

## “Labor Court Inputs, Judicial Cases Outcomes and Labor Flows: Identifying Real EPL”

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### Abstract

Using a data set of individual labor disputes brought to court over the years 1990 to 2003 in France, we examine the impact of the enforcement of Employment Protection Legislation on labor market outcomes. First, we present a simple theoretical model showing that judicial case outcomes cannot be directly interpreted in terms of EPL. When a large fraction of cases go to trial, it may well be a sign of low firing costs with firms facing low litigation costs and being therefore willing to go to court or, conversely, a sign of high firing costs of workers facing low litigation costs and being therefore willing to sue the firm. Second, we exploit our model as well as the French institutional setting to generate instruments for these endogenous outcomes. Using these instruments, we show that labor courts decisions have a causal effect on labor flows. More dropped cases and more trials cause more job destructions: more trials indeed are a sign of lower separation costs. More settlements, higher filing rates, a larger fraction of workers represented at trial, large lawyer density dampen job destruction.

**JEL classification:** J32, J53, J63, K31

**Keywords:** employment protection legislation, labor flows, labor judges, unfair dismissal, France

## 1 Introduction

The effects of employment protection legislation (EPL, hereafter) on labor markets have mostly been examined through changes in the legislation (see for instance Autor, Donohue, and Schwab, 2006 for the impact of exceptions to the employment-at-will in the US). However, enforcement of the law may matter more than its content (see for example Bhattacharya and Daouk, 2002 who find that insider trading laws decrease the cost of equity only when a case has been prosecuted). Moreover, a legislative text never exists in isolation but within a web of texts. Therefore, any alteration of the law in one dimension is likely to have an impact in other dimensions and each law must be considered as embedded in the legal system (see for example Autor, 2003 who shows how changes in the “Unjust Dismissal Doctrine” impacted the temporary help industry in the United States).

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The French EPL system characterized by large separation costs, high coverage by collective bargaining agreements, powerful unions is usually considered by international organizations as one of the strictest. It also produces every year a large amount of legal procedures related to individual labor disputes (roughly 160,000 new cases every year, as we will see). These procedures are complex, costly, and can last for years. It is these *legal procedures* that we analyze in this paper. We examine their impact on employment flows. However, in contrast with virtually all of the literature, we do not focus on legislation changes but on the judicial process itself. We measure labor courts outcomes – workers’ or firms’ victories, conciliations... -- directly using all cases that took place in France between 1990 and 2003. We relate these outcomes to the legal environment of each French labor court. We then try to understand how these legal outcomes affect job creation and job destruction within the jurisdiction of each court, using flows measured at those establishments that are within the jurisdiction of each court.

This strategy is, we believe, better suited to measuring and identifying *real* EPL since the mere wording of a new legislative text often tells little about its *real* impact. We build a model relating firing costs to judicial activities of the courts. The model as well as data will help us show how changes in the legislative environment that directly affect the legal costs of going to court transform the whole structure of potential labor courts outcomes. Because we want to relate legal case outcomes with EPL, our contribution to the literature has to be both methodological and empirical.

On the *methodology* side, we define here increasing EPL uniquely by **increasing separations costs**. Endowed with this definition, and using Bentolila and Bertola (1990)’s very general result that an increase in separation costs decreases labor flows (both at entry and at exit), we are in position to **identify those legal outcomes of labor courts that constitute *real measures of EPL*** as those that decrease labor flows.<sup>2</sup> Indeed, we show theoretically *and* empirically that some features of legislation that are, apparently, helping workers have the exact opposite effect and decrease separations costs. The main reason for such a surprising result comes from *composition* effects. These composition effects have direct consequences on final separation costs: for instance, if only “expensive” cases come to court, on one side the firm economizes on the extensive margin (less cases) but pays more on the intensive margin (more expensive). Therefore, measured case outcomes do not have a simple and univocal interpretation in terms of separation costs: more trials may sometimes mean larger separation costs, but it may also mean lower separation costs. This result does not only apply to labor courts but also to divorce or more generally to any legislation that alters the decisions of workers, couples, firms when they contract, sue, or indeed go to court.<sup>3</sup>

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<sup>2</sup> Under conditions that we discuss later.

<sup>3</sup> This has not escaped some analysts; see for instance Stevenson (2007) on legislation and divorce rates.

On the *empirical* side, our contribution is fourfold. First, we consider measures of EPL varying across space and time based on the various measures of judicial cases outcomes directly coming from legislation enforcement. In France, workers can contest the conditions of a firing by filing a case to one of the 264 local labor courts. We use information collected by the French Ministry of Justice on all cases that were filed over the 1990-2004 period (2 millions of cases) to compute, at the local level of the court and for each year, various EPL indicators characterizing the enforcement of the labor laws: fraction of cases leading to a conciliation between parties, to a trial, resulting in a worker's victory, to a case dismissed by the court, or the fraction of cases in which workers or firms were legally represented. We match these local indicators with local measures of the legal environment (judges, administrative staff, lawyers...) as well as local measures of job flows à la Davis and Haltiwanger (distinguishing in particular the extensive and the intensive margins, 1992). Second, as we work at the level of France, a country in which many institutions are centralized and do not vary across the French territory (minimum wage, unemployment benefits, wage bargaining...) we are able to "control" for most of the French labor market institutions, even though there is enough variation between as well as within local labor courts. Third, thanks to the precise French institutional setting and those local measures of legal environment, we use an instrumental variables strategy to correct for the endogeneity from which estimation of the relation between economic conditions, including labor flows, and application of the labor laws might suffer. These instruments rely on administrative features presiding over the allocation of judges and judicial clerks across French territory, on the location of universities training lawyers, and on union traditions across France. All these features are shown to be disconnected from local business conditions. Then, we measure the effect of various court outcomes on employment flows, identifying in so doing those that are valid measures of increasing EPL and those that are not. Fourth, because labor laws in France do not vary across local areas (see however Chemin and Wasmer, 2009, on the noticeable exception of the working time reduction laws in one French region, Alsace-Moselle), a difference in difference approach is essentially impossible to implement in a French setting. Our local enforcement indicators approach (paired with the appropriate instruments) offers one of the few credible substitutes to this classic identification strategy, in addition one that has never been used, to analyze France.

As in all of the empirical papers we are aware of, our paper focuses on the impact of labor regulations on labor market characteristics and leave aside the welfare gains from job stability which must be taken into account for policy recommendations.<sup>4</sup> However, and in contrast with the existing empirical literature, our labor court outcomes capture some dimensions of the quality of labor relations which according to Blanchard and Philippon (2004) or Algan and Cahuc (2009) are related to the evolution of labor market conditions.

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<sup>4</sup> See Bertola (2003) for a theoretical model considering risk-averse workers and potential positive effect of EPL on welfare.

**Related literature:** In a seminal paper, Lazear (1990), who used unemployment benefits and severance payments given to a blue collar with 10 years of service as a proxy for labor market flexibility, acknowledges that high overall labor market flexibility can prevail without being captured by any of these two variables. Hence, one might conclude with Freeman (2004) that cross-country analyses are hardly convincing since “with only 30 or so advanced countries, highly correlated outcomes, and infrequent changes in institutions, the number of configurations can easily exceed the number of independent data points”. Moreover, in these cross-country analyses, the typical EPL indices are deemed exogenous and imperfectly capture how the behaviors of unions, employer federations, or government regulators change over time.

Taking stock of these critiques, a recent strand of literature has assessed the impact of EPL within countries. This strategy typically involves measuring the impact of a change in legislation targeted to a specific category within a whole country or -- in the case of the US -- the impact of the differential timing in the introduction of a new EPL across different states. Wrongful-discharge protections were adopted by US state courts during the last three decades. Autor, Donohue, and Schwab (2004) take advantage of the between-state variation in the timing of the introduction of these labor laws and estimate their impact using difference-in-difference estimators. The “implied-contract” exception law, meaning that the employer implicitly promised not to terminate a worker without good cause, is found to have reduced state employment rate by 0.8 to 1.6%. Boeri and Jimeno (2005), using the 1990s tightening of the Italian regulation for firms with less than 15 employees, find that the threshold does matter in conditioning layoff and hiring probabilities but find no significant impact on employment growth. Bauer et al. (2007) find no effect of the change in the German EPL exemption for small firms on worker turnover. Martins (2009) reaches the same conclusion using Portuguese matched employer-employee data. Marinescu (2009) uses the change in employment seniority before being able to go to court – it went from 200 days to 100 – to identify the protection effects of EPL.

Unfortunately, this last strand of research suffers from several downsides as well. First, these studies do not provide information concerning the degree of **enforcement** of labor regulations. To which extent these regulations were used by workers to defend their own interests? Are these regulations actually binding for employers? For instance, in the case of the US, even if judicial breaches to the employment-at-will doctrine have been judged by some state courts, we have little evidence on the extent to which they are used or even known by the workers. Therefore, we do not know if they act as a credible threat to the employment-at-will policy. The state of California recognized the application of the covenant of good faith and fair dealing to employment relationships in 1980. In March and April 1986, about 100 cases were filed in Los Angeles which implies an approximate number of 1,000

for the entire year in the entire state<sup>5</sup> (hence, about 80 cases per million workers).<sup>6</sup> In comparison, for France, with a population and GDP close to those of California, 160,000 cases take place in any given year. Of course, one could argue that the law can act on the employer in a pre-emptive way but, to capture any effect in the data, this impact should be very strong (or conversely the impact on employment of labor courts should be extreme in France). Second, labor laws are subject to court interpretation and tend to vary over time and space. As pointed out by *The OECD 2004 Employment Outlook*, even if an employer may be sanctioned in case of non-respect of EPL, “these provisions are subject to court interpretation and this may constitute a major (but often hidden) source of variation in EPL strictness both across countries and over time”. In addition, methodologically, the timing of introduction of a new EPL can substantially alter the results. Indeed, Miles (2000) - using a different classification of cases when identifying the adoption dates - finds no significant effects. Third, problems of endogeneity abound: court interpretation with the ensuing impact might not be exogenous as market conditions are likely to have an impact on the leniency of the courts, the introduction of new laws, or workers’ propensity to go to court. Ichino et al. (2003), using micro data on labor court cases, focus on this institutional endogeneity of EPL enforcement. Studying the case of an Italian bank with roughly 20,000 employees among which 409 workers were fired and 86 of them went to trial over more than 20 years, they show that a higher unemployment rate increases worker’s probability of winning her case. In contrast, Marinescu (2008) - using data from a 1992 survey of Employment Tribunal Applications in Great Britain - finds that a higher unemployment rate leads to more decisions against the workers, in particular when they were already re-employed.

To summarize our results, we show that labor courts decisions have a causal effect on labor flows. More dropped cases and more trials cause more job destructions: more trials indeed are a sign of lower separation costs. More settlements, higher filing rates, a larger fraction of workers represented at trial dampen job destruction.

Section 2 describes the French labor courts institutional setting. Section 3 presents a simple theoretical model relating the judicial cases outcomes that result from the enforcement of labor laws to firing costs. Section 4 describes our data sets and provides some descriptive statistics. Section 5 explains our empirical methodology to capture EPL causal effects and presents our regression results on labor flows. We briefly conclude.

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<sup>5</sup> In 1986, civil case filings in Los Angeles represented about 60% of all civil activity in the state of California.

<sup>6</sup> These figures are taken from Dertouzos (1988).

## **2 Labor Courts in France: the Institutional Setting**

### ***2.1 French Firing Laws***

Three types of events may trigger the firm's decision to fire a worker: a grave misconduct, a lay-off due to a slowdown in the business activity, or an insufficient level of competence. Under the current French law, the separation should be declared as a redundancy (or economic dismissal). However, in France as in many European countries an economic dismissal may entail a more complicated and time consuming process as well as the payment of large severance fees. On the contrary, a dismissal for misconduct is a faster process - if not challenged by the worker or if confirmed by the labor court. Thus the dismissal for "just" cause implies a lower firing cost than a redundancy. When fired, a French worker might sue the firm. Since a bill passed in 1973, every individual dismissal must be justified by a "real and serious cause" and the firm has the burden of proof. Without delving deep into 30 years of jurisprudence that have made this concept simultaneously blurred and precise, "real" means that the wrongdoing justifying the dismissal must be objectively defined, accurate, and in line with the mandatory firing notification letter. For example, being ten minutes late does not mean being seventy minutes late; a lack of performance or a lack of trust is not considered "real" if it is not objectively measured. The cause is considered as "serious" only if it is related to the professional activity of the worker and if it makes the labor relation impossible to continue. There are various degrees of "seriousness". Some lead to "grave misconduct" (for example brawl or thievery) which allows the employer to fully deprive the worker of severance payment (in this case, the employee may lose her unemployment benefits).

In addition to the cause of the dismissal, the employee can sue the employer if the latter did not follow the mandatory legal steps of the firing process (for example the employer must notify one week in advance that the employer intends to meet the worker in order to discuss his firing).

As pointed out by Galdon-Sanchez and Guell (2003), EPL legislation in European countries may give rise to a double moral hazard problem: a worker fired for misconduct has an incentive to sue for unfair dismissal and a firm has an incentive to label "misconduct" a separation which, in reality, is a redundancy. Thus, even if this phenomenon is obviously hard to detect in the data, the proportion in France of dismissals for economic reasons decreased from 61% in 1993 to 24% in 2004.

### ***2.2 French Labor Courts***

The French labor justice is mainly dispensed by the "Prud'hommes" which is the relevant jurisdiction to every labor dispute arising at the individual level in France. There are several labor courts in each Prud'hommes. As the legislators wanted to take into account industry characteristics of the cases

brought to court, each Prud'homme is divided into 4 sections according to the main activity of the firm: Agriculture, Retail Trade, Manufacturing, and Other Activities (mainly Services). A fifth section is dedicated to cases involving “managers, engineers, and professionals” irrespective of the activity of the firm.

