Contract and Labor effort: an assessment

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Abstract

The aim of this study is to examine the relation between types of contract and labor effort, specifically, to verify if the probability of exerting effort is different for temporary workers respect to permanent ones. Propensity score techniques are used to compare the effort of people who have acquired a temporary job with those of people who started, in the same period, a permanent job. Effort is measured by indicators known in literature (absenteeism and overtime work, paid and unpaid) and the analysis refers to the period 2006-2013, before and during recession. In order to indirectly investigate the presence of unobservables, a sensitivity analysis is performed, testing the robustness of the results to specific violations of the CFA (according to the methodology proposed by Ichino et al.). Data are taken from Italian Labor Force Survey.

Jel Codes: J41, M55

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1. Introduction

In common theoretical settings, effort it has been often defined in relation to shirking, i.e. the provision of “minimal effort” (Shapiro and Stiglitz, 84), but it plays an important role in different strands of literature.

Few papers have shown an inverse relationship between environmental variables (unemployment) and effort at individual level (Leigh, 1985; Askildsen et al., 2005). This literature predicts a pro-cyclical absence rate in line with the discipline device role of unemployment (Vuri and Scoppa, 2014). There is a fear of being fired during periods of recession and EPL and institutional aspects influence the possibility of prosecuting a temporary contract and the probability of being fired itself (Dolado et al. 2013, Ichino and Riphan, 2006) affecting worker’s effort. A more wide literature focuses the attention on optimal contract design, exploring the incentive role of contracts (Lazear and Rosen 81, Holmstrom, 82 Ichino and Riphan, Engellandt and Riphan)². Contract mechanisms and regulation are also part of EPL and institutional aspects that affect effort (De Paola et. al 2014, Barmby, Barmby and Treble). Regulation may influence effort by modifying the duality of labor markets (Dolado et al. 2013).

The existing definitions of effort are empirical based and measures may vary depending on the scope of the research. The most used is absenteeism Engellandt and Riphan, 2005, Ichino and Riphan 2004, Barmby, 2002), (and it’s opposite, presenteeism which is effort above its optimal level, Hirsch et al. 2015). A brief discussion on absenteeism as a signaling factor for temporary workers and as instrument of screening device used by firms that may be found in Amilon and Wallette (2009). Moreover, effort

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² A key result of this literature in in Lazear and Rosen (1981): in their tournament mechanism context, effort depends on the spread between the top prize (of the tournament winner) and the other lower prizes of others. Where the expected spread is equated to marginal cost of exerting effort, reductions in the spread lead to lower effort.


was also proxied by overtime working, paid and unpaid (Engellandt and Riphan, Givord and Wilner, Ghignoni). The Signaling role of overtime working was explored by Anger (2008).

The main aim of this work is to add new and refined evidence on the foregoing issues, focusing on the effort that would be exerted by temporary and permanent workers. The analysis explores the issue whether workers with a temporary contract exert different effort, compared to those who are in permanent positions. Here an emphasis is given on endogeneity issues that typically may arise when comparing permanent and temporary workers. The paper deal with the presence of unobservable factors by examining the robustness of the results, testing specific failures of the CIA, according to a methodology proposed in Ichino, Mealli, and Nannicini (08). The analysis covers the period between 2006 and 2013 to see the results before and during the Great Recession: . . Italy is an interesting case because the great recession hit particularly Country’s labor markets and because it is characterized by a dual and a segmented labor market. A reform has recently took place in Italy with the definition of a new contract in which protection is seniority based and that may have peculiar incentive effects on effort.

Evidence shows that temporary contracts seems to affect absenteeism but not paid and unpaid overtime work. Results being different depending of the effort measure used (as in Engellandt and Riphan). The findings also differs according to the period examined suggesting different behavior before and during the crisis. Before 2008 results shows a gender difference: only women who work with a temporary contract show a lower probability to be absent at work respect to their permanent counterparts (this is consistent with the findings of Ichino and Ripahn). Differently during the great recession period, age seems to have a major role: only people with more than 30 years with a temporary show lower probability to be absent at work respect to permanent workers. But the sensitivity analysis shows that the selection problem arise when we take into account different age groups, suggesting that there may be unobservable factors determine the selection into temporary contracts with individuals more than 30 years of age.

The paper is organized as follows: the next section describes the data, Section 3 deals with the empirical strategy, Section 4 collects the results and Section 5 tests the robustness of the findings. Concluding remarks close the paper.

2. Data

The data used in the study are taken from the Italian Labor Force Survey (ILFS), a household based survey of individuals aged 15 years or older. ILFS provides, on a quarterly basis, a quite rich dataset with many observations (about 200,000 individuals per wave) and contains a wide set of control variables of personal information (gender, age, education, marital status, among others) as well as of "work features" (e.g. the type of contract, sector and occupation). Salary was introduced only in 2009.

The ILFS is conducted quarterly as a 2-2-2 rotating panel and each household member is interviewed in two consecutive surveys and after being excluded from the sample for two quarters s(he) is re-interviewed in another two consecutive quarters (2-2-2 rotation), This allows maintaining 50% of the sample unchanged both in two consecutive quarters and one year ahead and. When surveys are separated by three and four quarters, this makes for the building of a two year panel composed of different subsamples in which there are three observations for every individual. In this case the percentage of overlapping drops to 25%.
This allows implementing the peculiar evaluation strategy used in this paper\(^3\). The analysis is restricted to the individuals seeking work at time \(t_1\) and successfully finds it (with a “temporary” or a “permanent” contract) in \(t_2\). The observed outcome consists in the performed effort (absence and overtime work) of respectively, temporary and permanent workers at time \(t_2\). In a three period panel, pre-determined characteristics of the individual are collected at time \(t_0\) (before they find work). A propensity score matching, based characteristics at \(t_0\), is performed to compare those who enter in a temporary job and those who enter in a permanent one between \(t_1\) and \(t_2\). The identification strategy here is selection on observables. The sensitivity analysis for matching estimators is performed to test the robustness of the results to specific failures of the CIA Assumption\(^4\). Several estimates of the ATT under possible deviation from the CIA are presented here.

In ILFS the absence indicator describes if the worker was absent the entire week prior to the survey. The overtime work indicator is obtained from the question “whether in the week prior to the survey they have worked overtime hours?” Unpaid overtime work is taken considering the additional question if the overtime hours were remunerated. It is noteworthy that in the LFS poll the questions relate to the week prior to the survey. All the effort indicators used in this paper are binary variables\(^5\). The relationship between effort indicators and temporary employment is at first explored on cross section data and a set of control variables logit model on cross section data. This analysis is set out for various years from 2006 to 2013.

3. References


\(^3\) A similar strategy aimed to evaluate the effect of a spell of temporary employment on labor strategy was proposed before this paper in Paggiaro, Rettore and Trivellato (09 )

\(^4\) The methodological approach is suggested in Ichino, Mealli & Nannicini (2008).

\(^5\) The analysis is restricted to employees.


Mancini M. (2011) Labor Effort and temporary job evidence for Italy, Quaderni del Dipartimento di Economia, Finanza e Statistica n. 95, Università di Perugia.


