

Wage Inequality in Switzerland

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Gerzensee, March 2015

About me

- Current position
 - Professor of Economics at University of Lausanne
 - Director of Master of Science in Economics
 - Group leader NCCR LIVES
 - Managing Co-editor Swiss Journal of Economics and Statistics
- Research
 - Academic: Unemployment Insurance, Family Policy, Social Economics
 - Applied: SECO, ewz, Canton Vaud

Overview

- Who sets wages and how does that generate inequality?
- What happened to wage inequality in Switzerland?
- What shapes inequality?
- What can we do?

Who sets wages and how does that
generate inequality?

“Brave new world”

- Competitive labor market
 - Many small firms, many workers; identical
 - Wage clears market for labor
- Firm: How can I maximize my profit?
 - What do I gain by hiring one more worker? **Marginal product (MP), declines with number of workers**
 - What do I pay that worker? **Wage, set on the market**
 - Last worker I hire: **$MP = wage$**
 - Worker gets wage share (also: labor share), firm gets profit share

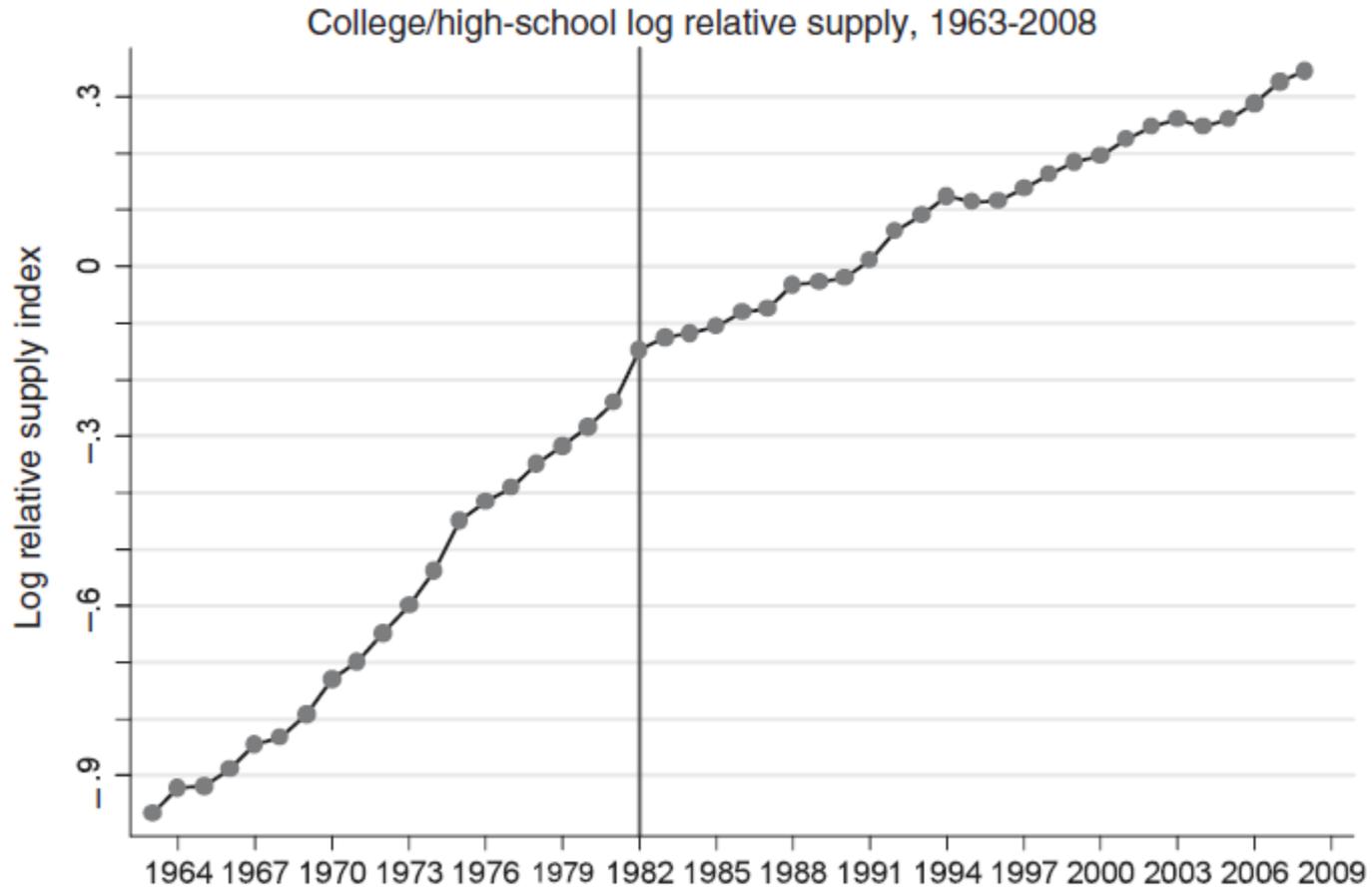
A more real world

- Two skill groups
 - Henry: earns wage w_H and is worth f_H
 - Leroy: earns $w_L < w_H$ and is worth $f_L < f_H$
- Wage inequality
 - Relative wage: w_H relative to w_L
 - Profit maximization: **Relative wage = Relative marginal product**
 - What happens to wage inequality over time?

A “race”

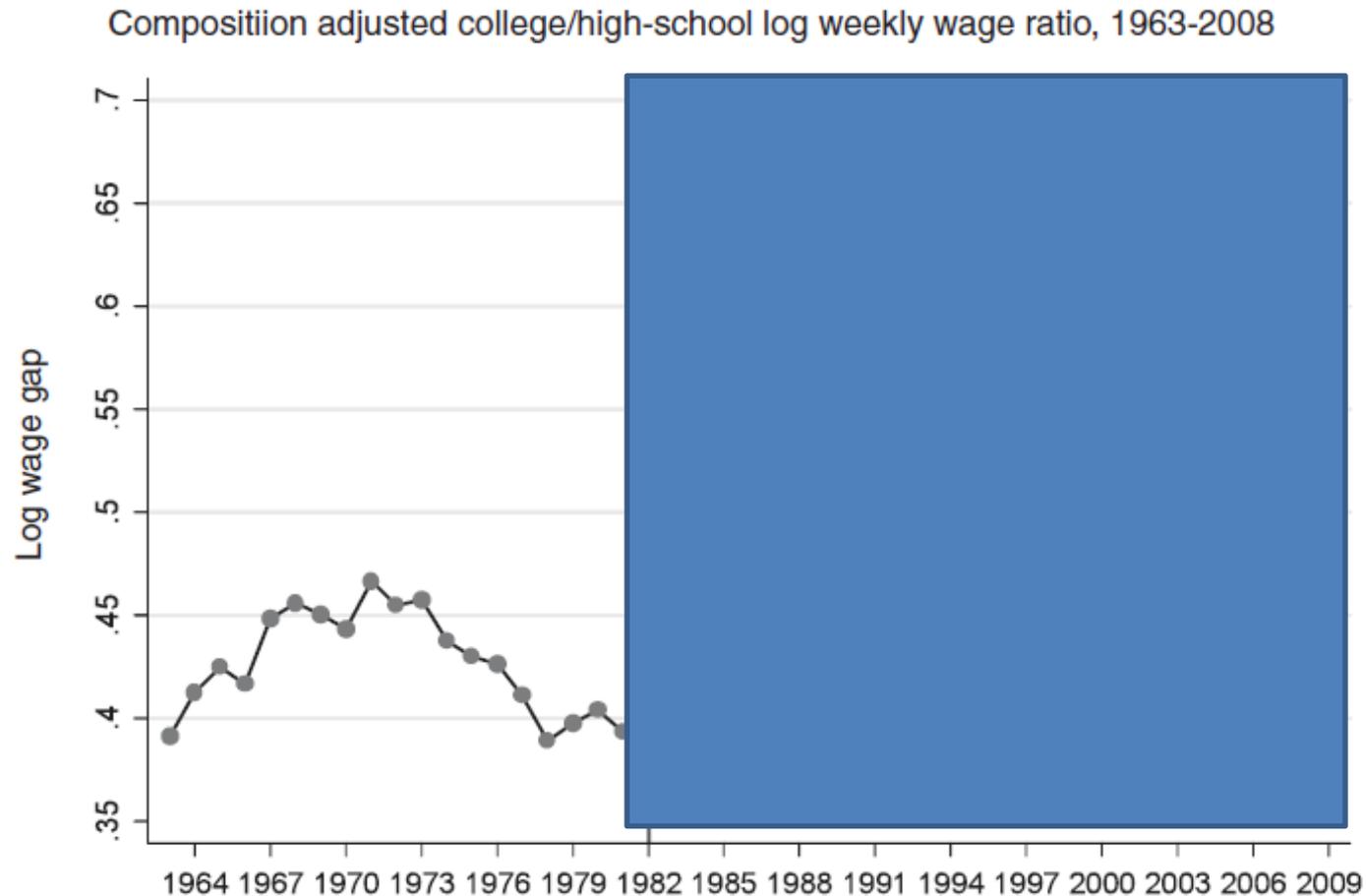
- Relative supply
 - Skill-upgrading: having more and more Henrys than Leroy
 - Wage inequality decreases
- Technology
 - Skill-biased: A new computer helps Henry more than Leroy
 - Wage inequality increases

