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Gender gaps in Italy and the role of public policy 2019/3



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Valeria Manieri

Labour Courts and Firing Costs in Italy: The Labour Market Gender Effects of Trial Delays[◊]

Giuseppina Gianfreda * Giovanna Vallanti **

Abstract

Gender equality is a relevant issue in the labour market regulation debate. Our analysis contributes to the gender effects of institutions by looking at the interaction among institutions empowered with the settling and the enforcement of rules, namely the interplay between labour courts' delays and employment protection legislation (EPL).

By exploiting the strong territorial heterogeneity in the duration of labour trials across Italian regions we investigate how and to what extent the duration of labour trials impacts differently male and female employment opportunities. We show that in regions with a more rigid labour market (in our analysis the rigidity arises from the inefficiency of the judiciary system) gender disparities are larger both in terms of employability and type of contracts (temporary and part-time jobs). The effect is typically stronger for women aged between 25 and 40 who are generally those in their top reproductive and care giving years.

We thank Valeria Foroni of the Italian Ministry of Justice and Silvia Dini of the Consiglio Superiore della Magistratura for their help with the courts' data. All errors are ours.

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Sintesi - Tempi di giustizia e costi di licenziamento: gli effetti della durata dei processi sulla parità di genere nel mercato del lavoro italiano

Un aspetto rilevante dell'attuale dibattito sulla regolamentazione del mercato del lavoro è rappresentato dalla parità di genere. La nostra analisi contribuisce a individuare il ruolo che le istituzioni svolgono per quanto riguarda gli aspetti di parità, guardando all'interazione tra le diverse istituzioni deputate all'elaborazione e all'applicazione delle norme.

In questo contributo ci focalizziamo sul caso italiano; in particolare, sfruttando la forte eterogeneità nei tempi di giustizia tra i distretti giudiziari in Italia, la nostra analisi ha l'obiettivo di individuare se e in che misura la durata dei processi incida sui divari occupazionali di genere. L'analisi mostra che nelle regioni in cui, a parità di legislazione, il mercato del lavoro è più rigido (il che implica, nel nostro caso, che i tempi di giustizia sono più lunghi), la disuguaglianza di genere tra uomini e donne aumenta sia in termini occupazionali che di tipologie contrattuali (contratti a termine e part-time). L'effetto è più forte per le donne in età compresa tra i 25 e i 40 anni, ossia le donne nella fascia di età in cui tipicamente sono più coinvolte nei doveri connessi con la cura dei figli.

JEL Classification: K31; K41; J16; J21; J65.

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Keywords: EPL, gender gap, labour courts

1. Introduction

Recent contributions on the effect of labour market regulation have focused on the impact of labour market institutions in amplifying within-workforce inequalities, including gender inequality. In the gender literature, the link between labor market regulation and women participation is not clearcut, though there are a number of empirical studies which show that the negative effects of labour market rigidities (as for example employment protection legislation) are generally larger for those individuals (such as prime-age women) who are more subject to labour market entry problems. As a result, in a rigid labour market employment opportunities for prime age women may be reduced because they are more likely than men to move between employment and inactivity due to the competing demands of work and family life (OECD, 2004; Heckman, and Pages, 2000).

Our analysis contributes to the gender effects of institutions by looking at the interaction among institutions empowered with the settling and the enforcement of rules. We focus on the judiciary, and more specifically on the interplay between labour courts' delays and employment protection legislation (EPL) and investigate how and to what extent the length of labour trials impacts differently male and female employment opportunities.

Employment protection is the result of labour laws as well as of institutional factors which are not encompassed in official legislation. Courts' delays in settling labour disputes are among those factors. Most empirical studies on the impact of dismissal costs on job reallocation and employment are based on aggregate indexes of EPL which provide a measure of the strictness of the legislation on workers' dismissal at country level. ¹ One important limitation of these aggregate indexes is that they only take formal law provisions into account and fail to capture the de facto impact of other institutional factors which may nonetheless play a significant role on the implementation and enforcement of job protection. As a result, the actual cost of dismissal rules can be very different even across countries with similar protection legislation if law provisions are enforced in a completely different way. In this respect, Italy offers particularly suitable conditions for identifying the impact of courts' delays. Italy ranks 111 (out of 190 economies) in the World Bank Ease of Doing Business Statistics as the Enforcing Contracts index, with 1120 days to solve a dispute - against the average of 582 days in the OECD high income countries. Moreover, Italy exhibits a tremendous heterogeneity in the length of trial across judicial districts, with the labour trial duration in the less efficient region (Puglia) being more than five times longer than in the most efficient region (Piemonte).²

The length of labour trials is a key determinant of the actual amount of firing costs that firms are confronted with when they take their hiring and firing decisions. First, courts' delays directly affect workers' compensations in case of unfair dismissals when such a compensation is proportional to the time elapsing from the firing decision to the Court ruling; this happens for example in many OECD countries (Venn, 2009).³ Second, the prolonged uncertainty about the result of the trial - induced by courts' delays -can hinder, at least temporarily, the adjustment process of the employment and investment at firm level with a negative effect on firms' business opportunities and productivity.⁴ This paper studies the impact of labour trials length as a determinant of the strictness of EPL on the gender labour market gap of individuals with different characteristics. We argue that labour courts' delays increase firms firing costs and therefore affect workers' employment opportunities by reducing inflows into unemployment and, at the same time, making it more difficult for job seekers to enter employment.⁵ Although the overall net impact of dismissal costs induced by labour courts' delays on aggregate employment is undetermined because of the negative effect on both job creation and job destruction, the increase in firing costs may hamper differently job opportunities of individuals with different characteristics. Typically, youths, as new entrants into the labour markets, and prime age women with intermittent participation spells are more likely to be affected by the reduction in job creation. Moreover, in presence of asymmetric information and high firing costs,

² See Courts 'statistics in Table 1.

³ In many countries, when firing decision is ruled unfair, the employer is required to pay legal expenses and, on top of it, to compensate the unfairly dismissed employee with the full foregone wages and social contributions for the length of time between the dismissal and the final judge's decision.

⁴ For instance, Bloom (2009) shows how higher uncertainty causes firms to temporarily pause their investment and employment decisions.

⁵ There is a large theoretical and empirical literature which shows how firing costs affect firms 'employment decisions and workers 'employment opportunities. See Skedinger (2010) for a comprehensive survey.

firms increase the share of workers hired with temporary contracts in order to reduce the probability of a bad match. This will mostly affect less experienced (typically young) and less educated workers.

Using individual data from the Italian Labour Force Survey for the period 2007-2010 and exploiting the territorial heterogeneity in the duration of labour trials across Italian regions, we investigate the gender differential effect of dismissal costs on labour market outcomes such as participation and employment rate, temporary employment and part time. We claim that dismissal costs induced by labour courts may hamper differently job opportunities of men and women also depending on their demographic characteristics (Kahn, 2007).