The judges in the Prud'hommes are not professional judges and are seen by some as performing a public duty. Each labor court comprises judges representing employers and judges representing employees in equal number. These judges are elected every five years within lists established by workers unions and employer federations. All employees are entitled to vote. They select judges in the union lists. Similarly, employers vote and select judges within the federation lists. Hence, in every section of every Prud'homme, the number of judges is even, at least four on each side. All French establishments are allocated to one Prud'homme. On the employee side, the electoral body includes all private sector workers with a labor contract. They are enrolled on the electoral list based on a mandatory administrative report from their employer. Unemployed individuals can also vote but have to enroll on the list by themselves. On the employer side, in addition to employers and business owners, employees entitled to take firing or hiring decisions can also vote for employer representatives.

Prud'hommes are supposedly not very formal and should be seen as conciliation boards. Prud'hommes were designed to foster agreements rather than trials. Therefore a first and mandatory step in each trial is a conciliation audience where plaintiffs and defenders explain their grievance and judges try to push for an agreement. If they do not, the case is judged. If, in the end, an equal number of judges decides in favor of a worker and against her, there is a tie (“solution de départage”). In this case, a single professional judge decides the outcome of the trial.

In the 90's, 264 Prud'hommes were spread all over metropolitan France, a labor court being at most within a radius of 30 miles from any establishment. A majority of plaintiffs were represented by a lawyer. The plaintiff or the defender can appeal the decision of the court if the stake is larger than a given threshold (about 5,000 euros in 2006). It is worth noting that 60% of the decisions were appealed in 2004. Among them, 55% of these appeals did not overrule the Prud'hommes' decision, 30% confirmed it “partially”.<sup>7</sup>

In case of an emergency, a summary judgment can be made. However, such judgments are only temporary and might be overruled afterwards. In this paper, we do not consider these summary judgments.

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<sup>7</sup> Munoz-Perrez and Serverin (2006).

For any given case filed in a labor court, the range of outcomes is wide. A case can lead to a full tribunal hearing and be lost or won. It can be classified as null and void if the plaintiff has not shown due diligence in the conduct of her case. The case can also be crossed out. This crossing out is less severe than a “null and void” classification. The worker can reinstate her case at the point it has been crossed out and does not have to restart the whole process. This crossing out can be decided by judges but it can also be the outcome of the plaintiff’s initiative.<sup>8</sup> A case can either be conciliated during the conciliation step or outside the tribunal with a formal agreement sent to the court.

The motives for suing are multiple. The nullification of a dismissal is asked in the majority of cases (58%).<sup>9</sup> 21% of plaintiffs ask for some compensation that was not paid by their former employer whereas 9% of plaintiffs do not agree with the level of their severance payment. In this paper, we do not distinguish between these different motives.

### ***2.3 Recent Changes***

The legal environment did not change substantially during our sample period (1990-2004).<sup>10</sup> In the relatively recent past of an institution officially founded in 1806<sup>11</sup>, a 1979 bill radically changed the institutional settings of the Prud’hommes. First, it extended the number of Prud’hommes across France in order to guarantee an equal access among workers. Second, it ended the majority rule for electing representatives which resulted in a more diverse composition of each Prud’homme. Third, it funded the Prud’hommes by the central administration (Ministry of Justice), an important feature in our analysis since national principles ruled funding which entailed much less sensitivity to local changes in the economic environment.

## **3 Litigation and Firing Cost: a Simple Theoretical Model**

We do not study here the theoretical impact of firing costs on labor market variables. This has been extensively examined elsewhere (see Bentolila and Bertola, 1990 and Bertola, 1992). We rely on these authors to say that larger firing costs entail slower and smaller adjustments than separations inducing no costs. Here, we try to illustrate how firing costs are related to labor court inputs and outcomes. To do so, we depart from the traditional model of litigation proposed by Priest and Klein (1984) or

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<sup>8</sup> In 2004, only 27% of crossed out cases were reinstated.

<sup>9</sup> In the very vast majority of the cases won by the workers, they are not reinstated but receive a compensatory award.

<sup>10</sup> Minor changes took place in relation with the application of the working time reduction and the 35 hours workweek.

<sup>11</sup> Prud’hommes can be traced back to the Middle Ages.

Bebchuk (1984) or more recently Card and McCall (2009) to run a cost-benefit analysis similar to the one proposed by Flanagan (1989) for disputes related to the compliance to the National Labor Relations Act in the US. For simplicity, the model that we describe below has no uncertainty, no asymmetric information that would explain why trials take place; everything is known and predictable; we will come back later on this topic and discuss how our results are affected by asymmetric information.

In our analysis, the employer can deliberately choose to pay a minimal firing cost with the risk to be sued by the worker; or to pay a larger amount, which corresponds to the payment a plaintiff would accept in order to give up any further possibility of lawsuit. Important to note here that this last sum is not negotiated between the firm and the worker, but is directly coming from legal precedents (jurisprudence). In France, it amounts to one to two years of earnings. Another way of understanding the model is as follows: a firm chooses to dismiss the worker either for a personal motive, paying a small or even zero severance payment in case of a disciplinary case, or to dismiss the worker for an economic motive (redundancy) with larger severance payments. Our hypothesis, then, is that when firms pay the severance payment corresponding to a redundancy, the workers never choose to sue the firm (indeed, 97.5% cases in our data come from dismissals rather than redundancies). When the worker goes to court after a dismissal, the firm has to prove that the case is a legitimate dismissal for personal motive rather than a redundancy.

In the case of a dismissal for personal motive, the firm incurs a minimum cost ( $c_m$ ) if the dismissal remains unchallenged by the worker. This cost  $c_m$  is lower than the maximum cost  $c_M$ , which leads the worker not to sue the firm. Yet the firm has to take into account the probability that the worker files a suit,  $p_f$ , the probability  $p_c$  that the case ends with a formal agreement in front of the judge, and, when the conciliation step fails, the probability that the worker wins,  $p_w$ . We assume that during the conciliation step, the judge tries to reach an agreement using an “intermediary” cost  $c_c$ , given by the jurisprudence, always lower than  $c_M$ . Note that in order to simply introduce the co-existence of a conciliation stage and a trial stage we consider  $c_c$  to be constant. The firm cannot increase  $c_c$  in order to avoid the trial.

Uncertainty of the entire process is summarized through  $p_w$ . The firm and the employee share this value. In this cost-benefit analysis, we assume that the quality of each case is known by both parties and is related to observed characteristics of the workers and of the firms.<sup>12</sup> For instance, union or personnel delegates or pregnant women are very well protected by the law, and the judges are very strict against dismissals of such individuals. Several past statements of judgments also show that

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<sup>12</sup> As mentioned above, this assumption is discussed below.

judges demand more stringent evidence when a firm has had large positive profits in the years preceding the trial.<sup>13</sup>

At this point, the model has no uncertainty, no asymmetric information that explains why trials take place. Theoretically, firms and workers should agree on a payment in order to avoid the litigation costs. Two features could be added to the model in order to explain why firms and workers go first to the Prud'hommes and then, if ever, to trial. First, costs for reaching an agreement without any mediator like the judge could be larger than the costs at the conciliation stage. This seems plausible since the Prud'hommes institution is seen as a public good and the conciliation stage is essentially free. Second, in line with the literature in which trial is an equilibrium outcome, we can assume that the worker and the firm have different and irreconcilable expectations on the outcome of the trial. This assumption would lead to a "contract zone" where a settlement amount can be found (see Bebchuk, 1984). When the expectations are not in the contract zone, the trial takes place; else an agreement can be found at the conciliation stage. Because there is a need to model expectations, computations become much less tractable. The model loses its simplicity without gaining much insight for our purpose. In addition, as underlined by Spier (2007) such a model does not fully solve the litigation puzzle since the conciliation stage should help the expectations to narrow. Again, it is possible to assume two stages of narrowing expectations, one leading to conciliation, one to the trial.<sup>14</sup> From this discussion, it is however interesting to note that workers employed in large firms are virtually absent from the Prud'hommes. In line with the above discussion, the various probabilities should be better known by the human resources management and union delegates that are always present in the larger firms. Hence, they should escape trials and easily agree on separation payments, as is observed. In small firms, conflicts become often personal and difficult to solve without the help of a neutral third party, a role apparently played by the Prud'hommes.

Now, let us go back to our model. If choosing  $c_m$  the expected firing cost for the firm is:

$$E(c) = p_f \{ p_c (c_c + l_c) + (1 - p_c) [ p_w (c_m + F) + (1 - p_w) c_m + l_t ] \} + (1 - p_f) c_m$$

where  $F$  is a compensatory award for the worker,  $l_c$  is the firm's litigation cost when the parties reach an agreement at the conciliation stage, and  $l_t$  is the firm's litigation cost when the parties go to trial. Otherwise, the firing cost is  $c_M$ .

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<sup>13</sup> Unfortunately, the data do not contain a firm identifier. Hence, it is not possible to directly relate firm and worker behavior.

<sup>14</sup> Computations not included in the Appendix are available from the authors.

As for the worker, if the firm chooses  $c_m$ , the expected severance payment is:

$$E(s) = p_f \{ p_c (c_c - k_c) + (1 - p_c) [ p_w (c_m + F) + (1 - p_w) c_m - k_t ] \} + (1 - p_f) c_m$$

$k_c$  being the cost of litigation for the worker at the conciliation stage,  $k_t$  being the cost at the trial stage. Otherwise, the received payment is  $c_M$ .

The parameters  $p_f$  and  $p_c$  result from the optimization from the firm and the worker and equal one or zero. The worker chooses to go to court or not; and in that case to accept the conciliation or not. The firm chooses to pay  $c_m$  or  $c_M$ ; and, if at the court, to accept the conciliation or not.

We define:  $\overline{p_w} = \frac{k_t}{F}$ ,  $\overline{\overline{p_w}} = \frac{c_c - c_m + k_t - k_c}{F}$ ,  $p_w^* = \frac{c_c - c_m - l_t + l_c}{F}$ , and  $p_w^{**} = \frac{c_M - c_m - l_t}{F}$

**Assumptions:**

*Condition (1):*  $k_t > c_c - c_m + l_c - l_t$  : the cost of trial is sufficiently large ( $p_w^* < \overline{p_w}$ )

*Condition (2):*  $c_c - k_c > c_m$  : the gain for the worker at the conciliation stage is larger than the severance payment she receives in case of firing for a personal motive ( $\overline{\overline{p_w}} < \overline{p_w}$ ).

*Condition (3):*  $c_c + l_c < c_M$  : the cost for the firm at the conciliation stage is smaller than the severance payment received by the worker in case of firing for an economic motive.

Conditions (1), (2) and (3) taken together allow for the possibility of a **conciliation** stage.

*Condition (4):* The compensatory award  $F$  is large enough so that when the firm is certain to lose at trial, it is less costly to pay the maximum severance payment. That is:  $c_M < c_m + F + l_t$ . It implies  $p_w^{**} < 1$  and excludes an equilibrium in which the law has no deterrent effect, every worker being fired for a personal motive.

*Condition (5):*  $c_c - k_c + k_t + l_t < c_M$  : there is a probability range for a trial to exist. The firm is better off at trial than paying  $c_M$ .

**Result:** Under these assumptions, there are four equilibria, depending on the value of  $p_w$  (see Appendix for a proof):

*Equilibrium (1):* for small probabilities  $p_w < \overline{p_w}$ , the firm pays  $c_m$  and the worker does not go to court ( $p_f = 0$  and  $p_c = 0$ ) since the firm would refuse the conciliation and the gain at trial would be negative for the worker.

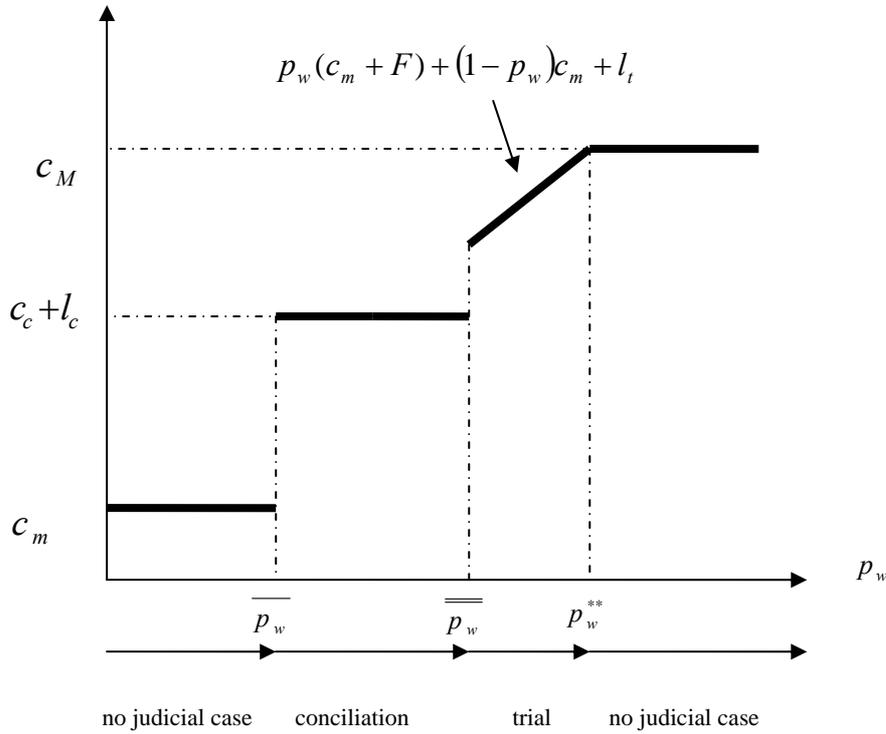
*Equilibrium (2):* when  $\overline{\overline{p_w}} < p_w < \overline{p_w}$ , the expected gain of the worker at trial is positive. She can credibly threat the firm to go to a full hearing. Since  $p_w^* < \overline{p_w}$  the firm accepts to settle with the

worker. The settlement amount is lower than the expected loss of the firm at trial but larger than the expected gain of the worker. ( $p_f = 1$  and  $p_c = 1$ ).

*Equilibrium (3):* when  $\overline{\overline{p_w}} < p_w < p_w^{**}$ , the worker is better off at the trial stage and refuses to conciliate anymore ( $p_f = 1$  and  $p_c = 0$ ).

*Equilibrium (4):* when  $p_w > p_w^{**}$ , the firm pays  $c_M$  since it would be too costly to go to court.

