MINIMUM WAGES, UNIONS, BARGAINING

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Study Materials and Reading List

Wednesday 25.3., 8.30-10.00, Minimum wages, unions, bargaining

Mandatory readings:
• Borjas: Labour Economics: Labour Demand, Chapter 3;
• Borjas: Labour Economics: Labour Unions, Chapter 10;

Optional readings:

Popular media and policy reports:
• IZA WORLD OF LABOUR ON EMPLOYMENT EFFECTS OF MINIMUM WAGES: Http://wol.iza.org/articles/employment-effects-of-minimum-wages

Further: Slides of the lectures
• All materials provided on: http://home.cerge-ei.cz/munich/labor14/

Wednesday 25.3., 10.30-12.00 Income inequality,
if time: Pay and Productivity, ownership.
OUTLINE

• Policy Application to the demand theory:
  – Minimum Wages
  – Unions and bargaining

Policy Application: Minimum Wages

• Objectives of the minimum wage
  ➢ Improve living standards of low-paid workers
  ➢ Protect workers in least organised sectors
  ➢ Prevent exploitation
  ➢ Reduce wage inequality

• Functions of the minimum wage
  ➢ Reference wage:
    o Basis for individual and collective negotiation
  ➢ Instrument of income policy:
    o Used to determine a number of social benefits:
      • Pensions
      • Maternity allowance
      • Unemployment benefits
      • Disability benefits, etc.
Example - The Netherlands

Unemployment benefits
Minimum benefit is 70% of minimum wage for single persons. Adjustments twice a year according to changes in net minimum wages.

Pensions
Minimum pension rates are linked to the minimum wage. Pensions are automatically adjusted twice a year according to changes in net minimum wages.

Maternity benefits
100% of actual earnings for employees. Unemployed workers receive 100% of earnings with a maximum of the minimum wage.

Disability benefits
Minimum benefit is 70% of minimum wage for single persons. Adjustments twice a year according to changes in net minimum wages.

Policy Application: Minimum Wages

• Set by:
  ➢ a government
  ➢ an outcome of negotiations between workers and firm representatives.

• Types:
  ➢ A national, government legislated MW
  ➢ Industry level minimum wage

• Minima – hourly, daily, weekly and monthly basis;
• Reduced or sub-minimum wages for some groups of workers (age, qualifications..)
• What do we know about the impact – on employment and wages?
Table 2.1 Minimum Wages in OECD Countries (2005)

<table>
<thead>
<tr>
<th>Country</th>
<th>Minimum wage to average wage ratio¹ (%)</th>
<th>Minimum wage (€ per hour)</th>
<th>Minimum wage (€ per month) PPP</th>
<th>Setting</th>
<th>Level</th>
<th>Coverage²</th>
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</thead>
<tbody>
<tr>
<td>Australia</td>
<td>7.25</td>
<td>1277</td>
<td></td>
<td>CB-L</td>
<td>P</td>
<td>95</td>
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<td>1220</td>
<td></td>
<td>CB</td>
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<td>90</td>
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<td>Belgium</td>
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<td>836</td>
<td></td>
<td>L</td>
<td>F-P</td>
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<tr>
<td>Canada</td>
<td>3.08</td>
<td>278</td>
<td></td>
<td>L</td>
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<td>100</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>3.50</td>
<td>783</td>
<td></td>
<td>L</td>
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<td>100</td>
</tr>
<tr>
<td>Denmark</td>
<td></td>
<td></td>
<td></td>
<td>CB</td>
<td>N</td>
<td>80</td>
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<td>1322</td>
<td></td>
<td>L</td>
<td>N</td>
<td>100</td>
</tr>
<tr>
<td>France</td>
<td>1.28</td>
<td>225</td>
<td></td>
<td>L</td>
<td>N</td>
<td>100</td>
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<tr>
<td>Germany</td>
<td>5.43</td>
<td>1388</td>
<td></td>
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<td>80</td>
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<td>L</td>
<td>N</td>
<td>100</td>
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<td>Hungary</td>
<td>1.18</td>
<td>237</td>
<td></td>
<td>L</td>
<td>N</td>
<td>100</td>
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<tr>
<td>Iceland</td>
<td>3.40</td>
<td>599</td>
<td></td>
<td>L</td>
<td>N</td>
<td>100</td>
</tr>
<tr>
<td>Japan</td>
<td>4.15</td>
<td>731</td>
<td></td>
<td>L</td>
<td>N</td>
<td>100¹</td>
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<tr>
<td>Korea</td>
<td>2.64</td>
<td>464</td>
<td></td>
<td>–</td>
<td>–</td>
<td>10</td>
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<tr>
<td>Luxembourg</td>
<td>7.30</td>
<td>1284</td>
<td></td>
<td>L</td>
<td>N</td>
<td>100¹</td>
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<tr>
<td>Netherlands</td>
<td>4.98</td>
<td>877</td>
<td></td>
<td>L</td>
<td>N</td>
<td>25</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1.35</td>
<td>237</td>
<td></td>
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<td>100</td>
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<tr>
<td>Poland</td>
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<td>366</td>
<td></td>
<td>L</td>
<td>N</td>
<td>100</td>
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<tr>
<td>Portugal</td>
<td>3.40</td>
<td>599</td>
<td></td>
<td>L</td>
<td>N</td>
<td>100</td>
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<tr>
<td>Slovak Republic</td>
<td>6.40</td>
<td>1127</td>
<td></td>
<td>L</td>
<td>N</td>
<td>100¹</td>
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<tr>
<td>Spain</td>
<td>2.76</td>
<td>489</td>
<td></td>
<td>L</td>
<td>N</td>
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<tr>
<td>Turkey</td>
<td>3.48</td>
<td>613</td>
<td></td>
<td>L</td>
<td>N</td>
<td>100</td>
</tr>
</tbody>
</table>

