



# Unemployment insurance and job turnover in Spain <sup>☆</sup>

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## ABSTRACT

The aim of this paper is to shed some light on the potential relationships between the unemployment insurance system and labour market turnover. This study assumes the incentives embedded in the unemployment insurance system have a heterogeneous impact, depending on the type of labour market transition (quits versus layoffs and recalls versus new job entrances) and on a worker's attachment to the labour market (gender and type of contract). The layoff hazard rate increases as workers qualify for unemployment benefits, whilst the quit hazard rate remains stable. Similarly, employment inflow increases sharply after the exhaustion of unemployment benefits. The timing and importance of the exit differ between recalls and new job entry and depend on a worker's attachment to the labour market. The results show that unemployment benefits appear to favour job turnover and both firms' and workers' decisions seem to matter.

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## 1. Introduction

The labour market is in a constant state of flux. There is a continuous flow of workers into and out of employment, and from one job to another. Understanding job turnover is the key to understanding how the labour market operates. Turnover is necessary because it helps allocate workers to those jobs where they are most productive and allows employers to hire and fire according to economic conditions. It is not always optimal, however. Some groups of workers experience high layoff rates without ever advancing to better positions (Rebollo, 2011; Gagliarducci, 2005). And some groups of firms face high firing rates without improving their productivity levels (Dolado and Stucchi, 2008; Bassanini et al., 2008). One of the factors blamed for excessively high turnover in the labour market is the design of the Unemployment Insurance System (UIS). Hence the aim of this paper is to shed some light on the potential relationships between the UIS and labour market.

Accordingly, we analyse the Spanish labour market for the period 2000–2007. Several features distinguish the Spanish labour market from other European labour markets. Firstly, it has a generous UIS financed by uniform payroll taxes. Uniform payroll taxes are

frequently criticised for giving rise to too many layoffs, reducing the mean duration of employment and increasing unemployment (see Anderson and Meyer, 2000; Cahuc and Malherbet, 2004; Fath and Fuest, 2005; Blanchard and Tirole, 2008). Secondly, employment turnover is notably higher than in other European countries, with recent figures showing that nearly 50% of workers have held their current job for six months or less and almost 30% for no more than a year. Thirdly, more than 80% of newly signed contracts are temporary, and Spain's temporary employment rate has remained above 30% since the beginning of the nineties. Fourthly, more than a third of the unemployed who find a job return to their former employer.

The effects of UIS benefits on job turnover compound labour supply and demand forces and their relative importance continues to be an empirical issue. A number of empirical studies have already examined how certain characteristics of the UIS play out with respect to the duration and outcome of unemployment spells. Typically, these previous studies show that higher replacement ratios lead to longer unemployment spells and that the probability of escaping unemployment increases as unemployment benefit entitlements are exhausted.

To understand whether demand or supply incentives are behind this effect, the researcher must take into account whether the unemployment spell finally ends in recalls or in a new job entrance and how the UIS affects the length of employment. In relation to the first point, the idea is that recall versus entry into a new job may involve several different causal mechanisms, all requiring explicit consideration in the analysis of the effect the UIS has on job turnover (Katz, 1986; Juradja, 2002). In relation to the second point, Juradja

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(2002) has shown that evaluating the UIS by studying only its effects on unemployment duration may lead to an underestimation of the total impact the UIS has on job turnover and hence on the unemployment rate. The influence of UIS eligibility parameters on employment duration, in contrast, has received scant attention and none of the empirical studies found takes into account the potential behavioural differences between layoffs and quits. These distinctions between different types of employment inflow and outflow are key to determining whether the UIS also affects a firm's hiring and firing decisions (as implicit contract theory shows, see [Feldstein, 1976](#)) and not only workers' decisions, as assumed in traditional analysis. For instance, one could easily argue that layoffs are triggered by productivity shocks whilst quits are triggered by reservation wage shocks ([Blanchard and Tirole, 2008](#)).

This paper conducts a more comprehensive analysis of the potential effects of the UIS on job turnover. Firstly, we take into account potential selection effects through the estimation of a multivariate mixed proportional hazard model—multiple spell and multiple states with competing risks—allowing for jointly-distributed unobserved heterogeneity. Although sample selection effects might be important in these types of analysis,<sup>1</sup> few empirical papers take them into account. In particular, the analysis considers three distinct initial states: employment, involuntary unemployment, and voluntary unemployment. Secondly, we define a competing risk model for employment and unemployment spells as follows: within the state of employment, the analysis differentiates between quits (leading to voluntary unemployment) and layoffs (leading to involuntary unemployment). Within the involuntary unemployment state, we consider whether the spell ends in recall or the worker's entry into a new firm. Within the voluntary unemployment state we only consider exit to employment, as job quitters probably face zero recall expectations. Thirdly, given the strong duality of the Spanish labour market, we allow for heterogeneous effects of the UIS system between workers holding permanent contracts and those holding temporary ones. Finally, the whole analysis is performed separately according to gender.