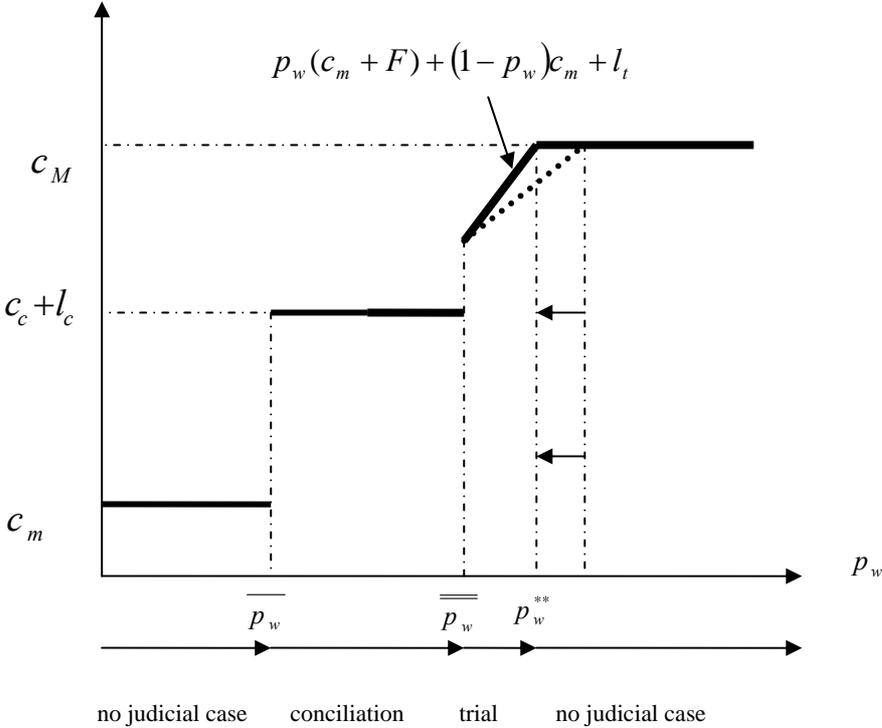
The firing cost, depending on the probability of winning of the case, is shown on Figure 1.



**Fig. 1: Firing cost**

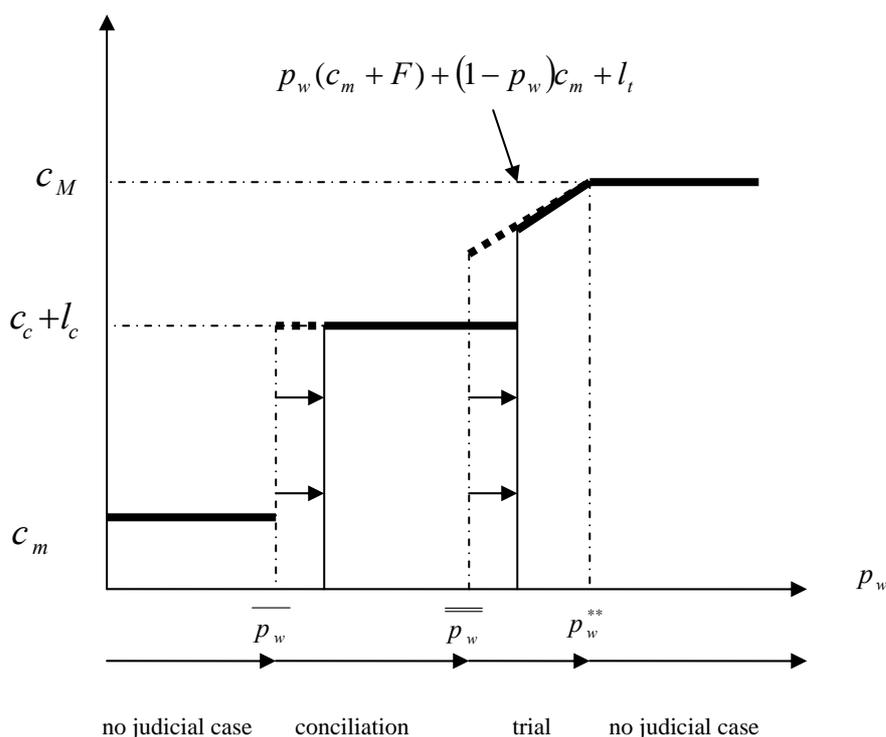
**Discussion:** We consider that firms are facing an invariant distribution of case quality. This model shows that changes in the “inputs” have intuitive impacts on the firing costs. For instance, an increase in the firm’s litigation cost at trial  $l_t$  implies a decrease in  $p_w^{**}$  (Figure 2). The firm will be more likely to fire high probability workers with an economic motive to avoid lawsuits. It will also increase the relative cost of a trial with respect to conciliation. The expected firm’s cost at trial will rise. All these changes lead to an increase in the firing cost, a decrease in the trial and filing rates. Hence, a

smaller number of trials and filing cases appear to be associated (in some cases at least) with more EPL, in contrast to the usual view promoted by OECD that equates trials with EPL.



**Fig. 2: Firing cost, case outcomes and an increase in the litigation costs for the firm**

Let us study the following case that stands in stark contrast with the previous one (Figure 3). An increase in workers’ litigation costs  $k_t$  will induce a decreased probability for the workers to file a case (through a higher  $\overline{p_w}$ ) as well as more workers that prefer to conciliate (through a higher  $\overline{\overline{p_w}}$ ). In this situation (contrasting with the previous one), a smaller number of trials is associated with lower total firing costs. In fact, our model shows that firing costs directly depend on variation in input costs; yet the link with case outcomes is ambiguous.



**Fig. 3: Firing cost, case outcomes and an increase in the litigation cost for the worker**

The model can also be used to think about the instruments and discuss the endogeneity problems that we will face when estimating the relations between labor court outcomes and labor market characteristics. For instance, an adverse shock on the labor market conditions can affect labor court outcomes. First, according to the legislator,  $F$  compensates the worker for past and future potential wage losses, in particular by taking into account the difficulty of finding a new and comparable job. The magnitude of  $F$  is therefore likely to be countercyclical. An economic downturn pushes  $\overline{p_w}$ ,  $\overline{\overline{p_w}}$ , and  $p_w^{**}$  downwards which results, other things being equal, in higher firing costs.<sup>15</sup> Moreover, if workers exert more effort on the job during a downturn (with an efficiency wage story in mind), the overall distribution of  $p_w$  will shift upwards. Third, economic conditions might also alter the overall distribution of  $p_w$  through judges' behavior. Judges showing a pro-worker bias when labor market conditions deteriorate increase the firing costs faced by the firms (see Ichino et alii, 2003).

<sup>15</sup> Empirically, Siegelman and Donohue (1995) find that cases of employment discrimination rise in downturns and are more likely to be lost. In our model, it means that the decrease in  $\overline{\overline{p_w}}$  more than offsets the decrease in  $p_w^{**}$  when computing the average worker's victory rate.

Our identification strategy is based on variations of the legal environment across years and labor courts as well as within courts. These variations might impact case outcomes and the cost of procedure without being related to current local economic developments. First, labor judges and judicial clerks involved in labor disputes are unequally distributed over French territory, leading to differentially congested labor courts. This implies an increasing marginal cost of challenging the dismissal following Buchanan's club theory of public goods and thus lowers the firing costs through higher  $k_t$ . Second, one might plausibly assume that a higher lawyer density induces a stronger competition amongst lawyers pushing down the cost of legal representation ( $k_t$  and  $k_c$ ). Third, judges working at the Prud'hommes are union members (employees or employers) and their behavior is likely to be shaped by a long tradition of industrial relations adopted by their union at the national level and loosely related to local economic developments. For instance, some unions tend to favor agreements over confrontation. This should also impact case outcomes. We will discuss more in depth the exogeneity of these indicators in Section 5.<sup>16</sup>

## 4 Data Set and Descriptive Statistics

### 4.1 Individual Cases Data Set

#### 4.1.1 Firms' and Workers' Characteristics

Our data source on individual cases comes from administrative records made at the level of each Prud'homme and collected by the statistical department of the French Ministry of Justice. Their primary goal is to monitor labor courts' activities with an emphasis on speed of treatment. The data source is exhaustive for the period 1990 to 2004. It includes approximately 2 millions individual cases.<sup>17</sup>

Apart from years 1993, 1994 and 1995, the number of cases treated by labor courts appears to be stable over the period, in stark contrast with what happened in some countries such as the UK where a sharp increase took place (see Figure 4 and Burgess, 2001).

For each case, the sex and age of the employee-plaintiff is recorded. There is no precise information on her skill-level in the firm. Nevertheless, the "managers" section of the Prud'hommes only deals

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<sup>16</sup> In our approach, the congestion of the labor courts increases the cost of litigation which deters workers either to file or to refuse the settlement and therefore decreases the firing cost. Two recent papers by Besancenot and Vranceanu (2008) and Stahler (2008) relate labor courts to labor markets through the existence of "judicial mistakes". The congestion of the court pushes upward the number of judicial mistakes. Bad type workers – that is workers that have rightly been fired for a personal motive – have an incentive to go to court gambling on a judicial mistake. This is found under some assumptions – and contrasting with our view – to have an increasing impact on the firing costs.

<sup>17</sup> We will not consider the 2% of cases involving employers as plaintiffs.

with high-skill employees and managers. Similarly, since low-income workers are eligible for financial help (13% of the cases) eligibility can be used as a low-income indicator. Approximately one half of these cases are susceptible of appeal,<sup>18</sup> which implies that the sums at stake are larger than 5,000 euros (in 2005). 53% of the employees are represented by a lawyer.

As for firms' characteristics, we know the industry, the size, and the Prud'hommes jurisdiction of the employing firm (i.e. the industry broadly defined). However, we can only differentiate between firms with more and firms with less than 10 workers. The size of the firm has to be known by labor court judges because labor laws differ for small firms; more specifically, they are less stringent and try to ease the financial costs of firing that could hurt them irreversibly. Small firms are overrepresented with 56% of the filed cases whereas they comprise 25% of the labor force.

For each case, the starting date, the ending date, the motives for dismissal, and the court decision are recorded. An average case takes approximately one year (343 days) with a standard deviation of 9 months.<sup>19</sup>

#### **4.1.2 Cases Outcomes Indicators**

Using the individual cases data set, we are able to compute various case outcomes indicators for each Prud'hommes and year. A case can follow various paths and every grouping is somewhat arbitrary but we try to follow elements of our model as much as possible. We start by computing the following cases outcomes indicators using the most disaggregated classification: "winning" (resp. "losing", "null and void", "crossed out", "conciliated", "agreement" and "tied") is computed as the ratio of the cases classified as worker's victory (resp. defeat at trial, null and void, crossed out, conciliated, having led to an agreement, having been judged by a professional judge) in year  $t$  over the number of cases disposed in year  $t$ . We then group cases in "conciliated" (cases conciliated or having led to an agreement), "dropped" ("null and void" or "crossed out") and "trial" (cases having reached trial) and compute rates accordingly, see Table 1. We also compute the worker's victory rate at trial ("victory").

About 60% of cases ended by a trial, among which 75% led to a worker's victory (see Table 2). Despite the mandatory step of conciliation, only 11% of the cases ended at this stage. Taking into account cases that led to an agreement notified to the court or to a withdrawal on the worker's side, at least 20% of the filed cases led to an agreement. 20% is also the proportion of cases having been

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<sup>18</sup> Unfortunately, current available data sets do not allow us to track the cases across the levels of jurisdictions. Whether the decision is appealed by the worker or the firm is also unknown. In 2004, according to Serverin and Munoz-Perez (2006), among the population of appealed cases, only 15% were overruled.

<sup>19</sup> Because we use court-level information for our analysis, rather than case-level information, our Tables will report court-year statistics. All case-level statistics are available from the authors on request.

dropped. All case outcomes or judicial environment indicators display a very strong variance over time and across Prud'hommes. In comparison with what is observed in a country such as the UK, a large fraction of workers and firms are represented by a lawyer despite other available means of representation. Despite the conciliation step which promotes a quick and costless resolution of the cases, labor disputes seem to induce important litigation costs. Our model help us understand the relative frequencies of these case outcomes, in particular the often low value of  $k$ , the worker's litigation cost and  $l$ , the firm's litigation cost.

Admittedly starting from a high base, we do not observe in France a strong increase in the number of cases brought to the labor courts. In absolute terms, the number of filed cases increased by 10% over the 1990 to 2004 period. The number of filed cases by unemployed workers hovered around five percent over the same period.

The cyclical behaviors of collective conflicts have been thoroughly studied in the literature without reaching a consensus: strike incidence has been found procyclical (see Harrison and Stewart, 1994) in the Canadian context and strike outcomes tend to be more favorable to unions when the national unemployment rate is lower in the British context (see Devereux and Hart, 2010). Evidence of any studies on the cyclical behaviors of individual conflicts is scarce. A regression of the different indicators of outcomes on local measures of the business cycle shows that the case outcomes are strongly correlated with the cycle (see Table A.1) and that traditional labor regulation indices are highly imperfect in this respect. As the mean duration of a case is around one year, we consider both the relationship between the outcome of the case and the unemployment rate at the time of the decision and the relationship between the outcome of the case and the unemployment rate at the time of filing. In both cases, a high unemployment rate is associated with a high trial rate, a high winning rate and a small number of “agreed, conciliated, or dropped” cases. Therefore a deteriorating labor market hardens the judicial process leaving less room to informal decisions. In the same time there are less cases relatively to the number of firings, since the filing rate displays a strong countercyclical pattern.

## ***4.2 Local Employment Data Set***

### **4.2.1 Labor Court Level**

Local employment flows at the establishment level are computed from the SIRENE files, maintained at the French statistical institute (INSEE). These files give the precise location (city within a “département”) for each establishment. We compute a set of Davis and Haltiwanger (1992) indicators over the 1990-2004 period: job creation (both at the extensive and the intensive margin), job

destruction (both at the extensive and the intensive margin), and net job creation variables over the 1990-2004 period. These measures are aggregated by industry (service, trade, and manufacturing) and size of the establishments (more or less than 10 employees) at the city level as well as at the Prud'homme level, using a 1999 correspondence between cities and Prud'hommes provided by the Ministry of Justice. In comparison with cross-country analyses, these indicators also show a high heterogeneity across periods and across the 264 areas.

