Personnel Economics

Details about the course & Overview

Nicole Schneeweis

Details about the course

- **Literature**
  - Edward P. Lazear and Michael Gibbs: "Personnel Economics in Practice", John Wiley & Sons
  - 2nd Edition (2009) and 3rd Edition (2015) very similar
  - 2nd Edition includes chapter appendices
  - 3rd Edition: chapter appendices online!
  - Chapters 1–5, 7–13
  - Several books are available in various libraries at the campus
  - Master copy available in the office (K149D, Ines Meister)
- **Slides** and additional material available at: `http://www.jku.at/institut-fuer-volkswirtschaftslehre/team/nicole-schneeweis/`

Details about the course

- Your presence in the course will not be documented
- Exercises relevant for exam
- Meetings: Tuesdays, 15:30, BA 9910
- Exam and Make-up exam
  - Friday, January 24, 2020, 13:45 - 15:15, HS19 (Science Park 3)
  - Friday, February 14, 2020, 13:45 - 15:15, HS15
- Contact & Questions
  - I: Announcements via KUSSS
    Make sure there is the right e-mail address in the system!
  - You: Ask me during and after the course or e-mail me
    nicole.schneeweis@jku.at

Why Personnel Economics?

- Human Resource Management (HRM) from an economic perspective
- Firm and individual decisions
  - **How do firms organize themselves and manage their employees?** Hire new workers, train workers, handle turnover, define tasks and jobs, make use of teams, evaluate performance of employees, pay their employees, promote their employees, . .
  - **How do individuals/employees act?** Apply for jobs, educate themselves/invest in their human capital, perform in their job, what effort do they make, when do they quit a job, retire from work, . .

Why Personnel Economics?

- Edward P. Lazear is a Prof. of Human Resources Management & Economics at Stanford University and founder of Personnel Economics
- Employees most valuable asset of firms
  - around 3/4 of all costs are human resource related
  - around 70% of wealth is human capital (next to physical or financial capital)
- Target: Analyzing conditions of the business & labor market environment to effectively utilize and develop **human capital**

Humankapital: Das Unwort des Jahres 2004

„Der Gebrauch dieses Wortes aus der Wirtschaftsfachsprache breitet sich zunehmend auch in nichtfachlichen Bereichen aus und fördert damit die primär ökonomische Bewertung aller denkbaren Lebensbezüge, wovon auch die aktuelle Politik immer mehr beeinflusst wird. Humankapital degradiert nicht nur Arbeitskräfte in Betrieben, sondern Menschen überhaupt zu nur noch ökonomisch interessanten Größen."

(Gesellschaft für deutsche Sprache 2004)

'reduces human-beings to economically interesting quantities'

Human Capital

- What we mean: bundle of skills and knowledge (innate ability, degree of acquired knowledge and skills, something that can be invested in)
- Capital: valuable from a firms' perspective
- Nobel prizes in Economics for their work on education and human capital: Gary S. Becker (1992) and Theodore W. Schulz (1979)

Economic Models

- Criticism: economic modeling is "inhuman" and therefore inappropriate for the solution of problems of HRM
- Models do not perfectly image reality, instead (like maps) simplify reality to give orientation. Good models omit unimportant details to clear the view on main mechanisms.
- Assumptions on behavior:
  - utility maximization of individuals
  - profit maximization of firms
  - rationality (actors do not behave in a way that they harm themselves deliberately)
- Analysis of incentive systems
- Economics *not instead* but supplementary to HRM

Topics

- **The labor share**
  - How much of national income is earned by labor?
  - How did the labor share change over time?
  - What is the role of the rise in ICT?
- **Setting hiring standards** (chapter 1)
  - Basics:
    - High or low skilled workers?
    - Productivity versus cost
  - Production function and recruitment
  - Recruitment under uncertainty

Topics

- **Recruitment and asymmetric information** (chapter 2)
  - Screening: uninformed party takes the lead
  - Signaling: informed party takes the lead
- **Investment in skills** (chapter 3)
  - Investment in education
    - Who invests in education and why?
    - What influences the individual education decision?
  - On the job training
    - General versus firm-specific human capital
    - Who pays for training?
- **Education economics**
  - Educational production functions
    - Family background, school inputs, institutional characteristics
    - Efficiency and equality of opportunities
  - Schooling reforms and its effects on individual outcomes

Topics

- **Managing turnover** (chapter 4)
  - Is turnover always bad?
  - Poaching (headhunting), lay-offs, retirement
- **Decision making** (chapter 5)
  - Economy
    - Centralization versus
    - decentralized market-oriented economies
  - Firm
    - Flat versus hierarchical structure
    - Two types of errors
- **Job design** (chapters 7/8)
  - What tasks are combined into jobs?
  - How did jobs change in the previous decades?
  - Teams: knowledge transfer and free-riding

Topics

- **Paying for performance** (chapters 9-13)
  - The Principal Agent Problem
  - Performance evaluation:
    Inputs? Output? Broad or narrow measure?
  - Rewarding performance:
    Should compensation be linked to performance?
  - Promotions and seniority pay
  - Profit sharing and benefits

Labor losing to capital: What explains the declining labor share?

