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LABOUR COURTS DELAYS AND THE COMPOSITION OF EMPLOYME
IS LABOUR ENCOURAGED OR ENDANGERED BY INSTITUTIONS?

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Labour Courts delays and the composition of employment: is labour encouraged or endangered by institutions?

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Abstract

Employment protection is the results of labour laws and of institutional factors which are not encompassed in official legislation. Courts' delay is settling labour disputes are among those factors. Using individual data on the Italian workforce for the period 2007-2010 and exploiting the territorial heterogeneity in the duration of labour suits among Italian regions we investigate the effect of labour trial delays on the composition of employment. We find that Labour Courts' delays hinder the occupation rate for specific categories of workers, i.e. women, young and low skilled people, while increasing the inactivity rate of the same groups; furthermore, long duration of trials reduces the likelyhood of accessing a permanent occupation for the same groups. Finally, it induces a shift from short term to long term unemployment.

Key words: EPL, courts, occupation rate, inactive workers, temporary jobs
JEL Classification: D24, J63; K31; K41

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1 Introduction

Since the seminal work by Mortensen and Pissarides (1994) the impact of labour market rigidigy on employment and firms' productivity has been deeply explored; in a world of costly firm-workers matching, firing costs hinder job reallocation processes thus undermining firms' capacity to quickly adjust to shocks and by this way firms' output. However, while the relevance of Empolyment Protection Legislation for firms' output is a well established result, there is a growing awareness that the role of labour institutions goes far behind legislative provisions as it encompasses rules and facts which affect the actual enforcement of legislation; EPL indexes used to measure the strictness of the legislation on workers' dismissal for various countries (Venn, 2009) may then fail to capture the effect of all (non written) constraints on labour markets.

Courts' rulings may play an important role in determining the strictness of EPL legislation but for the fact that firing costs tend to be higher if labour courts decide in favour of workers in litigations over dismissal cases. In this respect the relationship between the judicial and labour market is twofold; on the one hand courts' outcomes have an impact on job flows (Fraisse et al. 2009), on the other hand courts' decisions over dismissals are influenced by labour market conditions (Ichino et al., 2003). However, the relevance of the judiciary for labour market is not only related to courts' output; the lenght of the litigation may per se influence firms' adjustment costs. Indeed, firms may be affected by the timing of the judiciary in two important ways, i.e. in case of unfavorable courts' ruling if overall dismissal costs include items related to the lenght of time a worker is suspended, as the payment of foregone wages, and through accrued uncertainty.

The economic consequences of uncertainty caused by long trials have been recently stressed by the OECD (2013): costly, complex or time-consuming legal processes can add signicantly to the cost of hiring and especially dismissing workers. Moreover,increasing the costs associated to the riskiness of trials may undermine trust. On empirical grounds, Gianfreda and Vallanti (2015) have shown that judicial inefficiencies significantly reduce job reallocation and firms productivity; also, the uncertainty and costs associated with longer trials have shown to reduce the efficiency of credit markets (Jappelli et al. 2005; Fabbri, 2010), firms'size (Kumar, 1999; Giacomelli and Menon, 2013), trade flows (Nunn, 2007) and in general economic development (Chemin, 2009 and 2012).

Our study focuses on the impact of long labour trials on the access to the labour market. Exploiting the heterogeneity in Italian judiciary districts, we investigate the effects of the lenght of labour trials on the participation to the labour market status for different categories of workers, i.e.

as a function of age, sex and education. We find that long trials discourage the access to labour markets for women, younger and low skilled people, as it reduces the employment rate while increasing the inactivity rate while for those categories; it also reduces the probability of having a permanent occupation for those groups and also increases the probability of being long term against short term unemployed for all categories of workers.

Our study contributes to two strands of literature. On the one hand it explores the non legislative determinants of firing costs, thus sharpening the concept of EPL; following Kahn (2007), who compares EPL in 7 countries and finds that EPL raises non employment rates or causes a higher relative incidence of temporary employment for specific categories of workers (low skilled, young workers and women), we test whether a similar outcome can be obtained *within the same legislative framework* as a result of differences in the timing of EPL enforcement rather than in legislative provisions. By this way our results contribute to the shaping of a more convincing measure of employment protection. On the other hand our study sheds more light on the debate over the economic implications of judicial inefficiencies. According to World Bank Doing Business 2015, differences in the duration of dispute settlements among countries or even areas are huge, with 448 days in Europe and Central Asia and 1076 days in Southern Africa (Doing Business 2015); this dramatic heterogeneity among areas or countries in capacity to settle disputes have elicited a growing interest as to the causes and the consequences of judicial efficiency. While searching the causes of long trials is relevant for the desing of reforms which focus primarly on Courts' efficiency, detecting the effects of long trials allows to improve the effectiveness of policies in sectors other than the judiciary but deeply interconnected to it, which is the case whenever the scrutiny by the Courts may be essential for the enforcement of legislation.

Focusing on the Italian case has important advantages. Italy ranks 191th in Enforcing Contracts statistics s as to the lenght of trials, not only much more than the Europe and Central Asia average but also more than the Southern Africa average, with 1185 days from filing a case to the enforcement of judgement; most important, it shows a dramatic hetorogeneity in the duration of trials throughout the territory, with 1433 estimated days of labour trial in Bari against 224 in Turin. While EPL rules and procedures are homogenous throughout the country, differences in the lenght of labour trials can be thus analysed with respect to their capacity of influencing access to the labour market ceteris paribus.

