

Working Paper no. **200**

**Tightening temporary contracts: evaluating the effects of
Decreto Dignità on job and employment security**

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July, 2026

Tightening temporary contracts: evaluating the effects of Decreto Dignità on job and employment security

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Abstract

What happens to individuals' employability after being hired with a stricter Temporary Contract? I.e. maximum duration of temporary contracts reduced from 36 to 24 months, and the possibility to use them without justification limited to the first 12 months. We estimate a duration model of the hazard of terminating a job or employment spell, comparing treated to PSM-twin control individuals. Both job and employment security increase; women, migrants and workers in small firms benefit more. The hazard of moving to an open-ended contract within the same firm increases significantly at the end of the first year of tenure.

Keywords: Italian Decreto Dignità; duration model; propensity score matching; temporary contracts; employability.

JEL codes: J08, J41, J64, J68.

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1 Introduction

Policy makers promote reforms that increase flexibility of temporary contracts claiming that this would support labour demand, firms' performance and workers' employment probabilities. On the other hand, empirical literature usually compares temporary contracts (TC in what follows) to open-ended contracts (OEC) to assess the effects of increased labour market flexibility, while very seldom it can focus on different degrees of flexibility of TC. A further unanswered question is whether the effects are symmetric, i.e. what happens when decreasing TC flexibility, as the Decreto Dignità did.

The Italian Decreto Dignità introduced substantial changes to the regulation of fixed-term employment contracts, with the stated objective of reducing labor market precariousness and encouraging more stable employment relationships. The reform tightened the conditions under which fixed-term contracts can be renewed or extended, reintroduced causality requirements beyond a 12-month initial duration, and increased dismissal costs through higher contribution rates for successive contracts. While these measures were designed to discourage excessive reliance on temporary work, their actual impact on employment dynamics, and on the duration of fixed-term contracts, remains an open empirical question. While the empirical literature on Italian labour market reforms is relatively extensive for other interventions, evidence on the Decreto Dignità remains almost null¹. Moreover, the assumption that tightening rules on temporary contracts should have effects symmetric to those of past flexibilisation reforms is untested, as far as we know. We therefore aim to fill these gaps in the literature.

To identify the causal impact of the reform, we exploit its introduction as a quasi-experiment and implement a duration model. Outcome of interest is future employability, defined as the probability of retaining the current job (job security), or the probability of being employed across different firms with short intervening unemployment spells (employment security).

However, since the reform targets all temporary contracts, we do not have the chance to use as a control group an ineligible group, as is usually used in quasi-experiments. We therefore compare changes in job and employment duration for workers exposed to the reform relative to workers with the same characteristics in the period prior to the reform, matching workers exposed to the reform and workers not exposed using a very rich set of observable characteristics of workers and of their previous career.

2 Institutional framework

Before the introduction of the Decreto Dignità, employers were allowed to stipulate TC with a maximum duration of 36 months without the need to provide any justification, and TC could be renewed up to a maximum of five times.

With the introduction of the Decreto Dignità in July 2018, the regulatory framework shifted toward a more restrictive one. The maximum duration of TC was reduced from 36 to 24 months, and the possibility to use them without justification was limited to the first 12 months. Beyond this limit, employers were required to provide specific reasons for the use of TC instead of OEC. Additionally, the maximum number of renewals was reduced from five to four, further limiting the use of TC. The reform only applied to new contracts (signed after its entry into force). For existing contracts, a transitional period was introduced: they continued to be regulated by the previous rules until October 2018, after which the new regulation became effective (we do not include them in the analysis).

¹ To the best of our knowledge the only paper focussing on Decreto Dignità is Fiaschi and Tealdi (2024). Their approach is at the aggregate/cell level, while ours is at the micro level within the impact evaluation approach. Results are broadly coherent.

3 Methods

In a nutshell our econometric approach exploits the richness of the data at hand to perform a propensity score matching between workers exposed to the reform and workers not exposed, the second being workers employed before the reform came into force, as the reform is universal and rolled out at the same point in time for everybody. We then estimate a duration model of the hazard of terminating a job or employment spell, comparing treated to twin-control individuals.