¹Denmark, Germany, Italy, Cyprus, Austria, Finland and Sweden: no statutory minimum wage.
²July 2013.

Source: Eurostat online data code: min_wages

National monthly minimum wage (adult rate), 2013, in EUR

![Graph showing national monthly minimum wage (adult rate), 2013, in EUR](chart.png)
### Minimum wage as a % of average and median gross wage, 2012

<table>
<thead>
<tr>
<th>Country</th>
<th>% mean</th>
<th>% median</th>
<th>Country</th>
<th>% mean</th>
<th>% median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>44</td>
<td>53</td>
<td>Lithuania</td>
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<tr>
<td>Belgium</td>
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<td>51</td>
<td>Luxembourg</td>
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<td>Canada</td>
<td>40</td>
<td>45</td>
<td>Mexico</td>
<td>19</td>
<td>..</td>
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<td>Czech Rep</td>
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<td>36</td>
<td>Netherlands</td>
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<td>Chile</td>
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<td>67</td>
<td>Poland</td>
<td>38</td>
<td>38</td>
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<td>France</td>
<td>50</td>
<td>62</td>
<td>Romania</td>
<td>31</td>
<td>45</td>
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<tr>
<td>Greece</td>
<td>30</td>
<td>43</td>
<td>Slovakia</td>
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<td>Hungary</td>
<td>40</td>
<td>54</td>
<td>Slovenia</td>
<td>48</td>
<td>60</td>
</tr>
<tr>
<td>Ireland</td>
<td>44</td>
<td>48</td>
<td>Spain</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Estonia</td>
<td>30</td>
<td>42</td>
<td>UK</td>
<td>39</td>
<td>47</td>
</tr>
<tr>
<td>Latvia</td>
<td>36</td>
<td>51</td>
<td>United States</td>
<td>27</td>
<td>38</td>
</tr>
</tbody>
</table>


Source: OECD

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### The Effect of MW Increases: Theory

**Two Extreme Cases:**

- **Competitive Labor Market**
- **Monopsony**

*When agree:*
- the MW is too low = not binding
- the MW is too high = employment decrease
Assumption of labor demand theory of competitive markets: individual "price-taking firm"

A firm that is a perfect competitor in the labor market faces a horizontal labor supply curve and can hire an unlimited number of workers at the market-clearing wage.

What happens if we impose a minimum wage in this labor market?
MW Increases–Competitive Labor Markets, Alternative Models I

The basic competitive model -many simplifying assumptions,

*Alternative models:*

- **Substitution model** – allows for heterogeneity of labor ⇒ two types of workers, skilled and unskilled.
- If a minimum wage is above the market-clearing wage of unskilled workers but below the wage of skilled workers, *the ratio of skilled to unskilled workers will rise.*
- If all firms hire more skilled workers, the market wage for skilled workers is likely to rise ⇒ it will dampen the increase in the number of skilled workers employed.
- The total employment effect cannot be positive in this model because the wages of at least one, and possibly both, types of workers increase.