To measure local unemployment, we use the number of unemployed as registered at the National Labor Agency (ANPE) for each city as well as the city labor force as measured at the 1999 Census. Finally, from 1997 on, we are able to distinguish the reasons for losing one's job (economic or personal dismissal, entry into the labor force, end of temporary contract...). Unfortunately, there is no data set giving us, at the local level of the city, the size of the temporary help service industry. Hence, we cannot perform an Autor's type analysis. However, in contrast with other European countries (such as Spain), the fraction of temporary workers in French total private employment is low (about 2.5% in 2009).

### ***4.3 Election Data Set***

The elections for the Prud'hommes are crucial in France - at least for the trade unions - as they are the only way to assess unions' representative character at the national level. Over our sample period, 4 rounds of elections took place, in 1987, 1992, 1997, and 2002. For each round, we collected the share of judges affiliated with each union as well as the number of judges by section at the Prud'homme level. Union shares of votes are rather stable over time but display a great deal of heterogeneity across Prud'hommes (see Table 3). The number of judges did not change from 1993 to 2002 (see Table 4). Changes took place in 1992 and after 2002 (see Table 5). For the 1992, 1997 and 2002 rounds, we collected the turnout rates and the number of workers who were enrolled in the electoral lists for each Prud'homme.

### ***4.4 Additional Judicial Data***

In France, each lawyer has to get licensed and registered at the Bar ("barreau") in order to be entitled to practice. We know the number of lawyers registered at each "barreau" from 1996 to 2006. It allows us to have a local estimate of the number of lawyers by employed worker. As there are fewer bars in France than Prud'hommes (181 versus 264), we match each Prud'homme to the closest bar using shortest route distance and compute the number of lawyers available to employees depending on one single Prud'homme. Using the 1999 Census, the national average is 77 lawyers per 10,000 employees,

going from a minimum of 14 (Creuse) to a maximum of 868 (Paris). From our micro data set on Prud’hommes cases, we are able to compute the number of workers who were represented by a lawyer by labor court and year. We observe a very high correlation (0.68) between the lawyers’ densities computed from these two different sources. Lawyer data cover a shorter period than other variables (1996-2004).

In addition, we obtained the number of “greffiers” (clerks) employed by the Ministry of Justice attached to tribunals in the area of each “Tribunal d’instance”<sup>20</sup>, closest to the labor court (“Staff” hereafter) over the 1992-2004 period<sup>21</sup>. “Greffiers” are civil servants in charge of all the administrative tasks, which include assisting the workers in filing their cases as well as writing the judgment terms. Their allocation is centrally set (by the Ministry of Justice).

## 5 Identification Strategy and Results

### 5.1 An Instrumental Approach

We presented in Table 1 our measures of court decisions, properly aggregated to have a simple enough view of a complex sequence of outcomes. As clearly appeared through the model analysis, these decisions – dropping cases, workers’ victories or losses, settling cases, going to trial, or the duration of a case – are ambiguously related to firing costs.

In what follows, we try to examine the causal impact of these measures of judicial cases outcomes on employment flows. We rely on instruments, derived from our model, that are likely to affect the various costs of litigation for the workers and the firms. They are described in the next subsections after having presented the simple estimating framework that we adopt.

#### 5.1.1 Estimating Equations

We intend to estimate the following econometric model:

$$Flows_{p,t} = \alpha_1 BC_{p,t} + \alpha_2 BC_{p,t-1} + \beta Outcome_{p,t} + \delta_p + \gamma_t + \varepsilon_{p,t} \quad (3)$$

<sup>20</sup> As there is more “tribunal d’instance” than Prud’hommes (460 versus 264), we use again orthodromic distance for the matching.

<sup>21</sup> Data linearly interpolated for 1993 and 1994.

where  $Outcome_{p,t}$  is a measure of judicial cases outcomes at the unit of observation  $p$  and for year  $t$ .  $BC_{p,t}$  is a business cycle indicator. The unit of observation is the Prud'homme. Our labor market variables  $Flows_{p,t}$  are the labor flows at the Prud'homme level.  $\delta_p$  is a Prud'homme fixed effect;  $\gamma_t$  is the year effect and  $\varepsilon_{p,t}$  is the statistical residual. In each regression, observations are clustered at the local labor market area level. The labor market areas defined by the jurisdiction of the Prud'hommes display a large heterogeneity in size (measured by active population or employment). Half of the Prud'hommes account for about 80% of the 1991 total employment. We weight our regressions by the 1999 active population of the Prud'hommes area (results are unchanged when using total employment at the start of the period under review, 1991). Table 6 presents results of regression (3) with and without fixed effects using OLS. No clear pattern is apparent in this Table and, again, it is impossible to know if an increased number of conciliations causes job destructions or job destructions cause more conciliations in court.

Therefore, to estimate the parameter  $\beta$  measuring the causal impact of the judicial activity on the labor market flows, we adopt an instrumental approach by projecting our outcome indicators on instruments  $Z$ , business cycle indicators, year dummies and local labor market fixed effects:

$$Outcome_{p,t} = \mu_1 BC_{p,t} + \mu_2 BC_{p,t-1} + \lambda Z_{p,t} + \delta_p + \gamma_t + \nu_{p,t} \quad (4)$$

Clearly, the business cycle  $BC$  is endogenous and also needs to be instrumented: unobserved economic shocks might simultaneously impact the quality of the cases brought to labor court, bias the judges in their decisions, and affect the labor flows. To do this, we instrument the measure of local business cycles (number of unemployed registered at the local employment agency on the 1999 local labor force) by the *national* unemployment rate (in the spirit of Bartik, 1991 or Blanchard and Katz, 1992) using the following relation:

$$U_{p,t} = \delta_p + \gamma_t + \mu_p U_{aggregate} + \eta_{p,t} \quad (5)$$

Then, we use the *predicted* value  $\hat{U}$  of  $U$  by (3) to compute our exogenous measure of cycle  $BC$  as  $(\bar{U} - \hat{U})/\bar{U}$  where  $\bar{U}$  is the average of the *predicted* local unemployment rate  $\hat{U}$ .

### 5.1.2 Sources of exogenous variation

Suitable instruments for estimating the parameter  $\beta$  must explain the average outcomes observed at the level of the labor court and be exogenous to current labor market developments. We claim that the institutional settings of the Prud'homme itself and the local legal environment provide convincing instruments because, as our model discussed, they are related to case outcomes by affecting various costs of litigation and because their variations **within** each Prud'homme are essentially random.

### *a) Lawyers*

One of our instruments is the number of lawyers enrolled at the local bar – lawyers of all specialties, not only those specializing in labor disputes, a small fraction of the total -- scaled by total employment of the Prud'homme area or the département in 1991 (“lawyer density” hereafter). A high lawyer density is likely to reduce legal fees thanks to a higher competition (see Siegelman and Donohue, 1995 for a similar argument). It also helps to disseminate legal expertise and judicial knowledge of labor disputes among the population of workers. It should correspond to a lower cost of litigation for the worker and hence influences the outcome of the case.<sup>22</sup> One could argue that the lawyer’s choice of location depends on local economic conditions. First, labor disputes are only a small amount of the total number of civil cases (11% at the national level<sup>23</sup>). Second, in order to get a license to practice, a lawyer must enroll the local bar which jurisdiction the Prud'homme belongs to. This requirement and the building of a reputation and a clientele induce a low mobility of lawyers from one region to another. Moreover, a lawyer typically enrolled the bar the city where she studied and her location preference is likely to be unrelated to the incidence of labor disputes litigation. To see this, first note that there are only twelve law schools spread over French territory (see Figure 5). Then, observe the strong overlap between these areas where lawyers are trained and those that see the strongest increase in lawyer density over time (see Figure 6). Further supporting the identifying assumption that local labor market conditions are disconnected from the increase in lawyer density, lagged labor flows are found to have no predicting power on lawyer density including prud'hommes fixed effects and year dummies (see Appendix Table A.2). Thus the lawyers’ density influences judicial outcomes through the cost and the efficiency of the litigation process but are likely to be random *within* a Prud'homme with respect to current labor market developments, therefore making it a plausible instrument.

### *b) Clerks and Judges*

We also consider as instruments the number of judges and staff in charge of dealing with judicial cases (scaled by the local 1991 employment or by the local 1999 active population). Both categories obviously have an impact on judicial decisions as well. Judicial activity can be modeled as a production function for the case disposition. Beenstock and Haitovsky (2004) using a panel data on Israeli courts find that judges complete more cases as their caseloads grow and complete fewer cases when new judges are appointed to their court. In the case of Prud'homme, the sociological literature<sup>24</sup> supports this result and states that facing an increasing number of cases and having to meet some

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<sup>22</sup> Logit regressions using our data set of individual cases reaching the trial stage shows that hiring a lawyer against a unrepresented firm increases the probability of worker victory by about 4%.

<sup>23</sup> See available on line Info Stat justice (2005) « Une évaluation de l’activité des juridictions en 2004 » n° 80.

<sup>24</sup> See Bonaffé-Schmidt (1987).

productivity requirements, judges tend to be more meddlesome implying crossing out more cases for administrative reasons to speed up the process and lighten their burden. Less judges or staff would imply more dismissed cases which clearly diminish the firing costs of the firm.

### *Judges*

Prud'hommes' judges are unequally spread over French territory. Before 1979 when the "Réforme Boulin" took place, the administrative cost of the Prud'hommes was borne by the local administration and their creation mostly depended on a bargaining process between unions, firms, and this local administration. For instance, in those years (before 1979), 6 "départements"<sup>25</sup> out of 95 did not have a single labor court. In 1979, a legislation strongly supported by the Minister of Labor Robert Boulin transformed the financing and made it depend exclusively on central government resources. In addition, at least one labor court had to be present in every zone that also had a civil tribunal ("Tribunal de Grande Instance"). Since then, every additional change in the number of judges within a labor court or the opening of a new labor court depends on the outcome of a bargaining between the unions, the employers' federations, the local, and the national government. The process is supervised by a national agency ("Conseil national de la Prud'hommie"). This system generated strong rigidities with the consequence of essentially freezing the number of judges. This number stayed roughly the same from 1979 until 2008; every bargaining party preferring the status-quo. In 2008, the reform of the judicial map leading to the closing of 66 Prud'hommes out of 264 took stocks of the misallocation of judges across the French territory.

Figures 7 and 8 illustrate the dispersion of the Prud'hommes across French territory. We compare the proportion of the judges working at the local Prud'hommes with the size of the local labor market in 1992 (Figure 7, with Figure 8 eliminating the 6 largest Prud'hommes). For similar labor market sizes, the number of judges in some Prud'hommes is twice that found in other Prud'hommes. Turning to labor court activity, we plot in Figure 9 the average number of cases disposed every year by judges, a measure of their productivity. Hence, in some Prud'hommes, judges deal with 10 times more cases than judges in other Prud'hommes.

Judges are elected in December. As mentioned earlier, changes in their numbers and allocation across Prud'hommes took place in 1992 (in comparison with 1987) and in 2002 (see again Tables 4 and 5). Digging into administrative archives of the French Ministry of Labor, the number of cases brought to labor courts seems to be the main apparent quantitative indicator used to decide these changes.<sup>26</sup> Thus, nine labor courts were closed in 1992 because less than 100 cases were examined in a year. However,

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<sup>25</sup> As mentioned above, a French "département" is equivalent to an American county.

<sup>26</sup> In the US, the Administrative Office of the United States Court uses statistics over the average time spent by judges to handle a case of a given type to give an appraisal of judge allocation.

not all labor courts with less than 100 cases a year were closed. Figure 10 also shows that, along a very wide range of judges' productivity, no change took place (30 cases a year per judge being a rough threshold for an increase in the number of judges). Besides, lags of labor flows are unable to predict the change in the number of judges that occurred in 1993.<sup>27</sup> We try to give a sense of what might go on in the next paragraphs.

As explained before, labor courts are divided into 4 "sections" according to the industry of the firm (Agriculture, Retail Trade, Manufacturing, Services) and a fifth section for the "Cadres" (engineers, managers, and executives), see Appendix Table A.3. We essentially do not examine Agricultural sections. Labor court elections in France are the only way to gauge the representative character of a union and are critical for them. CGT, the most important union in France, is traditionally well represented in manufacturing and is reluctant to accept a reduction in the number of judges allocated to the manufacturing section, even if the share of workers employed in the manufacturing industry has declined in the geographical area.<sup>28</sup> To illustrate this point, we regress (using 1993 data) the local share of judges in a given section on the corresponding share of local employment (see Appendix Table A.4). We clearly see that there is no significant association between these shares in manufacturing and that the service industry is locally under-represented. Because the number of judges, as shown above, did not change at all between 1993 and 2002, our analysis will focus exclusively on this period.

### *Clerks*

In the vein of our lawyer density indicator, we consider the total number of civil servants from the ministry of justice working at the civil court independently of the type of cases they deal with. Their allocation planned at the national level responds to budget constraints and changes in the local caseload. As stressed before, Prud'hommes' cases represent a small share of the total civil case load and their steady number across the years is unlikely to have driven massive reallocations of judicial personnel. We check again that the clerks' density cannot be predicted by lagged labor flows (see again Table A.2).

The judge and staff densities influence the disposition of the cases through a congestion effect. Their allocation depends on institutional settings which generate outcomes that seem largely disconnected from local economic developments and let us think that they offer the characteristics of good instruments.

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<sup>27</sup> Results are available from the authors.

