

## Graded security from theory to practice

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Since 1 March 2015, all new open-ended contracts in Italy have offered graded security – that is, severance payments in case of dismissals, which are gradually and steadily increasing with tenure without any major discontinuity. These new contracts also reduce the range of compensations that judges may impose on employers in the context of judicial procedures on the fairness of the layoff, thereby reducing the uncertainty associated with the actual costs of dismissals. This particular design of employment protection for open-ended contracts largely draws on proposals developed by labour economists in Italy (Boeri and Garibaldi 2003 and 2006), France (Cahuc and Carcillo 2006, Blanchard and Tirole 2008), and Spain (Bentolila et al. 2012) in order to reduce contractual dualism, improve incentives for human capital investment at the workplace, and reduce inefficient layoffs.

The Italian experience with the new open-ended contract can be very relevant in improving the quality of jobs created in the aftermath of the Great Recession. New jobs in Europe are mostly temporary jobs. According to data from the EU-SILC, the share of fixed-term contracts in new hirings has increased, on average, by 15 base points in the EU from 2006 to 2012, and it has been as high as 90% in countries with strict employment protection of permanent (open-ended) contracts. There is a lot of churning in these jobs, and job-to-job shifts from one temporary contract to another are intermediated by frequent spells of unemployment. Moreover, these jobs usually pay lower wages, and are subject to a lower incidence of on-the-job training than the average job (OECD 2014b). In other words, firms do not invest in most of the new jobs that have been created. In addition, the flight away from tenured jobs is visible also in sectors and occupations requiring significant on-the-job training (such as, for example, professional services and other occupations for which there is more growth potential in advanced economies) and where the initial human capital investment of the worker

can be poorly monitored. Thus, understanding the spread of temporary employment and the reasons of the under-investment in training on-the-job is very important to improve the quality of job creation in the years to come.

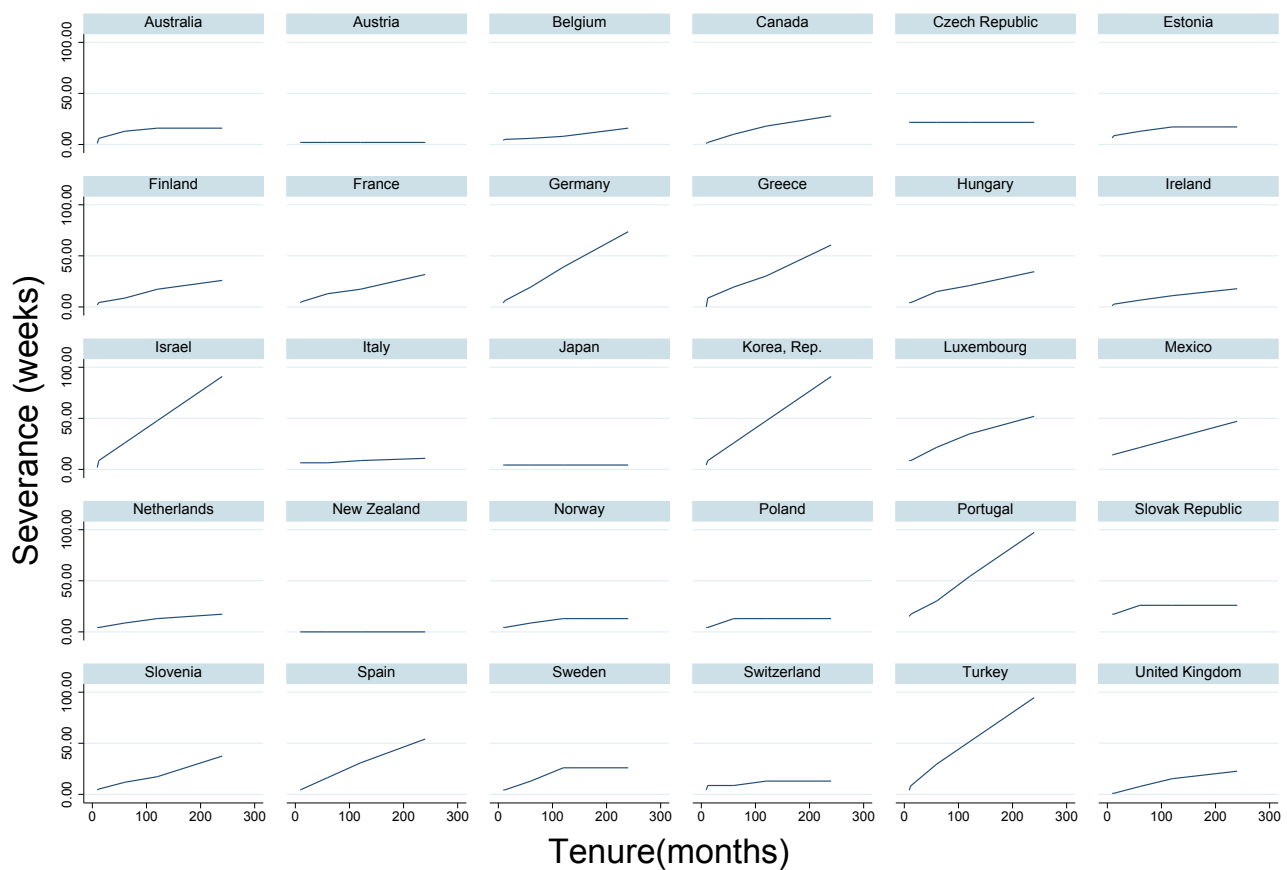
In this Policy Insight, we at first discuss the rationale for this design of employment protection for open-ended contracts. Next, we provide some evidence on dis-employment during the Great Recession in countries characterised by significant contractual dualism. Finally, we describe in some detail the new contract, and produce some preliminary evidence on its impact on the share of hiring in open-ended contracts.

