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Hiring incentives and/or firing cost reduction? Evaluating the impact of the 2015 policies on the Italian labour market

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* The Bank of Italy and the Eurosystem bear no responsibility for the analyses and conclusions, which are solely those of the authors.

The timing of structural reforms

1. **Political economy factors: crisis as trigger of reforms**

2. **Short run adverse impact of reforms is bigger during a recession (and when monetary policy is constrained by ZLB and/or already overstrecthed)**

3. **Particularly so for labour market reforms focusing upon firing cost reductions:**
    1. Longer run positive effects are less clear cut as they are related to allocative efficiency
    2. Short run negative effects (through faster reaction of firings to output) may predominate, further feeding up a recessionary spiral

The Italian case

Since 2008 Italy suffered from a **double deep recession after a 15 years** period of progressive (albeit discontinuous) introduction **of bits of labour market flexibility "at the margin" had increased labour market segmentation**

Labour market reforms tackling such a segmentation and strengthening (through a widening of coverage of) unemployment relief started **in 2012** but **falling short of fully tackling the "flag-carrier" principle of workers' reinstatement** in case of unjust firing of permanent employees (in 15+ firms)

A second round of reforms decided in 2014, possibly also motivated by the intention to show the capability to deal with such an unsolved issue (with reform plans sketched over the previous 20 years)

Italy's policy measures

A new dismissal regulation, but **only for newly established permanent contracts** (so ruling out impact upon job separations)

A large (albeit temporary) economic incentive favouring newly established permanent contracts

The new dismissal regime significantly reduces the (uncertainty related) costs of firing: it reduces the area in which workers' reinstatement is possible; it reduces the maximum amount and predetermines the monetary compensation to be paid in case of an unjust dismissal; a special tax regime nudge worker and firm to settle their case without recurring to the judge (who can decide either for a just cause dismissal, costless for the firm as before, or for a predetermined seniority related compensation). andofr ith no who can alternatively to ir employees

Our econometric exercise

- We exploit some discontinuities related to the overall policy package to disentangle the effects of its two main ingredients (the new firing rules and the hiring subsidy):
  - Timing (1st January vs 9th March 2015, each measure having been legislated approximately 2 months earlier)
  - The workers' eligibility of the hiring subsidy was lack of a permanent contract in the previuous semester (notice that also temporary to permanent contracts transitions are covered, within the same firm or from another firm and "testing" on a temporary basis a worker before offering her a permanent contract is a suitable firm's strategy)
  - Firms' "eligibility": the firing costs reduction matters (mostly) for 15+ firms
- We look at administrative data on hiring, firing and conversions occurred in a large Italian region (Veneto) between January 2013 (pre-policy-period) and June 2015 (post period). 2 million working episodes involving 800,000 workers and almost 200,000 firms. For each event: date of the job contract and the type (permanent/temporary), unique worker and firm identifiers, firm size class.

What we do

- We look at several outcomes:

  1. Conversion of fixed-term job contracts into open-ended contracts
  2. Firm hiring
  3. Individual labour market transitions (towards permanent employment)
  4. Total net job creation (hiring-separations)

An anticipation of what we find

1. We find that both policies favoured the re-composition from temporary to permanent employment;

2. We find that both policies favoured net job creation,
   - A quantitatively **larger effect** of hiring incentives,
   - But also a **non-negligible** positive impact of reducing firing costs.
3. Some deeper structural effects
   - Reducing firing costs increases firms readiness to hire "unknown" workers
   - Still firms exploit the possibility of testing "unknown" workers on a temporary basis
4. Of course, several caveats:
   - Very short period of analysis
   - No general equilibrium considerations (no supply side), no full evaluation of all aspects of the two policies

Estimation

Two dimensions of our dataset:

- Random sample of 5000 firms. For each firm we define cells as before. Closed panel (no entry, no exit). Different cells according to type of job contracts (6 types) , whether the worker had a permanent job contract in the previous semester (eligibility condition in 2015), size of firm, month and year.

- Random sample of 50,000 individuals, selected among those with at least one occurrence from 2013 to 2015.