OECD Employment Outlook 2012 (Chapter 3)

How technology and globalisation are transforming the labor market

OECD Employment Outlook 2017 (Chapter 3)

Labor versus Capital

- How much of the "cake" (national income) can be attributed to labor?
- $\Longrightarrow$ Terms: Labor share, Wage share, "Lohnquote"
- Questions:
  - What is the labor share and what can it tell us?
  - How did the labor share develop over time?
  - What is the labor share in the production function?

Measuring national income and the labor share

- National Income and Output: estimate total economic activity in a country
- Output approach (total value of all goods and services a nation produces)
- Expenditure approach (counting total output by finding the total amount of money spent)
- Income approach
  - Equates total output to the total factor income received by residents
  - Important components:
    - **Employee compensation (wages, salaries, benefits)**
    - Economic profits
    - Interest income from capital goods net of interest paid
    - Rental income net of expenses

Labor share: development over time

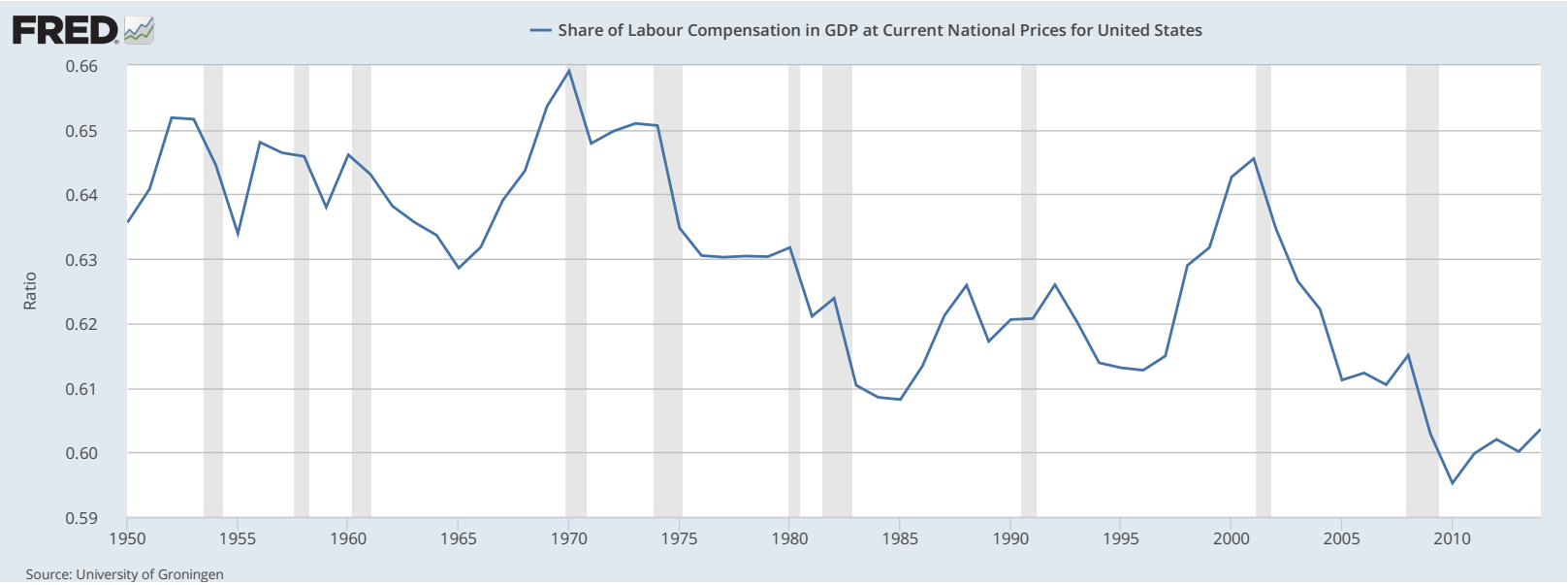


Figure: Labor share in the US 1950 to 2014.