US: Ever more Henrys



Source: Acemoglu and Autor (2011). This graph reports the relative supply of workers with college education to workers with high school education.

US: Henry earns ever more than Leroy



Source: Acemoglu and Autor (2011). The composition adjustment holds constant the relative employment shares of demographic group, as defined by gender, education, and potential experience, across all years of the sample. Relative wage measured in real 1982 dollars.

Competition: Mechanical Turk

External Link: http://s3.amazonaws.com/sb001/survey/media/images/2d1f120d-2d49-4461-88a8-3377d72c9184_original.jpg

How is the product picture provided? (required)

- Picture is good or partially good to use (even rotated)
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Limits to competition

- Frictions: Not easy to find a replacement
 - Worker: search for a new job
 - Firm: search for a worker
- Psychology of wages
 - Wage signals appreciation, motivates worker (in case unemployment is low)
- Networks
 - I decide on salaries of the people who decide on my salary

Wages: Leroy vs Henry

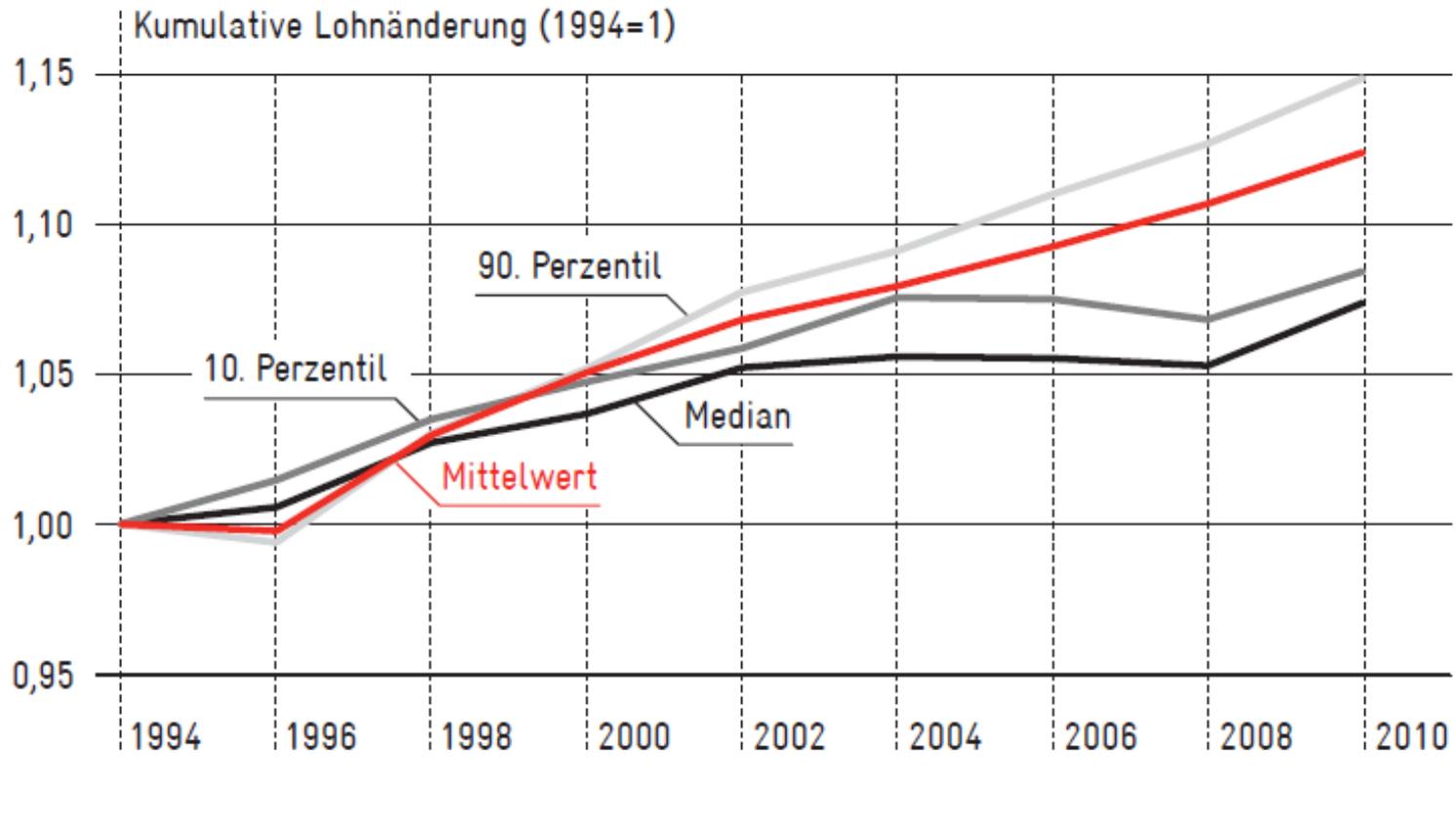
- What's relevant for Leroy?
 - Firm uses market power to lower wage
- What's relevant for Henry?
 - High wages to motivate for high performance
 - Tight network of board of directorships
 - Imported non-competition: lax rules in the U.S. shape wages in Switzerland