### A theory of graded security

Several countries allow for mandated severance pay to be increasing with tenure. Figure 1 displays the severance tenure profiles in OECD countries drawing on institutional information gathered by the ILO (EPLex project) and the OECD.

In 25 out of 30 countries, there is evidence of severance increasing with tenure. If we add the notice period (de facto an extension of the contract after the notification of the dismissal giving to the worker time to find alternative employment), only two countries pay the same compensation at all tenure levels, notably Austria and Japan.

Figure I.



Graphs by Country

This tenure profile of severance is relevant in affecting labour market outcomes. An indication of this comes by comparing the severance-tenure profile with the wage-tenure profile in different countries. We find that the tenure-related profile of severance is only mildly correlated with the wage-tenure profile across countries, pointing to rigidities in the wage tenure profile and potentially other factors that prevent severance to be fully internalised in the wage contract. According to Lazear (1990), under flexible wages (and risk neutral agents), severance pay can be undone by a bonding arrangement making wages to be increasing with tenure. In other words, severance is neutralised by internalising it in a wage contract increasing with tenure. Employers initially pay a lower wage, forcing their employees to buy from them a sort of bond or insurance that will give them the right to receive a deferred compensation, the severance payment, at the time of separation. As mentioned above, there is no evidence that this neutrality result is at play in OECD countries.

We are not aware of any theory rationalising these arrangements on the basis of purely efficiency considerations. Personnel economics offers explanations for why firms offer tenured jobs, that is, positions that cannot be severed under any set of circumstances. Tenured jobs can be rationalised as the result of learning about match quality or hiring incentives in organisations where incumbents have control over hirings, e.g., in academic institutions. Tenure prevents the strategic choice of incumbents

of hiring only low-quality workers in order to reduce competition with outsiders (Carmichael 1988). These theories explain why employers may want to commit not to layoff some workers, but do not explain why a mandated profile of severance increasing with tenure is chosen for potentially all private firms, irrespective of whether incumbents in these organisations play any role in hiring decisions or there is substantial heterogeneity in the quality of applicants. Moreover, these models do not address problems of commitment; private firms generally cannot credibly commit not to layoff some workers, irrespective of their performance.

Another (theoretically) neglected feature of EPL relates to the discretion of judges in deciding upon the fairness and the nature (economic versus disciplinary) of the dismissal. This decision deeply affects the costs of individual dismissals. Compensation is generally not offered to workers being fired for disciplinary reasons unless a court ruling declares that the dismissal is unfair. When the individual layoff is instead motivated by the economic conditions of the firm, that is, it occurs independently of the behaviour of the worker, compensation is typically offered also for fair dismissals, that is, cases where there is no evidence of opportunistic behaviour of the employer. In the case of unfair dismissals, however, compensation is higher than the severance for fair economic dismissals. There are also countries in which compensation is provided only for unfair dismissals