<sup>28</sup> However, some judges were reallocated from a section to another in 2002, mostly from "Agriculture" and "Manufacturing" to "Trade" and "Services".

c) *Union shares of votes*

We also use as instrument the share of judges working at the local labor court and affiliated to one of the unions running for the Prud'hommes elections. The union color of the Prud'homme is likely to influence the judicial outcomes. Prud'hommes elections in France are keys to determine the representative character of each union among the labor force. A large share of votes increases bargaining power at the firm and the national level. For instance, over the period under review, a share larger than five percent at the national level was a necessary condition to allow a union to take office in a firm with more than 50 employees and this irrespectively of the representative nature of the union at the firm level. The political platforms of the unions for these elections are their bargaining behaviors. CGT is often perceived as a hard line union with a strong political left ideology and is less prone to negotiate: the CGT leader was a member of the central committee of the communist party until 2001. From 1995 to 2004, the CGT signed on average one third of the collective agreements at the industry level against around seventy percent for the CFDT and sixty percent for the CFTC<sup>29</sup>. CFDT and CFTC are known as softer and more likely to conciliate. One could argue that facing a higher probability to lose their jobs workers would tend to vote for hard line unions. First, it would imply that every worker's opinion is to favor clash over dialogue to obtain what they want. Second, as shown by Andolfatto (1992) the map of union votes in France overlaps the map of political votes and is more related to traditional culture and local industrial history than to current economic conditions. The moderate Western France is characterized by a high turnout in favor of CFDT and CFTC and contrasts with left-wing territories from the south west and the north voting for CGT. Third, we showed that the institutional setting of the Prud'homme generates some discrepancies (to put it mildly) between the local Prud'homme characteristics and the local economy characteristics. Judges' behavior being determined by their union affiliation and the share of local votes being independent of current local economic developments –remember that an election takes place only every five years -- let us think that union color can instrument convincingly judicial activity, again *within* a Prud'homme.

Notice the variety of origins of our instruments: “staff” comes from the allocation by the central government of civil servants into local jurisdictions, “judges” and the union colors at the Prud'homme are set by the institutional settings of the Prud'hommes and the structure of industrial relations, “lawyers” is related to location preferences of the lawyers.

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<sup>29</sup> See page 63 « La négociation interprofessionnelle en 2004» part 2, page 63.Rapport du Ministère du Travail. Available on line at [http://www.travail-solidarite.gouv.fr/IMG/pdf/NC\\_2004\\_-\\_2\\_La\\_negociation-2.pdf](http://www.travail-solidarite.gouv.fr/IMG/pdf/NC_2004_-_2_La_negociation-2.pdf).

### 5.1.3 Results

Tables 7 and 8 present the instrumental regressions (first stage) for each of our outcome indicators – worker’s victory, going to trial, settlement, dropping the case, duration of the case, worker’s use of a lawyer, firm’s use of a lawyer – on the set of potential instruments, controls (year and business cycle indicators, appropriately transformed as described above), and Prud’hommes fixed effects. In Table 7, we focus on the whole period (1990-2003) with a restricted set of instruments (nothing on legal environment). In Table 8, we focus on a more recent period for which we can use an extended set of instruments (on the legal environment as measured by lawyers and ministry of justice staff in the area, see above). For each regression, the variables that are significant (in bold) are used in the IV regressions. The F-statistics (test of the null of the equality to zero of the selected instruments) and its associated p-value are given in the last rows of the Tables. Note that no instrument appears to be valid for the victory indicator. When more than one instrument is selected, we will test the (statistical) validity of our instruments using the Sargan-Hansen’s tests of over-identifying restrictions.

On substance, a larger judge density implies less dropped cases; when judges are “overworked” they tend to select the “best” cases and push the rest of plaintiffs (mostly workers) to abandon. Hence, dropping cases seems to work in favor of firms. By contrast, more judges (within a Prud’hommes court) are associated with more lawyers “helping” workers.

The legal environment is captured by the population of lawyers in the area and by the legal staff. More lawyers (all specialties, not only labor) entail a higher filing rate. More lawyers also imply less trials and more settlements. Interestingly, more lawyers are also associated with more workers choosing to be represented by a lawyer, but not more firms choosing to be represented by a lawyer. This is not necessarily surprising since firms appear to use lawyers when judicial staff is missing (see last column of Table 8).

Finally, the type of union that is strong in the Prud’hommes has some effect on court outcomes. Increases in votes for Force Ouvrière (FO) tend to favor the use of lawyers by workers and act against dropping cases when increases in votes for CFDT, a modernist union, appears to decrease the duration of cases.

### 5.1.3.1 Labor Flows and Court Outcomes

The results from our IV procedure are given in Table 9. The first panel presents estimates for the full period whereas the second panel presents estimates for the last years, 1996-2003. The outcome indicators differ according to the period since available and valid instruments also differ by period.

Through the results on job flows, we can induce which outcomes reflect increasing EPL, and which ones reflect decreasing EPL. Using Bentolila and Bertola (1990)'s very general result that an increase in separation costs decreases labor flows; we can deduce that outcomes which are negatively related to flows reflect increasing EPL (see below for a discussion of the assumptions needed for such a conclusion).

Table 9 shows that more dropped cases mean more job destructions as well as less net creation since dropping cases does not affect job creation. Thus dropped cases tend to favor firms. A larger conciliation rate dampens job destruction when a larger trial rate increases job destruction: settlements are apparently working in favor of workers when trials appear to help firms. Because these two EPL measures have no impact on job creation, the effect on net job creation is of the opposite sign. More trials destroy (net) jobs when more settlements create (net) jobs.

Workers are more often represented by a lawyer when the legal environment is dense (judges, lawyers of all specialties, or legal staff in the court). This in turn dampens job destruction, and the effect on net creation is positive. In unreported results (available from the authors), the fraction of firms represented by a lawyer has no impact on labor flows. Finally, lower cost of legal representations encourages the workers to file a case (last column of Table 8) and a high filing rate is found to deter firms from destroying jobs (last column of Table 9, second panel).

Finally, our results can be summarized as: the fraction of workers represented by a lawyer, the part of settlements, the filing rate are indicators of EPL; on the opposite, the part of dropped cases and the part of trials are negative indicators of EPL. Whatever indicator is used, EPL seem to protect jobs: more EPL increases net job creation, essentially through a decrease of job destruction.

These results can be illustrated thanks to our model. Consider the number of lawyers and assume that an increase in the number of lawyers induces a decrease in the costs of litigation for the worker ( $k_t$  and  $k_c$ ), the decrease being larger for the cost at the trial stage than at the conciliation stage. We assume that the impact on the costs of litigation for the firm is negligible (Table 8 shows that an increase of the number of lawyers has no effect on the part of firms being represented by a lawyer).

Under those assumptions, the model shows that  $\overline{p_w}$  decreases more than  $\overline{\overline{p_w}}$ : more workers file a case since it is less costly, and as a proportion more end the case at the conciliation stage than at the trial stage. Finally, the firing cost increases for the firms (Figure 11). This is consistent with the results of the first stage in Table 8: more lawyers imply a higher filing rate, a higher settlement rate, and a lower trial rate. It also helps to interpret the results of the second stage of our regressions. More lawyers mean more EPL and a lower trial rate. Thus more trials mean less EPL and more flows.

**Discussion:** Clearly, going from court outcomes to job destruction or creation and infer from the results the direction of EPL implies an assumption that *there is no other variable affecting the correlation between the court outcomes and job destruction or creation but would have no impact on firms' cost of hiring or separation*. Hence, we introduce control variables in the regression in particular to capture some of the costs accruing to the employees (such as unemployment). In addition, we follow the instrumentation strategy described in this section to help us catch all such variation in costs. The choice of the variables was directly inspired by our model section. Therefore, we believe that we were able to meet the above requirement as carefully as possible.

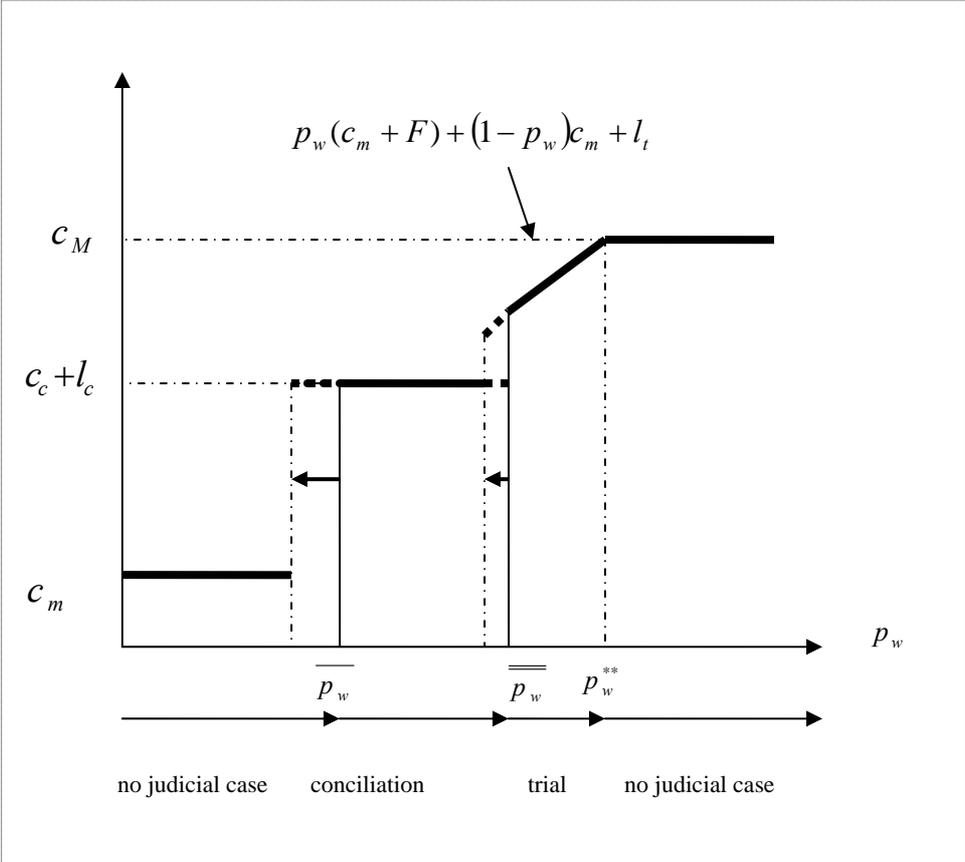


Fig. 11: Firing cost, case outcomes and a decrease in the lawyers' costs

## **5.2 Direct litigation costs and reduced- form regressions**

In the previous section, the impact of labor courts on labor flows has been assessed through the impact of court decisions, legal representations, and filing decisions -- instrumented by various measures of the cost of litigation i.e. judges, lawyers and staff densities, and union color. However, our measures of outcomes may not be sufficient to describe the entire judicial process. For instance, we do not have any data on the appeal process. Besides, our estimates are obtained outcome by outcome; we may miss some interactions.

In order to capture a total effect at the local level of our exogenous variables, we therefore run reduced-form regressions. The results are presented in Tables 10 and 11. First, judges have a negative effect on job destruction in all specifications, resulting in a clear positive effect on net job creation since job creation is less affected by judge density. On the opposite, judge density has a strong and clear negative effect on the extensive margin: job creation is strongly, negatively affected by a strong judge density. This is consistent with our instrumental results: the first stage showed that more judges mean less dropped cases and more workers represented by a lawyer; the second stage showed that these two situations lead to more job destructions.

Union color and administrative staff do not appear to be strongly related to job creation or job destruction. Finally, lawyer density is shown to affect negatively job destruction consistently with our instrumental results.

## **6 Conclusion**

This article examines the impact of the enforcement of the Employment Protection Legislation on labour markets for France using an original data set of individual labour disputes brought to court over the years 1990 to 2003. First, we present a simple theoretical model showing that judicial case outcomes are difficult to interpret in terms of EPL. The clearest example is the fraction of cases that go to trials. Firms faced with low litigation costs may well prefer to fire their personnel for personal motive and risk litigation rather than to fire them for economic motives, avoid lawsuits but pay a large separation cost. In this situation, trials are induced by lower firing costs. Workers faced with low litigation costs are more likely to sue the firm. Trials are now induced by higher firing costs.

Second, we exploit our model as well as the French institutional setting and the local legal environment to generate instruments for these endogenous outcomes. For instance, because lawyers tend to open their practice close to the university they went to, changes in their number are unrelated

to the number of cases in each labor court except through the litigation costs. Using these instruments, we show that labor courts decisions have a causal effect on labor flows. More dropped cases and more trials cause more job destructions: more trials indeed are a sign of lower separation costs. More settlements, higher filing rates, a larger fraction of workers represented at trial dampen job destruction.

Hence, the web of legislations and the variety of local situations affect the enforcement of legislation and legal outcomes. The nature of real EPL is likely to be the product (or the sum) of multiple effects. It is therefore not surprising that analyses ignoring this dimension yield inconclusive outcomes.

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## Model Appendix:

The employer dismisses the worker at the minimum cost, instead of paying the maximum severance payments, if:

$$p_f \{p_c(c_c + l_c) + (1 - p_c)[p_w(c_m + F) + (1 - p_w)c_m + l_t]\} + (1 - p_f)c_m < c_M$$

As for the worker, she chooses to challenge her dismissal ( $p_f = 1$ ) if her expected gain at trial or at the conciliation stage is larger than the minimum severance payment:

$$p_w(c_m + F) + (1 - p_w)c_m - k_t > c_m \text{ or } c_c - k_c > c_m$$

Thus the worker chooses to go to court if the gain at trial is large enough ( $p_w(c_m + F) + (1 - p_w)c_m - k_t > c_m$ , that is  $p_w > \overline{p_w} = \frac{k_t}{F}$ ). The worker would prefer the agreement ( $p_c = 1$ ) than the trial when  $p_w(c_m + F) + (1 - p_w)c_m - k_t < c_c - k_c$ , i.e.

$$p_w < \overline{p_w} = \frac{c_c - c_m + k_t - k_c}{F}$$

Yet the firm can refuse the agreement.

On the firm side, the firm dismisses the worker offering the minimum cost if:

$$p_w(c_m + F) + (1 - p_w)c_m + l_t < c_M$$

that is:

$$p_w < p_w^{**} = \frac{c_M - c_m - l_t}{F}$$

We assume that the compensatory award  $F$  is large enough so that when the firm is certain to lose at trial, it is less costly to pay the maximum severance payment. That is:  $c_M < c_m + F + l_t$  and thus  $p_w^{**} < 1$ .