Recap theory

- Competitive Framework
 - Wage inequality driven by relative supply and technology
 - Powerful technology effects for the USA
- Imperfect competition
 - Decrease wages at the bottom
 - Increase wages at the top

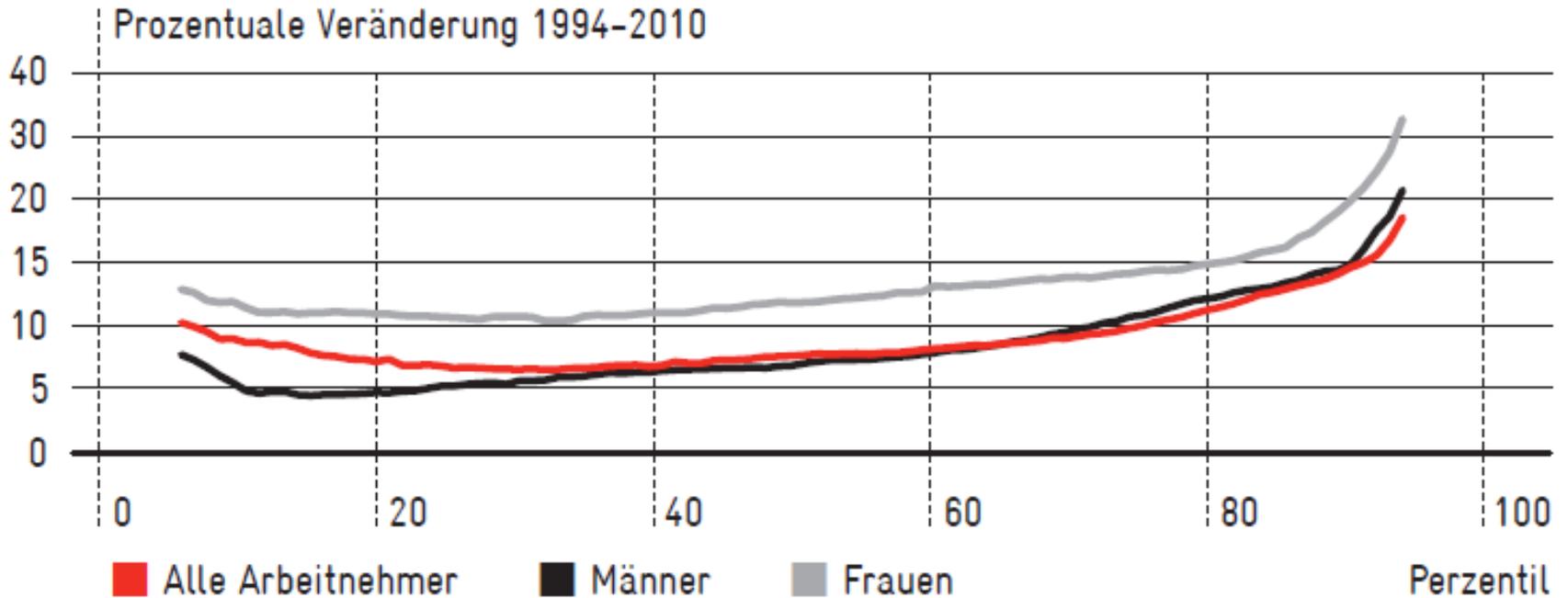
What happened to wage inequality
in Switzerland?

