Wage effects of non-wage labour costs

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ARTICLE INFO

Article history:
Received 29 November 2012
Accepted 23 September 2014
Available online 7 October 2014

JEL classification:
C23
D31
J31

Keywords:
Dismissal costs
Payroll tax
Evaluation of labour market reforms
Difference-in-difference
Matching model

ABSTRACT

We study wage effects of two important elements of non-wage labour costs: firing costs and payroll taxes. We exploit a reform that introduced substantial reduction in these two provisions for unemployed workers aged less than 30 and over 45 years who got a permanent job. A matching model with heterogeneous workers predicts positive wage effects of reducing firing costs but ambiguous wage effects of reducing payroll taxes, for both new entrant and incumbent workers. Difference-in-differences estimates and simulation of the model show positive wage effects for both new entrant and incumbent workers. The reduction in firing costs accounts for up to half of the overall wage increase for new entrants but only 10% for incumbents.

1. Introduction

In the last decades, several European countries have reduced employment protection and payroll taxes to improve the performance of the labour market (see Kugler, 2007 for employment protection legislation (EPL) reforms and Carone et al., 2007 for recent changes in payroll taxes).1 However, the estimation and evaluation of the causal effects of the changes have proved difficult, since most changes have been gradual (i.e. not sharp) and across the board (i.e. applied to everyone).

In 1997, Spain drastically reduced dismissal costs and payroll taxes for young and old workers only, which provides a unique natural setting to examine the effects of non-wage labour costs. Severance payments for unfair dismissals were reduced 20%, while payroll taxes decreased between 40% and 60%, depending on the targeted group. These sharp changes, which applied only to some age groups, provide a unique opportunity to examine the causal effects of firing costs and payroll taxes on employment and wages.

1 For instance, in the late 1980s France relaxed employment protection provisions to facilitate employment for certain types of workers, and Germany has recently (in 2004) exempted small firms (from 5 to 10 employees) from EPL. Payroll taxes decreased in the EU-27 from 7.5% to 7.3% of GDP between 1995 and 2005, and the Nordic countries have been reducing payroll taxes selectively for some regions since the mid-1980s.

http://dx.doi.org/10.1016/j.euroecorev.2014.09.005
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There is an increasing amount of empirical evidence, which points that stringent employment protection regulation affects employment flows (Autor et al., 2004, 2006; Kugler and Pica, 2003, 2008; Marinescu, 2009; Martins, 2009). However, evidence on wage effects is very scarce and not very conclusive. Leonardi and Pica (2013) analyse an increase in firing costs implemented in Italy for small firms and find that more stringent employment protection has a negative impact on entry and subsequent wages. Martins (2009) finds no reaction of wages to an increase in dismissal-for-cause costs only for large firms in Portugal, and van der Wiel (2010) finds positive wage effects of extending employer’s term of notice in the Netherlands.2

The incidence of payroll taxes also gathers mixed evidence. Generally speaking, when employees perceive a close link between employers’ contributions and their benefits, payroll taxes are likely to be fully shifted from firms to employees, with no disemployment effects (see Gruber, 1997 for Chile or Bennmarker et al., 2009 for Sweden). However, with a loose link between taxes and benefits, payroll taxes are usually not fully passed on to employees and employment decreases.4 In a recent study for Argentina, Cruces et al. (2010) exploit regional variations in tax rates and find that changes in payroll tax rates are only partially shifted onto wages with negligible effects on employment, due to rigid labour demand and supply functions. Small changes have also been found easier to pass on to employees than large changes (Gruber, 1997).

Our analysis focuses on the wage effects of firing costs and payroll taxes. To do so, we extend the matching model with heterogeneous workers put forth by Dolado et al. (2007) in two important ways to accommodate the salient features of the Reform. We consider the joint effect of payroll taxes and firing costs on wages, and since the reform basically targets the entry wage of two groups of workers, we consider a different wage bargaining process for new entrants than for incumbent workers.

The theoretical model predicts an ambiguous effect on wages for both new entrant and incumbent workers. While payroll taxes have an unclear effect on wages, firing costs in new entry positions reduce wages. This result takes place in new entrants because, since firing costs are not operational in entry jobs, firms can translate part of them to the new jobs, reducing the workers ‘implicit’ bargaining power. In the case of incumbents, an increase in firing costs of new entry positions decreases their wages because they expect a lower match surplus in case of moving to a new job position. As a result, incumbent employees are more willing to decrease their current wage in order to reduce the probability of being separated from the firm.

We provide two sets of complimentary evidence, from estimations and from simulations, which yield consistent results. Estimates come from a microeconometric analysis of panel individual administrative records, while simulations are obtained by first calibrating the model and then simulating the reform.

We exploit the variation of firing costs and payroll taxes across age groups (young, prime-age, and older) and over time (before and after 1997), and identify the effects of the reform using a difference-in-differences estimator, i.e. we compare wages of younger and older individuals with those of prime-age individuals, before and after the reform.

Our main findings suggest that decreased firing costs and payroll taxes have a positive effect on the wages (and employment) of new hired workers. Estimated effects are larger for older than for younger workers and for men than for women. Wages of incumbent workers also increase, but to a lesser extent. Our simulations show that the reduction in firing costs accounts for up to half of the overall wage increase for new entrants but only 10% for incumbents.

The experience of Spain should also provide direct evidence on the effects other countries might expect from a decision to promote (permanent) employment by reducing non-wage labour costs. Since firing costs and payroll taxes account for a large proportion of overall non-wage labour costs in many countries, they are likely to be used in the future to boost employment, as they have been extensively used in the past. Our results suggest that a substantial cut in non-wage labour costs has an important and substantial effect.

Our paper contributes to the small but growing literature that uses large policy changes within a country over time or across groups to evaluate their labour market effects. Our analysis makes several advances over previous studies. The source of identification in this paper, the age discontinuity, is unique compared to previous literature examining the impact of firing costs or payroll taxes on wages, which has relied on firm size discontinuities (Martins, 2009; Leonardi and Pica, 2013), differences in tenure (van der Wiel, 2010; Marinescu, 2009) or regional differences (Bennmarker et al., 2009; Cruces et al., 2010). The data we use is a unique longitudinal data set which contains information on individual job histories from social security records and basic individual information from the census. Thus, we can work with all relevant job spells instead of quarterly data, as provided for instance by the Labour Force Survey. We use information on previous unemployment spells to overcome the selection into treatment problem we face when estimating the causal effects on wages, which results from those getting new permanent employment not being a random sample of the unemployment pool. Moreover, our

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2 The extent to which severance costs are shifted from employers to employees in the form of lower wages depends on market imperfections or information problems. For instance, in situation of low institutional trust, the cost of severance pay may not be entirely shifted to workers under the standard severance pay system, where employers are required to pay severance at the time of separation, due to a problem of moral hazard, if workers fear that firms will declare bankruptcy and will not pay. Kugler (2005) studies the effect of a new system of severance payment savings account in Colombia, where firms are required to deposit a percentage of wages into guaranteed individual accounts available to workers in the event of job separation, and finds a substantial wage reduction that results from reducing the moral hazard problem.

3 This may be the case for pay-as-you-go social security systems, such as the Spanish one, with weak linkages between pensions and other benefits, on the one hand, and contributions, on the other.

4 We also discuss briefly the implications of changing firing costs and payroll taxes on employment. In Cervini Plá et al. (2010), the companion and more extensive working paper, we provide a more detailed discussion.
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