Jumping into traps
the scarring effect of being a temp

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1. Literature on temporary contracts - Temporary and permanent workers in comparison: contract scarring?

Main findings in the literature:

- **Wage penalties** (Barbieri and Cutuli, 2009; Barbieri *et al.* 2016).
- **Less training** (Berton and Garibaldi, 2012; Gash and McGinnity, 2007; Lange, 2007)
- **Bridges or traps?** (Addison and Surfield, 2009; Berton *et al.*, 2011; Güell and Petrongolo, 2007; Ichino *et al.*, 2008; Magnac, 2000)
- **Average lower productivity**

Features: 1. Permanent vs temporary contracts; **2. Persistence** in temporary contracts is the discriminatory fact

2. General identification of contract scarring: our proposal

Features: 1. Temporary vs temporary contracts; **2. Persistence** in temporary contracts is an **outcome of discrimination**

Identification: Market screening of the prospective employer with use of information on the former employer financial condition

		TEMPORARY WORKER		PROSPECTIVE EMPLOYER	
		High Ability	Low Ability		
FORMER EMPLOYER	Financially sound	Rehire	Leave	Group 1: Low ability	
	Financially distressed	Leave	Leave	Group 2: Average of low and high ability	Statistical discrimination

3. Hypothesis

Temporary workers who face contract expiry and are not rehired by the firm have a higher probability of being hired if they come from a financially distressed firm compared to similar workers that come from a financially-sound one.

4. Data and sample selection

Workers' characteristics	Individual sociodemographic	Compulsory notices (Ministry of Labour)
	First work-relation	
Employers' characteristics	Firm financial and real performance	AIDA (Bureau van Dijk)
	Firm stock of employees	ASIA (ISTAT)
Financial shock Credit constraint (intensity)	Index of banks' supply of loans	RBLS (Bank of Italy)
	Firm laverage to banks	AIDA

Workers → 3201 individuals

- Direct hire fixed-term contracts
- Individuals aged 16-29
- Individuals at their first formal employment experience
- In the time-window 1st Sept 2010 – 31st Dec2015
- Exclude re-employment and job-to-job transition
- Censoring at 18 months of unemployment

Firms → 1448 firms

- Service and Industry

5. Econometric strategy

Discrete-time piecewise constant duration model. We follow individuals for **6 quarters** after contract expiry. *i: worker, f: firm, s: semester, q: quarter, k: sector*

- **Dependent var**: employment in quarter q for individual i $y_{iq} \in Y = \{0,1\}$
- **Main covariate:** $CreditRestriction_{fs}$ = $leverage_{fy}$ x credit $supply_{ks}$; $CR \in [-20, 20]$
- **Covariates**: **Worker, W →** Gender, Age at end of contract, Province of residence, Contract duration, Registered at PES -> Education, Part-time/Full-time, Cause of exit, Qualification (1dgt), Province of workplace, Quarter indicator **Firm , F →** Stock of employment, Debt toward banks on revenues, ROE, Value added, Sector indicator, Firm indicator.

Linear predictor

$$\tau_{iq}^{y} = Baseline_q'\boldsymbol{\beta_0} + \beta_1 CreditRestriction_{fs} + W_{iq}'\boldsymbol{\beta_2} + F'_{fs}\boldsymbol{\beta_3} + \varepsilon_{iq}$$

Logit link - Odds-ratio of being employed $= \exp\{\tau_{iq}^{1}\}$

6. Findings: 12.5% higher probability of employment per 1 p.p. increase in intensity of credit restriction.

	B1.1 Baseline	B1.2 Robust st.err.	B1.3 Clustered st.err. (province)	R1.1 8 quarters	R1.2 4 quarters	R2 LPM	E1 Without firm indicators	E2 With education
Credit restriction	1.124***	1.124***	1.124***	1.121***	1.123***	1.017***	1.015	1.303***
(odds-ratio, excluding R2: OLS)	(0.0224)	(0.0255)	(0.0410)	(0.0214)	(0.0322)	(0.00356)	(0.00944)	(0.0445)
Person-period observations	19206	19206	19206	25088	12832	19116	19116	12318
Person-event observations	3201	3201	3201	4181	2139	3186	3186	2053
N enterprises	1447	1447	1447	1420	1441	1433	1447	1070
Baseline, Quarter, Sector, Firm Indicator	Y***,Y,Y,Y	Y***,Y,Y,Y	Y***,Y,Y,Y	Y***,Y,Y,Y	Yes***	Y***,Y,Y,Y	Y***,Y,Y,N	Y***,Y,Y,Y

NB: *** p<0.01, ** p<0.05, * p<0.1 ; standard errors in parenthesis, Yes***: significance level for baseline indicator

7. Work in progress

- Full population 2009-2018
- Consider subsequent spells to test the hypothesis that stigma becomes weaker for longer individual employment histories, consistently with the idea that individual ability is progressively unveiled.