Labor share: development over time

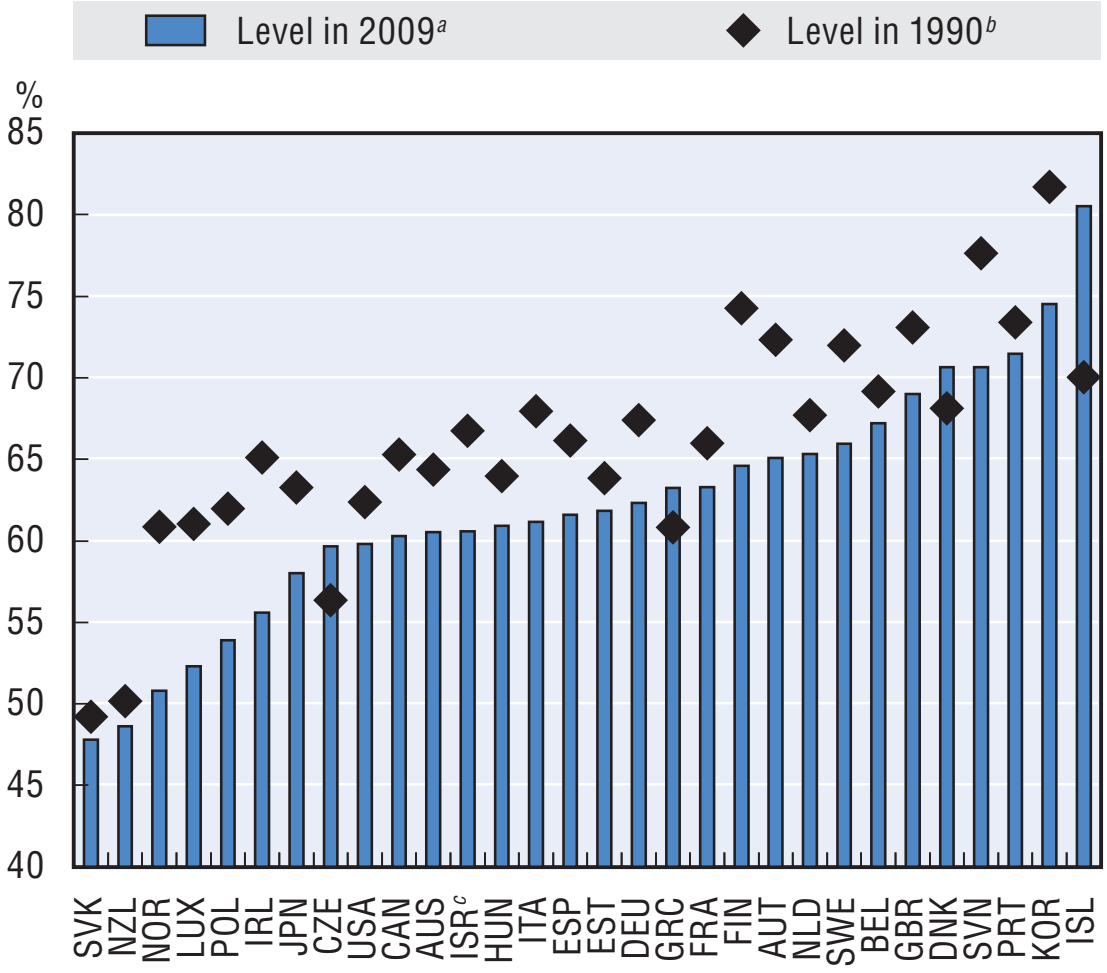


Figure: Median dropped from 66.1% to 61.7%.

Decreasing labor share and income inequality

- Not necessarily accompanied by a decline in living standards for workers $\Longrightarrow$ Might be accompanied by faster economic growth ('larger cake')
- Significant differences across earnings groups
  - On average, wage income share of top 1% increased by 20%
  - Wage share of lowest income group declined over time
- Higher capital share is associated with higher inequality in the distribution of income (Piketty 2013, *Capital in the twenty-first century*)
- Correlation of labor share and income inequality
  (Gini coefficient: 0 perfect equality, 100 perfect inequality)

Correlation of labor share and income inequality

Figure 3.2. **Changes in the labour share and in income inequality, 1990s to mid-2000s**[a]