3.1 Data

We use an administrative source known as Comunicazioni Obbligatorie (CO) jointly managed by the national and regional labor authorities. CO cover the population of labour market flows (hirings, extensions, terminations, temporary to permanent conversions) from 2008 onwards. We have access to CO for the Piedmont Region: Piedmont accounts for about 7% of the national GDP and workforce.

3.2 Sample selection

We select temporary contract job spells as follows:

- starting between January 1st 2017 and June 30th 2017 (controls)
- starting between July 1st 2018 and December 31st 2018 (treated)

I.e., we sample jobs in the first 6 months of each period and follow them up in the following 12 months: the follow up ends at latest on June 30th 2018 for controls (i.e. right before the introduction of the Decreto Dignità) and on December 31st 2019 for treated workers (i.e. right before the onset of the COVID pandemic). Notice that GDP was virtually constant in the relevant period (2017-2018) in Piedmont, posing no significant threats of confounding elements at the macro level to our analysis (on-line appendix A provides evidence).

We include in the sample all TC that are not replacement, seasonal or temporary work agency jobs. We exclude workers over 60 years of age at the hiring as well as agriculture, public, domestic and entertainment sectors that are not hit by the reform, due to their very specific traits. We also exclude job spells that last less than 7 days to reduce noise (on-line appendix B provides descriptive statistics). Some workers are eligible to be included both as treated and controls, or they could have more than one eligible job spell. In those cases, we randomly pick one job spell and exclude the others so that a worker will only be sampled once, either as control or treated.

3.3 Model specification

First, we use a propensity score model to match treated and controls; we then estimate a duration model on the matched sample. We use a duration model both for estimating the effect of the reform on job duration (time elapsed from the beginning to the end of the sampled job spell, including possible transformation into OEC) and employment duration (time elapsed from the beginning of the sampled job to the end of the employment spell, defined as a period of time where the worker is not unemployed for more than 30 consecutive days).

The PSM is performed on a rich set of information: dummy if sampled job is the first job in the last three years, entry age, gender, 2 digit sector, 2 digit occupation, part-time dummy, log firm size, commuter, native, work in Torino, past experience, total non-employment days in the last three years, total jobs held in the last three years, share of part time employment in the last three years, share of days in high skill occupations in the last three years, number of different 2 digit sectors in the last three years, number of different 2 digit occupations in the last three years. We match using a nearest neighbour algorithm, with no replacement and a 0.1 caliper. Summary statistics on the PSM are as follows (on-line appendix C provides full details).

Table 1: Summary statistics on the PSM

Sample	Ps R2	LR chi2	p>chi2	MeanBias	MedBias	B	R	%Var
Unmatched	0.006	839.84	0.000	5.5	3.8	18.6	0.99	67
Matched	0.000	10.51	0.881	0.4	0.3	2.2	0.97	33

The statistical model is a discrete time hazard logistic model, with the following equation:

$$\text{logit}\{h(t)\} = \alpha + \sum_{t=1}^{12} \beta_t I(T = t) + \gamma D + \sum_{t=1}^{12} \delta_t [I(T = t)D] + X\theta \quad (1)$$

$$\text{logit}\{h(t)\} = \alpha + \sum_{t=1}^{12} \beta_t I(T = t) + \gamma D + \sum_{t=1}^{12} \delta_t [I(T = t)D] + X\theta \quad (1)$$

where e^{β_t} is the odds ratio of exit at time t for the reference group ($D=0$) relative to the baseline time period, and e^{δ_t} is the increase - when $D=1$ - in exit odds relative to baseline in t :