The analytical framework of our work is close to Khan (2007). However, his approach, as most studies on the effect of firing costs on job flows and employment based on aggregate EPL indexes, uses cross country aggregate data and does not allow to distinguish between EPL provisions and EPL enforcement. Differently, we exploit the heterogeneity of the Italian judiciary districts in terms of trials' duration and, following Gianfreda and Vallanti (2017, 2018) and Fraisse et al (2015),⁶ we propose an identification strategy based on a source of variation of dismissal costs related to legislation enforcement which varies across space and time: even when labour laws do not change, labour courts tend to operate differently across geographical jurisdictions and years. This within-country variation in the enforcement allows us to make inference on the impact of EPL which goes beyond the usual cross-country approach. In this respect, focusing on the Italian case has an important advantage because of the dramatic heterogeneity in the duration of labour trials throughout the territory. Against this wide variation in judicial efficiency, the employment protection legislation and other labour market institutions are centralized and homogenous throughout the country. ⁷As a result, the effect of EPL provisions can be isolated from that of other institutional factors such as

⁶ Fraisse et al (2015) focus on the variation of labour courts activity (i.e. the number of filed suits over the number of dismissed workers) and suit outcomes at local level as a determinant of firing costs while Gianfreda and Vallanti (2017) focus on trials length.

⁷ Boeri and Jimeno (2005) and Rubery (2011) stress the importance of using institutional data referred to the same country and exploiting any time-series available for regulations, in order to avoid the well-known identification problems of reverse causality and omitted variables

wage compression and collective bargaining coverage which can interact with firing cost legislation in determining labour market outcomes (Bertola and Rogerson, 1997; Baranowska and Gebel, 2010; Kahn, 2007).

There are a number of issues concerning the identification of the causal effect of labour trial delays on employment outcomes. First and foremost, both the duration of labour trials and employment opportunities of different groups of workers may be driven by some unobserved factors such as, for example, the degree of local economic development and the quality of (local) institutions. Second, the risk of reverse causality should not be overlooked as a limited access to the labour market may affect the litigation rate among workers and by this way the length of legal disputes.

To cope with the potential endogeneity of our indicator of judicial efficiency, we use a set of instruments which are shown to be disconnected from the adjustment of the local labour market. These include the number of judges who moves from/to a given labour court districts (judges' turnover) and the number of judges 'decisions concerning labour disputes of civil servants that are appealed before the Court of Appeal, as in Gianfreda and Vallanti (2017). Moreover, the time series dimension of our data also allows to control for the unobserved heterogeneity among judicial districts via region fixed effects. Therefore, our main results are not driven by cross-sectional differences among districts, such as cultural, economic and social characteristics that may impact simultaneously on labour market adjustments, employment opportunities and the efficiency of courts.

We show that lengthy labour trials discourage the access to labour market of women as longer trials lower the relative incidence of employment and increases the inactivity rate for these groups. They also increase the share of women (relative to men) in temporary and part-time jobs. All these effects turn to be relative stronger for young and prime -age women at the beginning of their career and generally more involved in family duties concerning child rearing.

The rest of the paper is organized as follows. Section 2 discusses the background literature. Section 3 and Section 4 describe the institutional setting and the main characteristics of the data respectively. Section 5 presents the estimation framework and the results and Section 6 concludes.

2. Employment protection and labour market gender gap

Theoretical models offer clear predictions of the effects of EPL on employment adjustments. In the standard search and matching theoretical setting (Mortensen and Pissarides, 1994), 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 (Bentolila and Bertola, 1990; Hopenhayan and Rogerson 1993; Pissarides, 2000). By decreasing both job creation and job destruction higher firing costs unambiguously reduce job reallocation; nevertheless, from a theoretical point of view, the effect on employment is less clear cut, depending on which effect - the decrease in job creation or destruction – prevails ⁸.

A common feature of the standard search and matching models is that the labour force is homogeneous. In reality, workers have different characteristics which affect their employability opportunities in presence of labour market adjustment costs. The benefits and costs of stricter employment protection may be distributed evenly across different groups of individuals implying that some individuals can be more affected then others. Generally, new entrants (as young individuals) and prime age women who have a more fragmented work patterns are more penalized by the reduction in hiring caused by firing costs. Moreover, the negative effect of firing cost is stronger for women in the early stage of their work life since they are more involved in child care duties and may persist over their entire career.

A differential effect of firing costs on different groups of workers is also predicted by models with asymmetric information in which the productivity of new-hired workers is unknown either because it is imperfectly observed by firms (Kugler and Saint Paul, 2004; Canziani and Petrongolo, 2001) or because it is fully revealed at a later stage of their working career (Blanchard and Landier, 2002; Kahn, 2007; Tealdi, 2011). In this theoretical setting, when dismissal costs are high, firms will be more reluctant to hire individuals on a

⁸ On empirical grounds, firing costs have been shown to negatively affect job flows (Gomez-Salvador et al, 2004; Messina and Vallanti, 2007; Micco and Pages, 2004; Autor et al. 2007; Kugler and Pica, 2008, Haltiwanger et al. 2014) while evidence on their impact on overall employment is mixed.

permanent basis and more prone to increase the share of workers hired with temporary contracts in order to reduce the probability of a bad match.

Again, limited information on work-type in a high firing costs setting will mostly harm individuals with limited work experience and with less verifiable qualifications and competencies. Especially in countries in which the institutional framework and welfare state provisions do not facilitate reconciliation of family and working time and in which the distribution of the family loads within the family is unbalanced, women are more exposed to shorter and more discontinuous working lives and therefore they tend to accumulate less labour market experience than men. As a consequence, in case of high firing costs for permanent contracts and low protection for fixed-term positions, firms will prefer placing women more than men into temporary jobs.

There is a large empirical literature which documents that the effect of EPL varies across demographic groups. Using an aggregate employment law index for 85 countries, Botero et al. (2004) find that employment laws negatively affect the unemployment rates of young individuals, both men and women. Results in Kahn (2007), also based on an aggregate EPL index, show that stricter EPL raises the relative incidence of temporary employment for young workers, women as well as those with low cognitive ability. Similarly, Jimeno and Rodriguez-Palenzuela (2002), and Bertola et al (2007) find that employment opportunities for women, young and older workers are relatively lower in high unionization and employment protection environments. Other studies related to Latin America find a negative effect of EPL on women and young workers employment rates (Heckman and Pages, 2004; Montenegro and Pages, 2007). A negative effect of EPL on women employment and activity rate has also been reported in Giavazzi et al.(2013), Cipollone et al. (2014) and Gianfreda and Vallanti (2018).⁹

In line with previous research on the demographic effects of EPL, we study the impact of the length of labour trials as a determinant of firing costs on the

⁹ Boeri and Jimeno (2005) and Rubery (2011) stress the importance of using institutional data referred to the same country and exploiting any time-series available for regulations, in order to avoid the well-known identification problems of reverse causality and omitted variables.

labour market outcomes of men and women and check how the differential effect depends on individuals' demographic characteristics (age and education). The current paper differs from other previous empirical works in two ways. First, we use a within-country analysis, i.e. Italy. By focusing on the same country, we are able to better identify the effect of employment protection on the labour market gender gap independently from other labour market institutional features and other country-wide characteristics that cannot as convincingly be controlled for in cross-country macro data. Second, this paper overcomes previous literature because it exploits a measure of dismissal costs (courts' inefficiency) derived directly from the enforcement of legislation rather than from legislative provisions. In this way, our results contribute to the shaping of a more encompassing measure of employment protection.