MW Increases–Competitive Labor Markets, Alternative Models II

*Substitution by importing* – relaxes the assumptions of non-existence of foreign trade. Higher minimum wages leads to increase in costs ⇒ more expensive products ⇒ lower competitiveness ⇒ substitution of domestic production for imports. The effect strong for small open economies.
In a case of monopsonist, there can be even an increase in an employment in reaction to an increase in a minimum wage.

A monopsonist is a firm that faces an upward-sloping labor supply curve (similarly as monopoly on the product market is facing downward sloping demand curve for its products) the firm must raise the wage in order to hire additional workers;

The monopsonist determines the quantity of labor to hire by setting the value of the marginal product equal to the marginal cost of labor. The marginal cost of labor is no longer equal to the wage. Instead, the cost of hiring an additional worker is the wage paid to that worker plus the increase in the wages of all current workers.

Marginal labor cost curve for this firm is even more upward sloping than the supply curve = marginal expense of labor exceeds the wage

Some critique:

Monopsony less likely for the market for low-skilled labor, which is rather characterized by a large number of small firms.

But the case of monopsony similar for firms colluding in wage setting – collusion among employers may be favoured by collective bargaining institutions.

Further employers can have some degree of monopsony power also in the case of existence of search frictions and mobility costs. All these modern monopsony cases are rather frequent in practise (Manning)

- So in principle, few pure monopsonies, but many firms have some degree of monopsony power, e.g.:
  - Small "company town"
  - If skills are very specific e.g. IBM mainframe repair technicians
  - Hospital in the market for nurses, lab technicians, and radiologists
  - Fast food restaurants located in nearby towns.
The Effect of MW Increases: THEORY

• Minimum wage forces firms to:
  – Become more efficient
  – Rationalize production process
  – Invest in training
  – => increases in labour productivity
• Surplus labour finds employment in labour-demanding sectors
• Efficiency wages (a bit problematic wrt low-wage workers)

The Effect of MW Increases: THEORY – WAGE EFFECTS

Grossman 1984

Shifts in entire wage distribution

May magnify the employment effects;
May increase inflation
The Effect of MW Increases: Empirics
Card & Krueger experiment & New Jersey Minimum Wage Law

- Card & Krueger experiment – effects of minimum wage hikes in the U.S. fast-food industry
- New Jersey raised minimum wage in 1992 (from $4.25-$5.05 per hour), whereas Pennsylvania did not
- The authors compare the change in NJ to the change in PA
- a difference-in-difference estimator, which allows to identify a causal effect, not just a correlation

Card and Krueger Experiment

- Widely cited study
- Huge controversy among economists
- Caused millions of workers to get a raise from the Clinton administration in 1995
- April 1, 1992: in New Jersey, the minimum wage rose from $4.25 to $5.05 per hour (19% increase)
- Pennsylvania did not raise the minimum wage
- Survey of 410 fast food restaurants
- Timing is: before (Feb.-March 1992) and after (Nov-Dec 1992)
- Most workers are teenagers
- Teenagers widely seen as potential losers of minimum wage policies
Card and Krueger Experiment

Per store employment

<table>
<thead>
<tr>
<th></th>
<th>before</th>
<th>after</th>
<th>Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJ</td>
<td>20.44</td>
<td>21.03</td>
<td>ΔLN = +0.59</td>
</tr>
<tr>
<td>PA</td>
<td>23.33</td>
<td>21.37</td>
<td>ΔLP = -2.16</td>
</tr>
</tbody>
</table>

- Effect is 0.59 – (-2.16) = 2.76 (with a standard error of 1.36, meaning it is statistically significant at the 5% since the t ratio is ~ 2.0)
- 2.76 is ~ 13.5% increase in employment in NJ relative to PA

Card and Krueger Experiment: Interpretations

1. Monopsony

Other interpretations:
2. Hungry teens
   - when you put more money into workers' pockets, they go out and buy more stuff, stimulating the local economy and creating new jobs all around them
3. Motivational effects/efficiency wages (more people want to work for Burger King)
4. Confounding variables (shocks to PA that are not accounted for in this test)
The Effect of MW Increases: Empirics

Results mixed: mainly U.S evidence = small minimum wage changes; Early evidence that MW may reduced hiring of low-skilled, inexperienced workers -> higher unemployment among the workers.


