Reforms and Labour Market Outcomes

Tito Boeri

Università Bocconi and Fondazione Rodolfo Debenedetti

November, 9 2010
Outline

1. Labour Market Reforms
2. Aggregate Effects of Dual-track Reforms
3. Dualism at Work
4. The Financial Crisis and Labour Adjustment
5. Putting the pieces together: Dualism and Finance
6. An Exit Strategy from Dualism
Huge literature on European type labor market institutions
Reforms are widely used to identify the effects of LM institutions as natural experiments
This rich empirical literature needs stronger guidance from economic theory.

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- But create long-lasting asymmetries
- Properties of these multi-tier regimes have yet to be fully understood
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Institutional reform: change in the design of an institution

- **Two-tier (vs. complete)** reform: focus on the scope/coverage; the reform is confined to a subset of the potentially eligible population (alternatively its complete phasing in involves a very long transitional period)

- **Incremental (vs. discrete)** reform: focus on the size; the reform involves a small change in the overall institutional level-indicator

- **Structural reforms**: either complete and discrete reforms
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## The Taxonomy

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<thead>
<tr>
<th>Size</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discrete Two-tier</td>
<td>Structural</td>
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- Many LM reforms
- Sometimes undoing previous reforms: net changes in the values of the indicators conceal a lot of action
- Two-tier reforms majoritarian
- Way to engineer politically feasible reforms
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Two-Tier Reforms

Two-tier reforms which involve less than 50% of potentially eligible population

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<th>Reform area</th>
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<td>103</td>
<td>96</td>
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### EPL reforms by size and scope as a percentage of the total

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T. Boeri (Università Bocconi)
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### Tracking Reforms in Europe

A snapshot from Fondazione Debenedetti database (1):

Spain - EPL database

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>id</th>
<th>Number</th>
<th>Law</th>
<th>Description</th>
<th>Topic</th>
<th>Target</th>
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</thead>
<tbody>
<tr>
<td>1980</td>
<td>3</td>
<td>ES077</td>
<td>1</td>
<td>Ley 51/1980, Basic Employment Law (Ley Básica de Empleo)</td>
<td>Regulations governing the contract of employment, making contracts of employment more flexible; permanently established workforce representatives as a way to regulate workers' participation; and consolidated the status of collective agreements, as opposed to Labour Ordinances, as the principal source of industry-wide and occupational provisions.</td>
<td>Trade union rights</td>
<td>employees</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Regulation on termination of employment contracts.</td>
<td>Individual dismissals - Procedural obligations</td>
<td>employees</td>
</tr>
<tr>
<td>1981</td>
<td></td>
<td>ES078</td>
<td>1</td>
<td>Real Decreto 1362/1981</td>
<td>Regulation of fixed-term contracts</td>
<td>Fixed-term contracts</td>
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</tr>
<tr>
<td>1984</td>
<td>8</td>
<td>ES001</td>
<td>1</td>
<td>Ley 32/1984</td>
<td>Restrictions for fixed-term contracts are substantially relaxed. Legal norms that established the circumstances under which a fixed term contract could be stipulated are practically over ridden by the principle of promoting employment through the extension of its use. The so called “Contrato temporal de fomento del empleo” (Temporary Employment Promoting Contracts - TEPC) has a maximum duration of 3 years and a minimum of 6 months. The limit to the maximum number of TEPC to be signed is eliminated.</td>
<td>Fixed-term contracts</td>
<td>Fixed-term workers</td>
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A snapshot from Fondazione Debenedetti database (2):

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<table>
<thead>
<tr>
<th>Topic</th>
<th>Target</th>
<th>Sign</th>
<th>Overall sign</th>
<th>Two-Tier vs. Complete</th>
<th>Two-Tier vs. Complete - Overall</th>
<th>incremental vs. discrete</th>
<th>Source</th>
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<td>Trade union rights</td>
<td>employees</td>
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<tr>
<td>Fixed-term contracts</td>
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## Labor market vs. Financial and Product Market Reforms

### Reforms of Product, Financial and Labor Markets

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- Sometimes undoing previous reforms: net changes in the values of the indicators conceal a lot of action
- Two-tier reforms majoritarian
- Trade-off between size and scope
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Outline