3. Institutional background and IV strategy

3.1 Length of labour trials and firing costs in Italy

Lengthy labour trials influence labour markets by affecting firms' dismissal costs. Such an effect is not symmetric on firms and workers. In many countries, the duration of trials affects directly the monetary compensation that firms have to pay to a fired worker in case of adverse court's ruling. Focusing on the Italian case, according to the Statuto dei Lavoratori passed in 1970, an individual dismissal is legal only when it satisfies a just cause, e.g. it can be justified by an objective reason (concerning the production activity for example) or subjective reasons, which are mainly related to misconduct on the part of the worker. The worker has always the right to appeal the firm's decision and the final outcome ultimately depends on the court's ruling on the specific case. If the worker does not appeal the firing decision, or if the dismissal is ruled fair, the legislation does not impose any compensation to the firm. In the latter case, a common practice in Italy is that the labour union pays the legal costs if the layoff is ruled fair; therefore, a fired worker has always an advantage to take the case to court unless the firm does not compensate her properly in a private settlement.

Conversely, when the dismissal is ruled unfair, the judge imposes a specific

compensation on the firm. In particular, for firms with more than 15 employees, to which Article 18 of the Statuto dei Lavoratori applies, the worker is entitled to a compensation equal to forgone wages, social security and health insurance contributions for a period from the date of the dismissal to the judicial settlement of the case (with a minimum of 5 months and with no upper limits), implying that firing costs directly increase with the duration of trials.¹⁰ Moreover in some cases the worker can choose either to be reinstated in the firm or to be paid an additional financial compensation of 15 months of salary ¹¹.

Furthermore, firms and workers' options as long as the suit is not settled are not symmetric either. Should a worker find a new job while a trial is under way, she does not lose any right to her claims before the Court. On the contrary, firms' decisions to hire new workers before the court's final ruling may result in misadjustments in the case of worker reinstatement. Moreover, also postponing adjustment decisions for the whole duration of the trial may be costly for firms and undermine its business and investment opportunities. Therefore, independently of the action taken by the parties during the trial, courts delays increase firms' firing costs univocally.

This asymmetric position of the employer and dismissed employee during the trial and after the court's decision translates into a similar asymmetry in case the parties choose to pursue an off-court agreement. Indeed, the compensation that firm would pay in case of adverse ruling is the upper bound of the range of the possible acceptable payments within an alternative dispute resolution; as the dependence of compensation on the trail duration is well known to all parties, it will be incorporated in workers' claims in the nego-

¹⁰ In firms below the 15-employees threshold, the unfairly dismissed worker must be compensated with a fixed severance payment that varies between 2.5 and 6 months of salary regardless of the length of the judicial procedure and with no obligation of reinstatement of the dismissed worker. Therefore, for firms below the 15-employees threshold trials duration plays no role in determining the extent of dismissal costs. In our analysis we do not exploit the 15-employees threshold to identify the effect of trial duration, since the size of employer is not relevant for non-employed workers. Firms with more 15 employees account for more than 65% of total employed workers in Italy.

¹¹ The recent reforms of the Italian labour market, i.e. the Fornero's reform enacted in 2012 and more recently the Jobs Act, enacted in 2014 and 2015, have changed some of the rules related to the termination of the employment relationship. The change in legislation does not affect our estimates, since our data covers the period 2007-2010.

tiations (Galdon-Sanchez and Guell, 2003; Garibaldi and Violante, 2005; Palumbo et al., 2013) ¹².

The relationship between actual firing costs and trials duration implies that firing costs can vary considerably within country as a result of differences in courts' delays. For example, using the formula suggested by Garibaldi and Violante (2005) ¹³, the computed ex post firing costs in Italy varies from 26 months wages in Torino (the most efficient judicial district in Italy with an average duration of labour trials of 224 days) versus 163 months wages in Bari (the least efficient district with an average duration of 1366 days) ¹⁴. Hence, the cost of dismissing a worker for a firm located in the least efficient judicial district of our sample is more than 5 times higher than in the most efficient one ¹⁵. This example shows that, quantitatively, labour trial length represents a large component of the total firing costs and any employer who starts a firing procedure faces a potential district where the firm is located.

3.2 Italian labour courts

In the Italian Judicial System, labour disputes are sued before the Labour Court, a division of the Civil Court specialized in dealing with labour suits. Labour courts' decision (first instance) can always be appealed before the

$$FC = nw + (\tau^{s} + \tau^{h} + \varphi)nw + sp + lc$$
⁽¹⁾

where *n* is the number of months needed to reach a court decision, *w* is 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.

¹² In a private settlement the parties can save any court penalties that may eventually be imposed by a judge and all the legal costs related to the trial. This implies that the agreed compensation is smaller than the total cost that the firm would pay if the firing decision is taken to court and ruled unfair. The worker then receives a compensation that lies between the legal severance payment and the (expected) cost had the case taken to court. See Malo (2000) for a model where firing costs are bargained privately between employer and employee before going to court in order to avoid legal costs.

¹³ Focusing on monetary dismissal costs only, Garibaldi and Violante (2005) 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:

¹⁴ This computation is based on data from the Ministry of Justice website and refers to the period 2007-2010.

¹⁵ The off-court compensation is calculated by assuming that the employer and the dismissed worker bargain in a symmetric Nash fashion on the settlement and workers do not pay any legal cost if the firing is ruled fair by the court.

Court of Appeal. While ordinary civil courts have a seat in the main towns of each province¹⁶ in areas called "circondario" (167 in the Italian territory), the courts of appeal are located in the judiciary district. There are 26 districts in Italy, each grouping several courts areas (circondari) ¹⁷. Court districts are generally located in the regions' main town (administrative centre) with the exception of four regions which are Lombardia (two districts), Puglia (two districts), Calabria (two districts) and Sicily (four districts) ¹⁸.

Until 1998, labour courts presided over disputes involving private sector workers only, while labour trials involving workers in the public sector took place before the administrative courts, according to the traditional view of "public administration supremacy" ¹⁹. In the late 90s a series of reforms aimed at bringing public sector employment under private law rules have passed. As a part of this legislation, the 1998 law established that labour suits concerning civil servants had to be settled within the ordinary labour courts.

3.3 The IV strategy

In the empirical analysis, we want to assess the causal effect of our indicator of labour courts delays on labour market outcomes of individuals with different employability characteristics.

Trial delays arise whenever the system is not able to clear the workload of the incoming or pending suits brought to Courts. Hence, they can be thought as the result of the interplay between the demand for or to the supply of justice; whenever the demand for justice is not met, this causes courts' congestion and delays.

¹⁶ In Italy, a province (NUTS 3 level of geographical aggregation) is an administrative territorial unit at an inter-mediate level between the municipality and the region (NUTS 2).

¹⁷ Although the labour trial takes place within the civil trial, there are important differences between the two procedures: the labour trial is faster and the judge has more inquiring powers as compared to the civil judge. The first instance and the appeal take place within the same district both for civil and labour trials: a case issued in the first instance by an ordinary Court may be appealed to the Court of Appeal of the same district to which the originating Court belongs. The last instance takes place before the Corte di Cassazione, which is based in Rome.

¹⁸ Lombardia has the judicial districts of Milano and Brescia; Puglia has Bari and Lecce; Calabria has Reggio Calabria and Cosenza; Sicilia has Palermo, Catania, Caltanisetta and Messina.

¹⁹ Only since 1993 public sector employees have been appointed on a contractual basis and no longer as the result of an administrative deed of appointment.

In order to control for the potential endogeneity of the indicator of judicial inefficiency, we use two instruments for the duration of labour trials: (1) the rate of appeal of trials involving disputes of civil servants (i.e. the ratio of incoming suits to the appeal stage and the number of outgoing suits from the first instance stage), which is a demand-driven cause of congestion; (2) the turnover rate of judges in each judiciary district, which is a supply-driven factor ²⁰.