<table>
<thead>
<tr>
<th>Study</th>
<th>% change in employment (elasticity)</th>
<th>Change in unemployment rate (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaitz (1970)</td>
<td>-0.98</td>
<td>-0.006</td>
</tr>
<tr>
<td>Adie (1971)</td>
<td>/</td>
<td>+2.525</td>
</tr>
<tr>
<td>Moore (1971)</td>
<td>/</td>
<td>+3.649</td>
</tr>
<tr>
<td>Kosters &amp; Welch (1972)</td>
<td>-2.96/</td>
<td>/</td>
</tr>
<tr>
<td>Kelly (1975)</td>
<td>-1.204</td>
<td>/</td>
</tr>
<tr>
<td>Gramich (1976)</td>
<td>-0.94</td>
<td>/</td>
</tr>
<tr>
<td>Mincer (1976)</td>
<td>-2.31</td>
<td>+0.445</td>
</tr>
<tr>
<td>Welch (1976)</td>
<td>-1.78</td>
<td>/</td>
</tr>
<tr>
<td>Ragan (1977)</td>
<td>-0.65</td>
<td>+0.75</td>
</tr>
<tr>
<td>Mattila (1978)</td>
<td>-0.84</td>
<td>+0.10</td>
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<tr>
<td>Freeman (1979)</td>
<td>-2.46</td>
<td>/</td>
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<td>Wachter a Kim (1979)</td>
<td>-2.519</td>
<td>+0.512</td>
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<td>Iden (1980)</td>
<td>+2.26</td>
<td>/</td>
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<tr>
<td>Range</td>
<td>-0.98 / -2.519</td>
<td>-0.006 / +3.649</td>
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</tbody>
</table>

The Effect of MW Increases: Empirics

Studies based on natural experiments – using the difference-in-differences (DD) estimator – see Card & Krueger, later e.g. Steward (2004) for Britain = critique: focus only on a specific industry whereas competitive model apply to the labor market as a whole

Studies using longitudinal data - European Studies:
- Abowd, Kramarz & Margolis (1999) - negative effects
- Machin, Manning & Rahman (2002) – positive on wages (less inequality), small employment effect.

Big changes in MW:
- Castillo-Freeman & Freeman (1991) for Puerto Rico
- Rama (2001) for Indonesia
- Portugal and Cardoso (2001) for Portugal

no much research for new EU countries and economies in transition, where lots of labor market dynamics & changes happened
- Estonia (Hinnosaar & Rööm, 2003): MW: + 95.5% (1995-2000); Employment of affected workers: -4.8%
- Hungary (Kertesi & Köllö, 2002): MW: + 60%; Employment: -4%
The development of main economic and labor market indicators in CR: 94 – 06

<table>
<thead>
<tr>
<th>CZECH REPUBLIC</th>
<th>94</th>
<th>95</th>
<th>96</th>
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<tr>
<td>GDP growth at 2000 const. prices</td>
<td>2.2</td>
<td>5.9</td>
<td>4.0</td>
<td>-0.7</td>
<td>-0.8</td>
<td>1.3</td>
<td>3.6</td>
<td>2.5</td>
<td>1.9</td>
<td>3.6</td>
<td>4.2</td>
<td>6.1</td>
<td>6.1</td>
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<tr>
<td>Unemployment rate</td>
<td>4.3</td>
<td>4.0</td>
<td>3.9</td>
<td>4.8</td>
<td>6.5</td>
<td>8.7</td>
<td>8.8</td>
<td>8.1</td>
<td>7.3</td>
<td>7.8</td>
<td>8.3</td>
<td>7.9</td>
<td>7.1</td>
</tr>
<tr>
<td>Labor productivity growth</td>
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<td>4.2</td>
<td>3.3</td>
<td>-0.9</td>
<td>0.9</td>
<td>3.9</td>
<td>4.0</td>
<td>2.2</td>
<td>1.6</td>
<td>4.6</td>
<td>4.1</td>
<td>4.6</td>
<td>4.4</td>
</tr>
<tr>
<td>Increase in MW in %</td>
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<td>0.0</td>
<td>13.6</td>
<td>0.0</td>
<td>6.0</td>
<td>22.6</td>
<td>10.8</td>
<td>11.1</td>
<td>12.5</td>
<td>11.1</td>
<td>14.0</td>
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<td>8.1</td>
</tr>
<tr>
<td>MW as %-age of average wage</td>
<td>31.4</td>
<td>26.5</td>
<td>25.4</td>
<td>23.1</td>
<td>22.5</td>
<td>28.1</td>
<td>33.1</td>
<td>33.8</td>
<td>35.9</td>
<td>36.6</td>
<td>37.1</td>
<td>37.8</td>
<td>39.4</td>
</tr>
</tbody>
</table>