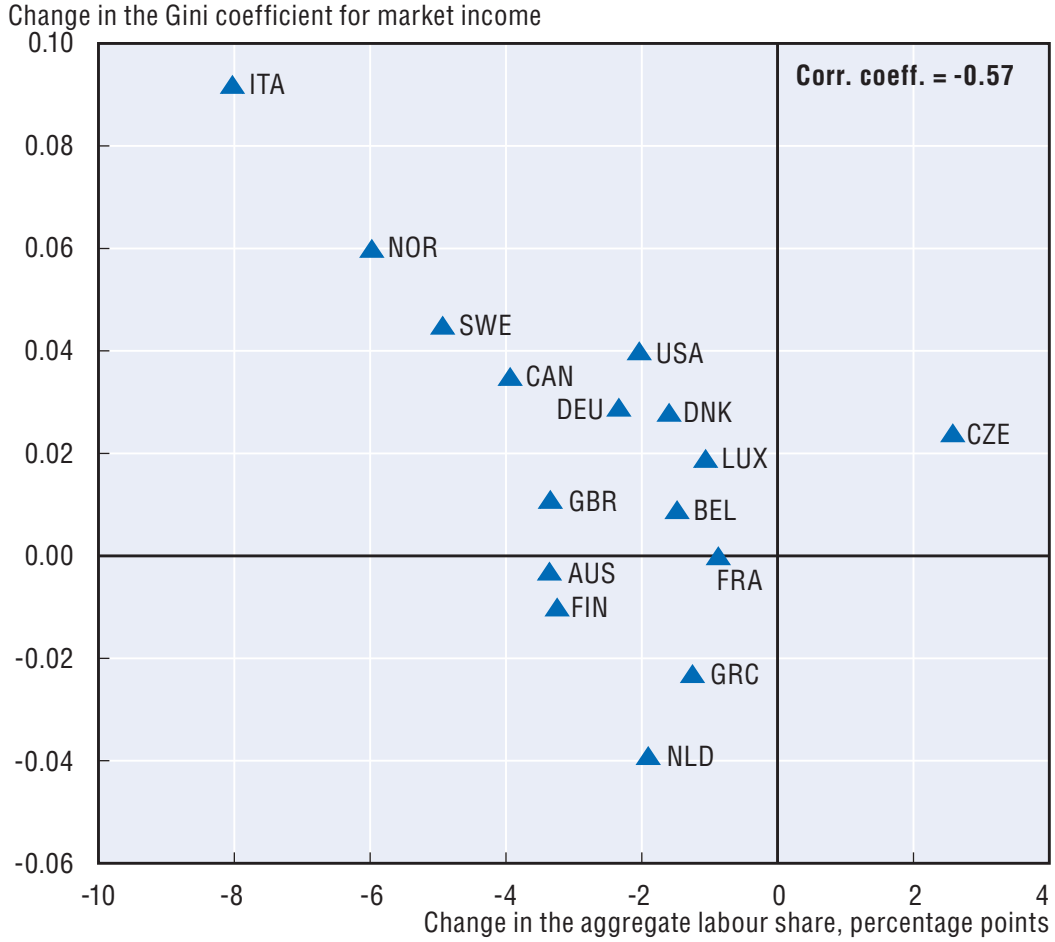


Figure: Decrease in Labor share related to increase in income inequality.