$$e^{\delta_t} = [OR_{\{t|D=1\}}]/[OR_{\{t|D=0\}}] \quad (2)$$

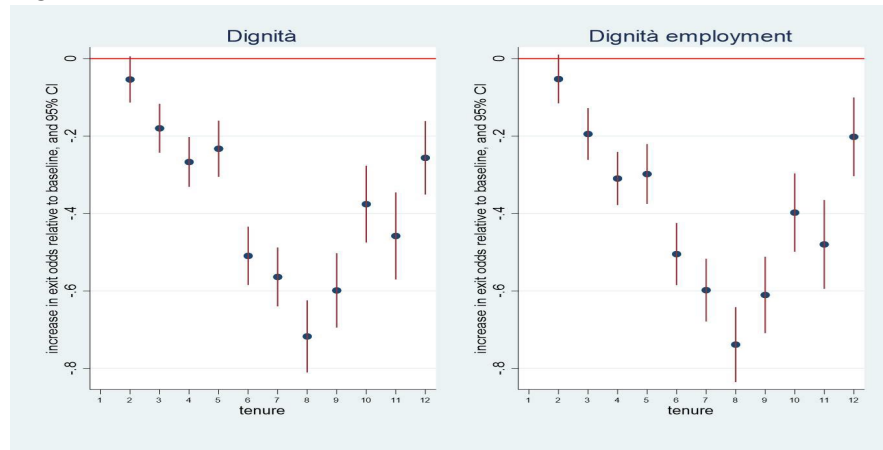
$$e^{\delta_t} = [OR_{\{t|D=1\}}]/[OR_{\{t|D=0\}}] \quad (2)$$

We include as covariates in the model the same set of variables entering the PSM model. In the next section we plot e^{δ_t} and 95% confidence intervals.

4 Results

Results show that the reform decreased both the probability of losing the job and the probability of terminating the employment spell. Some of the estimates' variability might be due to residual seasonality but overall consistency reinforces the conclusion that the reform has a positive effect on job and employment security. The two estimates are not so different as most employment spells are made of only one job (see on-line appendix B).

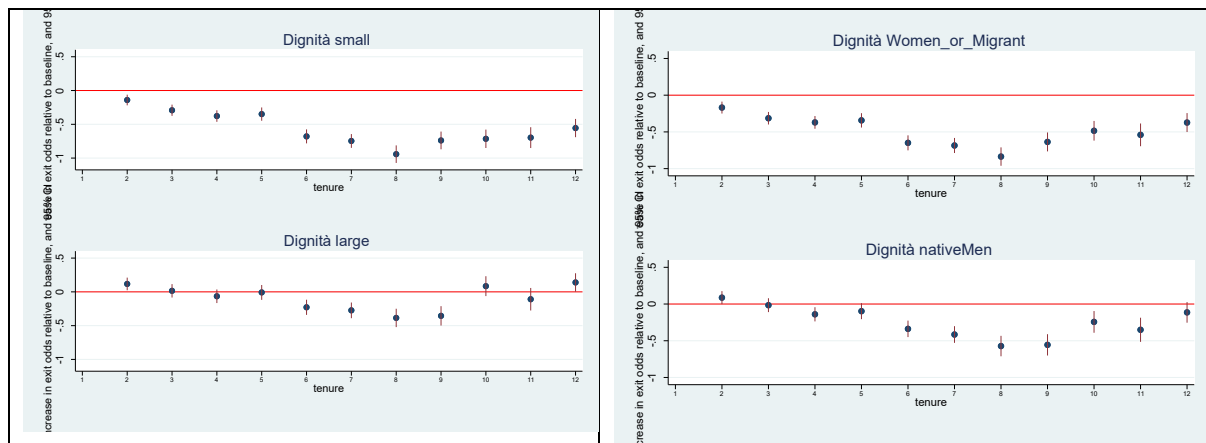
Figure 1: increase in exit odds relative to baseline, and 95% CI



Note: see eq. (2)

Heterogeneity analysis shows that non-natives and women are more advantaged than native men, as well as workers employed in small firms (below 20 employees) rather than large ones. In both cases, the reform has a stronger protective effect on the most fragile workers.