Source: Eriksson, Pytlikova and Warzynski (2010)
Data Description

- Trexima CR and Trexima SR matched employer-employee data set

  - **detail information on employees:**
    - Gender
    - Age
    - Education
    - Employment classification
    - Wage
    - Hours worked etc.

  - **detail information on employers:**
    - Region
    - NACE
    - Type of firm
    - Number of employees
    - Legal form of firm
    - Profit etc.

Czech and Slovak Republics share a similar pattern:

- 70% are Women
- 30% are Young
- 60% are Low Educated
- 40% working in proceeding industry
Model: we follow Card (1992) model:

• (1) $\Delta \ln W(j,t) = \alpha + \beta \text{MWI}(j,t-1) + \gamma X(j,t-1) + \varepsilon(j,t)$
  - $\Delta \ln W(j,t)$ log wage change,
  - $j$ denotes firm,
  - $t$ denotes time (98/99, 99/00),
  - $X$ is a vector of firm characteristics,
  - MWI—minimum wage index, 2 MWI definitions:
    ➢ 2/3 of the median pay of all wage earners,
    ➢ “minimum wage gap” à la Card (1992): (10th decile limit–minimum wage)/minimum wage

• (2) $\Delta \ln E(j,t) = \chi + \phi \Delta \ln W(j,t) + \phi X(j,t-1) + \omega(j,t)$
  - $\Delta \ln E(j,t)$ log change in employment
    ➢ In the number of employees in the firm
    ➢ In the total number of hours worked

Summary and conclusions - Eriksson and Pytlíková (2004):

• MW: + 40 and 30% (1999-2002)
• Using matched employee-employer data sets, we look at the impact of minimum wage hikes on both wages and employment.
• Large and positive effect on wages: The minimum wage increases clearly raise firms’ average wages – parts of the wage distribution other than the lowest tail are affected too.
• Mixed evidence on employment: the estimated effects on employment and working hours reflects the fact that elevating the MW above the subsistence wage motivates low-paid workers to supply more of their labour.
Policy Issues: should minimum wage increase or decrease?

- It seems as setting of the minimum wage is a matter of fine-tuning:
  - if it is too low it is not binding;
  - if it is too high, it can do worse than the market failure that it was supposed to address
- Strongest arguments in favor for an increase in the minimum wages rely on equity considerations – distributional effects and effects on poverty.

Unions and Collective bargaining

- **Unions**
  - Historically emerged in the 18th century in th UK and the US as organizations insuring their members against unemployment, death, and old age.
  - In 19th century industrial unions;
  - 20th century increasingly national organizations aiming to represent all workers & having a stronger political power.
  - Stronger among manual workers
  - Goals – egalitarian wage policies, reduction of wage differentials

- **Collective bargaining**
  - National level – unions, employer’s associations & politicians
  - Industry level agreements
  - Firm-level agreements
  - Hybrid or multilevel agreements
Unions and Collective bargaining

- Bargains over:
  - Wages, working hours, overtime, fringe benefits, employment security, health and safety standards. Power of strike threads.
  - Getting wages above reservation wages of otherwise uncoordinated individuals;
  - National labor unions bargain over minimum wages (previous slides), labor laws, age of retirements, family policies and unemployment benefits.
  - Bargains shifting product demand: unions lobby against legislation, such as e.g. free trade agreements that reduces imported goods; or directly influencing people’s tastes for products, e.g. “buy Czech products”...
  - Bargains restricting substitution:
    - Lobby to increase costs of inputs that could be potential substitutes for union members, e.g. prevent employment of immigrants...
    - Lobby to restrict substitution in means of e.g. staffing requirements – to prevent employers from substituting capital for labor.
  - => activity of unions interact with many other institutions