and fair economic dismissals do not involve mandated severance to the workers. Due to these wide differences in the levels of compensation related to the nature of dismissals, there are strong incentives for the employee or the employer to bring the case before a court. Involvement of judges in the determination of the level of severance cannot be avoided by state contingent contracts, and since workers' effort and employers' investments in the duration of the job are not perfectly observable, the decisions of the judges will tend to be imperfect. Shirkers may receive the compensation offered for unfair disciplinary or economic dismissals, while opportunistic employers claiming that the dismissal is either disciplinary or due to objective economic circumstances may get away without paying the higher severance required for unfair dismissals or not paying severance at all. The judicial discretion clearly affects also private settlements out of court, as such settlements will be based on the expected costs had the case gone to court. These relevant interactions between EPL and the efficiency of judicial systems have been neglected to date by the theoretical literature on EPL although there is evidence (Fraisie et al. 2009) that the organisational structure of judicial systems does affect significantly labour market outcomes.

Both the above features are very important in understanding the spread of temporary employment and possibly in identifying ways to counteract the most undesirable consequences of 'contractual dualism', that is the coexistence of two employment protection regimes within the same labour market, as a result of two tier reforms that between the late 1980s and the early 2000s expanded the scope of temporary employment in a number of countries (including Spain, Italy, Belgium, Germany, the Netherlands, Sweden, and Portugal) while leaving employment protection for open-ended contracts substantially unaffected. The political economics of these reforms has been extensively analysed by Saint-Paul (1997, 2002) who showed that they offer a viable mechanism to win the political opposition of insider workers. The properties of these two-tier regimes, notably their effects on job creation, on-the-job training, and productivity, have been much less investigated (Boeri 2010) although they are potentially very important in understanding the quality of job creation in 'sclerotic' European labour markets. Potential perverse outcomes of contractual dualism were pointed out, inter alia, by Dolado et al. (2002), Blanchard and Landier (2002), and by Cahuc and Postel-Vinay (2002). These perverse effects of labour market flexibility were mainly identified in insiders power, congestion in job search, and potential fiscal externalities of repeated unemployment spells. Although there is evidence that temporary contracts involve less training on-the-job, we are still lacking a proper theoretical framework accounting for the effects

of these reforms on productivity via on-the-job training, with the partial exception of Dolado et al. (2013), who do not model, however, the initial choice of employers as to the nature (open-ended versus fixed-term) of the contract.

Why do regulations in so many countries allow for severance graded with tenure? Is this profile efficient from the standpoint of the individual worker and firm involved?

We have addressed these issues in a recent paper (Boeri et al. 2014). In it, we show that graded security is efficient in dealing with moral hazard and adverse selection and that optimal severance is dependent on the design and efficiency of the judicial system. Severance is needed to deter opportunistic behaviour of workers. It has to be mandated by governments as adverse selection prevents individual employers from committing not to fire workers investing in the productivity of the job. Incentive reasons, notably deterrence of shirking (Shapiro and Stiglitz 1984) also explain why severance for economic dismissals is higher than for disciplinary dismissals. At the same time, this difference, especially when at least part of the burden of proof falls on the worker, induces employers to play strategically. Severance in case of unfair dismissals should be set at even higher levels to deter firms from taking the disciplinary dismissal route even in case of dismissals that are actually motivated on purely exogenous productivity reasons. These differences in severance pay levels by nature of individual dismissals, and the associated informational asymmetries enhance the discretion of judges, hence the unpredictability of the costs of dismissals stressed by many employers (see the quotes at the beginning of this article). Thus, there is a non-zero probability that a shirker obtains the severance pay provided in case of economic dismissals or that an employer pays the (low if any) severance due in case of disciplinary dismissals even when the worker has invested in the productivity of the job. We endogenise these probabilities depending on whether the burden of proof concerning the nature (economic versus disciplinary) of the dismissal falls on the worker or on the employer. We also show under which conditions severance should be increasing with tenure. In partial equilibrium, this depends on the age profile of the costs of training for the individual worker and on whether or not judges are more protective of older workers. In general equilibrium, an optimal graded security contract is also obtained as a result of fiscal externalities associated to layoffs in presence of tenure-related unemployment benefit systems and/or job finding rates declining with age.

As we dig into the legal system, we can establish a link between the efficiency of the judicial procedures in detecting opportunistic behaviour

of employers or employees, and the optimal levels of severance pay for disciplinary, economic, and unfair dismissals. In particular, our model delivers a very simple expression for optimal severance, which is dependent on rules concerning the burden of proof, notably whether this burden is on the employer or the worker. The model also shows under which conditions – in terms of productivity, monitoring technologies, jurisprudence, and design of unemployment benefit systems – a severance pay increasing with tenure improves productivity, reduces inefficient firing and induces an efficient allocation of labour. Finally, problems in monitoring rationalise why small firms are typically exempted from the strictest EPL regulations, as it is easier for employers in small firms to prove opportunistic behaviour of workers before courts as they can better monitor and document the effort made by their workers in increasing the productivity of a job.