Job contract conversions: estimated equation

We define a dummy variable π equal to 1 if the fixed-term position is converted into an open-ended position and we estimate:

$$[1] \qquad \pi_{pgwym} = \gamma_p + \gamma_g + \gamma_w + \gamma_y + \gamma_m + \beta D_{(w=1)(y\geq 2015)} + \delta D_{(g=15+)(y\geq 2015)(m\geq March)} + \epsilon_{pwym}$$

Identification:

- ✓ Time, firm size and non-eligible workers:
  - ✓ Those with an apprenticeship contract
  - ✓ Those with a permanent job in the previous semester

Job contract conversion: results

	(1)	(2)	(3)
Incentive (PHI)	0.008	0.007	0.009
	[0.086]*	[0.095]*	[0.075]*
Jobs Act (CTC)		0.005	0.013
		[0.000]***	[0.047]**
Incentive (PHI)*Jobs Act (CTC)			-0.009
			[0.209]
Individual fixed-effects	yes	yes	yes
Year and month dummies	yes	yes	yes
Observations	625,306	625,306	625,306
R-squared	0.164	0.164	0.164
Monthly probability of conversion in 2013-14	.009	.009	.009

Linear probability model. Robust p values in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. The dependent variable is a dummy equal to 1 if the fixed-term job contract is converted into an open-ended contract.

Worker's probability to find a permanent job

$$[1'] \qquad \pi_{pwym} = \gamma_p + \gamma_w + \gamma_y + \gamma_m + \beta D_{(w=1)(y\geq 2015)} + \epsilon_{pwym}$$

Identification:

- ✓ Time, non-eligible workers
- ✓ β identifies hiring incentives only

Hiring with permanent job contracts : results

	All	Non-working at time t-1	Fixed-term at time t-1
	(1)	(2)	(3)
Incentives (PHI)	0.008	0.008	0.011
	(0.000)***	(0.000)***	(0.001)***
Individual fixed-effects	yes	yes	yes
Year and month dummies	yes	yes	yes
Observations	1,289,075	860,185	428,890
Monthly probability to find an open-ended job position in 2013-14	.008	.008	.005

Linear probability model. Robust p values in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. The dependent variable is a dummy equal to 1 if the person finds a permanent job position and 0 otherwise. The model in column (1) includes also a dummy for the condition at time t-1 (whether employed temporarily or not employed). The second column refers to people moving from unemployment into a permanent employment; column (3) refers to transitions from fixed-term to open-ended job contracts in another firm within the same month.

Permanent gross hiring: estimated equation

$$[2] \quad n_{igofwym} = \gamma_i + \gamma_g + \gamma_o + \gamma_f + \gamma_w + \gamma_y + \gamma_m +$$

$$+\beta_1 D_{(o)(w=1)(y\geq 2015)} + \beta_2 D_{(f)(w=1)(y\geq 2015)}$$

$$+ \delta_1 D_{(g=15+)(o)(y\geq 2015)(m\geq March)} + \delta_2 D_{(g=15+)(f)(y\geq 2015)(m\geq March)} + \epsilon_{iofgwym}$$

Identification:

- ✓ Time, size and non-eligible workers in small firms
- ✓ β_1 and δ_1 identify the direct effect on permanent hiring

Controls:

- ✓ Firm-level (with firm fixed-effects).
- ✓ «known/unknown» workers

Permanent gross hiring: results

	(1) total hires	(2) total hires	(3) total hires	(4) total hires	(5) total hires	(6) total hires-job-to-job flows
Incentive (PHI), Open-ended	0.040	0.039	0.036	0.008	0.008	0.039
	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***
Jobs Act (CTC), Open-ended		0.03	-0.006		0.008	0.044
		[0.041]**	[0.335]		[0.000]***	[0.099]*
Incentive (PHI), Jobs Act (CTC), Open-ended			0.074			-0.013
			[0.013]**			[0.000]***
Anticipating incentive (PHI), Open-ended	-0.014	-0.014	-0.015	-0.004	-0.004	-0.004
	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.583]
Anticipating Jobs Act (CTC), Open-ended		0.019	0.019		0.003	
		[0.203]	[0.198]		[0.107]	
Known, Inc. (PHI), Open-ended				0.007	0.008	
				[0.000]***	[0.000]***	
Known, Jobs Act (CTC), Open-ended					-0.008	
					[0.000]***	