Unions and Collective bargaining

- Cross-country comparisons;
- Numbers and coverage vary considerably
- Changes over time – increasing divergence between unions presence (number of active members) and unions influence ⇒ excess coverage of unions increasing over time
- In some countries non-working members (e.g. Italy – more pensioners than workers in the largest unions)
- Last 20-30 years deunionization and decentralization
- In particular in:
  - the US – halved, nowadays in private sector under 10%
  - UK, especially under the Thatcher era
  - Australia (from 48-23)
  - New Zealand (from 56 to 13),
  - Southern Europe and the new EU countries after the communist breakdown
- But demand for unionization increases with economic downturns
Unions and Collective bargaining – Union membership in OECD countries 1960-2000

Figure 3.1 Union Membership in OECD Countries
Note: Weighted average of national union density rates, where union density is defined as members of working age as a fraction of employment and weights are the population shares.

Union Membership as a Percentage of All Workers, by Sector, United States, 1973–2008

Figure 13.1
### Unions – membership, coverage and excess coverage, 2000

<table>
<thead>
<tr>
<th>Country</th>
<th>% Workers in union (voting members)</th>
<th>% Workers covered by collective agreements</th>
<th>% Workers joining trade unions</th>
<th>Excess coverage</th>
<th>Centralisation</th>
<th>Coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>96</td>
<td>97</td>
<td>34</td>
<td>63</td>
<td>3</td>
<td>1</td>
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<tr>
<td>Australia</td>
<td>85</td>
<td>13</td>
<td>15</td>
<td>13</td>
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<tr>
<td>Belgium</td>
<td>77</td>
<td>87</td>
<td>44</td>
<td>28</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Canada</td>
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<td>75</td>
<td>10</td>
<td>65</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Denmark</td>
<td>48</td>
<td>52</td>
<td>68</td>
<td>16</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Finland</td>
<td>58</td>
<td>67</td>
<td>65</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>France</td>
<td>74</td>
<td>75</td>
<td>10</td>
<td>65</td>
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<td>2</td>
</tr>
<tr>
<td>Germany</td>
<td>72</td>
<td>80</td>
<td>25</td>
<td>55</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Italy</td>
<td>40</td>
<td>81</td>
<td>46</td>
<td>47</td>
<td>9</td>
<td>4</td>
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<tr>
<td>Netherlands</td>
<td>79</td>
<td>79</td>
<td>19</td>
<td>60</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Norway</td>
<td>54</td>
<td>63</td>
<td>41</td>
<td>38</td>
<td>4</td>
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<tr>
<td>Portugal</td>
<td>54</td>
<td>60</td>
<td>40</td>
<td>50</td>
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<td>4</td>
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<tr>
<td>Spain</td>
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<td>61</td>
<td>10</td>
<td>51</td>
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<tr>
<td>Sweden</td>
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<td>72</td>
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<td>5</td>
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<tr>
<td>Switzerland</td>
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<td>2</td>
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<td>United Kingdom</td>
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<td>16</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>United States</td>
<td>13</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: B&Ours Table 3.1

---

### Union Membership and Bargaining Coverage, Selected Countries, 2004

<table>
<thead>
<tr>
<th>Country</th>
<th>Union Membership as a Percentage of Workers</th>
<th>Percentage of Workers Covered by a Collective Bargaining Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>37</td>
<td>98</td>
</tr>
<tr>
<td>France</td>
<td>10</td>
<td>93</td>
</tr>
<tr>
<td>Sweden</td>
<td>81</td>
<td>93</td>
</tr>
<tr>
<td>Australia</td>
<td>25</td>
<td>83</td>
</tr>
<tr>
<td>Italy</td>
<td>35</td>
<td>83</td>
</tr>
<tr>
<td>Netherlands</td>
<td>23</td>
<td>83</td>
</tr>
<tr>
<td>Germany</td>
<td>25</td>
<td>68</td>
</tr>
<tr>
<td>Switzerland</td>
<td>18</td>
<td>43</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>31</td>
<td>33</td>
</tr>
<tr>
<td>Canada</td>
<td>28</td>
<td>32</td>
</tr>
<tr>
<td>Japan</td>
<td>22</td>
<td>18</td>
</tr>
<tr>
<td>United States</td>
<td>13</td>
<td>14</td>
</tr>
</tbody>
</table>