Also, reforms in the Italian labour market occurred during the 90s offer a unique identification strategy for the relation under study. In estimating the impact of labour trial delays on the access

to the labour market the risk of reverse causalilty should not be overlooked as a limited access to the labour market may affect the litigation rate among workers and by this way the lenght of trial. One important feature of the Italian labour market is a high degree of rigidity, with striking differences between the public and in private sectors. Employment in the public sector has always been characterized by a reduced risk of dismissal, pursuant to the principle of public work stability; furthermore, until 1998 the labour disputes involving workers in the public sector took place before the administrative courts as hiring a public sector worker was considered an "administrative deed". While there are still important differences between public and private sector workers, public sector labour disputes are now discussed before the labour Courts thus adding to the burden of the judiciary. As statistics about trials in the two sectors are still kept separated, following Gianfreda and Vallanti (2015) we use the rate of appeal in public sector disputes, which is shown to be disconnected with the local business conditions, as an instrument for the lenght of labour trial for the private sector workers.

The rest of the paper is organized as follows. The follwing section explains the rationale of the relation between courts' delays and labour market status. Section 3 presents the

main characteristics of the data. Section 4 illustrates the identification strategy while sectrion 5 sets out the empirical methodology. The main results are illustrated in section 6 while section 7 concludes.

2 The literature

The efficiency of the judicial system influences firms' employment decisions and productivity through its impact on dismissal costs. For employers, delays in trials over labour disputes can add significantly to the cost of dismissing workers for at least two important reasons. First, longer trials directly imply higher monetary costs for firms since in many countries the employer is required to compensate the unfairly dismissed employee with the full foregone wages and social contributions for the length of time between the dismissal and the decision of the judge. In Italy, firms have also to pay a fine to the social security system for the delayed payment of welfare contributions up to 200 percent of the original amount due. The dependence of actual dismissal costs on the duration of trials also implies that firing costs can vary considerably within country as a result of differences in courts' delays. For example, focusing on *ex post* firing costs and using a formula suggested by Garibaldi and Violante (2005), the computed *ex post* firing costs are 36 months wages in Trento (with an average length

of labour trials of 313 days) versus 160 months wages in Salerno (with an average length of labour trials of 1397 days). Hence, the cost of dismissing a worker for a firm located in the judicial district of Salerno is more than 300% higher than in Trento.[1]

Second, not all the costs of courts' inefficiency have a monetary dimension. The duration of labour trials can also be source of further uncertainty on both the employee and the employer. Independently of the judge's final decision, as long as a suit is not settled, the full extent of the costs related to the worker's dismissal (which can also encompass the reintegration of the dismissed worker) is not known to firms; such protracted uncertainty about the future can hinder, at least temporarily, the labour adjustment process thus hampering job reallocation.[2]

Theoretical models offer clear predictions regarding the effects of firing costs on employment adjustments. In a standard search and matching model, the searching process is costly both for firms and workers. Firing costs protect existing jobs, thus reducing job destruction; however, they also undermine job creation as firms anticipate costly dismissals. By decreasing both job creation and job destruction higher firing costs unambiguously reduce job reallocation; nevertheless, from a theoretical point of view, the effect of higher firing costs on employment is less clear cut, depending on which effect - the decrease in job creation or destruction - prevails. On the other hand, employment protection has been shown to affect specific categories of work, i.e. permanent employment versus temporary (Blanchard and Landier 2002) or workers with specific demographical or social characteristics. Kahn (2007) finds EPL is positively associated with the relative incidence of joblessness among the young, immigrants, and women while raising the relative incidence of temporary employment for young workers, native women, and especially immigrant women, as well as those with low cognitive ability; by the same token, Bertola et al. (2007) find that unionization decrease the employment–population ratio of young and older individuals relative to the prime-aged, and of prime-aged women relative to primeaged men, while it raises the unemployment rate of prime-aged women and young men compared to prime-aged men.

[1] The computation of firing costs is based on Garibaldi and Violante (2005). They calculate the *ex post* firing costs of an Italian firm with more than 15 employees that fires a blue collar worker with 8 years tenure, as follows:

$$FC = nw + (\tau^s + \tau^h + \phi)nw + sp + lc$$

where n is the number of months which it takes to reach a court decision, w are the monthly gross wage, τ^s and τ^h are the social and health insurance contribution respectively, ϕ is the penalty rate on forgone contributions, sp are the mandatory severance payments and lc are legal costs. The *ex post* firing costs in the example are estimated in the worst possible scenario, that is once the case has been taken to court and the judge's verdict is favorable to the worker. If we consider the probability of an off-court agreement and the fact that not all the individual layoffs are ruled unfair by the judge, the computed (*ex ante*) firing costs fall to 15 months wages in Trento and 65 months wages in Salerno. However, the difference in costs between Trento and Salerno remains unchanged in relative terms. This example clearly shows that, quantitatively, trial length may represent a large component of the total firing costs.

[2] In a recent paper Bloom (2009) shows how higher uncertainty causes firms to temporarily pause their investment and employment decisions.

3 The data

3.1 The length of labour trials

Italian labour disputes are sued before the Labour Tribunal, which is a sole judge specialized division of the Civil Court. The Civil Courts have a seat in the main town of each province in areas called "circondario" (167 in the Italian territory). The Civil Courts judgements - included labour suits - can be appealed before the Courts of Appeal, whose territory of competence is the district; there are 26 districts in Italy, each grouping several Courts areas (circondari). From an administrative point of view, the Italian territory is divided into 20 regions; in most cases the boundary of the judiciary district corresponds to the region while, in some others, there can be several districts in the same region. The last instance takes place before the Corte di Cassazione, which has only a seat in Rome. Considering both the first instance and the appeal, heterogeneity in the days of trial can be thus observed at the district level.

