



Working Paper no. **178**

Judicial performance as a worker discipline device

Stefano Dughera
University of Torino and LABORatorio R. Revelli

Alessandro Melcarne
EconomiX, CNRS and University of Paris Nanterre

July, 2021

Judicial Performance as A Worker Discipline Device

Stefano Dughera^{b,c}, Alessandro Melcarne^a

Abstract: We develop a shirking model with firing costs and imperfect EPL enforcement. When workers can rely on prompt and favourable labor-trials, the efficiency-wage is increasing in judicial delay and decreasing in the share of pro-labor justice. Hence, imperfections in EPL enforcement force firms to pay higher wages to induce workers to put forward their labor effort. Then, we test our empirical predictions using macro-data on French labor courts. All our estimates support the predictions of our theoretical model. Endogeneity issues concerning the effect of pro-labor judges are dealt with through an IV strategy.

JEL codes: J41 · K41

Keywords: judicial performance · labor justice · litigation · efficiency wage

- a) Corresponding author: em. a.melcarne@parisnanterre.fr; ph 0140977788. EconomiX, CNRS & University of Paris Nanterre, 200 avenue de la République, 92001 Nanterre Cedex 1, France. Alessandro Melcarne acknowledges the financial support from Agence Nationale de la Recherche (project ANR-17-CE26-0010- 0).
- b) University of Torino, Department of Economics and Statistics, Lungo Dora Siena 100/A – 10153 Torino, Italy.
- c) LABORatorio R. Revelli – Center for Employment Studies, Piazza Vincenzo Arbarello, 8 – 10122 Torino, Italy.

1. Introduction

The shirking version of efficiency-wage theory postulates that the combination of high wages and tight monitoring induces workers to put forward their labor effort (Shapiro and Stiglitz, 1984). Later developments show that employment protection legislation (EPL) has a key role in this mechanism (Alvi, 1998; Gáldón-Sánchez and Güell, 2003; Chang et al., 2009). When EPL is poorly enforced, in fact, a firm facing a redundancy may use disciplinary dismissals to avoid firing costs. As the OECD Employment Outlook (2004: 66) puts forward, even if employers should be held responsible for disrespecting the EPL, “these provisions are subject to court interpretation, and this may constitute a major [...] source of variation in EPL strictness”.¹ Marciano et al. (2019) show that even the most efficient rule will be ineffective if not properly enforced.

In this note, we analyze the effect of EPL enforcement on the wage level both theoretically and empirically. In section 2, we develop a shirking model to assess how judicial delay and the judges’ political bias affect the efficiency-wage. In section 3, we test how such variables affect aggregate compensation levels using macro-data on French labor courts. Section 4 concludes.

2. The model

We consider a modified version of Shapiro’s and Stiglitz’s (1984) shirking model to allow for variance in the “quantity” and “quality” of EPL enforcement. As usual, employees may either work and incur in the cost of effort $e > 0$ (strategy N) or shirk and supply no effort (strategy S). If employed, they receive a compensation $w > 0$; if unemployed, they receive their outside option V_U . While all workers face an exogenous probability $0 \leq b \leq 1$ of being terminated for

¹ Gáldón-Sánchez and Güell (2003: 327) analyze French data over the period 1982–1998 and demonstrate that “almost 74% of all labour conflicts were declared unfair” that “individual dismissal conflicts represented on average 60% of total claims” and that “80% of the dismissals that arrived in court involved disciplinary disputes”.

economic reasons, shirkers are also fired for personal motives, which happens with the exogenous probability $0 \leq q \leq 1$.

We assume that the EPL requires firms to compensate the employees dismissed for economic reasons with a severance payment $g > 0$, while disciplinary dismissals are costless for the firm. Hence, firms may leverage on courts' imperfect information and declare redundancies as disciplinary dismissals to avoid firing costs. In this case, unjustly terminated workers may ask for compensation in court.² We assume that the expected returns of litigating are given by:

$$C = p(s)f(d) - c \quad (1)$$

where $c > 0$ measures litigation costs; $f(d) > 0$ is the present value of the compensation, $d \geq 0$ is the number of days needed by the court to handle the dispute – where we assume $f'(d) < 0$ and $f''(d) = 0$ – $0 < p < 1$ is the probability that the court will recognize a hidden redundancy and $0 < s < 1$ is the share of pro-labor judges in a given court – where we assume $p'(s) > 0$, $p''(s) = 0$ and $p(0) \geq 0$.

The assumption $f'(d) < 0$ specifies the expected compensation as a decreasing function of judicial delay (Djankov et al., 2003): the longer the labor trial, the smaller the present value of the compensation. The probability p that workers win the trial, in turn, may depend on the court's ideological bias, as pro-labor judges are more inclined to decide in favour of the plaintiffs (Spiller and Gely, 1992; Berger and Neugart, 2011). Hence the assumption $p'(s) > 0$. To simplify things, we impose the following restriction upon the set of parameters' values:

Assumption 1— $c/f(d) \leq p \leq g/f(d) \forall d \geq 0$.