In addition, the firm accepts the conciliation only if it is less costly than going to trial, that is:

$$p_w(c_m + F) + (1 - p_w)c_m + l_t > c_c + l_c$$

which means:

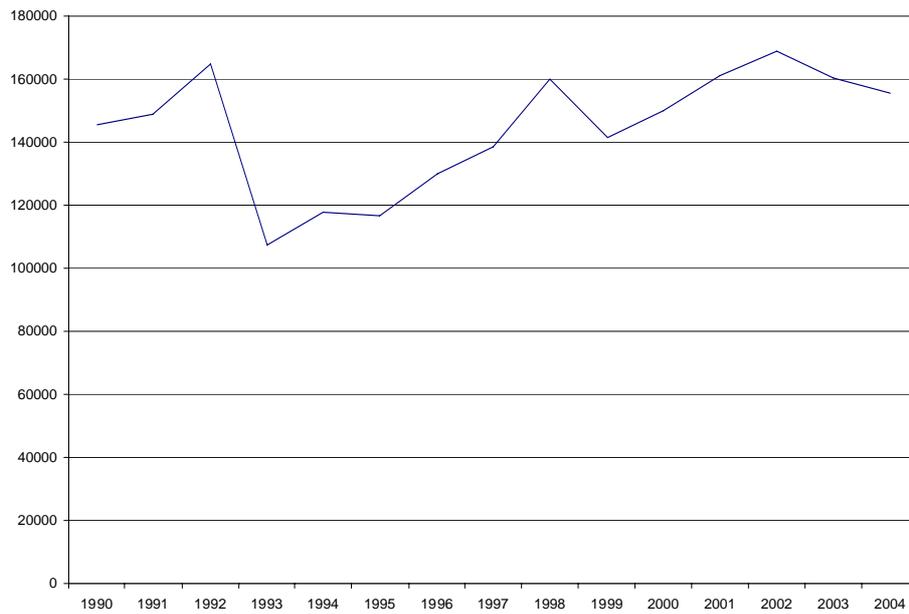
$$p_w > p_w^* = \frac{c_c - c_m - l_t + l_c}{F}$$

In order a conciliation to exist, suing must be a credible threat to the employer. Therefore, we impose that  $p_w^* < \overline{p_w}$  that is  $c_c - c_m + l_c < k_t + l_t$ . In addition, there must a probability range where the worker is better off to conciliate than going to trial. We must have  $\overline{p_w} < \overline{p_w}$  that is  $c_m < c_c - k_c$ . Finally, for the trial stage to exist, the firm must be better off in some probability range to go to trial rather than giving the compensatory award  $c_M$  that protects against any suing:  $\overline{p_w} < p_w^{**}$ .

Under these assumptions we end up with four equilibria:

- $p_f = 0$  and  $p_c = 0$  if  $p_w < \overline{p_w}$
- $p_f = 1$  and  $p_c = 1$  if  $\overline{p_w} < p_w < \overline{p_w}$  (with  $p_w^* < \overline{p_w}$ )
- $p_f = 1$  and  $p_c = 0$  if  $\overline{p_w} < p_w < p_w^{**}$
- the firm pays  $c_M$  if  $p_w > p_w^{**}$

Figure 4: Number of filed cases



Sources: Prud'hommes data from Ministry of Justice.

Figure 5: Map of the universities training lawyers

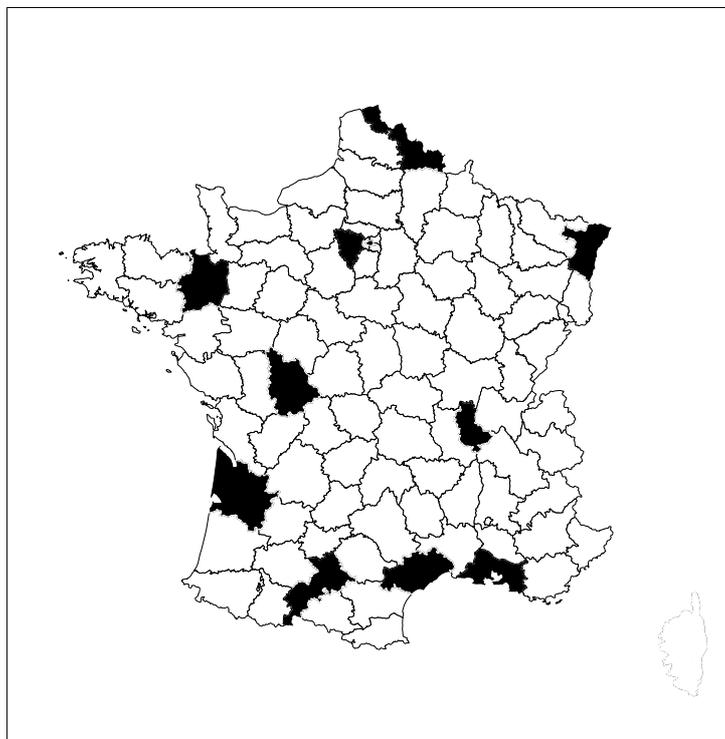


Figure 6: Map of the changes in the lawyer density between 1996 and 2003

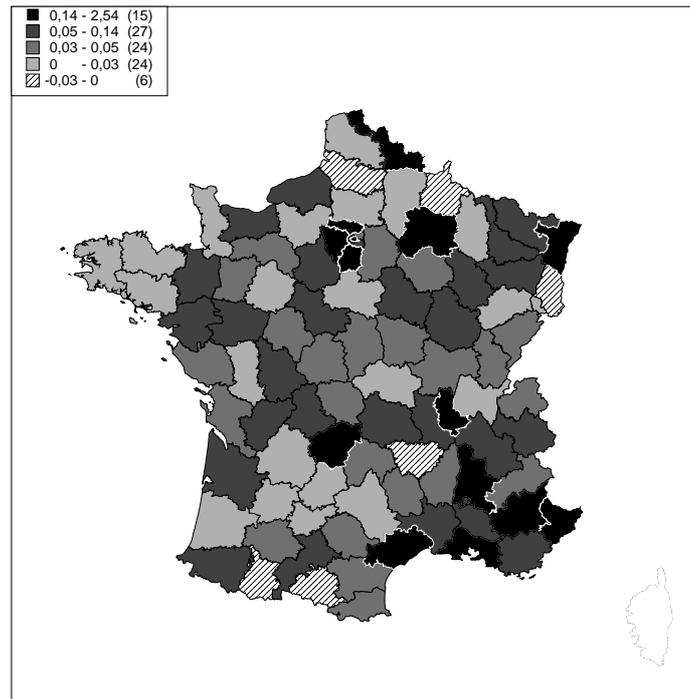
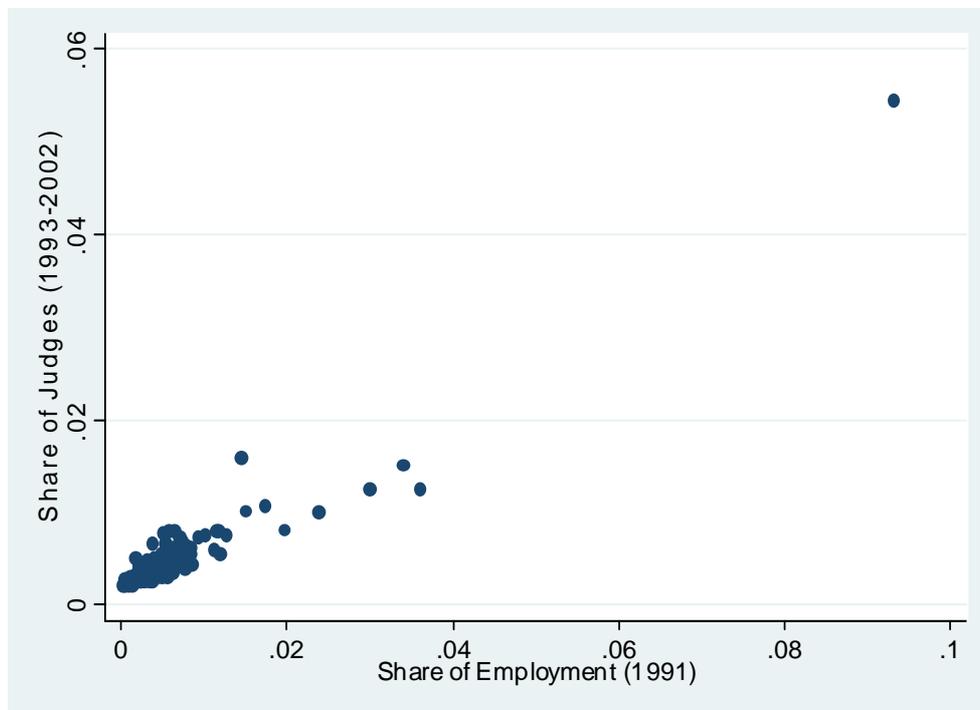
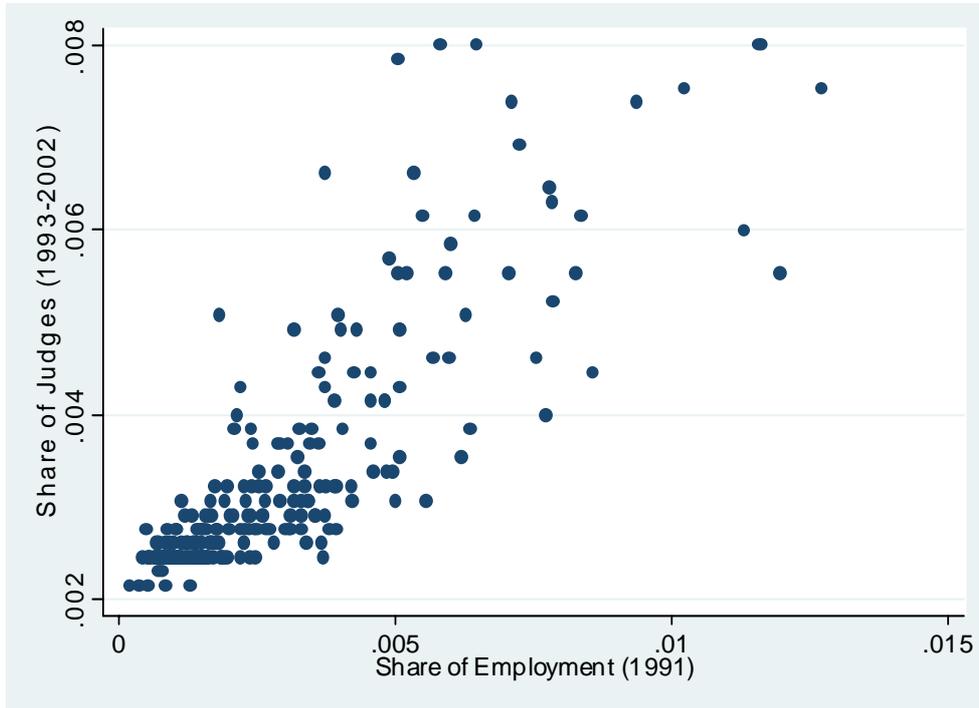


Figure 7: Allocation of judges



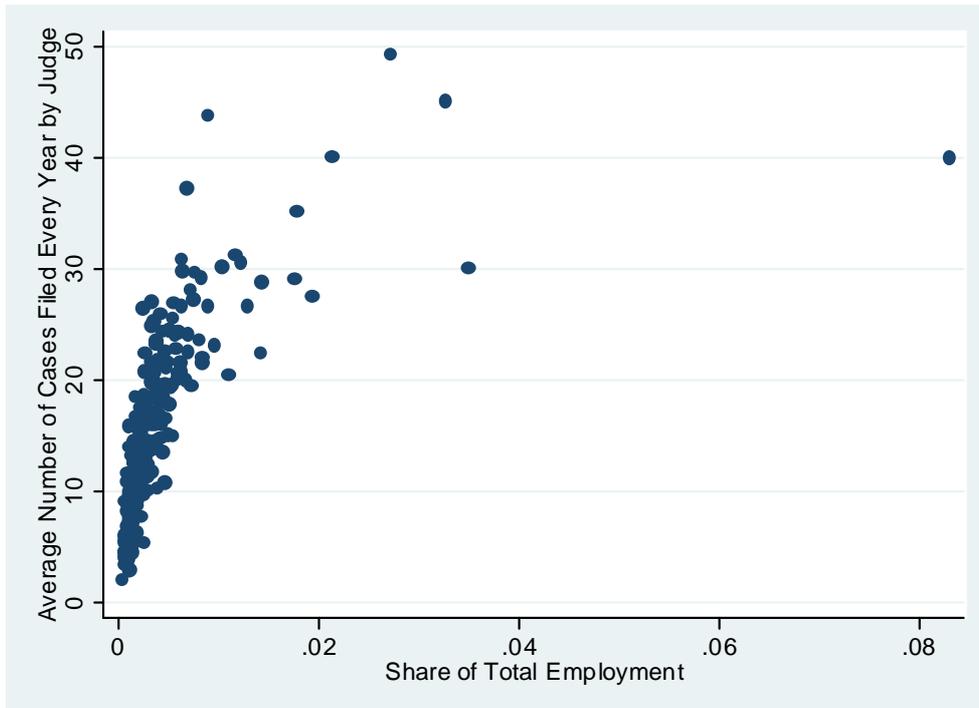
Sources: Election data from Ministry of Labor. Employment data from the Insee Sirene files on establishments.