The Italian Ministery of Justice publishes annual data on the civil and labour trial - both for civil servants and private workers - at the district level. In particular, data are available on the flows of suits initiated during the year ("newly filed"), the flows which are closed every year ("closed") and the stock of pending suits every year ("pending") in first instance and in the appeal stage for each of the 26 Italian judiciary districts. On those basis the average days of trial can be calculated as the ratio between the stock of cases (pending cases at the beginning plus pending cases at the end of the year) over the incoming plus outgoing flows (newly files plus closed) following the formula used by the Ministery and by the Italian Institute of Statistics (Istat). This formula allows us to estimate the days of trial within each stage of judgement. In order to take account of the overall days of trial for the first instance and the appeal using the same criterion one should sum up all the pending cases at the beginning and at the end of the year in the two stages for the nominator and all the ingoing and outgoing flows in the two stages and for the denominator. However, this ratio has a drawback as it would not take account of the sequentiality of the two trials, i.e. the fact that the suits which are closed before the courts of the first instance case can enter the appeal phase; thus it cannot be interpreted as a measure of the total days of trial.

In order to account for the sequentiality of the two trials we constructed an index of the duration of trials as a sum of the average days of trial for the first instance and for the appeal (calculated using the Ministery formula) where the appeal days are weighted by the share of ingoing suits at the appeal stage over the outgoing suits at the first instance:

$$IndexA = DLT_{dt}^{FI} + DLT_{dt}^{A} \times S_{dt} \quad (1)$$

where DLT are the days of labour trial for the first instance (FI) and for the appeal (A) in district d at time t while S is the share of the newly filed suits before the Appeal Courts on suits closed at first instance on in district d at time t. S is meant to take account of the hypothetical nature of the appeal trial as not all the suits which are decided upon by the Court at first instance reach the appellate courts.

It must be added that the index does not take into account the period between the first suit and the appeal. However, the time which elapses between the two stages also depends also on the decision of the party who appeals, which is not related to the courts' efficiency; furthermore, the delays fixed by the labour procedure do not vary by districts and so do not affect territorial heterogeneity in the days of trial. For these reasons not considering the interval between the two stages does not affect our estimates.

Finally, as individual data are available only at region level, for those regions including more than a districts an average value of trials' delay was calculated.

Table 1 reports our indicators of days of labour trials for private sector workers, the rate of appeal for civil servants suits, the days of civil trials and per capita income for the 26 jurisdictional districts from 2007 to 2010; data on per capita income are drawn for the Italian Institute of Statistics (Istat).

TABLE 1 AROUND HERE

3.2 The labour force

We draw data on the Italian workforce from EU Labour Force Survey, from which we have annual information on people aged between 17 and 64 years in 5-year bands (17-21, 22-27, ecc.) at regional level. The dataset contains data on a number of general as well as labour-related variables such as sex, nationality, kind of employment, education, ecc. We used annual data for a period from 2007 to 2010; observations included in the dataset are around 1300000. Table 2 reports our outputs for the labour force statuts - i.e. the number of employed workers, of inactive workforce, of workers having a permanent job and of long term unemployed - by sex, age, and education; in particular the sample is devided into three classes of age, i.e. from 20 to 34, from 35 to 44 and from 45 to 64, while the education levels are classified according to the 1998 ISCED codes – respectively ow skilled, medium and high level.

TABLE 2 AROUND HERE

Descriptive statistics on the access to the labour market for each category of workers are reported in table 3. Around 65% of the men are occupied, while for women the occupation rate is only 43%; within the occupied population, temporary employment is very small share of total employment, i.e. 11% for men and 15% for women, and concerns mostly the youngest. Around 5% of the population is unemployed, although unemployment tends shorter (less than a year) for men than for women. The striking difference between men and women is the participation rate: more then half of the women (52%) in inactive, while for men inactivity concerns less than one third (29%) of the population.

TABLE 3 AROUND HERE

4 The identification strategy

Until 1998, labour courts presided over disputes involving private sector workers only, while the labour trials involving workers in the public sector took place before the administrative courts, according to the old view of "public administration supremacy". In the late 90s a series of reforms passed aiming at bringing public sector employment under private law rules; only from 1993 employment in the public sector is on a contractual basis (and no more the result of an administrative deed of appointment). As a part of this legislation, the 1998 law established that labour suits concerning civil servants had to be settled within ordinary labour courts.

However, there are still important differences between public and private employment which can impact on labour trials. Although in principle the law concerning the termination of labour relations apply to both sectors, there are formal and *de facto* features which make dismissal in the public sector a much more complex and unlikely outcome. First, in case of dismissals for economic causes, while private sector workers terminate their labour relationships, civil servants usually enters in a procedure ("mobilità") aimed at placing them in a new public office[3]; this procedure aims both at improving the labour organization and curbing costs. Second, dismissals in public employment are also hindered by law provisions which impose a special responsibility on the public sector manager who, in case of unfair dismissal of a worker, can be personally liable for the economic damage caused by the dismissal. Moreover, the public sector manager himself has a different status as compared to the private sector manager. The latter can be fired if he has not been able to achieve the targets set by the firm or in case of loss of trust; on the contrary, the public manager has the same juridical status as the employee and hence cannot be dismissed for poor performance or lack of trust. This

[3] Only after two years of "mobilità", if the prodedure has been unsuccesful or the worker has refused the labour relation can terminate.

provision abides by the concept of the "stability" of employment in the public sector, which is a major feature of Italian public administration.[4]

In order to corroborate our results and control for the potential endogeneity of the indicator of judicial inefficiency, we perform two step IV probit estimates using as an instrument for the duration of labour trials the appeal rate of courts' decisions (i.e. the ratio between the number of suits in the appeal stage and the number of the outgoing suits in the first-instance stage) regarding labour disputes of civil servants at district level.

