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## Evaluating the effects of labour market reforms on job flows: The Italian case

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#### ABSTRACT

In this paper, we assess the effects of the labour market reforms to enhance flexibility, implemented at the beginning of the new millennium in Italy. We contribute to the debate on whether temporary contracts have positive or negative effects on employment and workers' perspectives of transition to a permanent job. We use an unexploited panel dataset of work histories for 2003–2010 and propose an estimation method based on Markov chains to measure the effects of the reforms on individual employment. Contrary to the goals of the reforms, our estimates show a small positive effect on job creation and a substitution of permanent contracts with temporary contracts, a risk amplified for young people and workers in the depressed areas of Southern Italy.

#### 1. Introduction

Over the last decades, most European countries have revised their employment protection legislation (EPL) and have introduced more flexible labour market contracts to promote employment and productivity growth (Geronikolaou et al., 2016; Parello, 2011). The increase in temporary contracts became substantial in the '90s with the highest percentages recorded for Spain (24%), Portugal and Poland (about 20%) (Eurostat, various years)<sup>1</sup>.

Italy also introduced several reforms to enhance labour market flexibility<sup>2</sup>. Starting with the Treu Package (Law 196/1997), these reforms generally revised EPL at the margin, mostly providing more flexible types of contracts for new hires (atypical contracts), without modifying the rules for workers who already had permanent (openend) contracts. The combination of reduced protection for new atypical contracts and rigid legislation for standard employment has raised concerns over the risk for workers to be trapped in positions of temporary employment, with lower wages, inferior bargaining power and a lower level of rights and social protection. A number of studies have analysed whether the temporary jobs introduced by the Treu Package have provided a springboard opportunity and a bridge, especially for young people, to permanent jobs (the so-called stepping stone effect) or if they have represented a dead end. This empirical literature found mixed results with respect to the effects on workers' perspectives and contractual careers (Barbieri and Scherer, 2009; Berton et al., 2011; Boeri and Garibaldi, 2007; Gagliarducci, 2005; Giannelli et al., 2012; Ichino et al., 2005, 2008; Kugler and Pica, 2008; Picchio, 2008). In particular, the probability of finding a permanent job increased with the duration of the contract and was positively influenced by the inclusion of training, but decreased with the number of repeated short-term jobs and career interruptions. In addition, most of these studies highlighted the risk of increasing labour market segmentation because less favoured workers (youth, women and people living in the southern regions) remained trapped in temporary employment relationships.

The successive labour market reforms, concerning fixed-term contracts in 2001 and apprenticeship in 2003 (i.e., the Biagi law), increased labour market flexibility more extensively. Some papers have attempted to estimate the effects of these reforms in causal terms, although evaluations of the overall influence are still scanty and the outcome in terms of employment and careers remains unclear (Bruno et al., 2013; Cappellari et al., 2012; Picchio and Staffolani, 2013). One reason may be the long-lasting lack of adequate pre- and post-reform data, since pieces of these reforms became gradually effective from 2005. This paper overcomes this problem by using a rich panel of individual work histories from 2003 to 2010, obtained from a joint

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<sup>&</sup>lt;sup>1</sup> For a debate on the growing role of these contracts in Europe, see Blanchard and Landier, 2002; Dolado et al., 2002; Güell and Petrongolo, 2007; Mourougane and Vogel, 2009. <sup>2</sup> See Addessi, 2014.

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project carried out by the Italian Treasury and the 'Giacomo Brodolini' Foundation - the AD-SILC dataset<sup>3</sup>, although it does not distinguish non-employment between unemployed and inactive subjects.

We evaluate the effects of these reforms on entry into the labour market and transitions between non-employment and employment, in order to answer the following research questions: How has enhanced flexibility shaped job creation and reallocation in the labour market? How have disadvantaged groups been affected by the spread of temporary contracts? Considering that several theoretical arguments can be raised to support the claims that enhanced flexibility either improves or hampers the access to permanent jobs (Booth et al., 2002; Bronstein, 1991), it is particularly important to provide evidence to assess the effects of these reforms on entry into the labour market and on employment transitions. We also stress that the Italian case is particularly interesting because the evidence shows that the spread of temporary contractual forms in this country has been the highest in Europe in the first decade of the 2000 s and has not been homogenous across different groups of workers (Eurostat, various years). Since welfare state and social security systems are not well implemented for non-permanent workers (Thompson, 2009), these workers were placed in a position of extreme vulnerability.

In order to investigate the research questions, we use a method based on Markov chains and first estimate the transition probabilities between non-employment and employment (the *two-state model*), and then extend the analysis to distinguish temporary and permanent employment (the *three-state model*). Within the category of temporary employment, we also identify the specific effects of two atypical contracts, viz., apprenticeship and fixed-term contracts, which are frequently used by firms to hire workers.