Figure 8: Allocation of judges (without the 6 largest Prud'hommes)



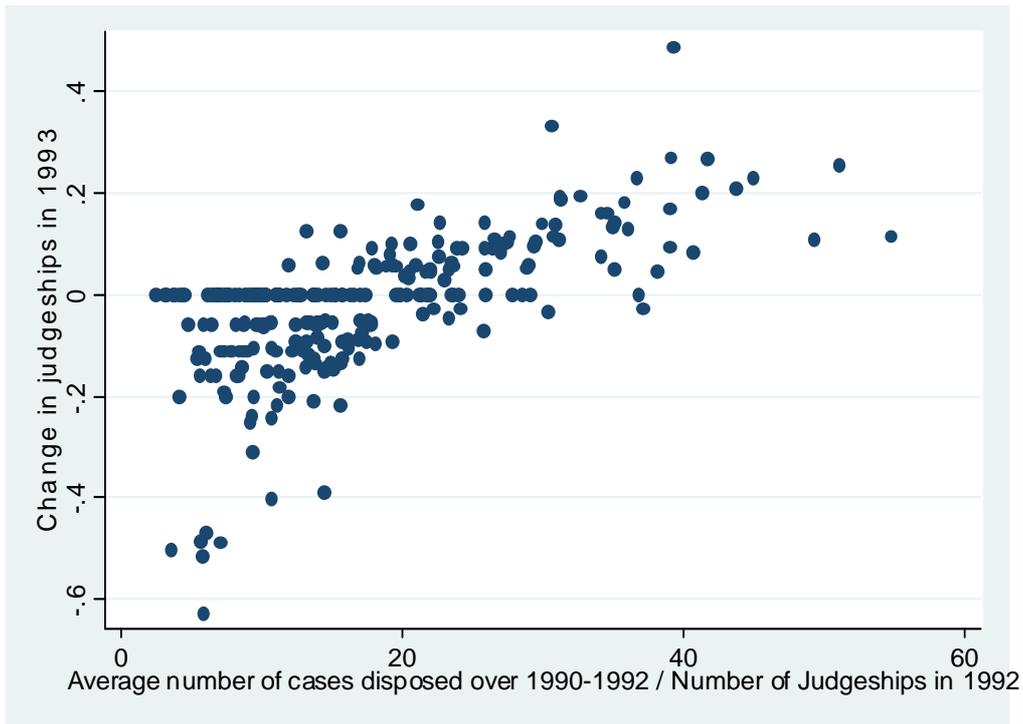
Sources: Election data from Ministry of Labor. Employment Data from the Insee Sirene files on establishments.

Figure 9: Productivity of judges across Prud'hommes



Sources: Election data from Ministry of Labor. Employment Data from the Insee Sirene files on establishments.

Figure 10: Change in judges in 1993 and productivity of judges



Sources: Election data from Ministry of Labor. Employment Data from the Insee Sirene files on establishments.

**Table 1 : Case outcomes: definition of variables**

| Names                 | Definition  |
|-----------------------|---|
| Drop rate             | (Null and Void +Crossed Out)/(Total number of cases)  |
| Conciliation rate     | (Conciliation +Agreement)/(Total number of cases)   |
| Trial rate            | (Winning+Losing)/(Total Number of Cases)  |
| Victory rate at trial | (Winning)/(Winning +Losing)   |
| Duration              | Duration (in days) of the legal process from the filing of the case to the its classification |
| Filing rate           | Number of cases filed over number of unemployed   |
| Worker Lawyer rate    | Number of cases where the worker is represented by a lawyer over the total number of cases    |
| Firm Lawyer rate      | Number of cases where the firm is represented by a lawyer over the total number of cases      |

Notes: These variables are computed at the labor court level (Prud'hommes\*year)

**Table 2: Summary statistics: case outcomes**

| Case Outcome          | Mean* | Std. | Min   | Max  |
|-----------------------|-------|------|-------|------|
| Drop rate             | 0.20  | 0.09 | 0.00  | 0.75 |
| Conciliation rate     | 0.20  | 0.09 | 0.00  | 0.81 |
| Trial rate            | 0.60  | 0.10 | 0.13  | 0.95 |
| Victory rate at trial | 0.75  | 0.09 | 0.00  | 1.00 |
| Duration              | 258   | 81   | 48    | 1037 |
| Filing rate           | 0.04  | 0.03 | 0.003 | 0.33 |
| Worker Lawyer rate    | 0.43  | 0.15 | 0.00  | 0.95 |
| Firm Lawyer rate      | 0.58  | 0.15 | 0.00  | 0.95 |

Notes: we first compute the proportion of cases with outcomes  $i$  in year  $t$  at the Prud'hommes level using the data set of individual cases collected from 1990 to 2004 by the French Ministry of Justice. We then take the means of these proportions over the 264 Prud'hommes over the 1990-2004 period. Sources: Prud'hommes data from Ministry of Interior.

**Table 3: Share of judges by unions**

| Union   | Mean | Std | Min. | Max. |
|---------|------|-----|------|------|
| CGT     | 37%  | 11% | 0%   | 71%  |
| CFDT    | 28%  | 10% | 0%   | 63%  |
| FO      | 22%  | 7%  | 0%   | 50%  |
| CFE-CGC | 8%   | 4%  | 0%   | 21%  |
| CFTC    | 4%   | 6%  | 0%   | 44%  |

Note: Number of observations: 1,056 (264 Prud'hommes over 4 electoral terms)  
Sources: French Ministry of Labor

**Table 4: Number of judges by section and change over the electoral terms**

|               | Number of judges in 1987 | Change in % between term t and term t-1 (t/t-1) |           |           |
|---------------|--------------------------|---|-----------|-----------|
|               |                          | 1992/1987                                       | 1997/1992 | 2002/1997 |
| Manufacturing | 2 213                    | -15   | 0         | -9        |
| Service       | 1 266                    | 0   | 0         | 11        |
| Trade         | 1 831                    | 5   | 0         | 1         |
| Management    | 1 278                    | 10  | 0         | 4         |
| Total         | 6 588                    | -1  | 0         | 1         |

Sources: French Ministry of Labor.

**Table 5: Breakdown of change in the number of judges across the 264 Prud'hommes**

|                         | 1992 Election |         |       | 2002 Election |         |       |
|-------------------------|---------------|---------|-------|---------------|---------|-------|
|                         | Manufacturing | Service | Trade | Manufacturing | Service | Trade |
| lost 3 judges or more   | 17            | 4       | 4     | 7             | 0       | 0     |
| lost 2 judges           | 17            | 0       | 0     | 8             | 0       | 0     |
| lost 1 judges           | 16            | 2       | 6     | 27            | 1       | 25    |
| no change               | 44            | 85      | 58    | 56            | 79      | 58    |
| gained 1 judges         | 3             | 5       | 17    | 1             | 9       | 9     |
| gained 2 judges         | 1             | 2       | 10    | 1             | 5       | 3     |
| gained 3 judges or more | 1             | 2       | 6     | 0             | 6       | 4     |
|                         | 100           | 100     | 100   | 100           | 100     | 100   |

Note: read as % of Prud'hommes that lost (or gained or no change) x judges in the election year *t*

Sources: French Ministry of Labor.

**Table 6: Outcome indicators and job flows, OLS**

|                     | drop rate | drop rate | conciliation rate | conciliation rate | trial rate | trial rate | victory rate at trial | victory rate at trial | duration | duration | lawyer for worker | lawyer for worker | lawyer for firm |
|---------------------|-----------|-----------|-------------------|-------------------|------------|------------|-----------------------|-----------------------|----------|----------|-------------------|-------------------|-----------------|
| dependent variable: |           |           |                   |                   |            |            |                       |                       |          |          |                   |                   |                 |
| Job destructions    | 0.004     | 0.106***  | -0.030*           | -0.097***         | 0.018      | -0.015     | 0.000                 | 0.001                 | -0.010   | 0.038*** | -0.019            | 0.057***          | -0.019**        |
|                     | (0.014)   | (0.018)   | (0.018)           | (0.022)           | (0.013)    | (0.018)    | (0.012)               | (0.017)               | (0.008)  | (0.005)  | (0.012)           | (0.013)           | (0.009)         |
| R-square            | 0.33      | 0.29      | 0.34              | 0.28              | 0.33       | 0.25       | 0.33                  | 0.29                  | 0.34     | 0.31     | 0.34              | 0.28              | 0.34            |
| Job creations       | -0.011    | 0.116***  | 0.007             | -0.105***         | 0.003      | -0.017     | 0.012                 | 0.009                 | -0.001   | 0.047*** | -0.002            | 0.080***          | 0.004           |
|                     | (0.011)   | (0.017)   | (0.012)           | (0.022)           | (0.009)    | (0.015)    | (0.009)               | (0.017)               | (0.004)  | (0.005)  | (0.008)           | (0.013)           | (0.006)         |
| R-square            | 0.46      | 0.36      | 0.46              | 0.35              | 0.46       | 0.32       | 0.46                  | 0.36                  | 0.46     | 0.40     | 0.46              | 0.36              | 0.46            |
| Net job creations   | -0.015    | 0.010     | 0.037**           | -0.008            | -0.015     | -0.002     | 0.011                 | 0.008                 | 0.009    | 0.010*** | 0.018             | 0.022***          | 0.023**         |
|                     | (0.017)   | (0.011)   | (0.017)           | (0.013)           | (0.014)    | (0.010)    | (0.013)               | (0.011)               | (0.008)  | (0.004)  | (0.013)           | (0.008)           | (0.011)         |
| R-square            | 0.51      | 0.48      | 0.52              | 0.48              | 0.51       | 0.48       | 0.51                  | 0.48                  | 0.51     | 0.49     | 0.51              | 0.49              | 0.52            |
| Fixed effects       | Yes       | No        | Yes               | No                | Yes        | No         | Yes                   | No                    | Yes      | No       | Yes               | No                | Yes             |

Robust standard errors are between parentheses. \* significant at 10%; \*\* significant at 5%, \*\*\*significant at 1%. Observations are for 264 Prud'hommes and for the years 1991-2004 (3, 432 obs.). Each regres: includes year and local business cycle indicators. Prud'hommes jurisdiction 1999 labor force is used as weights. Clusters: Prud'hommes level.

Sources: Prud'hommes data from Ministry of Labor. Job flows from Sirene files on establishments.

**Table 7: First stage regressions (1990-2003) without legal environment**

| Period: 1990-2003     | victory rate        |                    | conciliation       |                                      |                                    | worker lawyer                        | firm lawyer at      | filing rate         |
|-----------------------|---------------------|--------------------|--------------------|--------------------------------------|------------------------------------|--------------------------------------|---------------------|---------------------|
|                       | at trial            | trial rate         | rate               | drop rate                            | duration                           | at trial                             | trial               |                     |
| Judges                | -16.973<br>(47.068) | 93.737<br>(69.478) | 30.897<br>(61.110) | <b>-124.635**</b><br><b>(57.379)</b> | 162.462<br>(167.446)               | <b>301.183***</b><br><b>(77.468)</b> | 26.946<br>(114.942) | -54.462<br>(41.433) |
| Union share of votes: |                     |                    |                    |                                      |                                    |                                      |                     |                     |
| FO                    | -0.063<br>(0.062)   | 0.032<br>(0.068)   | 0.072<br>(0.058)   | <b>-0.104**</b><br><b>(0.052)</b>    | -0.100<br>(0.175)                  | <b>0.153*</b><br><b>(0.084)</b>      | 0.123<br>(0.123)    | -0.032**<br>(0.014) |
| CFDT                  | -0.042<br>(0.060)   | 0.011<br>(0.055)   | 0.026<br>(0.048)   | -0.037<br>(0.047)                    | <b>-0.381***</b><br><b>(0.134)</b> | -0.006<br>(0.084)                    | 0.123<br>(0.111)    | 0.025<br>(0.016)    |
| Others                | 0.024<br>(0.061)    | 0.021<br>(0.063)   | -0.025<br>(0.038)  | 0.004<br>(0.071)                     | -0.191<br>(0.116)                  | 0.075<br>(0.060)                     | 0.068<br>(0.081)    | -0.004<br>(0.011)   |
| R-squared             | 0.02                | 0.17               | 0.19               | 0.05                                 | 0.18                               | 0.59                                 | 0.25                | 0.39                |
| F                     |                     |                    |                    | 4.17                                 | 5.31                               | 10.1                                 |                     |                     |
| p-values              |                     |                    |                    | 0.0165                               | 0.0243                             | 0.0001                               |                     |                     |

Robust standard errors are between parentheses. \* significant at 10%; \*\* significant at 5%, \*\*\*significant at 1%. Observations are for 264 prudhommes (3,696 observations for the 1990-2003 period and 2,112 observations for the 1996-2003 period). F is the F statistic of the joint significance of the variables corresponding to the parameters in bold. Each regression includes year Prud'hommes and local business cycle indicators. Prud'hommes jurisdiction 1999 labor force is used as weights. Clusters: Prud'hommes level. Sources: Prud'hommes data from Ministry of Labor. Sirene files on establishments.

**Table 8: First stage regressions (1996-2003) with legal environment**

| Period: 1990-2003     | victory rate         |                                    | conciliation                       |                       |                          | worker lawyer                         | firm lawyer at                       | filing rate                       |
|-----------------------|----------------------|------------------------------------|------------------------------------|-----------------------|--------------------------|---------------------------------------|--------------------------------------|-----------------------------------|
|                       | at trial             | trial rate                         | rate                               | drop rate             | duration                 | at trial                              | trial                                |                                   |
| Judges                | 268.440<br>(171.574) | 360.177<br>(250.752)               | -86.030<br>(260.322)               | -274.147<br>(207.048) | 1,190.945**<br>(574.365) | <b>603.166***</b><br><b>(218.819)</b> | 129.189<br>(340.770)                 | -54.462<br>(41.433)               |
| Lawyers               | 2.080<br>(2.077)     | <b>-8.558***</b><br><b>(2.795)</b> | <b>8.083***</b><br><b>(2.043)</b>  | 0.475<br>(2.258)      | 1.878<br>(7.233)         | <b>5.655**</b><br><b>(2.745)</b>      | -2.328<br>(4.953)                    | <b>3.351***</b><br><b>(0.428)</b> |
| Staff                 | 5.830<br>(6.477)     | 9.755<br>(11.254)                  | <b>-10.059</b><br><b>(6.962)</b>   | 0.304<br>(6.143)      | 9.276<br>(17.676)        | 19.746*<br>(10.235)                   | <b>-50.686***</b><br><b>(14.797)</b> | 1.539<br>(1.250)                  |
| Union share of votes: |                      |                                    |                                    |                       |                          |                                       |                                      |                                   |
| FO                    | -0.017<br>(0.075)    | 0.013<br>(0.093)                   | -0.047<br>(0.083)                  | 0.034<br>(0.065)      | 0.079<br>(0.191)         | 0.096<br>(0.094)                      | 0.186<br>(0.151)                     | -0.037**<br>(0.016)               |
| CFDT                  | 0.071<br>(0.082)     | 0.004<br>(0.074)                   | -0.063<br>(0.068)                  | 0.059<br>(0.066)      | -0.241<br>(0.168)        | -0.057<br>(0.080)                     | 0.043<br>(0.135)                     | 0.002<br>(0.015)                  |
| Others                | -0.034<br>(0.048)    | -0.004<br>(0.053)                  | <b>-0.105***</b><br><b>(0.040)</b> | 0.109**<br>(0.047)    | -0.194<br>(0.182)        | -0.007<br>(0.057)                     | 0.201<br>(0.154)                     | -0.021*<br>(0.011)                |
| R-squared             | 0.03                 | 0.23                               | 0.28                               | 0.04                  | 0.17                     | 0.25                                  | 0.30                                 | 0.30                              |
| F                     |                      | 8.11                               | 12.49                              |                       |                          | 6.53                                  | 4.32                                 | 60.57                             |
| p-values              |                      | 0.0048                             | 0.00002                            |                       |                          | 0.0003                                | 0.0387                               | 0.0387                            |

Robust standard errors are between parentheses. \* significant at 10%; \*\* significant at 5%, \*\*\*significant at 1%. Observations are for 264 prudhommes (3,696 observations for the 1990-2003 period and 2,112 observations for the 1996-2003 period). F is the F statistic of the joint significance of the variables corresponding to the parameters in bold. Each regression includes year Prud'hommes and local business cycle indicators. Prud'hommes jurisdiction 1999 labor force is used as weights. Clusters: Prud'hommes level. Sources: Prud'hommes data from Ministry of Labor. Sirene files on establishments.