The rate of appeal of courts' decisions concerning civil servants' labour disputes is correlated with trials' length for private sector workers as it contributes to the overall bulk of disputes which are to be settled by (labour) courts: higher numbers of appeals imply more cases to be handled by courts and thus more congestion. Our instrument does not suffer from reverse causality issues (poor labour outcome - in the private sector - may increase labour suits and hence give raise to longer trials), nor is a factor that matters for firms' adjustment decisions. However, a possible source of bias could still arise if the appeal rate of courts' decisions referred to civil servants' working disputes were driven by district-level (unobserved) variables which also affect our dependent variables. This could happen if, for example, the appeal rate, which can be taken as a proxy of the quality of courts' decisions, were correlated with the quality of (local) institutions, which may also affect labour status. If this were the case, we should, however, also expect a significant degree of correlation between the rate of appeal for civil servants suits and that for private sector workers. This does not seem to be the case as the districts with relatively 'high' appeal rates of public sector workers' suits tend to differ significantly from those with 'high' appeal rates of suits for workers in the private sector; moreover, the correlation rate between the two variables is negative and not significant as shown in Figure 1.

FIG.1 AROUND HERE

This suggests that omitted variables that can also affect firm-level outcomes (territorial cultural or economical patterns) might not be a major concern.

We also include in the IV probit estimates both year and region dummies. Finally, in all regressions we control for differences in the economic development at region level by including among the regressors district per capita income (GDP), and for the overall quality of the judiciary by using as a regressor the length of civil trials.

[4] The protection granted to civil servants - differently from private sector workers - is the subject of intense debate in Italy. In many cases the idea of the stability of the employment in the public sector has an impact also on the productivity of civil servants; for example, from 2004 to 2008 the difference in the average annual rate of absenteeism between the public and private sector workers has been around 32%.

5 The empirical model

In order to investigate both the effect of Labour Courts delays on the access to the labour market for people aged between 20 and 65 we use a two step IV probit model (Newey,1987) with bootstrapped cluster errors at region level. Our dependent variables (*output*) are the following dummies: *employed*, taking the value of 1 for those employed; *inactive*, taking the value of 1 if the person in inactive; *permanent*, taking the value of 1 if the person has a permanent job, *long term unemployed*, if the person is unemployed for more than a year (against being unemployed for less than a year).

Our model specification is as follows:

$$\begin{aligned} Prob(Ouput_{ijt} &= 1|\mathbf{Z}_{ijt}) = \Phi(\mathbf{C}\prime\mathbf{Z}_{ijt}) \equiv \Phi(\boldsymbol{\beta}\prime ijt\mathbf{X}_{ijt} + a_1 Delay_{jt} + a_2 Delay_{jt} \times Women_{ijt} \\ &+ a_3 Delay_{jt} \times Age3544_{ijt} + a_4 Delay_{jt} \times Age4564_{ijt} + a_5 Delay_{jt} \times e2_{ijt} \\ &+ a_6 Delay_{jt} \times e3_{ijt} + \delta_j + \lambda_t) \end{aligned} \tag{2}$$

where, for each person i aged between 20 and 65 in region j at time t, $Delay_{dt}$ refers to the length of labour trials in log in district d at time t, the variables $Age3544_{ijt}, Age4564_{ijt}$,are dummies which take the value of 1 for ages in the ranges 35-44 and 45-64 respectively (20-34 is the base group), $Women_{ijt}$ is a dummy taking the value of 1 for women, the variables $e2$ and $e3$ captures the education level – classified according to the 1998 ISCED codes – respectively medium and high level, with low skilled as a base group. Finally, the vector X includes the main effect of the above specified variables as well as additional controls, i.e. the log of the real per capita gdp at regional level (*gdp*) and the lenght of civil trial at district level in log (*civil*). The variables δ_j and λ_t are respectively region dummies and time dummies. Z is a vector including all the explanatory variables. Finally, the lenght of labour trials has been instrumented with the rate of appeal of labour suits for civil servants.

6 Results

Table 4 shows the effect of trial delays on the occupation rate. Trial delays – as instrumented with the rate of appeal for public sector workers' suits - reduce the likelihood of being employed for women (columns 2 to 5), younger and low skilled people (columns 1 to 5). On the other end, the

accrued rigidity caused by delays favours better educated and mid-aged people, as firing costs make less likely for them to lose their jobs, while the effect is not significant for older people. Indeed, in case of dismissal, older people find it more difficult to enter the job market again, which explains the non significant or negative coefficients for this effect (columns 3 to 5). The Wald test rejects the null of non endogeneity while the first stage results show that for coefficient are mostly significant for all estimates (table 8). Our results is in line with Kahn (2007), who finds that EPL raises non employment rates for young people and women.

TABLE 4 HERE

Our findings can be better interpreted looking at table 5, which shows that long trials increases the likelihood of being inactive for women (columns 2 to 5) and low skilled and younger people (columns 1 to 5); note that this results hold also for older workers (columns 3 and 5), which confirms our interpretation in table 4: once that older workers lose their job they tend to drop out of the job market. Here again higher firing costs keep more skilled and mid-aged workers in activity.