Labor share excluding top earners

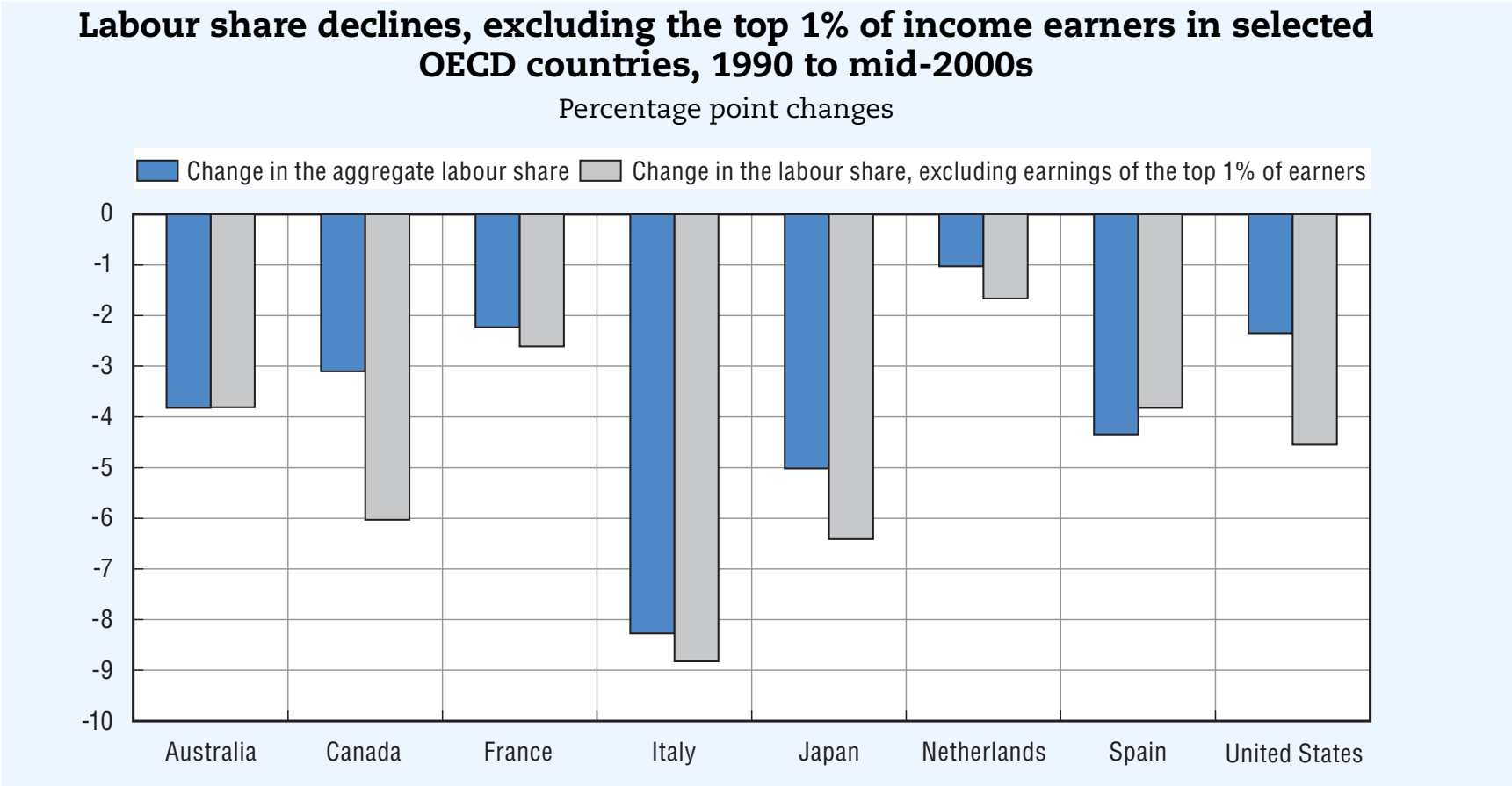


Figure: Stronger decline if top earners excluded.

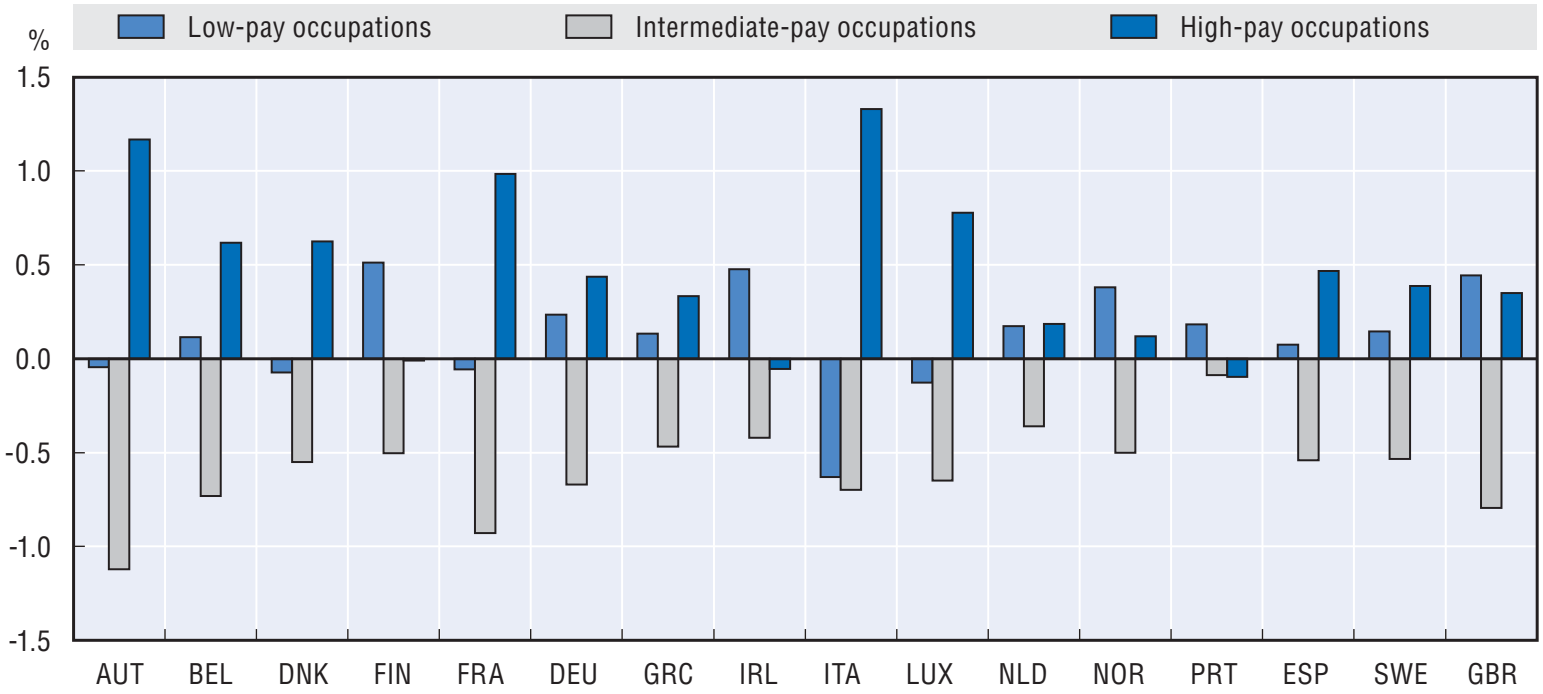
What explains the decline in labor share?