Real wages: Henry vs Leroy



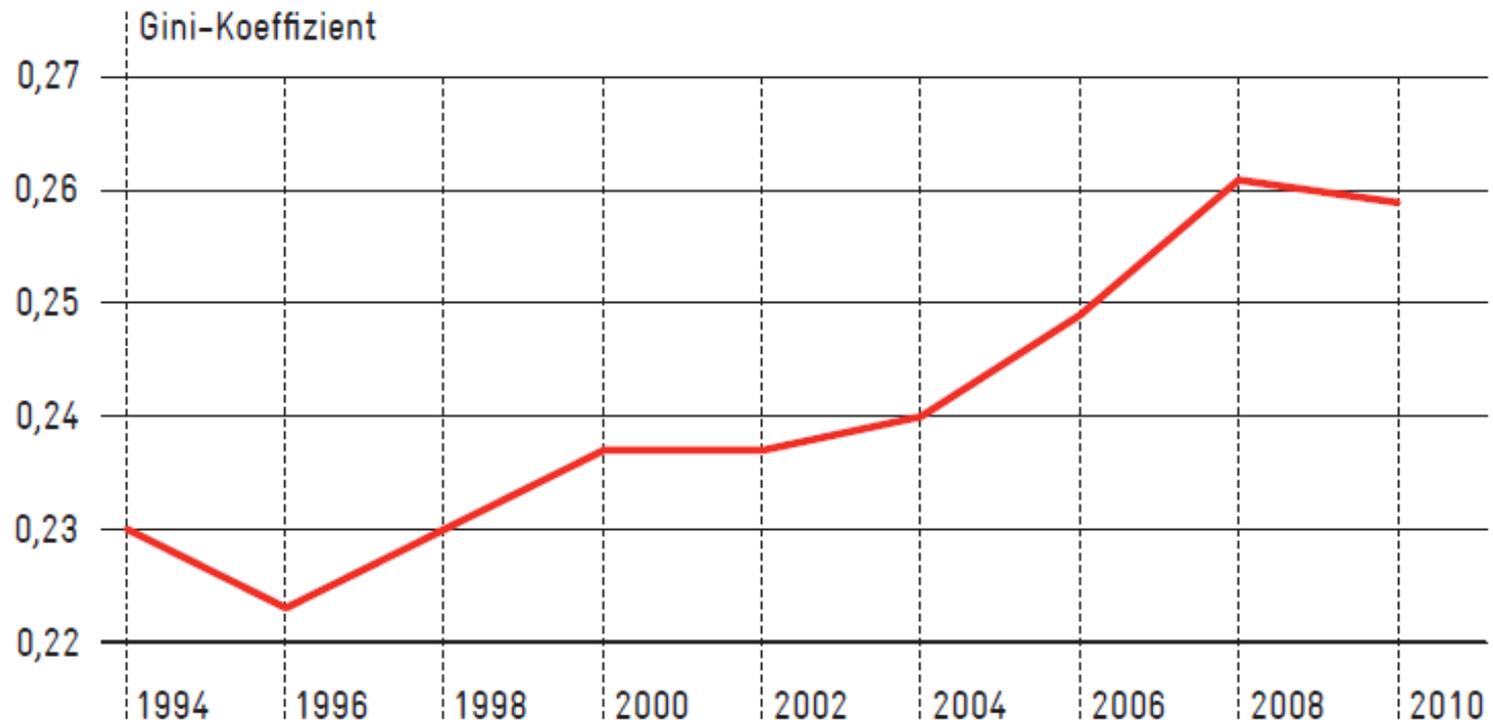
Quelle: BFS 2011c

Real wages: details



Quelle: BFS 2011c

Wage inequality (Gini)