TABLE 5 HERE

Also, trial delays reduce the access to a permanent occupation (table 6, column 1); once again this negative effect of accrued rigidity is stronger for women (columns 2 to 5) and for younger and unskilled workers (columns 1 to 5), while the marginal effect is reversed for more skilled and older workers (column 3 to 5). Also in this case our findings confirms Kahn's results, i.e. that EPL raises the relative incidence of temporary employment for the low skilled, youth and women.

TABLE 6 AND 7 HERE

Finally, we investigate whether labour trial delays affect the duration of unemployment. Differently from the previous estimates, which have been carried out over the whole sample, table 7 refers to the probability of being long term (a year and more) against being a short term (less then a year) unemployed. Increased firing costs due to long trials increase the probability of being a long term unemployed for all categories except the more educated workers (columns 4 and 5), who have more chances of being (re)introduced in the labour market.

TABLE 8 HERE

7 Conclusions

Labour markets respond to firing constraints which are imposed by long duration of labour trials, other things being equal. Focusing on different regions of the same country, i.e. where the same formal EPL rules hold, we show that labour trial delays hinder the occupation rate for specific categories of workers, i.e. women, young and low skilled people, while increasing the inactivity rate of the same groups; furthermore, long duration of trials reduces the likelyhood of accessing a permanent occupation and induces a shift from short term to long term unemployment. In our study we instrument labour trial delays in private sector labour suits with the rate of appeal in the public sector labour suits; furthermore, we take into account the effect of trial delays in civil suits on the labour market and include a set of standard controls.

Our study confirms well established results on the effects of EPL on employment patterns, implying that the duration of trials has the same impact on the access to the labour market as explicitely written mandates. Our findings can be explained by two factors, i.e. the dependence of firing costs on the time which elapses from the firing decision to the labour courts' outcome - which is on turn related to the structure of EPL rules - and on the accrued uncertainty produces by slow trials. As a result, the strictness of EPL shouldn't be assessed only on the basis of legisltative provisions but should be evalated with regard to the institutional environment at large; future studies on EPL should hence focus on the identification of non written institutional factors capable of influencing firing costs.

On the other hand, our study highlights important consequences of judicial inefficiency, thus contributing to the identification of the economic costs of long trials. Reforms aiming at streamlining trial procedures are to be considered also in their capacity to remove obstacles to growth.

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Table 1: Length of labour trials[(1)], rate of appeal in the public sector , length of civil trials and income per capita by judicial districts

	Labour trial length for private sector workers [(3)] (days)		Rate of appeal for civil servants' trials[(4)]		Civil trial length[(5)] (days)		Income per capita[(6)] (000)	
Districts[(2)]	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
TORINO	224	*18.32*	0.28	*0.05*	875	32.42	24.44	1.51
TRENTO	313	*43.72*	0.36	*0.09*	588	18.20	28.36	0.88
MILANO	389	*43.84*	0.31	*0.04*	1295	20.40	28.71	1.33
GENOVA	492	*80.41*	0.26	*0.07*	1386	27.86	23.72	0.87
CAMPOBASSO	499	*91.41*	0.45	*0.20*	1344	32.69	17.36	0.81
BRESCIA	554	*54.01*	0.41	*0.03*	1425	57.87	28.71	1.33
FIRENZE	646	*56.61*	0.37	*0.06*	1522	61.08	24.14	0.77
TRIESTE	735	*87.08*	0.30	*0.05*	1029	76.95	25.30	1.46
BOLOGNA	768	*47.79*	0.26	*0.04*	1828	49.51	27.70	1.53
CATANZARO	777	*83.77*	0.22	*0.13*	2120	153.63	14.25	0.40
ANCONA	782	*116.23*	0.48	*0.05*	1679	38.09	22.79	1.09
ROMA	826	*63.25*	0.30	*0.11*	2149	158.33	26.78	1.01
VENEZIA	827	*69.79*	0.33	*0.08*	1781	64.03	25.96	1.42
PALERMO	875	*150.99*	0.26	*0.10*	1602	101.85	14.37	0.47
NAPOLI	889	*57.56*	0.14	*0.07*	2108	103.84	14.18	0.46
L'AQUILA	913	*86.40*	0.37	*0.10*	1522	84.69	18.59	0.85
CALTANISSETTA	1046	*274.34*	0.37	*0.12*	1517	68.69	14.37	0.47
POTENZA	1080	*109.81*	0.30	*0.15*	2002	90.64	15.76	0.51
CAGLIARI	1098	*46.40*	0.15	*0.04*	1524	36.50	16.87	0.43
PERUGIA	1165	*134.62*	0.38	*0.13*	1246	117.70	20.90	1.19
REGGIO CALABRIA	1177	*963.74*	0.08	*0.01*	3029	134.10	14.25	0.40
MESSINA	1200	*148.80*	0.30	*0.11*	2564	72.43	14.37	0.47
CATANIA	1309	*57.34*	0.19	*0.05*	2060	107.56	14.37	0.47
LECCE	1325	*282.44*	0.22	*0.07*	1820	37.97	14.61	0.50
SALERNO	1397	*715.30*	0.26	*0.07*	1784	60.45	14.18	0.46
BARI	1433	*288.06*	0.24	*0.25*	2126	102.52	14.61	0.50
Average	*852.84*	*354.32*	*0.29*	*0.13*	*1689.23*	*514.39*	*19.99*	*5.65*

Note. [(1)] Excluded the appeal stage before the Supreme Court. [(2)]Districts are ordered following an efficiency ranking.