² In reality, EPL creates a “double moral hazard problem”, as shirkers fired for personal motives may also claim unfair dismissal to get compensation—see Gáldón-Sánchez and Güell (2003). For an extended version of the model contemplating this possibility, see Appendix A.

According to assumption 1, it is a dominant strategy for workers to contest a hidden redundancy, while it is a dominant strategy for firms to declare redundancies as disciplinary dismissals.³ Given the above, the workers' value functions are given by:

$$rV_E^N = w - e + b(V_U - V_E^N + C) \quad (2)$$

$$rV_E^S = w + (b + q)(V_U - V_E^S) + bC \quad (3)$$

where $r > 0$ is the discount rate. Solving equation (2) for V_E^N , (3) for V_E^S , and the payoff difference $V_E^N - V_E^S = 0$ for w , we derive what Shapiro and Stiglitz (1984) call the “no-shirking condition”, that expresses the efficiency-wage level \hat{w} that make all workers just indifferent between shirking and non-shirking, which is given by:

$$w = rV_U + (r + b + q)e/q - bC \equiv \hat{w} \quad (4)$$

From equation (4), we formulate two testable predictions, Hp1 and Hp2, concerning the effect of judicial performance on the wage rate, which are summarized in the following Proposition:

Proposition 1—*The efficiency wage is increasing in judicial delay (Hp1) and decreasing in the share of pro-labor judges (Hp2).*

Proof: $\partial \hat{w} / \partial d = -bp(s)f'(d) > 0$ since $f'(d) < 0$ by assumption and $\partial \hat{w} / \partial s = -bp'(s)f(d) < 0$ since $p'(s) > 0$ by assumption ■

The intuition behind Proposition 1 is as follows: when workers can rely on quick and just labor trials in case of unfair termination, they have greater incentives to put forward their labor

³ Gáldón-Sánchez and Güell (2003) impose similar limitations. For a model contemplating the scenarios ruled out by Assumption 1, see Besancenot and Vranceanu (2009).

effort. Hence, poor EPL enforcement increases the efficiency-wage, as firms must raise the compensation to attract labor effort.

3. Empirical Analysis

We test the two hypotheses highlighted in Proposition 1 using data from French labor courts (*Conseils des Prud'hommes – CPHs*). Labor justice in France represents a harshly debated topics in the political agenda. While French EPL is itself very rigid compared to other developed countries (OECD, 2016), it has been shown that an ineffective enforcement of such regulation may hinder labor market's dynamism (Fraisie et al., 2015). Especially in the aftermath of the 2008 financial crisis and the consequent increase in the number of labor contracts' terminations, one of the critiques usually ascribed to *CPHs* is their lack of performance in terms of lengthy delays and excessive polarization among their judges. A unique institutional feature of *CHPs*, in fact, is that judges are elected via multi-party proportional elections as to equally represent both workers and employers. Ideology plays a relevant role in the election of judges representing workers, with moderate and confrontational unions competing for employees' consensus. Ideology thus reflects also on judges' performance, with more adversarial courts being relatively more supportive of labor litigation.

Table 1

	(1)	(2)	(3)	(4)
Judicial_delay	0.150*** (0.0541)	0.105** (0.0507)	0.0487* (0.0283)	0.0664** (0.0335)
Legal controls		Y		Y
Economic controls			Y	Y
Obs	203	203	203	203

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Because of data availability (wages measured only every 5 years) we employ a cross-section of the 203 *CPHS*' districts, averaging all other variables, that are measured between 2012 and 2016.

Hp 1, that wages increase in judicial delay, is tested by an OLS model in which we regress (observed average) wages against judicial delay and various “economic” (gdp per capita, unemployment rates and the share of temporary workers) and “legal” (lawyers’ density and litigation rates) controls. Results are displayed in Table 1. Our estimates predict that a 1 month increase in judicial enforcement is correlated to an increase in yearly wage that, depending on the specification, ranges between €50 to €150. We are aware that we cannot exclude *ex ante* the existence of reverse causality. However, to a more rigorous scrutiny, it is reasonable to claim that a richer district characterized by higher wages is much likely also characterized by better functioning institutions (Djankov et al., 2003) and thus lower judicial delays. If this is true, this means that even if biased, our results underestimate the true coefficients.