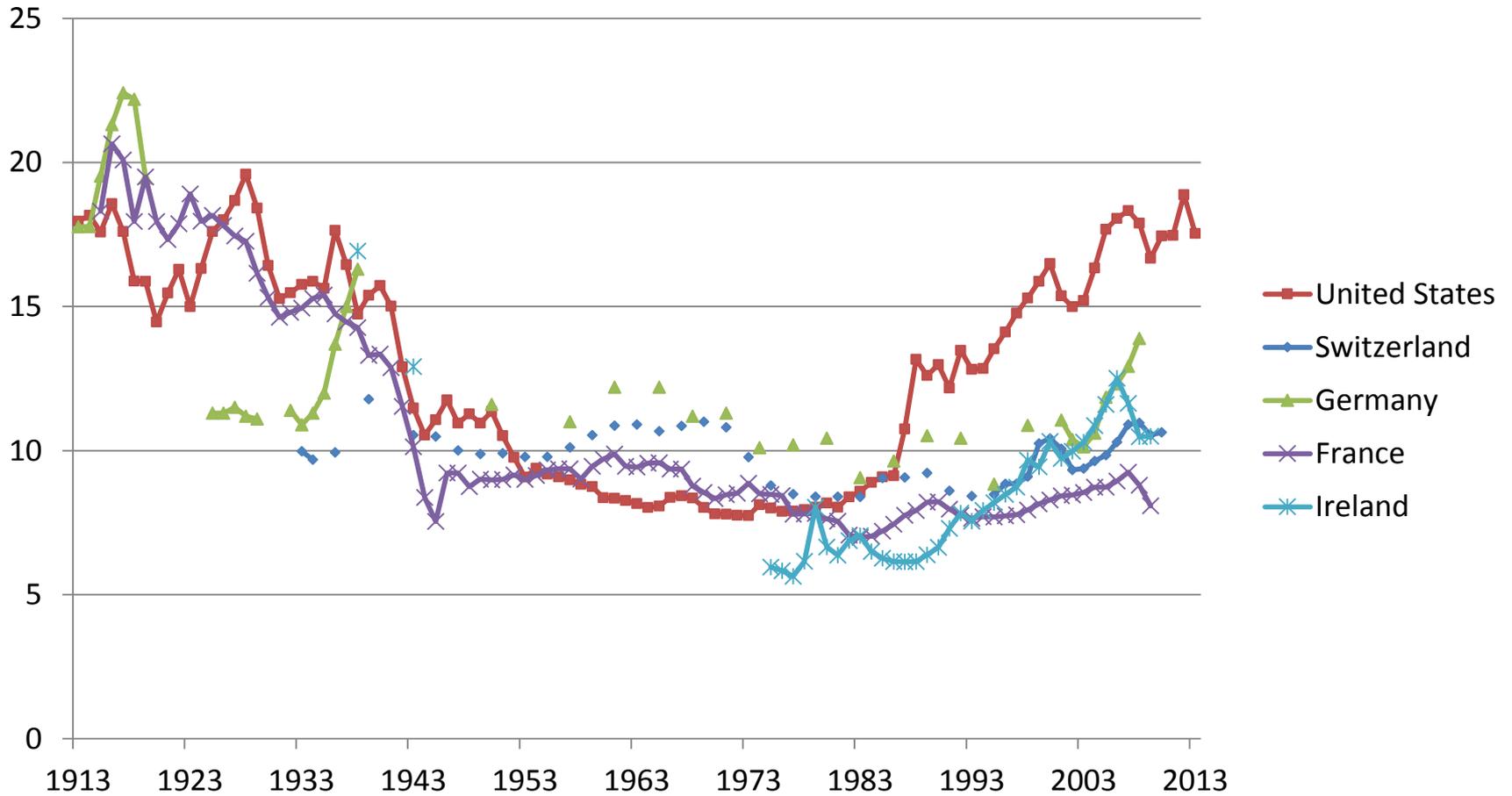
Quelle: BFS 2011

Comparison

- 3 points in the Gini is quite a lot



World: Top Incomes



Source: World Top Incomes Database, accessed March 2015.