Source: [(3)] [(4)] [(5)] Source: Ministry of Justice website and authors' calculations. [(6)]ISTAT, national accounts.

Table 2: The number of employed workers, of inactive workforce, of workers having a permanent job and of long term unemployed by sex, age, and education

		Sex		Age			Education			TOTAL
		men	women	20-34	35-44	45-64	low	medium	high	
Labour market status										
				1						
employed		381902	307389	90326	217750	281215	250618	328586	110087	689291
	%	*0.55*	*0.45*	*0.28*	*0.32*	*0.41*	*0.36*	*0.48*	*0.16*	-
inactive		172427	373484	138754	81168	325989	330190	177782	37939	545911
	%	*0.32*	*0.68*	*0.25*	*0.15*	*0.60*	*0.60*	*0.33*	*0.07*	-
permanent		339863	260455	145314	194382	260622	216944	289077	94297	600318
	%	*0.57*	*0.43*	*0.24*	*0.32*	*0.43*	*0.36*	*0.48*	*0.16*	-
long term unempl.		15302	17292	15743	9027	7824	15951	13413	3230	32594
	%	*0.47*	*0.53*	*0.48*	*0.28*	*0.24*	*0.49*	*0.41*	*0.10*	-
Total sample		587958	715608	363924	317184	622458	612372	535006	156188	1303566
	%	*0.45*	*0.55*	*0.28*	*0.24*	*0.48*	*0.47*	*0.41*	*0.12*	-

Source: EU Labour Force Survey and authors' calculations

Table 3: The labour market status and its composition

	Sex		Age			Education			TOTAL	%
	men	women	20-34	35-44	45-64	low	medium	high		
Labour market status										
employed	381902	307389	190326	217750	281215	250618	328586	110087	689291	*0.53*
permanent (%)	*0.89*	*0.85*	*0.76*	*0.89*	*0.93*	*0.87*	*0.88*	*0.86*	*0.87*	-
temporary (%)	*0.11*	*0.15*	*0.24*	*0.11*	*0.07*	*0.13*	*0.12*	*0.14*	*0.13*	-
unemployed	33629	34735	34844	18266	15254	31564	28638	8162	68364	*0.05*
long term (%)	*0.46*	*0.50*	*0.45*	*0.49*	*0.51*	*0.51*	*0.47*	*0.40*	*0.48*	-
short term (%)	*0.54*	*0.50*	*0.55*	*0.51*	*0.49*	*0.49*	*0.53*	*0.60*	*0.52*	-
inactive	172427	373484	138754	81168	325989	330190	177782	37939	545911	*0.42*
Total sample	587958	715608	363924	317184	622458	612372	535006	156188	1303566	-