For Hp 2, that wages decline in the share of pro-labor judges, we employ an IV strategy. Recently, Nizza (2021) showed how the *Phylloxera* crisis⁴ in the nineteenth century can be used as an exogenous source of the current variation in the geographical distribution of confrontational unions⁵. The *Phylloxera* had an impact on unions’ creation, which still predicts today electoral local support for confrontational unions in *CPHS*' elections and thus the share of pro-labor judges in courts. We construct our IV as a dummy equal to 1 if the district was hit by the blight, and 0 otherwise. As for the former estimation, we include a number of “legal” (judicial delay, litigation rates, lawyers’ density) and “economic” (gdp, unemployment, the share of temporary workers and a dummy accounting for “agricultural” departments) controls.

⁴ This event has already been used to test the impact of economic shocks on health conditions (Banerjee et al., 2010) or crime rates (Bignon et al., 2015).

⁵ We adopt the classification by Desrieux and Espinosa (2019) considering judges elected with CGT and FO as pro-labor.

Table 2

	(1)	(2)	(3)	(4)
Panel A – second stage (dependent variable: wage)				
%_Confr_judges	-9.398***	-12.63***	-10.16***	-10.40***
	(3.070)	(4.666)	(2.947)	(3.830)
Panel B – first stage (dependent variable: %_confr_judges)				
Phylloxera	.0703***	.0532***	.0765***	.0588***
	(0.000)	(0.001)	(0.000)	(0.000)
Legal controls			Y	Y
Economic controls		Y		Y
Obs.	203	203	203	203

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

All first-stage statistics (see Appendix B) suggest that our IV appears to be a relevant and possibly exogenous instrumental variable. Depending on the specification, a judicial district facing the *Phylloxera* crisis in the '800 is associated with around a 6% increase in the share of confrontational judges in today's *CPHs*. In our second stage this translates, assuming the validity of our identification strategy, in a reduction of about €100 of yearly salary for every additional percentage of pro-labor representation in *CPHs*.

4. Conclusions

In this work, we developed a shirking model to analyze the effect of judicial delay and judges' ideology on the efficiency-wage. We find that wages increase with the lengthiness of trial and decrease with the share of confrontational judges. Our empirical estimates support these theoretical findings. However, we are aware that we cannot identify the underlying mechanisms with the data at hand. Hence, we mean this contribution as a preliminary exploration of the issue and leave further refinements for future research.

References

- Alvi, E. (1998) Job Security and Unemployment in an Efficiency-Wage Model. *Journal of Labor Research* 20(2): 388-394
- Banerjee, A., Duflo, E., Postel-Vinay, G., & Watts, T. (2010). Long-run health impacts of income shocks: Wine and phylloxera in nineteenth-century France. *The Review of Economics and Statistics*, 92(4), 714-728.
- Berger, H., & Neugart, M. (2011). Labor courts, nomination bias, and unemployment in Germany. *European Journal of Political Economy*, 27(4), 659-673.
- Bignon, V., Caroli, E., & Galbiati, R. (2017). Stealing to survive? Crime and income shocks in nineteenth century France. *The Economic Journal*, 127(599), 19-49.
- Besancenot, B. and Vranceanu, R. (2009) Multiple equilibria in a firing game with impartial justice. *Labour Economics* 16, 262–271.
- Chang, J.J., Huang C..C and Lai, C.C. (2009) Employment effect of dismissal pay in the presence of judicial mistakes. *International Review of Law and Economics* 29: 38–45.
- Desrieux, C., & Espinosa, R. (2019). Case selection and judicial decision-making: Evidence from French labor courts. *European journal of law and economics*, 47(1), 57-88.
- Djankov, S., La Porta, R., Lopez-De-Silanes, F., & Shleifer, A. (2003). Courts. *The Quarterly Journal of Economics*, 118, 453-517.
- Fraisse, H., Kramarz, F., and Prost, C. (2015). Labor disputes and labor flows. *Industrial Labor Relations Review*, 68(5), 1043-1077.
- Gáldón-Sánchez, J. and Güell, M. (2000). Let's go to court! Firing costs and dismissal conflicts. Princeton University-IR Section Working Paper 444.
- Gáldón-Sánchez, J. and Güell, M. (2003) Dismissal Conflicts and Unemployment. *European Economic Review* 47: 323-335.
- Marciano, A., Melcarne, A., & Ramello, G. B. (2019). The economic importance of judicial institutions, their performance and the proper way to measure them. *Journal of Institutional Economics*, 15(1), 81-98.
- Nizza, U. (2021). Are polarized courts dangerous for litigation? Evidence from French labor courts. *Journal of Institutional Economics*.
- OECD (2004). *Employment Outlook*, Paris.
- OECD (2016). *Employment Outlook*, Paris.
- Shapiro, C. and Stiglitz, J.E. (1984) Equilibrium Unemployment as a Worker Discipline Device. *American Economic Review* 74 (3), 433–444.
- Spiller, P. T., & Gely, R. (1992). Congressional control or judicial independence: The determinants of US Supreme Court labor-relations decisions, 1949-1988. *The RAND Journal of Economics*, 463-492.