The above findings are important in assessing employers' incentives to hire under contracts that are severed and (dual) contracts that are not severed at termination. This choice involves a trade-off between low productivity-low wage and high wage-high productivity job creation. The mechanism operates as follows. Consider an employer who has to choose between two alternative contractual regimes for new hires:

- Offering open-ended contracts involving high and uncertain costs of dismissals;
- Offering temporary jobs that are not severed at termination.

If the employer offers a temporary contract, it is hard for her to induce the worker to make an investment with uncertain returns, when effort can be imperfectly monitored. If she offers a higher wage to reward an investment in training, she creates a gap between the worker wage and the outside option. It will typically be very hard for her to commit not to fire workers who invest in job-specific human capital, but whose effort, for exogenous reasons, does not translate in sufficiently high productivity levels to match the increased wage levels. Nor does statutory employment protection provide this commitment device, as the contract is temporary, and hence does not involve any cost of dismissal. It follows that the employer hiring with temporary contracts cannot deal with the moral hazard associated with investment in training when workers' effort can be poorly monitored. Consequently, the choice of a temporary contract tends to involve a flat wage tenure profile (provided that the worker's outside opportunity is constant over time), low human capital investments by workers, and firing whenever a negative productivity shock is experienced.

If instead the employer offers an open-ended contract, she can commit to a higher pay (hence a higher sanction for opportunistic behaviour) in the future and use statutory employment protection as a commitment device. In fact severance pay dents the gap between the higher wage paid to continuing workers and the outside opportunity, making it not convenient for the employer to fire 'unlucky' investors under a relatively large set of circumstances. However, if the mandated severance is too high or the judicial system very inefficient in discriminating between opportunistic workers and unlucky investors, the employer may find it more convenient to go for the low-wage low-productivity combination offered by temporary jobs.

Thus, depending on the design of severance and on the efficiency of the judicial system, the firm may opt for either one contractual arrangement or the other.

### Contractual dualism and the Great Recession

Asymmetric (two-tier) reforms of employment protection have made temporary contracts more appealing for employers increasing labour market segmentation between unstable jobs with poor working conditions, and stable jobs with better working conditions.

An increasing body of empirical research suggests that the share of temporary jobs is higher in countries where protection of permanent jobs is more stringent. Kahn (2007), using 1994-98 International Adult Literacy Survey micro data, investigates the impact of employment protection laws on the incidence of temporary employment by demographic group. His study covers Canada, Finland, Italy, the Netherlands, Switzerland, the UK, and the US – countries with widely differing levels of mandated employment protection. He finds that more stringent employment protection for permanent jobs (as measured by the OECD) increases the relative incidence of temporary employment for less experienced and less skilled workers, and for young workers, native women, immigrant women, and those with low cognitive ability. This result is important, since temporary jobs tend to be lower paying, and offer less training, other things being equal, than permanent jobs; moreover, workers in temporary jobs express lower levels of job satisfaction than comparable workers in permanent jobs (Booth et al. 2002). Thus, policies that lead to a substitution of temporary jobs for permanent jobs may actually worsen the welfare of the average worker, especially in the event that this policy does not lead to lower unemployment.

The labour market segmentation induced by stringent regulation of permanent jobs improves

the security of permanent jobs, but does so at the expense of an increasing instability of temporary jobs. Therefore, the impact of protection of permanent jobs on overall job security is ambiguous. This property has been illustrated in search and matching models with temporary and permanent jobs (Blanchard and Landier 2002, Cahuc and Postel-Vinay 2002, Cahuc and Carcillo 2006, Cahuc et al. 2015). Actually, more stringent regulation of permanent jobs can be associated with stronger feelings of job insecurity not only for temporary workers but also for permanent workers, as shown by Clark and Postel-Vinay (2009). They construct indicators of the perception of job security for various types of jobs in 12 European countries using individual data from the European Community Household Panel. Then, they consider the relation between reported job security and OECD summary measures of employment protection legislation strictness on one hand, and unemployment insurance benefit generosity on the other. They find that, after controlling for selection into job types as well as the state of local labour markets, workers feel most secure in permanent public sector jobs, least secure in temporary jobs, with permanent private sector jobs occupying an intermediate position. They also find that perceived job security in both permanent and temporary jobs is positively correlated with unemployment insurance generosity, while the relationship with employment regulation strictness is negative – workers feel less secure in countries where jobs are more protected! These correlations are absent for permanent public jobs, suggesting that such jobs are perceived to be, by and large, insulated from labour market fluctuations. While care needs to be taken in establishing the causality of these correlations, this result suggests that job protection is not the best response to the problem of job insecurity.