Source: EU Labour Force Survey and authors' calculations

Figure 1: Appeal rates of public sectors and private sectors suits

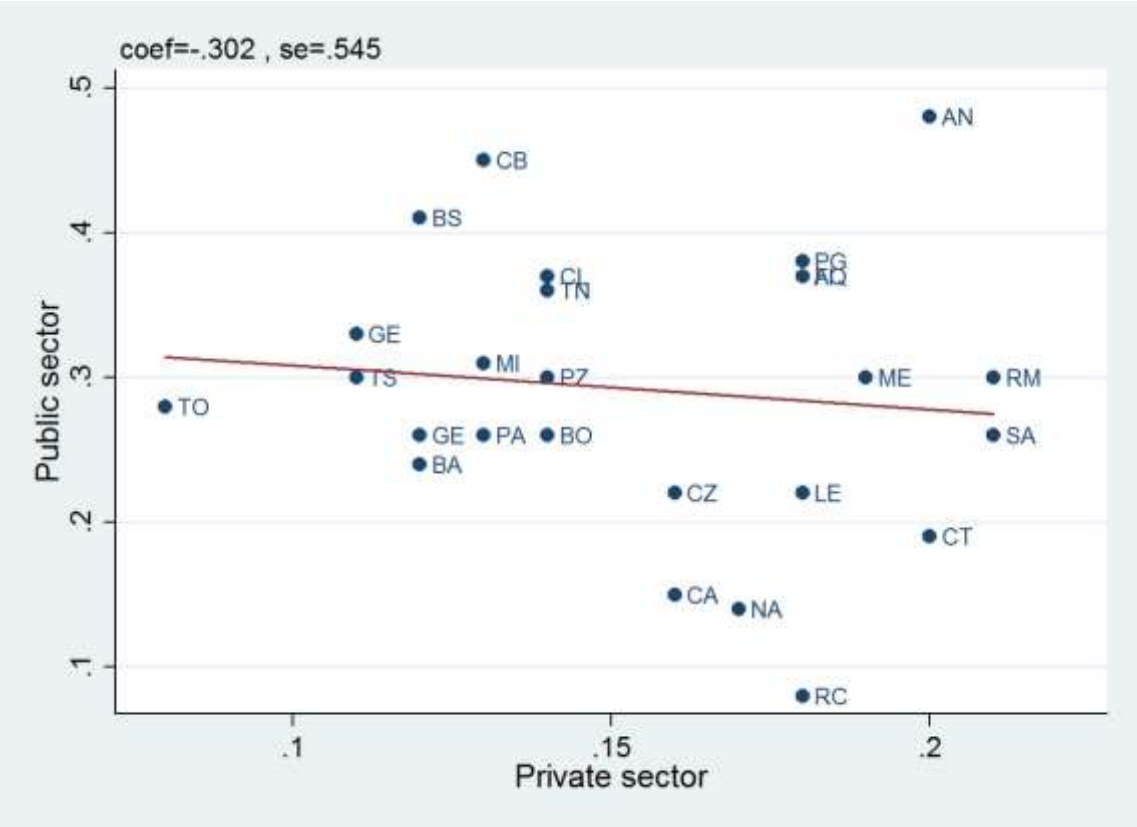

Table 4: The effect of trial delays on the occupation rate

	IV probit 1	IV probit 2	IV probit 3	IV probit 4	IV probit 5
	Dependent variable: employed				
delay	-0.272	-0.240	-0.264	-0.281	-0.317
	(2.84)**	(2.36)*	(3.16)**	(3.28)**	(3.66)**
women x delay		-0.083	-0.087	-0.091	-0.097
		(22.75)**	(26.26)**	(19.63)**	(20.66)**
age 35-44 x delay			0.070		0.091
			(22.28)**		(30.31)**
age 45-64 x delay			-0.027		0.001
			(2.23)*		(0.07)
education 2 x delay				0.081	0.083
				(24.40)**	(31.24)**
education 3x delay				0.125	0.129
				(29.31)**	(20.21)**
Constant	1.821	1.910	2.071	1.902	2.014
	(3.00)**	(2.87)**	(3.77)**	(3.39)**	(3.68)**
Observations	1303566	1303566	1303566	1303566	1303566
Additional controls	yes	yes	yes	yes	yes
Bootstrapped clustered errors	yes	yes	yes	yes	yes
Year dummies	yes	yes	yes	yes	yes
Region dummies	yes	yes	yes	yes	yes

z statistics in parentheses
* significant at 5%; ** significant at 1%

Instrumented: delay; sex x delay; age35-44 x delay; age45-64 x delay; education2 x delay; education3 x delay. Instruments: appeal; sex x appeal; age35-44 x appeal; age45-64 x appeal; education2 x appeal education3 x appeal; sex; civil; gdp; age35-44; age45-64; education2; education3; region and year dummies

Table 5: The effect of the length of trials on inactivity

	IV probit 1	IV probit 2	IV probit 3	IV probit 4	IV probit 5
	Dependent variable: inactive				
delay	0.221	0.181	0.202	0.220	0.249
	(2.09)*	(2.32)*	(2.46)*	(2.88)**	(2.05)*
women x delay		0.088	0.094	0.096	0.102
		(16.06)**	(16.15)**	(14.36)**	(20.65)**
age 35-44 x delay			-0.060		-0.080
			(12.35)**		(18.07)**
age 45-64 x delay			0.056		0.030
			(4.10)**		(2.85)**
education 2 x delay				-0.083	-0.079
				(30.31)**	(42.42)**
education 3x delay				-0.129	-0.128
				(30.86)**	(24.21)**
Constant	-1.614	-1.684	-1.944	-1.657	-1.868
	(2.30)*	(3.34)**	(3.67)**	(3.31)**	(2.26)*
Observations	1303566	1303566	1303566	1303566	1303566
Additional controls	yes	yes	yes	yes	yes
Bootstrapped clustered errors	yes	yes	yes	yes	yes
Year dummies	yes	yes	yes	yes	yes
Region dummies	yes	yes	yes	yes	yes

z statistics in parentheses
* significant at 5%; ** significant at 1%

Instrumented: delay; sex x delay; age35-44 x delay; age45-64 x delay; education2 x delay; education3 x delay. Instruments: appeal; sex x appeal; age35-44 x appeal; age45-64 x appeal; education2 x appeal education3 x appeal; sex; civil; gdp; age35-44; age45-64; education2; education3; region and year dummies.

Table 6: The effect of the length of trials on finding a permanent occupation

	IV probit 1	IV probit 2	IV probit 3	IV probit 4	IV probit 5
	Dependent variable: permanent				
delay	-0.278	-0.249	-0.283	-0.286	-0.336
	(3.03)**	(2.62)**	(2.68)**	(3.12)**	(4.54)**
women x delay		-0.081	-0.085	-0.088	-0.094
		(19.51)**	(20.67)**	(24.50)**	(26.22)**
age 35-44 x delay			0.088		0.107
			(15.92)**		(26.07)**
age 45-64 x delay			0.010		0.037
			(1.26)		(3.67)**
education 2 x delay				0.074	0.084
				(30.55)**	(34.84)**
education 3x delay				0.106	0.115
				(23.21)**	(18.65)**
Constant	1.700	1.793	1.866	1.771	1.809
	(2.92)**	(2.99)**	(2.75)**	(2.94)**	(3.58)**
Observations	1303566	1303566	1303566	1303566	1303566
Additional controls	yes	yes	yes	yes	yes
Bootstrapped clustered errors	yes	yes	yes	yes	yes
Year dummies	yes	yes	yes	yes	yes
Region dummies	yes	yes	yes	yes	yes

z statistics in parentheses
* significant at 5%; ** significant at 1%

Instrumented: delay; sex x delay; age35-44 x delay; age45-64 x delay; education2 x delay; education3 x delay. Instruments: appeal; sex x appeal; age35-44 x appeal; age45-64 x appeal; education2 x appeal education3 x appeal; sex; civil; gdp; age35-44; age45-64; education2; education3; region and year dummies.