Appendix A

In this section, we show the implications of allowing for the double moral hazard problem studied in Gáldón-Sanchez and Güell (2003), whereby shirkers fired for personal motives may decide to claim unfair dismissal to get compensation in court. To do so, we assume that the cost of litigating for a shirker facing a disciplinary dismissal is given by

$$D = p(s)(1 - \alpha)f(d) - c \quad (1')$$

where $0 < \alpha < 1$ is a parameter that ensures that shirkers have a lower probability of winning the trial if compared to workers facing a hidden redundancy. This, however, does not rule out the information problem that generates imperfections in the judges' decisions, as shirkers would find it rational to litigate whenever $D \geq 0$. In addition, observe that $1 - p(s)$ is the probability with which judges makes a type-1 error – i.e., they mistake a hidden redundancy for a disciplinary dismissal – while $p(s)(1 - \alpha)$ is the probability with which judges makes a type-2 error – i.e., they mistake a disciplinary dismissal for a hidden redundancy. Given the assumption that $\alpha < 1$, our modelling strategy entails that type-1 errors are less frequent than type errors, since $p(s)(1 - \alpha) > 1 - p(s)$ is always satisfied $\forall \alpha \in [0,1]$. A similar assumption is made in Chang et al. (2009). The fundamental asset equation for a shirker is now given by:

$$rV_E^S = w + (b + q)(V_U - V_E^S) + bC + qD \quad (4')$$

which entails that the no-shirking condition in equation (5) must be re-written as:

$$w = rV_U + (r + b + q)e/q + (r + b)D - bC \equiv \bar{w} \quad (5')$$

from which it is straightforward to see that $\hat{w} < \bar{w}$. Indeed, the possibility that judges may mistake shirkers for unjustly terminated workers has a disincentivizing effect on the decision to provide effort, as shirkers know that they may be recognized a termination indemnity

despite their misbehavior. The upshot is that organizations are forced to raise to wage premium to attract labor effort. Observe that when $D/C > b/(b+r)$, the no-shirking condition in equation (5') is tighter than Shapiro's and Stiglitz's (1984). This strengthens the idea already put forward in Proposition 1: labor courts may have positive effects on organizational compliance only when efficient. To inquire further in this mechanism, we advance the following Proposition:

Proposition 2—*When shirkers find it rational to litigate ($D \geq 0$), the effect of judicial delay on the efficiency-wage is ambiguous.*

Proof: The following comparative statics prove the first parts of Proposition 2: $\partial \bar{w} / \partial d = f'(d)p(s)[(r+b)(1-\alpha) - b] \begin{matrix} \geq \\ < \end{matrix} 0$ if $\alpha \begin{matrix} \geq \\ < \end{matrix} \frac{r}{r+b}$ ■

Proposition 2 extends the insights from Proposition 1 in the following way: allowing shirkers to leverage on the information problem and demand compensation in court increases the circumstances in which judges may take a wrong decision. Under Assumption 1, in fact, judges may only make a type-1 error, that is, they may only mistake a hidden redundancy for a genuine disciplinary dismissal. Relaxing Assumption 1 entails that judges may also commit a type-2 error, as they may additionally mistake a genuine disciplinary dismissal for a hidden redundancy. The upshot is that the implications of poor EPL enforcement and judicial mistakes are more severe than in the scenario described by Proposition 1.

Appendix B

Table A.1 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
wage	203	13.553	1.811	11.42	22.64
judicial_delay	203	12.83	3.415	4.2	24.68
%_confrontational_judges	203	.578	.109	.278	.95
Phylloxera	203	.241	.429	0	1
lawyers_density	203	393.088	1818.323	15.2	25531.6
litigation_rate	203	92.848	33.951	34.019	215.581
unemployment	203	9.952	1.878	6.06	14.935
gdp	203	28288.966	9916.547	19280	99900
share_precarious_workers	203	.115	.033	.05	.208
agricultural department	203	.246	.432	0	1

Table A.2 2SLS (full) Results

	(1)	(2)	(3)	(4)
Panel A – second stage (dependent variable: wage)				
%_confr_judges	-9.398*** (3.070)	-12.63*** (4.666)	-10.16*** (2.947)	-10.40*** (3.830)
Panel B – first stage (dependent variable: %_confr_judges)				
phylloxera	.0703*** (0.000)	.0532*** (0.001)	.0765*** (0.000)	.0588*** (0.000)
Legal controls			Y	Y
Economic controls		Y		Y
First-Stage Angrist-Pischke F-Test (p-value)	0.000	0.0007	0.000	0.0002
Stock-Wright Orthogonality Test (p-value)	0.0016	0.0005	0.0003	0.0005
Cragg-Donald Weak Identification Test	16.746	10.374	20.384	12.36
Kleibergen-Paap Underid. Test (p-value)	0.000	0.0016	0.000	0.0005
Obs.	203	203	203	203

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1