. In this paper, we have proposed a model that stresses that it is not just the level of severance payments what matters, but a wider view of employment protection. In particular, dismissal conflicts and their cost have been considered. As discussed before, the model presented integrates the different existing views of firing costs.

More precisely, we have analysed the problem behind the conflict between employer and employee in cases of disciplinary dismissals and redundancies, in a context where effort is imperfectly observable. There is a double moral hazard problem that can only be resolved imperfectly by a third party. The conclusion is that firing costs would have a negative effect on employment because they modify the rent to be paid to workers in order to prevent those workers from shirking.

The main policy conclusions are two. First, to set a gap wide enough between severance payments for cases declared "unfair" and cases declared "fair". Second, any agent caught lying should be punished. In our model, different severance payments should be set for hidden redundancies declared "unfair" and for truly disciplinary cases declared "unfair". With such a policy, the different firing costs for "unfair" dismissals have a punishment role for both employer and employee and, therefore, its implementation would eliminate the double moral hazard problem.

In this paper we have explored one possible reason behind imperfect court resolutions and their implication for employment. That is, the fact that effort, which motivates disciplinary dismissals, is not perfectly observable. There are other reasons why court's decisions could be imperfect. In our context, there is the problem of defining a dismissal case precisely. For instance, in the case of redundancies, it is difficult to set unquestionably "how bad" the economic situation of a firm must be in order to have an objective reason to fire a worker. Similarly, for disciplinary dismissals, it is difficult to set the degree of the worker's fault that justifies dismissal. This leaves room for interpretation implying again that resolutions will tend to be imperfect. Other possible reasons are related with what the legislation considers as an "unfair" dismissal itself, something that differs across countries (see OECD (1999)). Or, how complex the dismissal procedures are because this implies potentially more strict proofs in order to win a case. In Galbón and Güell (1999), we incorporate these elements in a theoretical model and undertake an empirical analysis to test the magnitude of dismissal conflicts and labour market outcomes for different countries.

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