

# Firm-size dynamics and the role of labour market institutions

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# Literature review

### · Firm characteristics

- Smaller firms tend to produce more jobs (Birch 1979; Lotti et al 2003; Neumark et al 2011) but only after controlling for age (Haltiwanger et al 2013)
- Younger firms tend to produce more jobs (Gomez-Salvador et al 2004; Haltiwanger et al. 2013)
- Evidence that more productive firms produce more jobs (OECD 2009)

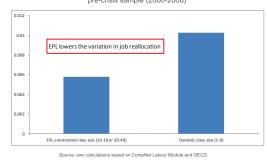
### Labour market institutions

- Stringent EPL inhibits the emergence of high-risk entrepreneurial firms (Henrekson and Johansson 2010)
- Stringent EPL reduces dismissal probabilities for permanent workers that are concerned by restrictions (Boeri and Jimeno 2005)
- size-contingent EPL makes allocation of labour sub-optimal (Schivardi and Torrini 2008; Garicano, Lelarge and Van Reenen 2013)

# Job reallocation rate: cross-country variation

Size-contingent EPL reduces reaction of jobs to market-driven shocks

Job reallocation rate (st. dev.): most constrained versus most dynamic size class; pre-crisis sample (2000-2008)



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# EPL and the 20-employee threshold

Stricter EPL increases the difference in the growth performance between firms not covered by the EPL and those that would become covered (i.e. if exceeding the 20E threshold).

| $\Delta e_{cst}^{10E}$ | $-\Delta e_{cst}^{20E}$ | = f(E | $EPL_{ct}$ |
|------------------------|-------------------------|-------|------------|
|                        |                         |       |            |

c country s sector t year ∆e<sup>xE</sup> % of firms growing over X employees threshold.

| OLS: (∆e <sup>10E</sup> -     | - ∆ <b>e</b> ²0E) |
|-------------------------------|-------------------|
| Real value added growth       | -0.03             |
|                               | (0.029)           |
| EPL ID: Individual dismissals | 0.08+             |
|                               | (0.042)           |
| EPL CD: Collective dismissals | 0.01              |
|                               | (0.022)           |
| Constant                      | -0.29*            |
|                               | (0.120)           |
| Country, Sector, Year FEs     | Yes               |
| Observations                  | 537               |
| R <sup>2</sup>                | 0.499             |
|                               |                   |

# Notes: Standard errors in parentheses; \*\* p<0.01, \* p<0.05, + p<0.1

# **Outline**

# • Research questions

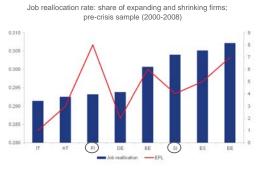
- Does EPL have an impact on job reallocation?
- What is the role of size-contingent EPL? Does EPL bind more firms of a size close but below the threshold than others?
- How does it behave over the cycle and what was the impact of the crisis? Is it more binding for growing or downsizing firms?

### • Data

- CompNet size class dataset: firms changing size class or remaining in the same one during 3-year periods (per country, sector and year)
- Size classes: 1-9 employees, 10-19 employees, 20-49 employees, 50-249 employees, 250 employees and above
- Sample: 8 EU countries (AT, BE, DE, EE, ES, FI, IT, PT), 9 macro-sectors over the period 1998-2012 (about 2,000 observations)
- Institutional variables: EPL distinguishing between rules for individual and collective dismissal (OECD). In most countries applies to firms with 20 and more employees.

# Job reallocation rate and EPL

### Greater job reallocation in more flexible EPL regimes



urce: own calculations based on CompNet Labour Module and OECD Note: higher EPL numbers indicate more flexible labour markets.