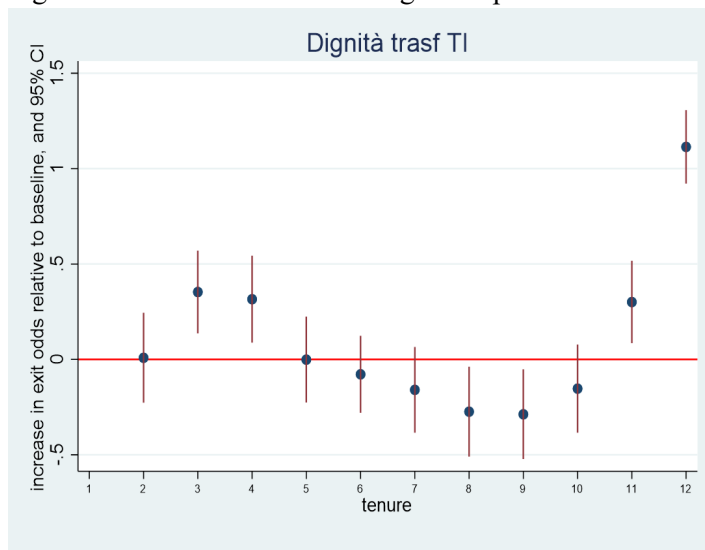
Figure 2: increase in exit odds relative to baseline, and 95% CI", by gender, nationality and firm size



4.3 Transformation to open-ended contract

We also model - in the very same econometric framework - the hazard of obtaining a transformation from TC to OEC within the same firm. We find that this probability increases and becomes significant approaching the twelfth month, i.e. when firms must produce a reasonable justification in order to use TC instead of OEC.

Figure 3: increase in exit odds to get an open-ended contract, relative to baseline, and 95% CI



5 Extensions

We compute the share of days worked over the 12-month follow-up period and we estimate the difference in that share across treated and matched controls². On average treated individuals share of worked days in a year is 1.5 percentage points less than controls (1.35 in case of FTE); a result that although statistically significant is economically small.

Finally, we replicate model (1) selecting individuals that enter unemployment - instead of a TC - using the same setting, periods and econometric strategy (on-line appendix D for details). The hazard of a job-to-job movement (within 2 months) is unchanged, while that of getting a job afterward decreases till month 10, when the difference between treated and twin-controls is again non-significant, pointing again to an economically small and transitory effect.

6 Discussion and Conclusions

Our paper contributes answering the following question: what happens to individuals' future employability after being hired with a stricter TC? To do so we focus on the Decreto Dignità implemented in July 2018. In a companion paper we study the Poletti reform - implemented in April 2014 and lasting till July 2018 - that produced a more flexible setting of TC. To be more specific, before the Poletti reform TC had a maximum duration of 24 months (12 months with no justification needed to use a TC instead of an OEC), and only one possible renewal/extension. As said, after the Poletti reform TC had a maximum duration of 36 months, all with no justification needed, and 5 possible renewals/extensions.

We highlight no symmetric effect: (i) null (or inconclusive) effect on workers' employability produced by higher flexibility of TC generated by the Poletti reform; (ii) positive effect on workers' employability if we lower the flexibility of TC (Decreto Dignità), mostly for the weakest parts of the labour force (women, migrants, small firms' employees); furthermore, significant increase of OEC transformation, negligible decrease in worked days and transitory slowdown of re-entering employment after a non-work spell. Overall, we can say that while increasing flexibility of TC does not show significant improvements in workers' employability perspective, decreasing TC flexibility does so. Our results are consistent with the (scant) literature on the topic focussing on similar TC reforms in European countries: e.g. Daruich et al. (2023), Aguirregabiria and Alonso-Borrego (2014), Brüll (2019).

A unavoidable limitation of our study is its short run perspective, as the reform has been followed shortly by the COVID pandemic that changed the Italian labour market environment significantly, making a consistent longer run perspective difficult to justify.

References

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² We apply the same PSM of the above models and estimate a fractional response model on the matched sample.

Funding source

This work was supported by PRIN 2022 - 20224PY4F4 Project “Job Safety, Globalization and Labor Market Institutions” CUP: D53D23006130006

Data availability

The CO data are not publicly available because access is restricted by the data provider.