EAS Table 13.1
Unions and Collective bargaining

- Reasons for deunionization and decentralization:
  - Demographic changes – females, aging;
  - No incentives to join, as contracts extended also to nonunionized workers
  - Changing industrial mix – growing employment in wholesale and retail, finance & insurance, services; SBTCH; small firms
  - Competitive pressures – foreign competition in manufacturing etc.
  - Employers resistance

---

### Percentage of U.S. Wage and Salary Workers Who Are Union Members, by Selected Characteristics, 2009

<table>
<thead>
<tr>
<th>Percentage of U.S. Wage and Salary Workers Who Are Union Members, by Selected Characteristics, 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
</tr>
<tr>
<td>Women</td>
</tr>
<tr>
<td>African American</td>
</tr>
<tr>
<td>Hispanic</td>
</tr>
<tr>
<td>White</td>
</tr>
</tbody>
</table>

**By Industry**

- Mining                                   | 8.6 |
- Construction                             | 14.5 |
- Manufacturing                            | 10.9 |
- Transportation, Public Utilities          | 22.2 |
- Wholesale, Retail Trade                   | 5.3 |
- Finance, Insurance                        | 1.4 |

Source E&S TABLE 13.2
Unions and Collective bargaining, effect on wages and employment

- Unlike minimum wages, unions act on the entire wage distribution – not only on its lower end.
- Again a possibility to apply a monopsony model
- Given the equality goal – unions tend to compress wage distribution
  - => crowd out least skilled workers located at the low end of the distribution to unemployment
  - => reduce skill premium that would prevail in the case of absence of unions
    => high-skilled workers leave unions
  - => membership concentrated around intermediate-skill positions => further compression

Unions and Collective bargaining, effect on wages and employment: Empirical evidence

- Estimates of effects of unions on wages of members X non-members => union wage gaps, and on the entire wage distribution, usually drawing on individual micro-data.
- Mincerian wage equations:
  \[ \log W = \beta_0 + \beta_1 D + \beta_2 X + \epsilon \]
  - Where \( D \) is a dummy for union membership (1 when an individual is a member; 0 otherwise), \( X \) is a matrix of personal characteristics such as age, gender, education, tenure. \( \beta_1 \) represents coefficient of the estimated union wage gap.
  - Estimates of \( \beta_1 \) range from 12-20% in the US, 3-19% in the UK. Usually a consensus that union membership associated with higher wages.
  - Evidence of counter-cyclical union wage gap (higher in economic downturns)
  - the effect of unionization or union decentralization on the entire wage distribution: usually unions reduce wage dispersion in countries with higher centralization of bargaining (e.g. Card 2002).
Unions and Collective bargaining, effect on wages and employment: Empirical evidence

- Estimates of effects of unions and bargaining on employment/unemployment, and inflation, drawing mostly on macroeconomic time series.
- Usually found a negative relationship between a degree of coordination and unemployment is observed, with higher coordination leading to lower unemployment.
  - BUT some recent studies find the opposite.
  - Also some studies find a hum-shaped relationship with low unemployment at both low and high degrees of centralization, and high unemployment with hybrid/intermediate bargaining systems.
- Unions and lower job turnover

Unions and Collective bargaining, effect on wages and employment: Empirical evidence

- Unions and wage dispersion:
  - wage dispersion about 25% lower in union firms than in nonunion firms (lower returns to skills, union workers more homogenous,...
  - Evidence that unionization reduces wage dispersion by about 10% (Card, 1996)
- Unions and fringe benefits
- Unions and firm outcomes:
  - Union firms more productive,
  - Negative effects of unions on profits and shareholders wealth
Minimum-Wage Effects under Monopsonistic Conditions: Both Wages and Employment Can Increase in the Short Run

Marginal Expense of Labor ($ME_L$)
Marginal Revenue Product of Labor ($MRP_L$)

$W_m$  $W_m'$  $W_0$

$E_0$  $E_m$  $E_1$

Supply

Wage, $ME_L$ ($)