Permanent gross hiring: size of the effects

	(1) total hires	(2) total hires	(3) total hires	(4) total hires	(5) total hires	(6) total hires-job-to-job flows
Share of flow of permanent contracts due to the policies						
Effect of incentives (PHI)	39	38	30	39	38	51
Effect of Jobs Act (CTC)		5			5	12
Effect of both policies			5			
Share of total flow due to the policies						
Effect of incentives (PHI)	8	8	6	8	8	14
Effect of Jobs Act (CTC)		1			1	3
Effect of both policies			1			

Linear probability model. Robust p values in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. The dependent variable is the number of hires made by each firm. For each firm we identify cells measuring the number of hires of workers with given characteristics made by the firm. Each cell is defined by the intersection of month (from January 2013 to June 2015), type of contract (6 categories), eligibility to PHI (as defined in the text), size of the firm (smaller than 15, 15+), and past relationship with the firm (worker known, unknown) in columns 4 and5, only. Difference between total hires and job-to-job flows in column 6.

Net job creation: estimated equation

$$[2] \qquad n_{igofwym} = \gamma_i + \gamma_g + \gamma_o + \gamma_f + \gamma_w + \gamma_y + \gamma_m +$$

$$+\beta_1 D_{(o)(w=1)(y\geq 2015)} + \beta_2 D_{(f)(w=1)(y\geq 2015)}$$

$$+ \delta_1 D_{(g=15+)(o)(y\geq 2015)(m\geq March\ )} + \delta_2 D_{(g=15+)(f)(y\geq 2015)(m\geq March\ )} + \epsilon_{iofgwym}$$

Identification:

- ✓ Time, size and non-eligible workers in small firms
- ✓ β_1 and δ_1 identify the direct effect on permanent hiring

Controls:

- ✓ Firm-level (with firm fixed-effects).

Net job creation: results

	(1)	(2)	(3)	(4)
	Closed panel (5,000 firms)			**Unbalanced panel (50,000 firms)**
Incentive (PHI), Open-ended	0.04	0.038	0.036	0.005
	[0.000]***	[0.000]***	[0.000]***	[0.000]***
Jobs Act (CTC), Open-ended		0.03	-0.006	-0.009
		[0.047]**	[0.447]	[0.123]
Incentive (PHI), Jobs Act (CTC), Open-ended			0.075	0.014
			[0.016]**	[0.071]*
Anticipating incentive (PHI), Open-ended	-0.006	-0.007	-0.007	-0.003
	[0.028]**	[0.023]**	[0.019]**	[0.000]***
Anticipating Jobs Act (CTC), Open-ended		0.018	0.018	0
		[0.282]	[0.272]	[0.991]
Main effects	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes
Observations	1,865,880	1,865,880	1,865,880	10,400,000
R-squared	0.004	0.004	0.004	0.004
Share of flow of permanent contracts due to the policies				
Effect of incentives (PHI)	51	47	41	47
Effect of Jobs Act (CTC)		5		
Effect of both policies			5	5
Share of total flow due to the policies				
Effect of incentives (PHI)	42	38	35	38
Effect of Jobs Act (CTC)		4		
Effect of both policies			4	4

Linear probability model. Robust p values in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. The dependent variable is the difference between the number of hires made by each firm and the number of job separation in the same cell. For each firm we identify cells measuring the number of hires and job separations of workers with given characteristics made by the firm. Each cell is defined by the intersection of month (from January 2013 to June 2015), type of contract (6 categories), eligibility to PHI (as defined in the text), and size of the firm (smaller than 15, 15+). Unbalanced panel of 50,000 firms in column 4.

Conclusions

We find that both hiring incentives and firing costs reduction were successful in both reducing dualism and stimulating (net) hiring.

Our analysis has several drawbacks:

- Short term analysis
- Our estimates do not consider all the relevant aspects in evaluating the measures (see Brown et al., 2011, for a wider theoretical discussion on hiring subsidies). There are MANY details that may be relevant and we do not consider here.
- Indeed, we believe that our exercise is useful in the discussion on how to favour job creation and on the short-term impact of reducing firing costs (in downturns).

Robustness:

- Transitions from small to large firms (an viceversa).
    - ✓ Higher than «normal» transitions (e.g. from temporary in one firm to permanent in another firm) were affected by the policies, but their effect is very small.

- We drop firms around the 15-employees threshold, which could strategically modify their size in response to the policy. Also in this case the results are qualitatively similar.

Thank you very much!