The number of appeals of courts' decisions concerning civil servants' labour disputes captures the litigiousness rate in public sector employment. It is correlated with the length of legal disputes concerning private sector workers as it contributes to the overall bulk of disputes which - since 1998 - are to be settled by labour courts: higher numbers of appeals both from private employees and civil servants imply more cases to be handled by courts and thus more congestion. At the same time, litigiousness in the public sector has determinants which are exogenous with respect to (private) labour market dynamics and outcome, so that our instrument does not suffer from reverse causality issues. This is mainly related to the peculiarities of the employment in the Italian public sectors and to the resulting differences in the level of protection granted to public and private jobs, which still persist despite the recent legislative efforts of alignment.

One main feature of the Italian public administration is the concept of "stability" of employment in the public sectors; although in principle the law concerning the termination of labour relations applies to both sectors, there are important formal and de facto features which make dismissals in the public sector a much more complex and above all unlikely outcome ²¹. Due to the

²⁰ See Gianfreda and Vallanti (2017, 2018) for a discussion and application of a similar IV identification strategy.

²¹ For example, in the case of dismissals for economic causes, while private sector workers terminate their labour relationships, civil servants usually enter in a procedure (the so called "mobilità") aimed at placing them in a new public office; the labour relation can terminate only after two years of "mobilità", if the procedure has been unsuccessful or the worker has refused to move to the office. Also, dismissals in public employment are 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

higher degree of job security enjoyed by civil servants the risk of termination for economic reasons and/or for workers' low productivity and misconduct is dramatically reduced. As a result, the share of incoming suits concerning dismissals within the public sector is very low, around 1% to 2% of overall suits within the public sector. Indeed, public sector disputes mainly concern social security and welfare issues. The share of labour trials related to dismissal disputes is much higher for the private sector, i.e. 14% in 2014; furthermore, during the years under investigation - which precede the EPL reforms known as Legge Fornero - the number of incoming suits concerning private sector dismissals was more than twice higher 22 .

Finally, the segmentation between private and public sector employment due to the high degree of job security in the latter also implies that jobs in the private sector cannot be considered as an outside option for civil servants; during the years under study, the termination rate (i.e. the share of civil servants terminating their employment in the public sector) ranged from 5% to 7% of the total employment in the public sector; excluding retirements, or movements to other PA jobs or decease, i.e. focusing on those voluntary terminations which encompass - but are not limited to - movements to the private sector, this share plummets down to $2\%^{23}$.

Our second instrument is the judge turnover rate at district level, that is the voluntary or mandatory transfer of a judge to another court district (and his replacement). A large empirical evidence has documented that employees' turnover may have a detrimental effect on organizational performance under some circumstances ²⁴. Recently several studies have explicitly focused on the relationship between the turnover of judges and trial delays (Guerra and Tagliapietra, 2013; Rosales-López, 2008; Coviello et al. 2009). Judges' turnover represents a supply-driven cause for trial delays, as it is a constraint on courts' organization and functioning. In each court district, a transfer involves the movement of two judges: the judge who leaves his current position

public manager has the same juridical status as the employee and hence cannot be dismissed for poor performance or lack of trust.

²² Ministry of Justice statistics and Ichino (2017).

²³ Italian Ministry of Economy and Finance (MEF), "Conto Annuale" (http://www.contoannuale.tesoro.it)

²⁴ See among the others Arthur (1994), McElroy et al. (2001), Hausknecht and Trevor (2011) and Hancock et al. (2013).

(outbound flow) and the judge who fills a vacancy (inbound flow). Both the inbound transfer of a new judge and the outbound transfer of an incumbent judge represent an (exogenous) shock for the internal organization and therefore affect the organizational performance of the court. First, the outbound and inbound flows may not occur simultaneously as some positions may remain vacant. Second, delays in the process managing the backlog of outbound judges and the existence of asynchrony between outbound and inbound transfers can produce delays to court activity. Therefore, judge turnover is likely to be correlated with the length of trials by affecting courts' congestion within that district ²⁵.

This instrument also satisfies the exclusion restriction as the transfer of judges from one office to another is a complex procedure which on the one hand is set off by the decisions taken by several agents at different levels of the judiciary hierarchy, who respond to different sets of incentives, while on the other hand rests on objective requirements.

In order to guarantee the independence of the judiciary, Italian law prescribes judges' transfer after ten years; however, judges can voluntarily request to move from one office to another after three years of mandate. The transfer generally follows a three-step procedure: i) the publication of vacant positions to be filled ii) the request of the judge who is willing to be transferred and occupy the vacant position; iii) the approval by the self-governing body of the judiciary, the Consiglio Superiore della Magistatura (CSM). Vacancies within judicial districts primarily arise due to transfers of judges to others district or to other offices, for example career advancements, or to retirement. Once a vacant position is created in given district, the judge who is willing to be transferred has to apply to the CSM; as a general rule, judges cannot be transferred to a different assignment or district without their consent. Once applications are received, the CSM decides on the basis of a competitive procedure among candidates. The criteria for the CSM collegial decision are the following: competence, which is assessed on the basis of the functions so far carried out and the judge's capacities; the judge's health status and his/ her family members' (offspring, spouse, parents and brothers/sisters if leaving with the judge, in some cases relatives and relatives-in-law); family ties; merit

²⁵ See Guerra and Tagliapietra (2013) for empirical evidence concerning Italian courts.

(which also depends on the fact that in the past the judge has occupied vacancies for which an urgent procedure had been set up or vacancies for which no application had been received); seniority ²⁶. Therefore, the complexity of the transfer procedure, to which the decisions taken by different agents with different incentives contribute, and above all the provision of objective parameters which individual transfers ultimately depend on, is such that the turnover rate within each district ends up to be independent from (local) factors that might also affect firm-level outcomes.

4. Data and descriptive statistics

4.1 Courts'data

We draw annual data on labour trials for private and public sector workers at district level from the Italian Ministry of Justice dataset ²⁷. In both cases, 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 (*F I*) and in the appeal stage (*A*) for each of the 26 Italian judiciary districts. Following a formula used by the Ministry of Justice and the Italian National Institute of Statistics (ISTAT), the average number of days of trial can then be calculated as the ratio between the stock of cases (pending cases at the beginning plus pending cases at the end of the year) and the incoming plus outgoing flows (newly files plus closed)²⁸.

$$DLT_t = \frac{P_{t-1} + P_t}{F_t + C_t} \cdot 360$$

where $P_{t,t}$ and P_t are the number of cases pending at the beginning and at the end of the year, respectively; F_t is the number of new cases filed during the year; C_t is the number of cases that reached the final judgment during the year. This measure is widely used in the economic literature in cross-country and with-in country studies. See, for example, Djankov et al. (2003) for a cross-country study; Bianco et al. (2005) and Giacomelli and Menon (2012) on the effect of Italian courts' efficiency on the performance of credit market

²⁶ See the Circolare 15098 of November 30, 1993 of Consiglio Superiore della Magistartura and subsequent amendments.

²⁷ Bianco et al. (2005), Gianfreda and Vallanti (2017, 2018) and Coviello et al. (2018) use similar data to estimate the effects of judicial inefficiency on credit markets, firms 'productivity and on public work performance respectively.

²⁸ Since data on the actual duration of legal proceedings are not available, the Ministry of Justice uses information on caseflows to calculate an index for trial duration as follows:

This formula provides an estimate of the days of trial within each stage of judgement (first instance and appeal stage).