Table 7: The effect of the length of trials on long term unemployment

	IV probit 1	IV probit 2	IV probit 3	IV probit 4	IV probit 5
	Dependent variable: long term unemployment				
delay	0.243	0.240	0.241	0.253	0.251
	(1.85)	(1.68)	(1.52)	(1.81)	(2.25)*
women x delay		0.018	0.018	0.022	0.022
		(5.19)**	(5.99)**	(5.82)**	(6.04)**
age 35-44 x delay			0.017		0.012
			(3.89)**		(3.38)**
age 45-64 x delay			0.027		0.020
			(3.68)**		(2.39)*
education 2 x delay				-0.016	-0.011
				(2.24)*	(1.98)*
education 3x delay				-0.046	-0.040
				(4.63)**	(4.52)**
Constant	-1.654	-1.692	-1.774	-1.713	-1.769
	(1.90)	(1.79)	(1.66)	(1.83)	(2.42)*
Observations	68364	68364	68364	68364	68364
Additional controls	yes	yes	yes	yes	yes
Bootstrapped clustered errors	yes	yes	yes	yes	yes
Year dummies	yes	yes	yes	yes	yes
Region dummies	yes	yes	yes	yes	yes

z statistics in parentheses
* significant at 5%; ** significant at 1%

Instrumented: delay; sex x delay; age35-44 x delay; age45-64 x delay; education2 x delay; education3 x delay. Instruments: appeal; sex x appeal; age35-44 x appeal; age45-64 x appeal; education2 x appeal education3 x appeal; sex; civil; gdp; age35-44; age45-64; education2; education3; region and year dummies

Table 8: First stage estimates

	-1		-2					
	delay		delay	d x women				
ROA	0.1651891		0.1640789	0.6110539				
	(126.35)**		(102.15)**	(151.27)**				
ROA x women			0.0020168	-0.9413101				
			1.19	(-220.81)**				
constant	9.966096		9.993667	1.779607				
	(261.01)**		261.95**	18.55**				
Wald test of exog.	chi2(1) = 8.99		chi2(2) = 235.46					
	Prob > chi2 = 0.0027		Prob > chi2 = 0.0000					
			-3				-4	
	delay	d x women	d x age 35-44	d x age 45-64	delay	d x women	d x e3	d x e3
ROA	0.1733511	0.6138705	0.2621857	0.5124912	0.1804752	0.6346894	0.4602191	0.1187825
	83.99**	118.27**	59.64**	(99.1)**	98.66**	137.95**	102.6**	41.2**
ROA x women	0.0023755	-0.9411986	0.0027665	0.0008061	0.002372	-0.9418844	-0.0312569	0.0054163
	1.4	(-220.68)**	0.77	0.19	1.4	(-220.72)**	(-7.51)**	2.03*
ROA x age 35-44	-0.0156452	-0.0035412	-0.9628016	0.0110425				
	(-6.7)**	-0.6	(-193.56)**	1.89				
ROA x age 45-64	-0.0121339	-0.0043003	-0.0028762	-0.9357159				
	(-6.09)**	-0.86	-0.68	(-187.45)**				
ROA x e2					-0.0304922	-0.0516901	-0.9367933	-0.0136153
					(-16.86)**	(-11.36)**	(-211.17)**	(-4.78)**
ROA x e3					-0.0369479	-0.0214586	-0.0651734	-0.8751631
					(-13.43**)	(-3.1)**	(-9.66)**	(-201.83)**
constant	9.962241	1.762851	0.6866891	1.585581	-13.43	1.763926	1.666855	0.3364003
	260.87**	18.35**	8.44**	16.57**	261.69**	18.38**	17.82**	5.59**
Wald test of exog,	chi2(4) = 1383.85				chi2(4) = 503.89			
	Prob > chi2 = 0.0000				prob > chi2 = 0.0000			
				-5				
	delay	d x women	d x age 35-44	d x age 45-64	d x e3	d x e3		
ROA	0.1997139	0.6500043	0.2685665	0.5302184	0.4676905	0.1310691		
	82.77**	107.1**	52.25**	87.68**	79.04**	34.46**		
ROA x women	0.0030158	-0.9413694	0.0027976	0.0019527	-0.031007	0.0058296		
	1.78	(-220.5)**	0.77	0.46	(-7.45)**	2.18*		
ROA x age 35-44	-0.0225923	-0.01358	-0.9645441	0.0067242	-0.0091799	-0.0106848		
	(-9.58)**	(-2.29)*	(-191.91)*	1.14	-1.59	(-2.87)**		
ROA x age 45-64	-0.0240011	-0.0208466	-0.0057816	-0.9435039	-0.0091604	-0.0168074		
	(-11.59)**	(-4.00)**	-1.31	(-181.8)**	-1.8	(-5.15)**		
ROA x e2	-0.0362469	-0.0567086	-0.009603	-0.0195739	-0.9389878	-0.0176624		
	(-19.32)**	(-12.01)**	(-2.4)*	(-4.16)**	(-204.05)**	(-5.97)**		
ROA x e3	-0.0415576	-0.0255854	-0.0063527	-0.0493742	-0.0669214	-0.8784957		
	(-14.94)**	(-3.66)**	-1.07	(-7.08)**	(-9.81)**	(-200.35)**		
constant	9.946803	1.740863	0.6828548	1.575765	1.651466	0.3263637		
	260.46**	18.12**	8.39**	16.46**	17.63**	5.42**		
Wald test of exog.	chi2(6) = 1692.76							
	Prob > chi2 = 0.0000							
Additional controls	yes	yes	yes	yes	yes	yes	yes	yes
Bootstr. cluster err.	no	no	no	no	no	no	no	no
Year and region dummies	yes	yes	yes	yes	yes	yes	yes	yes
observations	1303566	1303566	1303566	1303566	1303566	1303566	1303566	1303566

t statistics in parentheses; * significant at 5%; ** significant at 1%