# Stricter EPL reduces firm dynamics (threshold 20E)

| Logit: growing firms          |         |         | Logit: do | Logit: downsizin              | Logit: downsizing firms               |   |
|-------------------------------|---------|---------|-----------|-------------------------------|---------------------------------------|---|
| abor productivity             | -0.06   | -0.06   | 0.05      | Labor productivity            | Labor productivity -0.17**            | Labor productivity -0.17** -0.16**            |
| (0                            | (0.037) | (0.037) | (0.035)   |                               | (0.035)                               | (0.035) (0.035)                               |
| (0                            | 0.74**  | 0.74**  | 0.74**    | Real value added growth       | Real value added growth -1.87**       | Real value added growth -1.87** -1.83**       |
|                               | (0.147) | (0.148) | (0.136)   |                               | (0.099)                               | (0.099) (0.097)                               |
| EPL ID: Individual dismissals | -1.80** | -1.66** | -1.39**   | EPL ID: Individual dismissals | EPL ID: Individual dismissals -1.17** | EPL ID: Individual dismissals -1.17** -2.20** |
|                               | (0.416) | (0.452) | (0.407)   |                               | (0.218)                               | (0.218) (0.246)                               |
| EPL CD: Collective dismissals | -0.12   | -0.05   | -0.03     | EPL CD: Collective dismissals | EPL CD: Collective dismissals -0.05   |   |
|                               | (0.087) | (0.096) | (0.076)   |                               | (0.057)                               | (0.057) (0.063)                               |
| EPL ID * crisis               |         | -0.38** |           | EPL ID * crisis               | EPL ID * crisis                       | EPL ID * crisis 0.68**                        |
|                               |         | (0.064) |           |                               |                                       | (0.074)                                       |
| EPL CD * crisis               |         | -0.02   |           | EPL CD * crisis               | EPL CD * crisis                       | EPL CD * crisis 0.11**                        |
|                               |         | (0.027) |           |                               |                                       | (0.022)                                       |
| EPL ID * size class 2         |         |         | -0.63**   | EPL ID * size class 3         | EPL ID * size class 3                 | EPL ID * size class 3                         |
| (10-19 employees)             |         |         | (0.040)   | (20-49 employees)             |                                       |   |
| EPL ID * size class 3         |         |         | -0.38**   | EPL ID * size class 4         | EPL ID * size class 4                 | EPL ID * size class 4                         |
| (20-49 employees)             |         |         | (0.057)   | (50-249 employees)            |                                       |   |
| EPL ID * size class 4         |         |         | -0.46**   | EPL ID * size class 5         | EPL ID * size class 5                 | EPL ID * size class 5                         |
| (50-249 employees)            |         |         | (0.135)   | (>250 employees)              | (>250 employees)                      | (>250 employees)                              |
| EPL CD * size class 2         |         |         | -0.34**   | EPL CD * size class 3         | EPL CD * size class 3                 | EPL CD * size class 3                         |
| (10-19 employees)             |         |         | (0.026)   | (20-49 employees)             |                                       |   |
| EPL CD * size class 3         |         |         | -0.31**   | EPL CD * size class 4         | EPL CD * size class 4                 | EPL CD * size class 4                         |
| (20-49 employees)             |         |         | (0.038)   | (50-249 employees)            |                                       |   |
| EPL CD * size class 4         |         |         | -0.41**   | EPL CD * size class 5         | EPL CD * size class 5                 | EPL CD * size class 5                         |
| (50-249 employees)            |         |         | (0.080)   | (>250 employees)              |                                       |   |
| Constant                      | 3.91**  | 3.38**  | 1.99+     | Constant                      | Constant 0.88                         | Constant 0.88 3.80**                          |
|                               | (1.053) | (1.197) | (1.024)   |                               | (0.571)                               |   |
| Country, Sector, Year FEs     | Yes     | Yes     | Yes       | Country, Sector, Year FEs     | Country, Sector, Year FEs Yes         | Country, Sector, Year FEs Yes Yes             |
| Observations                  | 1 769   | 1 769   | 1 769     | Observations                  | Observations 1 651                    | Observations 1 651 1 651                      |
| R <sup>2</sup>                | 0.715   | 0.722   | 0.761     | R <sup>2</sup>                | R <sup>2</sup> 0.835                  | R <sup>2</sup> 0.835 0.843                    |

Notes: Base groups: growing firms: size class 1; downsizing firms: size class 2. Standard errors in parentheses ; \*\* p<0.01, \* p<0.05, + p<0.1.

# Conclusions Main results

- Stricter EPL (e.g. by imposing positive hiring and firing costs) reduces the likelihood that firms grow or shrink (in terms of employment), as predicted by the literature.
- EPL has a stronger (negative) effect on the growth of firms above the 20
  employee-threshold, which is in line with the institutional setup of most
  countries in the dataset (e.g. concerning restrictions on collective and
  individual dismissals).
- During the financial crisis, the negative effect of EPL on growing firms was aggravated, while the effect on downsizing firms was muted.
- Qualitative results are robust across sectors, country groups, and some additional controls available in the CompNet dataset.

### Policy implications

- EPL has a stronger negative impact on firm growth during the financial crisis, acting as a drag on recovery.
- Softening of threshold effects would lead to improved allocation of jobs.