1. Labour Market Reforms
2. Aggregate Effects of Dual-track Reforms
3. Dualism at Work
4. The Financial Crisis and Labour Adjustment
5. Putting the pieces together: Dualism and Finance
6. An Exit Strategy from Dualism
Setup: qualitative description

Equilibrium job search model. Endogenous job creation and destruction. Four types of Institutions:

1. An exogenous firing tax $T$ (not transfer) levied on termination of job-worker matches.
2. An unemployment benefit $b = \rho \bar{w}$ offered as a replacement of the average wage, $\bar{w}$, at the rate $0 < \rho < 1$ throughout the entire unemployment spell ($\rho$ measures the generosity of unemployment benefits).
3. An employment subsidy (or tax credit), $e < b$ also provided on a flow basis at continuing jobs.
4. A hiring-recruitment subsidy, $h < c$, reducing the flow costs of unfilled vacancies, $c$.

Job creation and destruction margins are affected by these institutions either directly and indirectly, that is, via their effects on wages. Government budget constraint not considered.
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Aggregate Effects of Dual-track Reforms

Introducing Institutions: Some Theory

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A two-tier reform of employment protection reduces firing taxes for entry jobs ($T_0 = 0 < T$), while leaving employment protection unaltered for continuing jobs.

New jobs last until they are hit by a productivity shock. If the new realization is below a reservation productivity specific to entry jobs, $R_0$, the match is dissolved and ends with a flow into unemployment. If instead the new productivity realization is above $R_0$, jobs are converted into permanent contracts, covered by the standard firing taxes, $T$. 
Two-tier Regimes in the MP model

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Insider and Outsider Wages

Two-tier regimes generate two wage equations from Nash bargaining. The first wage equation determines workers pay in entry jobs or the wage of *outsiders* (dual workers), denoted by the subscript 0. The second wage equation applies to continuing jobs and provides *insider* wages at all productivity levels above the reservation productivity level. The difference between insider and outsider wages at the entry productivity level is given by

\[ w(1) - w_0 = (1 - \beta) w(\rho - \rho_0 + e_0) + \beta (rT) \]

Even for lower \( x \), \( w(x) > w_0 \) in this setting. Continuing jobs have lower average productivity but higher average wages than entry jobs. Partial equilibrium of two-tier reforms: increase wage differentials between entry jobs and continuing jobs.
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Key differences with respect to complete reforms:

- $\rho \uparrow$ accompanied by reduction of $\rho_0$ does not necessarily increase $u$ (flexicurity)
- $T \uparrow$ increases turnover
- $\rho \uparrow$ may increase job destruction (for entry jobs)
- Less ambiguity in signing their effects on $u$. 
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How relevant is dualism?

\[ \rho = 0.81 \]

Strictness of EPL for Permanent Contracts and Share of Temporary Contracts in Total (Dependent) Employment

\[ \rho = -0.72 \]

Strictness of EPL for Permanent Contracts and Transition Probability from Temporary to Permanent Contracts
Two-tier wage structures: Premium of Permanent Contracts

\[ \log w_i = \alpha + \beta_1 EDU_i + \beta_2 EDU^2_i + \gamma_1 TEN_i + \gamma_2 TEN^2_i + \mu PERM_i + \varepsilon_i \]