**Table 9: Instrumental Variables Regressions**

| <i>Period: 1990-2003</i>             |                     |                      |                        |
|--------------------------------------|---------------------|----------------------|------------------------|
| Outcome indicators:                  | drop rate           | duration             | worker lawyer at trial |
| Dependent variable: Job Destructions |                     |                      |                        |
| Outcome                              | 0.540**<br>(0.25)   | 0.145<br>(0.11)      | -0.275**<br>(0.11)     |
| P-value Hansen J statistic           | 0.903               |                      | 0.563                  |
| Dependent variable: Job Creations    |                     |                      |                        |
| Outcome                              | 0.0204<br>(0.069)   | 0.0984<br>(0.081)    | 0.0297<br>(0.086)      |
| P-value Hansen J statistic           | 0.933               |                      | 0.972                  |
| Dependent variable: Net Job Creation |                     |                      |                        |
| Outcome                              | -0.595**<br>(0.27)  | -0.0469<br>(0.070)   | 0.305**<br>(0.13)      |
| P-value Hansen J statistic           | 0.877               |                      | 0.575                  |
| Instruments                          | Judges, FO          | CFDT                 | Judges, FO             |
| Test of excluded instruments F       | 4,17                | 5,31                 | 10,1                   |
| <i>Period: 1996-2003</i>             |                     |                      |                        |
| Outcome indicators:                  | trial rate          | conciliation rate    | filing rate            |
| Dependent variable: Job Destructions |                     |                      |                        |
| Outcome                              | 0.829**<br>(0.344)  | -0.853***<br>(0.297) | -2.003***<br>(0.422)   |
| Dependent variable: Job Creations    |                     |                      |                        |
| Outcome                              | 0.140<br>(0.168)    | -0.144<br>(0.142)    | -0.338<br>(0.318)      |
| Dependent variable: Net Job Creation |                     |                      |                        |
| Outcome                              | -0.689**<br>(0.278) | 0.709**<br>(0.314)   | 1.666***<br>(0.578)    |
| Instruments                          | Lawyer              | Lawyer               | Lawyer                 |
| Test of excluded instruments F       | 8,11                | 12,68                | 60,57                  |

Robust standard errors are between parentheses. \* significant at 10%; \*\* significant at 5%, \*\*\*significant at 1%. Observations are for 264 Prud'hommes and for the years 199-2003 (3,432 obs.) or 1996-2003 (2,112 obs.). Each regression includes year Prud'hommes and local business cycle indicators. Prud'hommes jurisdiction 1999 labor force is used as weights. Clusters: Prud'hommes level. Sources: Prud'hommes data from Ministry of Labor. Job flows from Sirene files on establishments.

**Table 10 : Reduced forms (1990-2003 period)**

|              | Job Destruction       | Job Creation       | Net Job Creation     | Extensive margin   |                        |
|--------------|-----------------------|--------------------|----------------------|--------------------|------------------------|
|              |                       |                    |                      | Job Destruction    | Job Creation           |
| Judges       | -71.462**<br>(31.972) | 10.824<br>(26.895) | 82.285**<br>(33.501) | 39.039<br>(29.255) | -70.831***<br>(26.189) |
| %union share |                       |                    |                      |                    |                        |
| FO           | -0.049<br>(0.031)     | 0.010<br>(0.025)   | 0.059*<br>(0.033)    | 0.038*<br>(0.022)  | -0.038<br>(0.025)      |
| CFDT         | -0.043<br>(0.027)     | -0.017<br>(0.021)  | 0.026<br>(0.027)     | 0.007<br>(0.021)   | -0.034<br>(0.023)      |
| Others       | 0.014<br>(0.029)      | 0.012<br>(0.015)   | -0.002<br>(0.029)    | 0.031**<br>(0.014) | 0.004<br>(0.020)       |
| R-squared    | 0.34                  | 0.47               | 0.52                 | 0.31               | 0.37                   |

Notes: Robust standard errors are between parentheses.\*\*\* p< 0.01, \*\*p<0.05, \*p<0.1. Observations are for 264 Prud'hommes and for the years 1991-2004 (3, 432 obs.) Each regression includes year and Prud'hommes and local business cycle indicators. Prud'hommes' jurisdiction 1999 labor force is used as weights.Clusters: Prud'hommes level.

**Table 11 : Reduced forms (1996-2003 period)**

|              | Job Destruction          | Job Creation          | Net Job Creation       | Extensive margin     |                          |
|--------------|--------------------------|-----------------------|------------------------|----------------------|--------------------------|
|              |                          |                       |                        | Job Destruction      | Job Creation             |
| Judges       | -505.162***<br>(138.570) | -162.724*<br>(83.110) | 342.438**<br>(148.271) | -78.941<br>(67.615)  | -451.003***<br>(134.081) |
| Staff        | 6.951*<br>(4.153)        | -2.150<br>(2.049)     | -9.101**<br>(3.539)    | -5.096***<br>(1.867) | 5.166<br>(3.857)         |
| Lawyer       | -5.322***<br>(1.190)     | -0.719<br>(1.021)     | 4.603***<br>(1.598)    | 1.145<br>(1.162)     | -2.602*<br>(1.469)       |
| %union share |                          |                       |                        |                      |                          |
| FO           | -0.075*<br>(0.043)       | 0.006<br>(0.026)      | 0.082*<br>(0.045)      | 0.017<br>(0.023)     | -0.045<br>(0.040)        |
| CFDT         | -0.048<br>(0.041)        | -0.035*<br>(0.021)    | 0.013<br>(0.040)       | -0.013<br>(0.021)    | -0.026<br>(0.036)        |
| Others       | -0.006<br>(0.031)        | -0.006<br>(0.014)     | 0.000<br>(0.031)       | 0.017<br>(0.013)     | 0.012<br>(0.032)         |
| R-squared    | 0.44                     | 0.46                  | 0.57                   | 0.41                 | 0.49                     |

Notes: Robust standard errors are between parentheses.\*\*\* p< 0.01, \*\*p<0.05, \*p<0.1. Observations are for 264 Prud'hommes and for the years 1996-2003 (2,112 obs.) Each regression includes year and Prud'hommes and local business cycle indicators. Prud'hommes' jurisdiction 1999 labor force is used as weights.Clusters: Prud'hommes level.



## Appendix Tables

**Table A.1: Case outcomes and the business cycle**

| Outcome variable             | Unemployment<br>rate, year of<br>filing | R-squared | Unemployment<br>rate, year of<br>decision | R-squared |
|------------------------------|---|-----------|---|-----------|
| Wining                       | 1.297***<br>(0.102)                     | 0.376     | 0.894***<br>(0.089)                       | 0.367     |
| Losing                       | 0.199***<br>(0.0745)                    | 0.280     | 0.196***<br>(0.072)                       | 0.274     |
| Null and Void                | -0.436***<br>(0.0482)                   | 0.378     | -0.337***<br>(0.047)                      | 0.355     |
| Crossed out                  | 0.0521<br>(0.0949)                      | 0.534     | 0.019<br>(0.086)                          | 0.527     |
| Conciliation                 | -0.467***<br>(0.0555)                   | 0.504     | -0.317***<br>(0.055)                      | 0.510     |
| Agreement                    | -0.646***<br>(0.0656)                   | 0.288     | -0.455***<br>(0.060)                      | 0.289     |
| Victory                      | 0.272***<br>(0.105)                     | 0.301     | 0.123<br>(0.099)                          | 0.298     |
| Trial                        | 1.496***<br>(0.111)                     | 0.406     | 1.090***<br>(0.100)                       | 0.388     |
| Conciliation or Agreement    | -1.112***<br>(0.0862)                   | 0.440     | -0.772***<br>(0.080)                      | 0.443     |
| Null and Void or Crossed Out | -0.384***<br>(0.0977)                   | 0.512     | -0.318***<br>(0.090)                      | 0.496     |
| Filing rate                  | -0.720***<br>(0.033)                    | 0.628     |   |           |

Sources: Prud'hommes data from Ministry of Justice. Others from Insee.

Each row displays the regression of an outcome variable on the current local unemployment rate and Prud'hommes fixed effects. The local unemployment rate is defined as the number of unemployed enrolled at the local branch of the National Employment Agency (ANPE) over the 1999 census local workforce. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A.2: The Impact of past labor flows on judges, staff, lawyer densities and union share of votes**

| <i>Job Destructions</i>  |                     |                     |                     |                     |                     |                     |
|--------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Flows=                   | Judges              | Staff               | Lawyer              | Percent FO          | Percent CFDT        | Percent CGT         |
| Flows (-1)               | -0.0000<br>(0.0000) | 0.0000<br>(0.0001)  | -0.0004<br>(0.0003) | -0.0196<br>(0.0162) | -0.0216<br>(0.0186) | 0.0342*<br>(0.0184) |
| Flows (-2)               | -0.0000<br>(0.0000) | -0.0000<br>(0.0001) | -0.0002<br>(0.0002) | 0.0076<br>(0.0157)  | 0.0260<br>(0.0192)  | -0.0151<br>(0.0163) |
| R-squared                | 0.01                | 0.12                | 0.11                | 0.14                | 0.33                | 0.07                |
| <i>Job Creations</i>     |                     |                     |                     |                     |                     |                     |
| Flows=                   | Judges              | Staff               | Lawyer              | Percent FO          | Percent CFDT        | Percent CGT         |
| Flows (-1)               | -0.0000<br>(0.0000) | 0.0001<br>(0.0001)  | 0.0001<br>(0.0004)  | 0.0211<br>(0.0227)  | 0.0009<br>(0.0226)  | 0.0413<br>(0.0280)  |
| Flows (-2)               | 0.0000<br>(0.0000)  | -0.0000<br>(0.0001) | 0.0006<br>(0.0006)  | 0.0287<br>(0.0209)  | 0.0095<br>(0.0228)  | -0.0207<br>(0.0214) |
| R-squared                | 0.00                | 0.12                | 0.11                | 0.14                | 0.33                | 0.07                |
| <i>Net Job Creations</i> |                     |                     |                     |                     |                     |                     |
| Flows=                   | Judges              | Staff               | Lawyer              | Percent FO          | Percent CFDT        | Percent CGT         |
| Flows (-1)               | 0.0000<br>(0.0000)  | 0.0000<br>(0.0001)  | 0.0003*<br>(0.0002) | 0.0262<br>(0.0164)  | 0.0122<br>(0.0164)  | 0.0019<br>(0.0218)  |
| Flows (-2)               | 0.0000<br>(0.0000)  | 0.0000<br>(0.0001)  | 0.0005<br>(0.0003)  | 0.0162<br>(0.0130)  | -0.0088<br>(0.0171) | -0.0042<br>(0.0141) |
| R-squared                | 0.00                | 0.12                | 0.11                | 0.14                | 0.33                | 0.07                |
| Observations             | 2904                | 2860                | 2103                | 2904                | 2904                | 2904                |

Notes: Robust standard errors are between parentheses.\*\*\* p< 0.01, \*\*p<0.05, \*p<0.1. Each regression includes year and Prud'hommes and local business cycle indicators. Prud'hommes' jurisdiction 1999 labor force is used as weights.Clusters: Prud'hommes level.

Sources: Prud'hommes data from Ministry of Labor. Job flows from Sirene files on establishments.

**Table A.3: Breakdown of judges and employment by industry**

|               | 1990-1992  |        | 1993-2002  |        |
|---------------|------------|--------|------------|--------|
|               | Employment | Judges | Employment | Judges |
| Manufacturing | 35%        | 41%    | 53%        | 37%    |
| Trade         | 47%        | 33%    | 36%        | 36%    |
| Service       | 18%        | 26%    | 11%        | 27%    |

Notes: A change in French classification of products occurred in 1993. Proportion are averaged out over the period under review. Number of observations: 264 Prud'hommes. Sources: Election data from Ministry of Labor. Employment Data from the Insee Sirene files on establishments.

**Table A.4: (Mis)allocation of judges by industry**

| Dependent variable: 1993 local share of judges in the industry | Manufacturing | Trade    | Service   |
|--|---------------|----------|-----------|
| 1993 local share of employment in the industry                 | 0.002         | 0.203*** | -0.451*** |
|  | (0.014)       | (0.015)  | (0.031)   |
| Observations   | 264           | 264      | 264       |
| R-squared  | 0.00          | 0.19     | 0.21      |

Notes: Columns (2) (3) and (4) display the regressions of the proportion of local number of judges allocated to industry  $i$  in the national aggregate on the corresponding proportion of employment. Standard errors in parentheses. \* significant at 10%; \*\* significant at 5%, \*\*\*significant at 1%.

Sources: French Ministry of Labor, Insee Sirene Files