The overall days of trial for the first instance and the appeal stages are obtained by summing the average days of trial for the first instance and for the appeal, where the appeal days are weighted by the number of incoming suits at the appeal stage relatively to the number of outgoing suits at the first stage. This considers the fact that not all the suits which are decided upon by the Court of first instance reach the appeal courts.

From the Ministry of Justice database, we also draw annual data on the rate of appeal of trials involving civil servants.

We combine the data from the Ministry of Justice with the data provided by the Consiglio Superiore della Magistratura (CSM). The CSM database contains information on the actual and statutory number of judges and the number of inbound and outbound judges for the period 2007-2010. Judges turnover at district level is calculated as in Guerra and Tagliapietra (2015) as the sum of judges outbound and inbound in each district normalized to the number of judges in the same district.

Table 1 reports some descriptive statistics concerning labour courts averaged over regions (NUTS 2 level of geographical aggregation)²⁹ and years (2007-2010)³⁰.

and firm size respectively.

²⁹ Since labour force survey provides information on individuals' region of residence (NUTS 2), we aggregate the judicial data by region in order to match the legal variables with the individual variables. In the paper we will refer to judicial districts and regions interchangeably. In regions with more than one judicial court we take the average duration of trials. We aggregate the judicial data by region in order to match the legal variables with the individual variables. In the paper we will refer to judicial districts and regions interchangeably. In regions in order to match the legal variables with the individual variables. In the paper we will refer to judicial districts and regions interchangeably. In regions with more than one judicial court we take the average duration of trials.

³⁰ The time span of our analysis is 2007-2010 because of data limitations related to the availability of information on judges outflows and inflows.

| | Courts | delays ⁽³⁾ | Judges' | turnover ⁽⁴⁾ | PA rate of | f appeal ⁽⁵⁾ |
|------------------------|---------|-----------------------|---------|-------------------------|------------|-------------------------|
| Regions ⁽²⁾ | Mean | St. Dev. | Mean | St. Dev | Mean | St. Dev |
| Piemonte | 221.56 | 19.76 | 0.25 | 0.10 | 0.28 | 0.05 |
| Trentino Alto Adige | 298.47 | 35.03 | 0.28 | 0.13 | 0.36 | 0.09 |
| Lombardia | 406.08 | 39.79 | 0.28 | 0.07 | 0.33 | 0.03 |
| Liguria | 463.42 | 57.31 | 0.25 | 0.09 | 0.26 | 0.07 |
| Molise | 521.96 | 86.82 | 0.36 | 0.22 | 0.45 | 0.20 |
| Toscana | 634.96 | 58.24 | 0.29 | 0.11 | 0.37 | 0.06 |
| Friuli Venezia Giulia | 717.21 | 88.82 | 0.29 | 0.15 | 0.30 | 0.05 |
| Calabria | 731.19 | 95.08 | 0.36 | 0.18 | 0.14 | 0.04 |
| Emilia Romagna | 775.77 | 51.61 | 0.32 | 0.09 | 0.26 | 0.04 |
| Marche | 820.20 | 92.32 | 0.33 | 0.14 | 0.48 | 0.05 |
| Lazio | 825.79 | 73.03 | 0.29 | 0.10 | 0.30 | 0.11 |
| Veneto | 830.62 | 80.18 | 0.27 | 0.08 | 0.33 | 0.08 |
| Abruzzo | 880.57 | 56.01 | 0.36 | 0.09 | 0.37 | 0.10 |
| Campania | 925.18 | 53.79 | 0.31 | 0.10 | 0.16 | 0.06 |
| Sicilia | 1068.93 | 29.77 | 0.31 | 0.14 | 0.26 | 0.05 |
| Basilicata | 1097.09 | 119.15 | 0.39 | 0.11 | 0.30 | 0.15 |
| Sardegna | 1105.18 | 50.61 | 0.26 | 0.11 | 0.15 | 0.04 |
| Umbria | 1131.25 | 129.25 | 0.26 | 0.02 | 0.38 | 0.13 |
| Puglia | 1306.34 | 173.60 | 0.32 | 0.13 | 0.23 | 0.18 |
| | | | | | | |
| Average | 776.94 | | 0.30 | | 0.30 | |
| Within St. Dev. | 75.87 | | 0.11 | | 0.08 | |
| Between St. Dev. | 298.63 | | 0.04 | | 0.09 | |

Table 1 Courts descriptive statistics: length of labour trials ⁽¹⁾, Judges' turnover rate, appeal rate of the public sector workers (regions averages)

Note: Note. (1) Excluded the appeal stage before the Supreme Court. (2) Regions are ordered from most efficient to least efficient.

Source: (3) (5) Ministry of Justice website and authors' calculations. (4) Ministry of Justice database and authors' calculations.

Columns 1-2 report the indicator of labour courts efficiency for the 19 Italian regions,³¹ which are ranked from the most to the least efficient. The data show a great territorial heterogeneity in the duration of trials; for example, the length of trial in the least efficient region (Puglia with a trial duration of 1306 days) is more than five time longer as compared to the most efficient region (Piemonte/Valle d'Aosta with 224 days). The time-series variation is also substantial. Within each region, the standard deviation normalized to the mean ranges from 0.03 (in Sicilia) to 0.17 (in Molise), and the average within standard deviation is around 0.10. This evidence suggests considerable heterogeneity in law enforcement both cross-sectionally and in the time-series. In columns 3-4 we report the average judges' turnover rate at regional level. The average turnover rate exceeds 30% in our sample. Again, both the between-group and within-group standard deviations are not negligible (0.37 and 0.14 of the mean respectively), implying large territorial heterogeneity in the inflows and outflows of judges and also some variation over time within each region. Finally, columns 5-6 show the appeal rates concerning labour suits related to public sector workers. Molise (48 percent of appealed cases) and Marche (45 percent) record the highest rates of appeals of public employees courts' disputes while Sardegna (0.15 percent) and Calabria (0.14 percent) the lowest.

4.2 Labour force data

We draw individual data on the Italian workforce from the Italian Labour Force Survey (LFS), from which we have annual information on individuals aged between 15 and 64 years in 5-year age bands (15-19, 20–24, 26-30 etc.). The dataset also contains information on a number of individual characteristics such as the region of residence, gender, education, age, type of employment, type of contract, etc. For the purpose of the analysis, we restrict our sample to all individuals (with the exclusion of public sectors workers) aged 20-64³² and to the years 2007 to 2010. The final dataset consists of around 1 million observations.