- Total factor productivity growth
  - Information and communication technologies (ICT): invention of new capital goods and production processes (replacement of labor in certain types of jobs)
- Globalization
  - Delocalization of parts of production
- Reduction in bargaining power of workers
  - Higher domestic competition and decrease in use of collective bargaining institutions

Changes in occupations

Figure 3.7. **Changes in the shares of different occupational groups in total hours worked, 1993-2006**

Annual percentage rates



Note: Annual growth of total hours worked in different occupations. Occupational groups are defined on the basis of their ranking in terms of average wages in each country over the period.

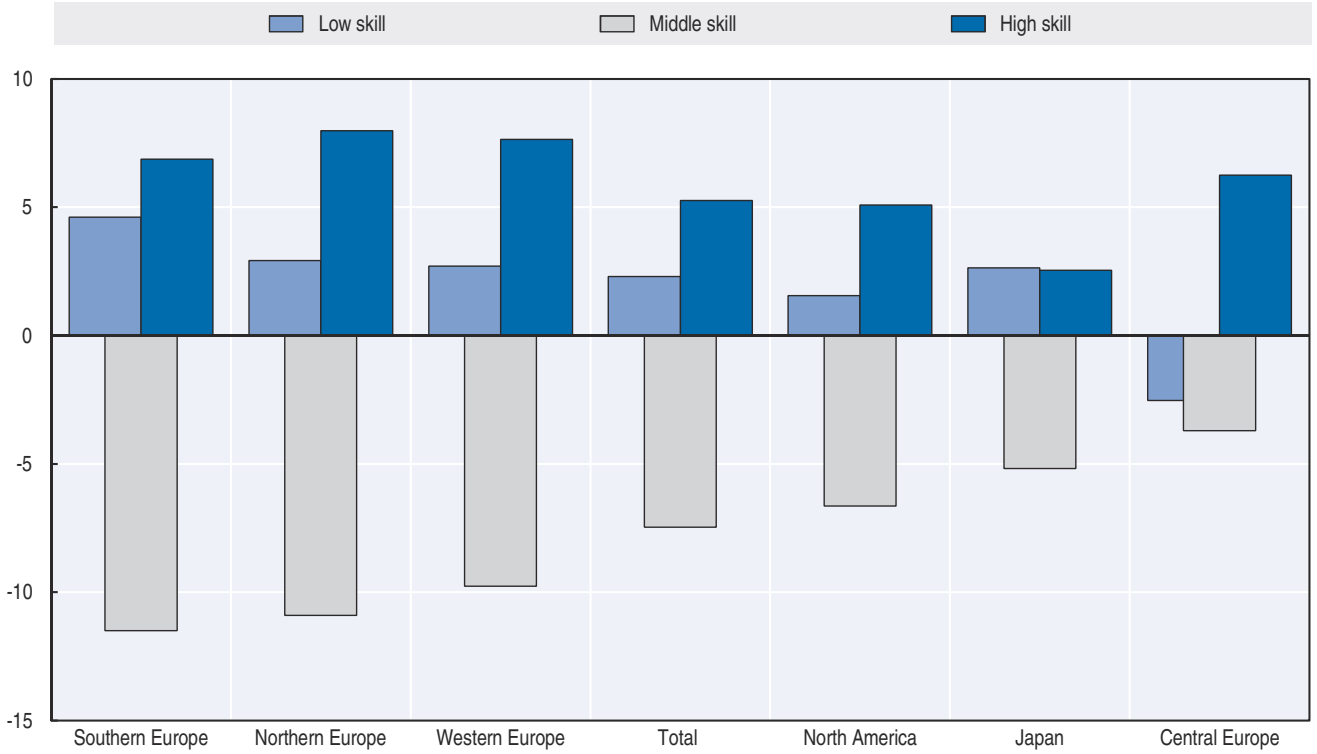
Figure: Decline in middle-pay occupations.

Changes in occupations

Figure 3.1. **The labour market continues to polarise**

Heterogeneity in polarisation, selected OECD countries by region, 1995 to 2015[a, b, c, d]

Percentage point change in share of total employment



Note: High-skill occupations include jobs classified under the ISCO-88 major groups 1, 2, and 3. That is, legislators, senior officials, and managers (group 1), professionals (group 2), and technicians and associate professionals (group 3). Middle-skill occupations include jobs classified under the ISCO-88 major groups 4, 7, and 8. That is, clerks (group 4), craft and related trades workers (group 7), and plant and machine operators and assemblers (group 8). Low-skill occupations include jobs classified under the ISCO-88 major groups 5 and 9. That is, service workers and shop and market sales workers (group 5), and elementary occupations (group 9). Southern Europe contains Spain, Greece, Italy and Portugal. Western Europe contains Austria, Belgium, Germany, France, Ireland, the Netherlands, Switzerland and the United Kingdom. Central Europe contains the Czech Republic, Hungary, the Slovak Republic, and Slovenia. Northern Europe contains Denmark, Finland, Norway, and Sweden. North America consists of Canada and the United States.