Although several dimensions of the UIS affect the labour market, we shall concentrate on two of its key components: Entry Requirement (ER) and Potential Benefit Duration (PBD). ER refers to the minimum number of weeks individuals have to work over a specified period in order to qualify for UIS benefits. PBD refers to the maximum number of weeks the unemployed worker is entitled to draw UIS benefits. In Spain, both parameters (ER and PBD) depend on the number of weeks worked over the six years prior to the onset of unemployment. The empirical method is to look for spikes in the employment and unemployment hazard profiles exploiting cross-sectional and longitudinal variations in ER and PBD parameters, respectively. As mentioned above, we allow these UIS parameters to differ between temporary and permanent contracts. Note that the influence of UIS benefits on search behaviour and reservation wage policy might differ depending on the type of contract.

Another key feature of this analysis is the use of an administrative dataset (Longitudinal Working Life Sample, LWLS) that allows compiling full employment histories and analysing the distribution of employment and unemployment durations as affected first by ER and then by PBD. It is very important to use an administrative dataset in this type of analysis since it avoids the existence of seam bias,<sup>2</sup> a serious problem for estimating duration models, as it affects the timing of transitions.

Our results show that omitting the role of unobserved heterogeneity and dependence between the different states will hide the fact,

<sup>1</sup> See [Ham and LaLonde \(1996\)](#) for a discussion of dynamic sample selection in multiple-state, multiple-spell data.

<sup>2</sup> With seam bias, transitions or changes in status within reference periods are underreported, while too many transitions or changes are reported as occurring between reference periods. See [Moore \(2008\)](#) for a summary of seam bias research.

amongst other things, there are certain types of workers whose labour market path is characterised by high exit probability from employment and long unemployment duration. The analysis presented also points to various behavioural consequences of the UIS on job turnover. Firstly, we observe that employment inflow and outflow are influenced by the UIS, varying the intensity of the effect by gender, type of contract and type of transition. In general, these effects stand out for those segments with a loose attachment to the labour market, such as females and temporary workers. Secondly, we show that employers might play a role in the timing of the layoff, as well as in the timing of the outflow from unemployment. Thus, the layoff hazard rate increases when the worker qualifies for UIS benefits; whilst job quit decisions remain unaffected. The exit rate from unemployment for benefit recipients records sharp increases around the time that benefits run out.<sup>3</sup> Interestingly, the recall hazard rate peaks one month prior to the exhaustion of benefits for workers previously hired on permanent contracts. Meanwhile, the new job hazard rate peaks when UIS benefits run out. In light of these findings, it can be concluded that the observed 'moral hazard' effects the UIS has on employment and unemployment duration cannot all be attributed to worker reactions alone. Note that the importance of these results resides in the finding that the UIS tends to reduce the time an individual spends in employment throughout their labour market career.

The rest of the paper is organized as follows. [Section 2](#) describes the main characteristics of the Spanish UIS and [Section 3](#) outlines the theoretical framework and reviews existing empirical literature. The data and econometric model are presented in [Sections 4 and 5](#), respectively. The results of the empirical analysis are given in [Section 6](#). The paper's conclusions are summarized in the final section.

## 2. Institutional background

As in most OECD countries, there are two basic types of unemployment benefits in Spain<sup>4</sup>: Unemployment Insurance (UI) and Unemployment Assistance (UA). All employees who involuntarily become unemployed are entitled to UI benefits, provided that they have been employed for at least 12 months over the 72-month period prior to unemployment. Individuals receiving full-time disability benefits, voluntary job quitters and anyone over the age of 65 are excluded from UI benefits. Benefits end when individuals cease to be unemployed or complete the maximum benefit period. The amount of income provided for the unemployed is determined by multiplying the gross replacement rate by the average basic pay over the 12 months preceding unemployment. The monthly payment is 70% of average basic pay for the first four months of benefits and 60% from the fifth month onwards. Unemployment insurance is also subject to a floor of 75% of the statutory minimum wage (SMW) and a ceiling of between 170% and 220% of the SMW depending on a worker's family circumstances. The last two factors imply that the net replacement rate could be much higher than the gross rate quoted above. PBD and the amount of benefit received depend on previous employment duration and wage levels, respectively. These benefits last for a period of at least 4 months extendable in 2-monthly periods up to a maximum of 2 years, depending on the worker's employment record. UA benefits are available for those who have not been in work long enough to qualify for UI or who have exhausted their UI benefits.

Regarding the Spanish UIS, it is worth pointing out that it is financed by uniform payroll taxes. In particular, employers and employees both pay UI contributions. The government pays the balance outstanding. In the case of a permanent contract, the contribution rate is 7.55% (employees: 1.55%, employers: 6%). For fulltime fixed-

<sup>3</sup> This peaks are sharper than in other economies (see [Grubb, 2011](#)).

<sup>4</sup> For more details of the UIS in Spain see [Bover et al. \(2002\)](#).

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