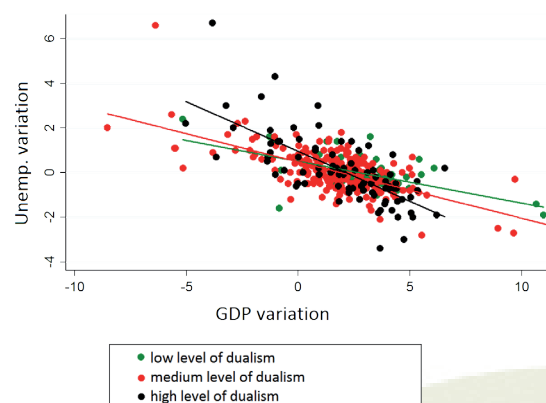
The employment/unemployment response to the Great Recession has been much different across European countries. Such differences can be traced to the size of the output shock in different countries. Another component can be traced to institutional factors.

A very crude way to assess the importance of these two sets of factors is in terms of Okun's law elasticities. Deviations from the overall Eurozone elasticity can be attributed to labour market institutions, while different country positioning along the same U-Y (unemployment-output) or E-Y (employment-output) elasticity can be related to the magnitude of the macro shock. Needless to say, part of the output fall can be itself attributed to labour market institutions (in their role as sources of shocks or in the transmission mechanism of shocks generated elsewhere), but, with a very few exceptions that we highlight below, during the Great Recession the effects on output of shocks

generated in the labour market are relatively second order.

As suggested by Figure 2, countries with large contractual dualism display larger Okun's law elasticities, that is, a stronger responsiveness of unemployment to output changes. The reason for this role of contractual dualism is that employers do not have to pay costs, even in terms of severance payments, to dismiss temporary workers as they can simply wait until contract termination and not renew their contract. Moreover, the very fact that all the adjustment is concentrated on temporary employment de facto insulates workers holding permanent contracts from the consequences of negative shocks. To the extent that large job losses among the temporary workers segment can be associated with wage rises among the permanent contracts. Something similar happened in the Spanish construction sector during the first phase of the Great Recession (2008-2010); while about one-third of jobs on *contratos temporales* were destroyed, workers holding permanent contracts continued to enjoy real wage increases. Needless to say, there is something fundamentally wrong in a labour market operating this way.

Figure 2. Unemployment responsiveness to output changes in countries with different degrees of dualism



### The Italian Graded Security Contract

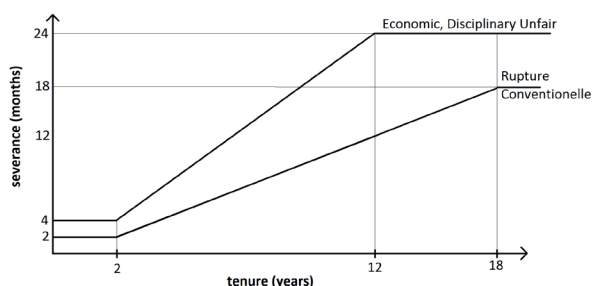
The Italian Graded Security Contract ("Contratto a Tutela Crescenti") is effective since 7 March 2015. The previous open-ended contract for firms with more than 15 employees involved the compulsory reinstatement of workers in the case of unfair dismissals. This reinstatement, although rarely enacted (about 3,000 cases in a typical year), was a strong deterrent to hiring in open-ended contracts as it made the costs of dismissals very high (up to 36 months of pay) even for very short tenures. The reinstatement is a major deterrent also because there is a risk of a long trial and eventually a reinstatement, with the employer having also to pay back the worker during the trial period.

The new contract has been introduced on a flow basis (limited to new hires), but will be the only type of open-ended contract allowed in Italy henceforth. It will also involve all workers of firms growing above the 15-employees threshold.