Figure: Decline in middle-skill jobs.

Changes in occupations

Figure 3.7. **Polarisation has occurred in almost all industries**

Percentage point change in share of total employment within industry for select OECD countries,[a] 1995 to 2015[b, c, d]

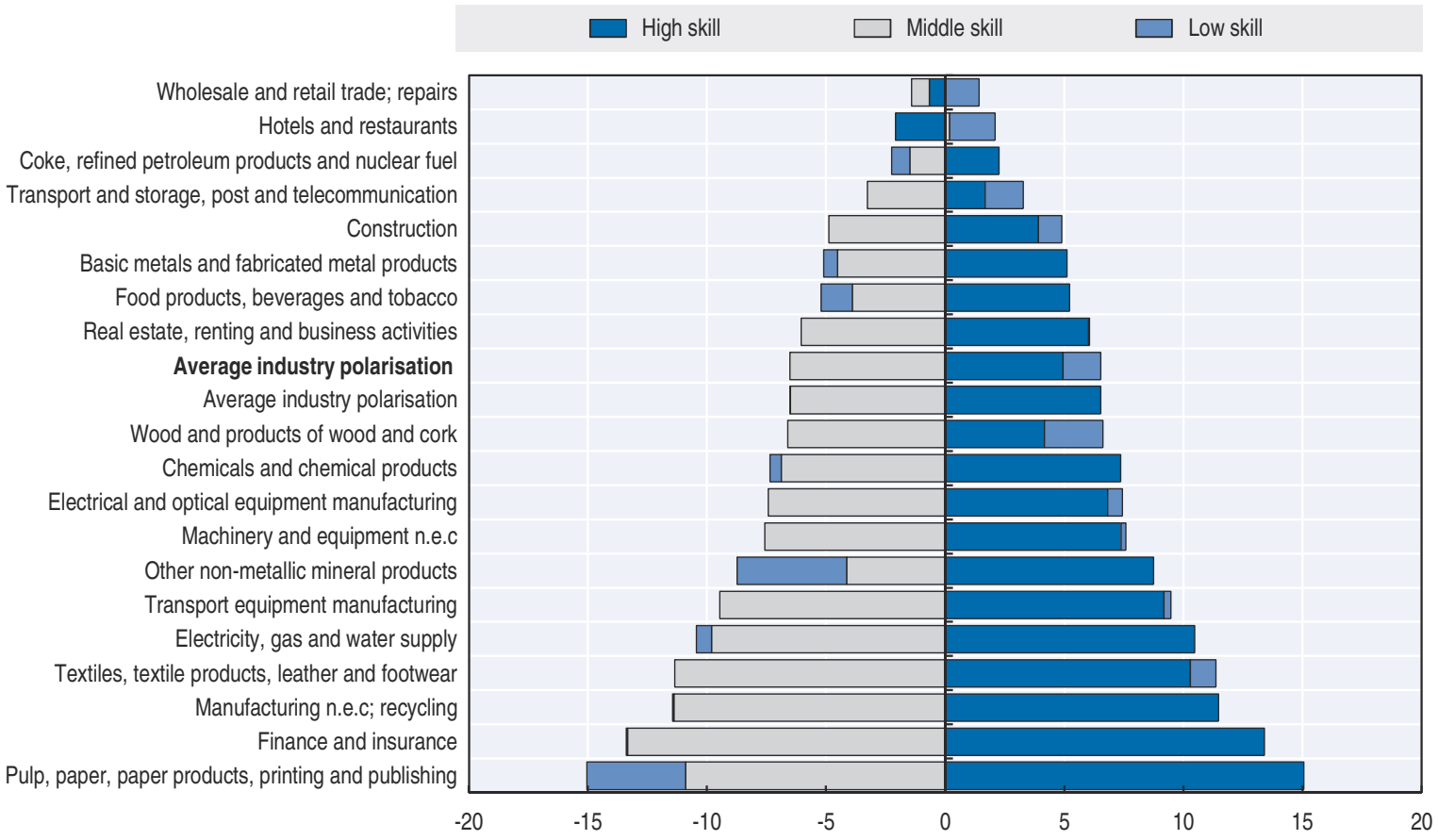


Figure: Decline in middle-skill jobs in nearly all industries.