Table 2 considers five different outcomes for both men and women and the gender gap measured as the male–female difference in each outcome: the rate of non-employment rate, the inactivity rate, the unemployment rate, the

share of temporary workers and the share of part-time. The table shows that in Italy the labour market gender gaps are sizeable and women are overrepresented in both temporary and part-time occupations. Nevertheless, the aggregate statistics hide a strong territorial heterogeneity. Figure 1 shows a strong regional variation in gender employment and participation gaps with regions in the centre of Italy such as Emilia Romagna, Toscana and Marche with gender gaps in line with northern European economies, Lombardia and the other regions of the North-West resembling European continental countries and southern Italy with substantial gender gaps as in Greece and Spain. A different picture emerges when we consider the share of temporary or part time employment. In this case the typical North-South territorial pattern is reversed; regions in the Centre and the North of Italy register higher gaps than the Southern part of the country. This may reflect a different process of selection into employment. Female participation and employment rates in the South are low and concentrated among high-educated women for whom the incidence of atypical and part-time contracts is generally lower (Olivetti, 2008; Olivetti and Petrongolo, 2008).

| | men | women | gender gap |
|--------------|----------|-------|------------|
| | Italy | | |
| non-employed | 0.432 | 0.523 | 0.091 |
| inactive | 0.163 | 0.390 | 0.227 |
| unemployed | 0.068 | 0.099 | 0.031 |
| temporary | 0.138 | 0.182 | 0.044 |
| part-time | 0.049 | 0.251 | 0.202 |
| | North-We | est | |
| non-employed | 0.410 | 0.472 | 0.062 |
| inactive | 0.129 | 0.333 | 0.204 |
| unemployed | 0.050 | 0.067 | 0.018 |
| temporary | 0.120 | 0.144 | 0.024 |
| part-time | 0.045 | 0.263 | 0.219 |
| | North-Ea | ıst | |
| non-employed | 0.381 | 0.444 | 0.063 |
| inactive | 0.120 | 0.322 | 0.202 |
| unemployed | 0.035 | 0.060 | 0.025 |
| temporary | 0.118 | 0.163 | 0.044 |
| part-time | 0.044 | 0.287 | 0.243 |
| | Centre | | |
| non-employed | 0.413 | 0.489 | 0.075 |
| inactive | 0.137 | 0.346 | 0.209 |
| unemployed | 0.055 | 0.082 | 0.028 |
| temporary | 0.143 | 0.172 | 0.029 |
| part-time | 0.050 | 0.259 | 0.210 |
| | South | | |
| non-employed | 0.475 | 0.599 | 0.124 |
| inactive | 0.210 | 0.467 | 0.257 |
| unemployed | 0.099 | 0.140 | 0.040 |
| temporary | 0.152 | 0.212 | 0.060 |
| part-time | 0.052 | 0.223 | 0.171 |

Table 2 Labour market status and gender gap (2007-2010)

Source: Italian Labour Force Survey and authors' calculations





Source: LFS and authors' calculations

Table 3 reports the same descriptive statistics - the share of non-employed, inactive, unemployed, temporary and part-time workers - by demographic characteristics (age and education) and separately for men and women ³³. Figures show that gender differences rise substantially for those women aged between 30 and 40 (for whom family ties and child rearing responsibilities are generally stronger) and for low educated women. This is in line with other descriptive results on gender gaps reported, among the others, in OECD (2002), Petrongolo (2004) and Cipollone et al (2014).

| (2007-2010) |
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| Table 3 |

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| 0.110 0.180 0.232 0.253 0.243 0.245 ed 0.061 0.047 0.052 0.049 0.038 0.021 | 0.123 0.111 (| _ | 0.085 | 0.069 | 0.082 | 0.227 | 0.088 | -0.042 |
| ed 0.061 0.047 0.052 0.049 0.038 0.021 | 0.232 0.253 (| _ | 0.260 | 0.260 | 0.260 | 0.368 | 0.216 | 0.097 |
| | 0.052 0.049 (| _ | 0.009 | 0.000 | -0.003 | 0.053 | 0.027 | 0.013 |
| 0.049 0.0/5 0.067 0.0/2 0.05/ | 0.075 0.067 (| _ | 0.036 | 0.019 | -0.012 | 0.072 | 0.032 | 0.028 |
| 0.199 0.254 0.291 0.285 0.225 | 0.254 0.291 (| _ | 0.163 | 0.123 | 0.090 | 0.301 | 0.200 | 0.105 |

Labour Courts and Firing Costs in Italy: The Labour Market Gender Effects of Trial Delays

5. Empirical model

5.1 Empirical specification

As a starting point to investigate the gender effects of labour courts' delays on labour market outcomes we collapse the LFS into cells based on region, year, and the demographic group (gender x age x education) as described earlier. Also, we supplement this data with courts data on the duration of labour trial aggregated at regional level. Then we estimate a regression in which the dependent variable Y is the labour market outcome (non employment rate, unemployment rate, share of temporary workers and share of part-time workers) for a particular group, defined by the demographic cell g for that group (gender x age x education), region r, and year t. Our regression equation takes the form:

$$Y_{grt} = \beta_I Delay_{rt} + gender_g + age_g + education_g + \alpha_r + \gamma_t + \varepsilon_{grt}$$
(2)

where gender_g, age_g and education_g are group-specific intercepts and Delay_{rt} is the length of labour trials in region r and year t. We also include region (α_r) and year (γ_t) fixed effects. The coefficient of interest is β_i ; it captures the overall effect of trials length on labour market outcomes.

In order to see whether this effect is different for men and women we estimate a second equation in which we include an interaction term between delay and the gender dummy (women) as follows:

$$Y_{grt} = \beta_{l} Delay_{rt} + \beta_{2} (Delay \ gender)_{rtg} + gender_{g} + age_{g} + education_{g} + (3)$$

+ $\alpha_{r} + \gamma_{t} + \varepsilon_{grt}$

In specification (3) the coefficient β_2 is the differential effects of courts' delays on women labour market outcome after controlling for age and education characteristics.

Finally, in the last set of regressions we re-estimate equation (2) for each major demographic group, such as low educated, medium educated and high

educated individuals, those individuals in the age group 20-24, 25-30 and so on, and for men and women separately. In this set of regressions, the coefficient of interest β_1 gives the sensitivity of each group (for example, low educated women) to courts delays ³⁴. This last specification allows us to compare the effect of trials duration not only between women and men but also between women and men with different demographic characteristics.

5.2 Empirical results

To begin, we show the impact of courts' delays on labour market status by considering the whole sample and using the set of instruments discussed in the previous section. IV results are reported in Table 4 while OLS regressions follow in Table 5.