<table>
<thead>
<tr>
<th>Country</th>
<th>Premium temporary-permanent $\mu$</th>
<th>St. Err.</th>
<th>Obs.</th>
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<tbody>
<tr>
<td>Austria</td>
<td>20.1***</td>
<td>0.023</td>
<td>9867</td>
</tr>
<tr>
<td>Belgium</td>
<td>13.9***</td>
<td>0.017</td>
<td>7948</td>
</tr>
<tr>
<td>Denmark</td>
<td>17.7***</td>
<td>0.015</td>
<td>8009</td>
</tr>
<tr>
<td>Finland</td>
<td>19.0***</td>
<td>0.011</td>
<td>8940</td>
</tr>
<tr>
<td>France</td>
<td>28.9***</td>
<td>0.016</td>
<td>15260</td>
</tr>
<tr>
<td>Germany</td>
<td>26.6***</td>
<td>0.010</td>
<td>25448</td>
</tr>
<tr>
<td>Greece</td>
<td>20.2***</td>
<td>0.013</td>
<td>6978</td>
</tr>
<tr>
<td>Ireland</td>
<td>17.8**</td>
<td>0.069</td>
<td>1583</td>
</tr>
<tr>
<td>Italy</td>
<td>24.1***</td>
<td>0.008</td>
<td>30177</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>27.6***</td>
<td>0.018</td>
<td>7889</td>
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<tr>
<td>Netherlands</td>
<td>35.4***</td>
<td>0.021</td>
<td>15845</td>
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<tr>
<td>Portugal</td>
<td>15.8***</td>
<td>0.016</td>
<td>7550</td>
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<tr>
<td>Spain</td>
<td>16.9***</td>
<td>0.007</td>
<td>22626</td>
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<tr>
<td>Sweden</td>
<td>44.7***</td>
<td>0.036</td>
<td>5412</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>6.5*</td>
<td>0.037</td>
<td>7000</td>
</tr>
</tbody>
</table>
## Pre-Reform EPL Strictness and Post-Reform Temporary Employment

<table>
<thead>
<tr>
<th>Country</th>
<th>Time Period</th>
<th>EPL strictness (Regular Index)</th>
<th>EPL Strictness (Temporary Empl.)</th>
<th>Temporary Emp. Growth $\Delta ET_t$ (000)</th>
<th>Contribution of Temporary Jobs $\Delta ET_t/E_0$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>1987-1996</td>
<td>1.68</td>
<td>4.63</td>
<td>22.7</td>
<td>0.66</td>
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<td></td>
<td>1997-2005</td>
<td>1.71</td>
<td>2.63</td>
<td>135.3</td>
<td>3.54</td>
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<tr>
<td></td>
<td>$\Delta$</td>
<td>0.03</td>
<td>7.00</td>
<td>112.6</td>
<td>2.89</td>
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<tr>
<td>Italy</td>
<td>1987-1997</td>
<td>1.77</td>
<td>5.38</td>
<td>402.9</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>1998-2005</td>
<td>1.77</td>
<td>2.82</td>
<td>823.2</td>
<td>4.11</td>
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<tr>
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<td>$\Delta$</td>
<td>0</td>
<td>-2.56</td>
<td>420.3</td>
<td>4.09</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>1987-1995</td>
<td>3.08</td>
<td>2.38</td>
<td>340.1</td>
<td>5.79</td>
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<tr>
<td></td>
<td>1996-2005</td>
<td>3.06</td>
<td>1.45</td>
<td>288.8</td>
<td>3.80</td>
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<tr>
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<td>$\Delta$</td>
<td>-0.02</td>
<td>-0.93</td>
<td>-51.3</td>
<td>-2</td>
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<tr>
<td>Portugal</td>
<td>1987-1996</td>
<td>4.56</td>
<td>3.34</td>
<td>-168.9</td>
<td>-4.10</td>
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<tr>
<td></td>
<td>1997-2005</td>
<td>4.29</td>
<td>2.94</td>
<td>431.8</td>
<td>10.09</td>
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<td>$\Delta$</td>
<td>-0.27</td>
<td>-0.40</td>
<td>600.6</td>
<td>14.19</td>
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<tr>
<td>Spain</td>
<td>1981-1984</td>
<td>3.83</td>
<td>-</td>
<td>0</td>
<td>0</td>
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<tr>
<td></td>
<td>1985-1995</td>
<td>3.67</td>
<td>3.66</td>
<td>3377.1</td>
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<td>-</td>
<td>3377.1</td>
<td>28.5</td>
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<tr>
<td></td>
<td>1997-2005</td>
<td>2.86</td>
<td>1.63</td>
<td>189.2</td>
<td>4.82</td>
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<td>$\Delta$</td>
<td>-0.02</td>
<td>-1.65</td>
<td>328.1</td>
<td>8.04</td>
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</tbody>
</table>