Changes in occupations

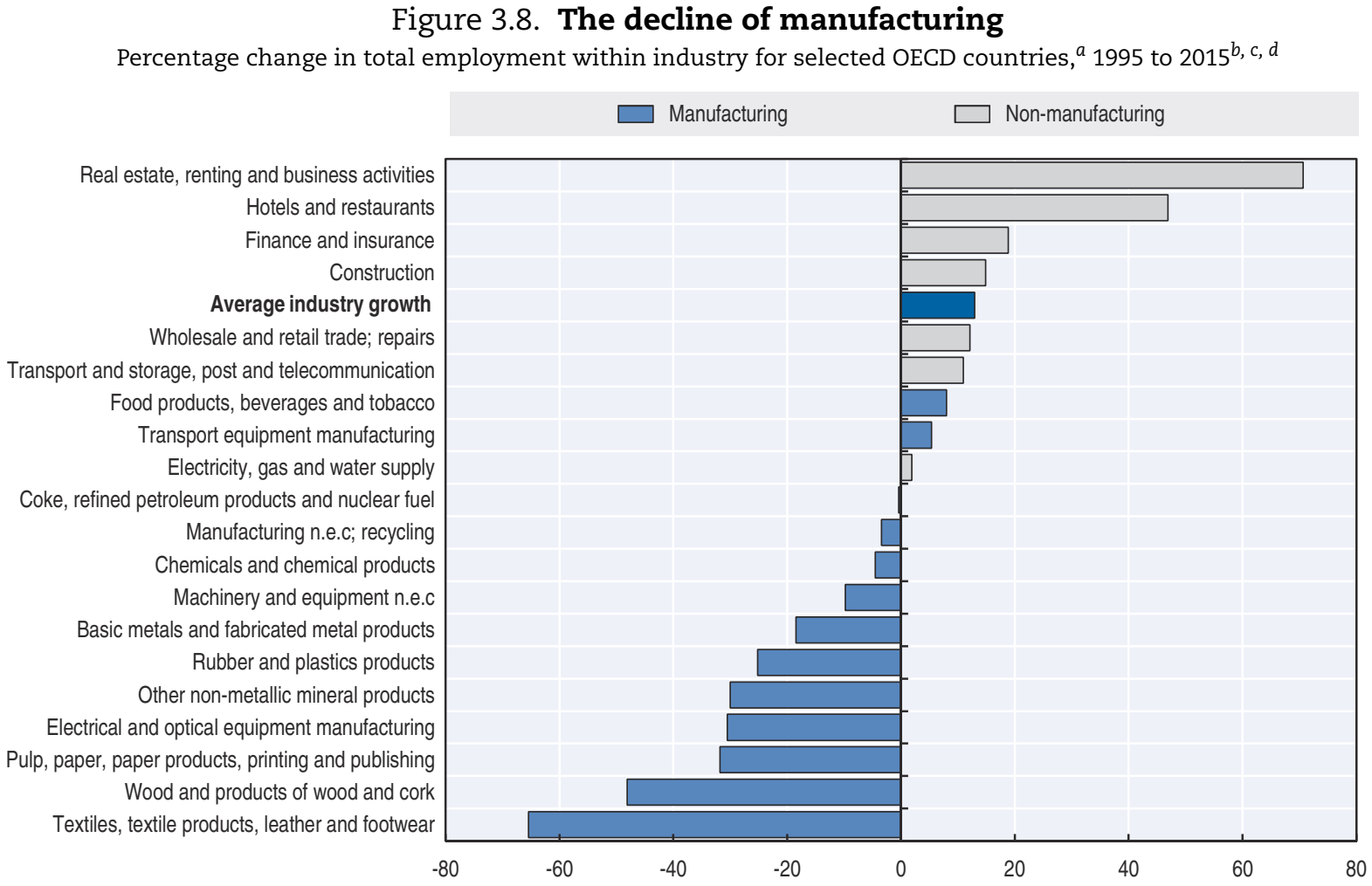


Figure: Decline in manufacturing industry.

Fundamental changes in the labor market

- **Occupational Polarization**
- OECD regions experience a decline in the share of middle-skill and middle-pay jobs relative to high-skill and low-skill jobs
- About $\frac{1}{3}$ of polarization due to reallocation of employment away from manufacturing (due to global competition)
- About $\frac{2}{3}$ of polarization due to changes in occupational structure within sectors (also due to ICT use)

The labor share in the production function

- Cobb Douglas Production Function: $Y = AK^{\alpha}L^{1-\alpha}$
- Producer optimization: $\frac{\partial Y}{\partial L} = \frac{w}{p}$ and $\frac{\partial Y}{\partial K} = \frac{r}{p}$ p ... price
- Marginal products: $\frac{\partial Y}{\partial L} = (1-\alpha)A(\frac{K}{L})^{\alpha}$ and $\frac{\partial Y}{\partial K} = \alpha A(\frac{L}{K})^{(1-\alpha)}$
- Expressions for labor and capital shares: $\frac{(w/p)L}{Y}$ and $\frac{(r/p)K}{Y}$
- Labor share: $\frac{((1-\alpha)A(\frac{K}{L})^{\alpha})L}{AK^{\alpha}L^{1-\alpha}} = 1 - \alpha$
- Capital share: $\frac{(\alpha A(\frac{L}{K})^{1-\alpha})K}{AK^{\alpha}L^{1-\alpha}} = \alpha$

Questions?