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| Table |

| | Non-emplo | Non-employment rate | Inactivity rate | y rate | Unemployment rate | nent rate | Share of temp. empl. | ıp. empl. | Share of part-time | art-time |
|---------------|------------|---------------------|-----------------|------------|-------------------|------------|----------------------|------------|--------------------|------------|
| delay | 0.148 | 0.096 | 0.157 | 0.107 | 0.053 | 0.032 | 0.146 | 0.101 | 0.147 | 0.083 |
| | *(20.0) | (0.042)** | (0.037)*** | (0.042)** | (0.041) | (0.044) | (0.073)** | (0.033)*** | (0.081)* | (0.047)** |
| delay x women | | 0.105 | | 0.100 | | 0.043 | | 0.091 | | 0.073 |
| | | (0.053)** | | (0.052)* | | (0.043) | | (0.044)** | | (0.035)** |
| women | 0.091 | -0.598 | 0.227 | -0.426 | -0.072 | -0.352 | 0.042 | -0.553 | 0.202 | 0.682 |
| | (0.004)*** | (0.348)* | (0.004)*** | -0.342 | (0.004)*** | (0.284) | (0.003)*** | (0.288)** | (0.003)*** | (0.230)*** |
| age_2529 | -0.054 | -0.053 | -0.035 | -0.035 | -0.039 | -0.039 | -0.18 | -0.18 | -0.012 | -0.012 |
| | (0.011)*** | (0.011)*** | (0.011)*** | (0.011)*** | (0.010)*** | (0.010)*** | (0.012)*** | (0.012)*** | 0.008 | 0.008 |
| age3034 | -0.074 | -0.074 | -0.062 | -0.062 | -0.042 | -0.042 | -0.28 | -0.28 | 0.007 | 0.007 |
| | (0.010)*** | (0.010)*** | (0.010)*** | (0.010)*** | (0.010)*** | (0.010)*** | (0.011)*** | (0.011)*** | 0.008 | 0.008 |
| age_3539 | -0.084 | -0.084 | -0.079 | -0.079 | -0.044 | -0.044 | -0.326 | -0.326 | 0.017 | 0.017 |
| | (0.010)*** | (0.010)*** | (0.010)*** | (0.010)*** | (0.009)*** | (0.009)*** | (0.011)*** | (0.011)*** | (0.008)** | (0.008)** |
| age4044 | -0.098 | -0.098 | -0.087 | -0.087 | -0.054 | -0.054 | -0.347 | -0.347 | 0.009 | 0.009 |
| | (0.010)*** | (0.010)*** | (0.010)*** | (0.010)*** | (0.009)*** | (0.009)*** | (0.011)*** | (0.011)*** | (0.008)** | (0.008)** |
| age4549 | -0.114 | -0.114 | -0.088 | -0.088 | -0.077 | -0.077 | -0.372 | -0.372 | -0.027 | -0.027 |
| | (0.010)*** | (0.010)*** | (0.010)*** | (0.010)*** | (0.009)*** | (0.009)*** | (0.011)*** | (0.011)*** | (0.008)*** | (0.008)*** |
| age5054 | -0.122 | -0.122 | -0.066 | -0.066 | -0.106 | -0.106 | -0.391 | -0.391 | -0.06 | -0.06 |
| | (0.011)*** | (0.011)*** | (0.010)*** | (0.010)*** | (0.009)*** | (0.009)*** | (0.011)*** | (0.011)*** | (0.008)*** | (0.008)*** |
| age5559 | -0.048 | -0.048 | 0.030 | 0.030 | -0.080 | -0.080 | -0.401 | -0.401 | -0.073 | -0.074 |
| | (0.012)*** | (0.012)*** | (0.011)*** | (0.011)*** | (0.010)*** | (0.010)*** | (0.011)*** | (0.011)*** | (0.008)*** | (0.008)*** |
| age_6064 | 0.169 | 0.169 | 0.278 | 0.278 | 0.074 | 0.074 | -0.392 | -0.392 | -0.038 | -0.038 |
| | (0.012)*** | (0.012)*** | (0.012)*** | (0.012)*** | (0.013)*** | (0.013)*** | (0.011)*** | (0.011)*** | (0.009)*** | (0.009)*** |
| ed_2 | -0.147 | -0.147 | -0.169 | -0.169 | -0.075 | -0.075 | -0.041 | -0.041 | -0.065 | -0.065 |

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| | (0.005)*** | | (0.005)*** | (0.005)*** | (0.004)*** | (0.004)*** | (0.004)** ³ | (0.004)*** | (0.004)*** | (0.004)*** |
|-----------------------------|------------|--------|------------|------------|------------|------------|------------------------|------------|------------|------------|
| ed_3 | -0.167 | | -0.251 | -0.251 | -0.036 | -0.036 | 0.008 | 0.008 | -0.113 | -0.113 |
| | (0.006)*** | | (0.006)*** | (0.006)*** | (0.005)*** | (0.005)*** | (0.005)*** | (0.005)*** | (0.004)*** | (0.004)*** |
| # cells | 4089 | | 4089 | 4089 | 89 | 4089 | 4089 | . 089 | 4089 | 4089 |
| Region FE | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Year FE | yes | | yes | yes | yes | yes | yes | yes | yes | yes |
| Instruments | | | | | | | | | | |
| Underid test ⁽¹⁾ | 90.07 | 144.40 | 90.02 | 144.35 | 90.12 | 144.47 | 89.45 | 143.80 | 89.45 | 143.80 |
| p-value - chi2(7) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Overid test ⁽²⁾ | 0.02 | 1.69 | 0.48 | 1.11 | 0.37 | 1.74 | 0.36 | 1.93 | 3.64 | 3.67 |
| p-value - chi2(6) | 0.88 | 0.43 | 0.49 | 0.57 | 0.54 | 0.42 | 0.55 | 0.38 | 0.06 | 0.16 |
| | | | | | | | | | | |

Note IV regressions with the appeal rate of PA sector and judges' turnover as instruments: (1) Kleibergen-Paap rk LM stat. and (2) Hansen J stat. Robust standard errors in parenthesis. *significant at 10%; ** significant at 5%; *** significant at 1%. Base groups are men, individuals aged 20-24, and low educated individuals (ed_1).

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| | Non-emple | Non-employment rate | Inactivi | Inactivity rate | Unemployment rate | nent rate | Share of te | Share of temp. empl. | | Share of part-time |
|---------------|------------|---------------------|------------|-----------------|-------------------|------------|-------------|----------------------|------------|--------------------|
| delay | 0.111 | 0.111 | 0.083 | 0.102 | 0.020 | 0.012 | 0.033 | 0.012 | 0.058 | -0.050 |
| | (0.061)* | (0.071) | (0.063) | (0.071) | (0.064) | (0.074) | (0.018)* | (0.007)* | 0.042 | 0.050 |
| delay x women | | 0.452 | | 0.372 | | 0.024 | | 0.070 | | 0.112 |
| | | (0.181)** | | (0.161)** | | (0.012)** | | (0.042)* | | (0.021)*** |
| women | 0.091 | -0.203 | 0.227 | -0.013 | -0.072 | -0.233 | 0.042 | -0.004 | 0.202 | 0.416 |
| | (0.004)*** | (0.052)*** | (0.004)*** | (0.051) | (0.004)*** | (0.047)*** | (0.003)*** | (0.038) | (0.003)*** | (0.040)*** |
| R2 | | | | | | | | | | |
| # cells | 4089 | 4089 | 4089 | 4089 | 4089 4 | 1089 | 4089 | 4089 | 4089 | 4089 |
| Region FE | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Year FE | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |

Note All specifications include age and education dummies as reported in Table 4. Robust standard errors in parenthesis. *significant at 10%; ** significant at 5%; *** significant at 1%.

As predicted by the theory, the coefficient on courts delays is positive implying that courts inefficiency worsens labour market conditions of individuals by decreasing employment and participation and increasing the incidence of atypical contracts. As in the previous empirical literature, the effect on unemployment is not significant. Moreover, consistently with the theoretical predictions, the effect is relatively stronger for women. The coefficients of the interactions are significant (with the exception for the unemployment rate regression) and the effects are robust to the inclusion of time dummies, region dummies and other demographic controls such as age and level of education. We assess the magnitude of the estimated gender effects by computing the change in the differences of labour market outcomes of men and women that would result from increasing the (average) efficiency of the Italian labour courts of 1 (within-regions) standard deviation, which corresponds to an increase in the average trials length of around 10% (77 days). The estimated impact is 1.5 percent-age points increase in the employment and participation gaps, 0.9 and 0.7 percentage points in the temporary and part-time gaps respectively.

We next look at the differential effects of courts' delays on labour market outcomes of different demographic groups. Figure 2 and Figure 3 show the results of the series of regression estimates for each single age group and education level. Figure 2 reports the results for non-employment, inactivity and unemployment rates, while figure 3 reports those for temporary and parttime employment. We present the results for the overall sample and for men and women separately. Each point on the graph represents estimates from a separate regression: the x-axis gives the person' demographic characteristics (age and education) while on the y-axis we plot the estimated coefficient and the 90 percent confidence interval. For example, the first point on graph 1 of Figure 2 is interpreted as "when courts inefficiency (at region level) increases by 1 sd, individuals in the age group 20-24 experience a 2.5 percentage point higher non employment rate".





