The part-time pay penalty in a segmented labor market

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ABSTRACT

This paper is the first to examine the implications of switching to PT work for women’s subsequent earnings trajectories, distinguishing by their type of contract: permanent or fixed-term. Using a rich longitudinal Spanish data set from Social Security records of over 76,000 prime-aged women strongly attached to the Spanish labor market, we find that the PT/FT hourly wage differential is larger and more persistent among fixed-term contract workers, strengthening the existent evidence that these workers can be classified as secondary. The paper discusses problems arising in empirical estimation (including a problem not discussed in the literature up to now: the differential measurement error of the LHS variable by PT status), and how to address them. It concludes with policy implications relevant for Continental Europe and its dual structure of employment protection.

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1. Introduction

In the light of the recent surge in PT employment in many industrialized countries, and the relative concentration of women in PT jobs (making the issue a major one in gender equality), many researchers have increasingly become interested in analyzing the hourly wage differential between PT female workers and their FT counterparts and its causes. To disentangle the channels through which the (raw) PT pay penalty emerges is the first step for designing policies which aim at improving the conditions of PT workers. Given the policy relevance of this line of research, it comes as a surprise the little attention there has been, thus far, on the differential effect of PT work on wages across different population subgroups, as the underlying forces behind the PT pay penalty may differ drastically in different labor markets leading to distinct policy recommendations.1

At the same time, there is a growing concern among academics, politicians and practitioners, that the path of partial reforms taken by many Continental European countries, such as France, Germany, Portugal, Italy, and Spain, over the last three decades of maintaining strong employment protection for regular jobs while attempting at establishing more flexible but marginal labor market segments has resulted in a dual labor market. Thus, there has been a deepening segmentation of these labor markets with ‘insiders’ (those with permanent contracts), on the one side, enjoying high level of employment protection, decent jobs and generous benefits, and ‘outsiders’ (those with fixed-term contracts), on the other, having

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1 A possible explanation for this is that most studies (especially in Europe) rely on relatively small sample sizes of individuals who work PT making difficult the heterogeneity analysis. We have identified the following exceptions: Mocan and Tekin, 2003, analyze the nonprofit sector dimension; O’Connell and Gash, 2003, focus on differences between skilled and unskilled workers; and Ferber and Waldigöbel, 1998; Rodgers, 2004; Booth and Woods, 2008; Hirsch, 2005; O’Dorchai et al., 2007; and Mumford and Smith, 2007, study the gender dimension (or focus on male workers).
poor labor market perspectives and low remuneration. Clearly, analyzing the PT/FT hourly wage differential and understanding the underlying channels behind the (possible) PT penalties in these two segments of the labor market ought to be of most relevance for policy making in countries with a high share of unemployment and stringent employment protection legislation. This is the central point of this article.

Our paper is the first to examine the implications of switching to PT work for women’s subsequent earnings trajectories from the dual labor market employment protection perspective, by analyzing the PT pay penalty and its cause across two groups of workers, those with and without a permanent contract. We focus on adult women between 24 and 45 years old and strongly attached to the Spanish labor market and use a rich longitudinal dataset obtained from the Social Security records that covers employment history from 1996 to 2006, and has only recently been available to researchers in Spain.

Considering that one of the primary conditions of establishing secondary-worker classification is low wages (for a given level of human capital) and limited career advancement, which could be measured as lower wage growth (for a given level of human capital), we show that these measured wage differentials between FT and PT workers persist (for a given level of human capital) even after controlling for individual- and firm-level heterogeneity (through fixed-effects) and measurement error in contractual hours. In addition, we find that the wage evidence for secondary worker classification is even more pronounced among PT fixed-term contract workers.

The paper also discusses problems arising in empirical estimation, and how to address them. In particular, one contribution of our paper is to uncover an empirical problem not discussed in the literature up to now: the differential measurement error of the LHS variable by PT status. We use an alternative dataset (the Time Use Survey), to compare contractual hours with actual hours worked and show that PT workers consistently work a greater number of hours in excess of contractual hours relative to their FT counterparts. The result of this measurement error in contractual hours is to bias upwards the hourly wages of PT workers (relative to FT workers) leading to underestimating the PT wage penalty. To address this problem, we follow two different strategies. First, we use imputed effective hours to obtain an estimate of the PT/FT wage differential in levels. Second, we focus our attention on the wage change as opposed to wage level, and drop from our sample of analysis the observations of wage change observed exactly when status changes. Assuming that differential measurement error by PT status is an individual-employment-status fixed-effect, our approach circumvents the problem of differential measurement effect and informs us on whether the PT status also implies a penalty in the subsequent growth of wages.