The new contract phases out the possibility of reinstatement for economic dismissals, and almost entirely for disciplinary reasons. Basically, the protection is offered only in terms of a mandatory severance pay in case of unfair dismissal increasing steadily (by two months per year with a low threshold of four months and a maximum of 24 months) with tenure, as depicted in Figure 3. Fair economic dismissals (as well as fair disciplinary dismissals) continue to involve no transfer to the worker at all tenures, while an option has been introduced that allows the employer to offer an intermediate level of severance (one month per year of tenure, starting from a threshold of two months and a maximum of 18 months) together with the notification of the dismissal. If the worker accepts the payment, then there is no possibility for the worker to sue the employer. This compensation is called ‘rupture conventionnelle’ in Figure 3, as it mimics the French legislation in this respect.

Below the 15-employees threshold, compensation for dismissal amounts to one month’s salary per year of tenure for a minimum of two and a maximum of six months.

Figure 3. The Italian ‘Contratto a Tutele Crescenti’



## References

Bentolila, S, P Cahuc, J Dolado and T Le Barbanchon (2012), “Two-Tier Labour Markets in a Deep Recession: France vs. Spain”, *Economic Journal*, 122, F155–F187.

Blanchard, O and A Landier (2002), “The perverse effects of partial labour market reform: Fixed-term contracts in France”, *Economic Journal*, 112, F214–F244.

Blanchard O and J Tirole (2008), “The Joint Design of Unemployment Insurance and Employment Protection: A First Pass”, *Journal of the European Economic Association*, MIT Press, vol. 6(1), pages 45–77, 03.

Boeri, T (2010), “Institutional Reforms and Dualism in European Labour Markets”, in Ashenfelter,

O. and Card, D. (eds.), *Handbook of Labour Economics*, 2010, Elsevier, pp. 1173–1236..

Boeri, T and P Garibaldi (2003), “Un nuovo contratto per tutti”, *Chiarelettere*.

Boeri, T and P Garibaldi (2006), “Un sentiero verso la stabilità”, [www.lavoce.info](http://www.lavoce.info), May 8, 2006.

Boeri T, P Garibaldi and E Moen (2014), “Severance Pay”, CEPR Discussion Paper 10182.

Booth, A, M Francesconi, and J Frank (2002), “Temporary jobs: Stepping stones or dead ends”, *Economic Journal*, 112(480), F189–F213.

Cahuc, P and S Carcillo (2006), “The shortcomings of a partial release of employment protection laws: The case of the 2005 French reform”, IMF Working Paper No. 06/301.

Cahuc, P and F Postel-Vinay (2002), “Temporary jobs, employment protection and labour market performance”, *Labour Economics*, 9, pp. 63–91.

Cahuc, P, O Charlot, and F Malherbet (2015), “Explaining the Spread of Temporary Jobs and its Impact on Labor Turnover”, forthcoming, *International Economic Review*.

Carmichael, H L (1988), “Incentives in academics: why is there tenure?”, *Journal of Political Economy*, Vol. 96, pp. 453–472.

Clark, A and F Postel-Vinay (2009), “Job security and job protection”, *Oxford Economic Papers*, 61, pp. 207–239.

Dolado, J J, C Garcia—Serrano, and J F Jimeno (2002), “Drawing Lessons From The Boom Of Temporary Jobs In Spain”, *Economic Journal*, Royal Economic Society, vol. 112(721), pp. F270–F295, June.

Dolado, J J, S Ortigueira, and R Stucchi (2013), “Does dual employment protection affect TFP? Evidence from Spanish manufacturing firms”, Economics Working Papers we1137, Universidad Carlos III, Departamento de Economía.

Fraisse, H, F Kramarz, and C Prost (2009), “Labor Court Inputs, Judicial Cases Outcomes and Labor Flows: Identifying Real EPL”, Working papers 256, Banque de France.

Kahn, L M (2007), “The impact of employment protection mandates on demographic temporary employment patterns: International microeconomic evidence”, *Economic Journal*, 117(521), F333–F356.

Lazear, E (1990), “Job security provisions and unemployment”, *Quarterly Journal of Economics*, 105(3), pp. 699–726.

OECD (2014), *Employment Outlook*, Paris: OECD

Saint-Paul, G (1997), “The Rise and Persistence of Rigidities”, *American Economic Review*, American Economic Association, vol. 87(2), pages 290–94, May.

Saint-Paul, G (2002), “Macroeconomic Fluctuations and the Timing of Labour Market Reforms”, CEPR Discussion Paper 3646.

Shapiro, C and J E Stiglitz (1984), “Equilibrium Unemployment as a Worker Discipline Device”, *American Economic Review*, American Economic Association, vol. 74(3), pages 433–44, June.

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