Notes: Each point is the estimate on courts' delays from a separate regression (along with the 90 percent confidence interval) for a given demographic group. The model also includes fixed effects for demographic group, region and year fixed effects.
Figure 3 Effect of courts delays on group temporary employment and part-time employment by age and education



Notes: Each point is the estimate on courts' delays from a separate regression (along with the 90 percent confidence interval) for a given demographic group. The model also includes fixed effects for demographic group, region and year fixed effect Results show that firing costs induced by courts' inefficiency hit more younger and low skilled individuals but with some differences between men and women. An increase in trials duration reduces men employment and participation for people up to 35 years old and then declines and becomes not statistically significant. The effect on women is higher (at least for the youngest cohorts) and lasts longer. The graph clearly shows that the coefficients on non-employment and participation rates are still significant for women in the age groups 45-49. The story is somewhat similar when we consider the responsiveness of the unemployment rate for different demographic age groups. In this case the responsiveness for young men in the age group 20-24 is almost twice as that in next age group (25-29), and for the latter it is not statically significant. For women, the coefficients remain positive and statistically significant also for individuals in the age groups 30-34 and 35-39, thought it declines for women in their 30s.

The second set of graphs concerns the incidence of temporary and parttime contracts. The results show that the effect of courts' inefficiency is remarkably stronger for women than for men in the same age-group. The share of temporary contracts increases more for women in their 30s and 40s, while the effect on part-time is stronger for women in their late 20 and early 30s. These results seem to confirm that an increase in firing costs leads to a displacement of women in regular and full-time jobs, and this is particular true for women at the beginning of their careers and more involved in child-care duties.

The picture that emerges from the estimates can be summarized by saying that a more rigid labour market (in our analysis the rigidity arises from the inefficiency of the judiciary system) has the effect of increasing gender disparities in the labour market. The effect is stronger for prime age women, especially those aged between 25 and 40, who are supposed to be in their top reproductive and care giving years. Overall these results reinforce the theoretical conclusion that an increase of employment adjustment costs does not penalize all workers in the same way, but there are categories of individuals who pay more for labour market rigidities. The statistics to test the validity (relevance) of the instrument are given at the bottom of each tables and the coefficients of the instruments of the firststage regressions are reported in Table 6.

| Endogenous var: | delay | delay | delay x |
|------------------|------------|------------|------------|
| | | | women |
| | (1) | (2) | |
| turnover | 0.202 | 0.204 | -0.025 |
| | (0.078)*** | (0.093)** | 0.057 |
| appeal | 0.535 | 0.534 | 0.018 |
| | (0.153)*** | (0.169)*** | 0.029 |
| turnover x women | | 0.002 | 0.482 |
| | | 0.099 | (0.177)*** |
| appeal x women | | -0.002 | 0.572 |
| | | 0.088 | (0.171)*** |
| F-test | 54.97 | 27.47 | 25.53 |
| p-value | 0.00 | 0.00 | 0.00 |

Table 6 First stage regressions

Note results are based on the specification in Table 4, column 1 & 2. All specifications include women, age and education dummies. * significant at 10%; ** significant at 5%; *** significant at 1%

The Kleibergen-Paap Wald ³⁵ and the Hansen J tests easily reject the null hypothesis of weak and endogenous instrument(s) in all specifications suggesting that the instruments and their interactions with the gender dummy are adequate to identify our equations. Moreover, in the first stage equation both instruments turn to be positively and significantly correlated with the duration of labour trials.

6. Conclusions

This paper has provided evidence on how the labour market gender gaps respond to firing costs which arise from lengthy labour trials. Two main results have emerged from this analysis. First, labour courts' inefficiency hinders the employment rate and activity rate more for women then for men. The differential effect of dismissal costs turns to be stronger for women aged 25-40, probably because they are more likely than men to move between employment and inactivity when seeking to balance the competing demands of work and family. Moreover, longer trials increase the likelihood of having a temporary occupation and a part-time job for the same group of women.

Second, our study also confirms well established results on the effects of EPL on employment patterns as for example in Kahn (2007), implying that trials length and, more generally, courts activity has an impact on labour market outcomes which goes in the same direction as the "de iure" law provisions.

Finally, our study highlights an important economic consequence of judicial inefficiency, thus contributing to the identification of the economic costs of long trials. Reforms aiming at simplifying and shortening trial procedures are to be considered also in their capacity to foster gender labour market equality.

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ECONOMIA ITALIANA 2019/3

Gender gaps in Italy and the role of public policy

In Italia il tema della parità di genere è di particolare urgenza. Secondo classifiche internazionali nel 2018 il Paese si attesta al 70° posto (su 149 Paesi considerati) rispetto al 41° del 2015. Ciò nonostante, di parità di genere se ne parla in modo spesso superficiale, le azioni concrete sono poche e le risorse limitate. Questo numero di Economia Italiana, **editor la prof.ssa Paola Profeta**, fa il punto sul gender gap nell'economia italiana e analizza il ruolo della politica pubblica proponendo stimolanti spunti di riflessione.

Daniela Del Boca, Enrica Martino, Elena Claudia Meroni e Daniela Piazzalunga analizzano il ruolo che le diverse forme di cura nei primi anni di vita hanno sull'influenza di bambine e bambini, per comprendere come incoraggiare il loro sviluppo cognitivo e non cognitivo specifico e ridurre i differenziali di genere nel corso della vita. Francesca Carta partendo dalla partecipazione femminile al mercato del lavoro in Italia si concentra sul ruolo delle politiche in materia di congedi di paternità e servizi per l'infanzia. Anche Francesca Barigozzi, Helmuth Cremer e Chiara Monfardini pongono l'accento sulla cura dei figli che, soprattutto in Italia, penalizza il lavoro delle madri. Giuseppina Gianfreda e Giovanna Vallanti affrontano il tema dei tempi di giustizia e dei costi di licenziamento e gli effetti della durata dei processi sulla parità di genere nel mercato del lavoro italiano. Focalizzandosi sulla rappresentanza delle donne ai vertici aziendali, Anna Rita Macchioni Giaquinto propone un approfondimento sulle conseguenze delle quote di genere introdotte dalla legge "Golfo-Mosca" del 2011. L'intervento di Alessandra Perrazzelli approfondisce il ruolo delle donne italiane tra lavoro e genitorialità, nodo cruciale dei differenziali di genere.

Nelle "rubriche", **Roberta Palazzetti** spiega come la diversità di genera possa costituire un impulso all'innovazione costituendo un vantaggio competitivo. **Pamela Minelli e Alberto Navarra** invitano ad una riflessione sul gender gap come fattore che rallenta le strategie di successo aziendale. **Valeria Manieri** propone la sfida di costruire un futuro tecnologico a misura di donna.

ECONOMIA ITALIANA nasce nel 1979 per approfondire e allargare il dibattito sui nodi strutturali e i problemi dell'economia italiana, anche al fine di elaborare adeguate proposte strategiche e di *policy*. L'Editrice Minerva Bancaria si impegna a riprendere questa sfida e a fare di Economia Italiana il più vivace e aperto strumento di dialogo e riflessione tra accademici, *policy makers* ed esponenti di rilievo dei diversi settori produttivi del Paese.