Spain is a suitable case to investigate this issue because of the striking segmentation of its labor market. The Spanish unemployment rate has been extremely high (as much as one fifth of the labor force) for almost two decades (during the 1980s and 1990s), and it is currently, at 20%, the highest in Europe. In addition, an important dual labor market developed after legislation changes in 1984, resulting in the economy with the highest rate of fixed-term contracts in Europe for the last two decades (over one third of all contracts are fixed-term contracts). Finally, the issue is particularly timely as the Spanish Prime Minister, following other industrialized countries’ practices, is proposing to promote the use of PT work to fight unemployment, arguing that it will add flexibility in the labor market.

This paper is closer to Connolly and Gregory, 2009, (hereafter, CG) in that it examines the implications of switching to PT work for women’s subsequent earnings trajectories using a long unbalanced panel and a fixed-effects ‘within’ estimator approach. Methodologically, our work differs from CG study in the following four ways: First, we estimate the differential PT pay penalty by type of contract. Second, we are able to distinguish between the PT pay penalty and the ‘motherhood pay gap’, as our data contains information on children in the household (whereas CG cannot distinguish between mothers and non-mothers). Third, we identify and address a methodological issue regarding differential measurement error in the dependent variable. And fourth we control for both individual and firm heterogeneity. While our findings for the primary labor market are consistent with those found by Connolly and Gregory (2008, 2009), and Manning and Petrongolo (2008), in the UK and Hirsch (2005), in the US, our work brings to light that in addition to the conventional channels behind the PT penalty, workers with fixed-term contracts suffer a further unexplained loss due to the PT status switch itself, in addition to experiencing negative returns to PT work, strengthening the already existent evidence that fixed-term contracts can be classified as secondary.

The paper is organized as follows. The next section presents an overview of the literature. Section 3 describes the Spanish economic and institutional background. Section 4 presents the data and the descriptive statistics. Section 5 explains the methodological approach, and analyzes the results. Section 6 concludes with a discussion on policy implications. An additional Appendix, which can be found on the authors’ web page, provides further information on the data and detailed results on the sensitivity analyses.

2. Literature on PT earnings penalty

Many researchers have increasingly become interested in analyzing the hourly wage differential between PT female workers and their FT counterparts. While the earliest studies focused on the US (Jones and Long, 1979; Blank, 1990) and the UK (Ermisch and Wright, 1993), the more recent literature has evaluated the PT pay penalty in many industrialized countries, such as Australia (Rodgers, 2004), Belgium (Jepsen, 2001; Jepsen et al., 2005), Norway (Hardoy and Schane, 2004), The Netherlands (Hu and Tijdens, 2003); and West Germany (Wolf, 2002), among others. Most studies find a negative unadjusted PT wage gap, the magnitude of which differs substantially across the different countries. In some studies—such as, Rodgers, 2004; Jepsen, 2001; Jepsen et al., 2005; Hardoy and Schane, 2004; Muñoz de Bustillo Llorente et al., 2008; and Manning and Petrongolo, 2008—, the PT pay penalty vanishes or becomes small when controlling for differences in workers and job characteristics (especially education and occupation). In other studies (Gallie et al., 1998; Gornick and Jacobs, 1996; Kalleberg and Rosenfeld, 1990), a wage gap remains and this unexplained part also shows considerable cross-country variation. Finally, in a third group of studies, a PT pay premium is found (Booth and Woods, 2008; Pissarides et al., 2005; Pagán Rodríguez, 2007). While some of the differences in the results are explained by countries’ institutional and cultural differences, and the amount of information available on workers, jobs, and labor market

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2 See Bentolila and Dolado, 1994; Blanchard and Landier, 2002; Dolado et al., 2002; Cahuc and Kramarz, 2004; Beninger, 2005; Eichhorst, 2007; and Dolado et al., 2007, among others.
3 Although several papers have used longitudinal data to estimate the PT pay penalty (Blank, 1998; Hirsch, 2005; Booth and Woods, 2008, among others), very few have over a decade of data allowing them to observe women extended labor market history (see for instance, Connolly and Gregory, 2008).
4 The measurement error in contractual hours can be explained by employers having an incentive to underreport contractual hours to reduce total labor costs, and being able to act upon it in a much easier way for PT jobs (since they are less protected by the law and the unions) than for FT jobs.
5 As our data comes for Social Security records, we use contractual monthly wages and hours to calculate the hourly wages.
6 For most (96%) of our sample of individuals who switched to PT employment, we observe them several years in either status. Therefore individuals’ attrition because of this restriction is practically negligible.
7 Among workers with permanent contracts, we find that the PT penalty is fully explained by the change of employer, negligible returns to PT work experience, and job characteristics.
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