Our main results indicate that the labour market reforms produced a reduction of permanent contracts and slightly improved the probability of entering the labour market through a temporary contract, which is particularly evident for young workers. When we estimate the probabilities of transitions for temporary workers, the results indicate a large persistence in temporary job relationships. Even if these results are emphasised for fixed-term contracts, especially in the depressed areas of Southern Italy, they remain unchanged for various socio-demographic decompositions of workers, and subject to the potential caveats. Overall, our analysis confirms that the labour market reforms considered in this study have increased the risk of workers being trapped in temporary jobs after experiencing a history of recurrent short-term contracts. In terms of policy implications, our study raises questions about the effectiveness of enhancing flexibility as a strategy to permanently improve employment, particularly for young workers.

This paper is organised as follows. Section 2 describes the dataset; Section 3 gives a stylised model for labour market employment; Section 4 presents the identification and estimation strategies; Section 5 discusses the results; Conclusions are drawn in Section 6.

#### 2. Data

The AD-SILC database merges the dataset "IT-SILC (2005)" provided by the Italian Institute of Statistics (ISTAT) with the administrative archives of the Italian Institute of Social Security (INPS). It contains the work histories of about 56,000 workers, and includes the amount of national insurance contributions paid for each type of contract, the beginning and ending dates for each contract, data on maternity leave, accidents and/or injuries, and time off for illness. In particular, the administrative data from the INPS archives merge information from the Register of Active Workers (*Casellario degli Attivi*), established in 2005, and the Register of Pensioners (*Casellario*)

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*dei Pensionati*), introduced in 1971<sup>4</sup>. All this information, including workers' age, gender, date of birth, place of birth, and place of residence, are recorded in a panel data framework. On the other hand, education, marital status and nationality are listed cross-sectionally for the year 2005 by the IT-SILC dataset.

Our strategy classifies each worker as pertaining to a given contract when the amount of national insurance contributions paid within that contract is prevalent, irrespective of whether the worker in question has several contracts in a given year and/or different kinds of contracts. This allowed us to select the working experiences of 22,632 employees aged between 15 and 64. As will be argued below, since we focus on the effects of apprenticeship and fixed-term contracts that have been applied gradually at the sectoral and regional level from 2005, the sample starts from 2003 (to 2010). As a partial limitation to the use of the dataset, workers employed by the public sector were excluded from this analysis (since the INPS does not distinguish between temporary and permanent contracts in the public sector) and private employees who retired or died during the analysed period. In addition, we excluded self-employed workers since during the analysed period, many laws were changed specifically for them, complicating the proper identification of the labour market reforms in which we were interested.

Temporary jobs in the AD-SILC dataset include workers in leasing, seasonal work, work on projects, apprenticeships and fixed-term contracts. We removed workers on leasing contracts from the dataset, because detailed information on them was not available<sup>5</sup>. We were also obliged to exclude seasonal workers, due to the large quantities of missing data. The sample finally comprised 19,546 subordinate private workers, for a total number of 156,368 observations within the panel framework. Table 1 lists the composition of our sample, distinguishing between non-employment and various types of employment contracts. In particular, we consider permanent contracts and three types of temporary contracts: work on projects, apprenticeships, and fixed-term contracts.

Work on project contracts (contratto di collaborazione a progetto, "co.co.pro.") were a novelty of the Biagi reform (Law 30/2003) and replaced collaboration contracts (collaborazione coordinata e continuativa, "co.co.co.") introduced by the so-called Treu Package (from the name of the Minister for Labour). Formally, workers were collaborators in a company working on a clearly defined professional project. This type of contract turned out to play a key role in the growth of temporary jobs, providing services which were very similar to those of permanent jobs. Despite the importance of work on projects, we could not identify its effects after the Biagi reform, because the AD-SILC dataset merges previous co.co.co contracts, which were still in place after that reform, with the new co.co.pro. contracts introduced in 2003. Furthermore, Law 20/2003 did not abolish the collaboration contracts allowing these contracts to be implemented for specific contexts. Consequently, there may be still collaboration contracts in use

Apprenticeship contracts<sup>6</sup> were also reshaped by the Biagi reform, by means of several innovations: i) an increase in the limiting age threshold (up to age 30); ii) an increase in the contract's duration, from

 $<sup>^3</sup>$  To our knowledge, only (Naticchioni et al., 2016) have used this dataset to investigate the experience-earnings profiles of young employees.

<sup>&</sup>lt;sup>4</sup> These registers collect social security information for each worker and contribute to the monitoring and evaluation of labour market and social security policies. Merging the registers overcomes the limitations of the previous datasets (e.g., the labour force survey prepared by ISTAT) which collected information from several sources (Forlani, 2008): i) workers' data regarding "hiring and firing", from the Workers' Compensation Authority (INAIL); ii) data on residence from the Ministry of Internal Affairs, and iii) data covering time off for injuries and illness provided by public institutions (e.g., the Ministry of Health).

<sup>&</sup>lt;sup>5</sup> For an extensive discussion on leasing contracts and temporary work agencies in Italy, see Ichino et al., 2005.

<sup>&</sup>lt;sup>6</sup> Apprenticeship contracts were introduced for the first time with Law 25/1955, and are defined as contracts in which the employers are responsible for providing or arranging the provision of vocational training.

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