1 For Spain, 1981-1984, the EPL index is the overall index, as in Nickell (2006)
Complete Reforms with a long phasing-in

- Transitional dynamics may depart significantly from steady state outcomes of complete reforms.
- Are deviations increasing with initial level of the institution and the size of the reform?
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Complete Reforms with a long phasing-in

Example of two-tier reforms of Epl (Boeri and Garibaldi, 2007)

Flexi-land

$L^d (bad times)$  
$L^d (good times)$

A  B  Employment
Honeymoon effect and unemployment volatility

Estimating Okun’s Law Betas: $\Delta u_t = \alpha + \beta \Delta y_t + \varepsilon_t$
Honeymoon effect and employment volatility

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Much Different Unemployment Response controlling for Output
US more responsive than reformed Europe
Not much on links between financial crises and labor market dynamics

More on (steady state) interactions between financial and labor frictions

Ambiguous predictions:

Rendon (2000), Belke and Fehn (2002) easy access by firms to financial markets as a substitute for labour market flexibility

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The Financial Crisis and Labour Adjustment

Why? Hints from Economic Theory?

The Job Destruction Effect

- Financial deepening reduces churning and employment volatility
- As firms do not adjust employment to transient shocks
- Yet, what happens when a highly leveraged firm experiences a financial shock and liquidity is suddenly pulled back?
- The lack of liquidity can force firms to liquidate projects as well as jobs, thus enhancing job destruction
- It is a labor demand effect
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- Workers need financial markets and mortgages to finance real estate investment
- Over the medium run, more financial deepening likely to increase workers ability to move across space and facilitate real estate investments
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During Financial Deepening Decline in Job Turnover

Source: ECHP

T. Boeri (Università Bocconi)
Drop in JT and then rebound in JD stronger for SMEs
Highly leveraged sectors experienced more variations in JC and JD in this recession

<table>
<thead>
<tr>
<th></th>
<th>High Leveraged Manufacturing</th>
<th>Low Leveraged Trade</th>
<th>Δ</th>
<th>Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta JD Financial recession</td>
<td>27.81%</td>
<td>4.46%</td>
<td>23.35%</td>
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<tr>
<td></td>
<td>Non-financ. recession</td>
<td>14.37%</td>
<td>3.56%</td>
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<tr>
<td></td>
<td>Δ</td>
<td>13.45%</td>
<td>0.91%</td>
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<td>Delta JC Financial recession</td>
<td>-20.45%</td>
<td>-16.10%</td>
<td>4.36%</td>
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<td>Non-financ. recession</td>
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<td>Δ</td>
<td>1.61%</td>
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<tr>
<td>Delta Exit Financial recession</td>
<td>19.35%</td>
<td>7.82%</td>
<td>11.53%</td>
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<td>Non-financ. recession</td>
<td>5.13%</td>
<td>2.15%</td>
<td>2.98%</td>
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<tr>
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<td>Δ</td>
<td>14.23%</td>
<td>5.67%</td>
<td>8.56%</td>
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<td>Delta Entry Financial recession</td>
<td>1.92%</td>
<td>-5.30%</td>
<td>7.22%</td>
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</tr>
<tr>
<td></td>
<td>Non-financ. recession</td>
<td>-3.23%</td>
<td>1.22%</td>
<td>4.45%</td>
</tr>
<tr>
<td></td>
<td>Δ</td>
<td>5.15%</td>
<td>6.52%</td>
<td>2.77%</td>
</tr>
</tbody>
</table>

Source: Business Employment Dynamics, 2000-2010. Notes: Financial related recession 2008q1-2009q2; Non-financial recession 2001q2-2001q4. Delta are calculated with respect to the period preceding the recession (same time span).
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### The Nightmare Case: High-leverage and Dualism (or low EPL)

<table>
<thead>
<tr>
<th>Elasticity of Employment to Output</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leverage (Debt to sales ratio)</td>
<td>-0.0002***</td>
<td>0.0001**</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td>Financial-related recession</td>
<td>0.0943***</td>
<td>0.1249***</td>
</tr>
<tr>
<td></td>
<td>(0.0220)</td>
<td>(0.0266)</td>
</tr>
<tr>
<td>EPL</td>
<td>-0.0795***</td>
<td>-0.0802***</td>
</tr>
<tr>
<td></td>
<td>(0.0138)</td>
<td>(0.0167)</td>
</tr>
<tr>
<td>Temp. Workers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leverage<em>Temp</em>Fin. Crisis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leverage<em>lowEPL</em>Fin. Crisis</td>
<td>0.0006***</td>
<td>-0.0003</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0002)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.3183***</td>
<td>0.1746***</td>
</tr>
<tr>
<td></td>
<td>(0.0390)</td>
<td>(0.0487)</td>
</tr>
<tr>
<td>Country*Sector FE</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Country FE</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>

Source: Boeri, Garibaldi and Moen. Imf data
JD concentrated on Dual Workers
Lower Coverage of Unemployment Benefits with Dualism

Unemployment benefits coverage by age in 2008

Source: EU-SILC 2008

T. Boeri (Università Bocconi)
A lost Generation?

In France, Italy, and Spain up to 90 per cent of new hirings is fixed-term. Also in the US increasing role of TWA. No training is offered.
How many cohorts affected? For how long?

The fact that they are young not mean that the costs are temporary. Evidence of "‘scarring’" effect of unemployment at the beginning of a career

- Ellwood (1982): poor start induces lower lifetime wages and lower employment opportunities
- Mroz e Savage (2006): unemployment at 22 implies earning 30 per cent lower at 25. At age 30-32 below -2-3 per cent
- Kletzer and Fairlie (1999): wage losses over the lifetimes 8 per cent for men and 13 per cent for women
- Gregg and Tominie (2001): wage losses 13-21 per cent
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- Bell and Blanchflower (2009) von Wachter (2009): health effect even 20 years after
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Summarizing

Before the Crisis Finance may have reduced volatility and employment fluctuations

- Financial Crisis hit particularly hard Leveraged Firms
- Huge Job Losses when High Leverage is accompanied with low EPL or large share of Dual Workers
- Here Job Losses are very serious problem because of lack of social protection (limited access to unemployment benefits or short-time work) and loss of human capital
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- More volatility of employment
- Automatic stabilizers do not operate efficiently
- Higher social costs of recessions
- Reduced Human Capital Investment after financial recessions: hiring on temporary contracts offering no on-the-job training, lower education wage premia, lower incentives to investment also in formal education
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- Access to finance reduced unnecessary layoffs in the US (secular fall of temporary layoffs)
- Caggese, Cunat (2008): Financially constrained firms have a larger proportion of fixed-term contracts (higher volatility of total employment)
- Fixed-term contracts have a major role in absorbing productivity shocks in the presence of financing constraints
- Reducing access to finance we cannot exit from dualism as liquidity constraints induce small firms to offer only temporary contracts
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We need Smart Reforms

Removing temporary contracts would mean reducing also employment creation in the recovery after having experienced the negative side of dualism. Better to go beyond dualism, working on employers’ incentives. Need to balance two forces

- Let firms enjoy flexibility at entry. On the labour demand side, firms benefit from a labour market where experimentation is allowed
- Set a well defined path to stability for workers, through a long run entrance with an open-ended labour contract
- Flexibility is important in the entry phase. Problem of asymmetric information
- Tenure tracks to stable jobs
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Contrato Unico, Contratto Unico di Inserimento, Contrat Unique

Proposals developed in Spain (100 academic economists), France (Blanchard-Tirole, Cahuc-Kramarz) and Italy (Boeri and Garibaldi): tenure track to stable jobs with protection increasing with tenure. Differences according to national regulations.
Italian draft bill differentiates entry through experimentation from genuinely fixed term jobs. Open ended contract with two phases:

- **Entry Phase** (up to the third year): the worker has the right to severance payments proportional to tenure (independently of firm size): dismissal without just clause requires up to six months in severance payments (5 days of severance every month). Entry phase lasts three years

- **Stability Phase** (from third year onward): current legislation (for dismissal without just clause: reinstatement right in firms above 15 employees and six months severance in small firms)

- Fixed term contracts and de-facto dual workers (yet self employed in the books) only with high salaries and higher contributions to unemployment benefits
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