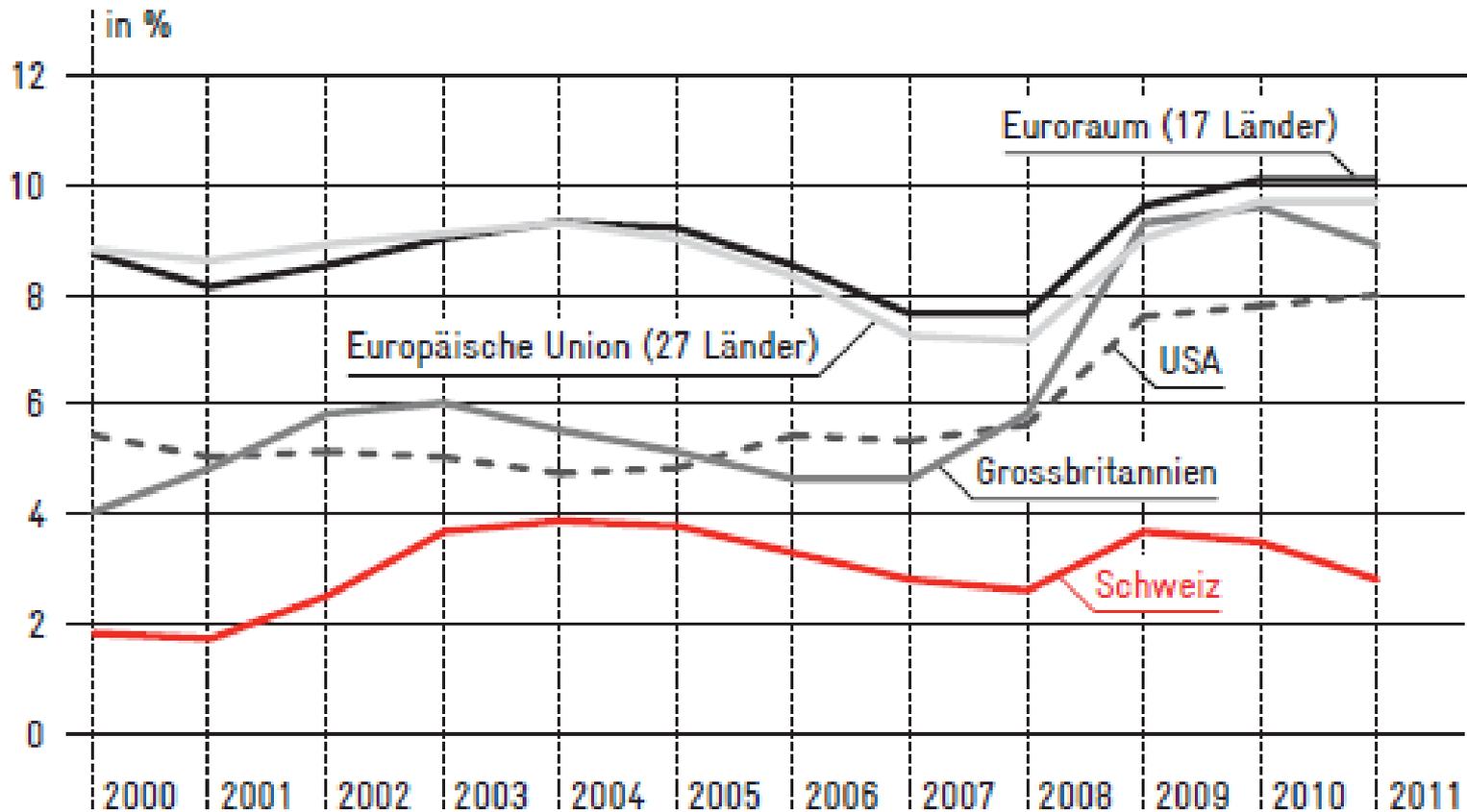
CH: Top incomes



Figure 6: Top 1% Income Shares of Total Income and Labor Income, 1981–2008

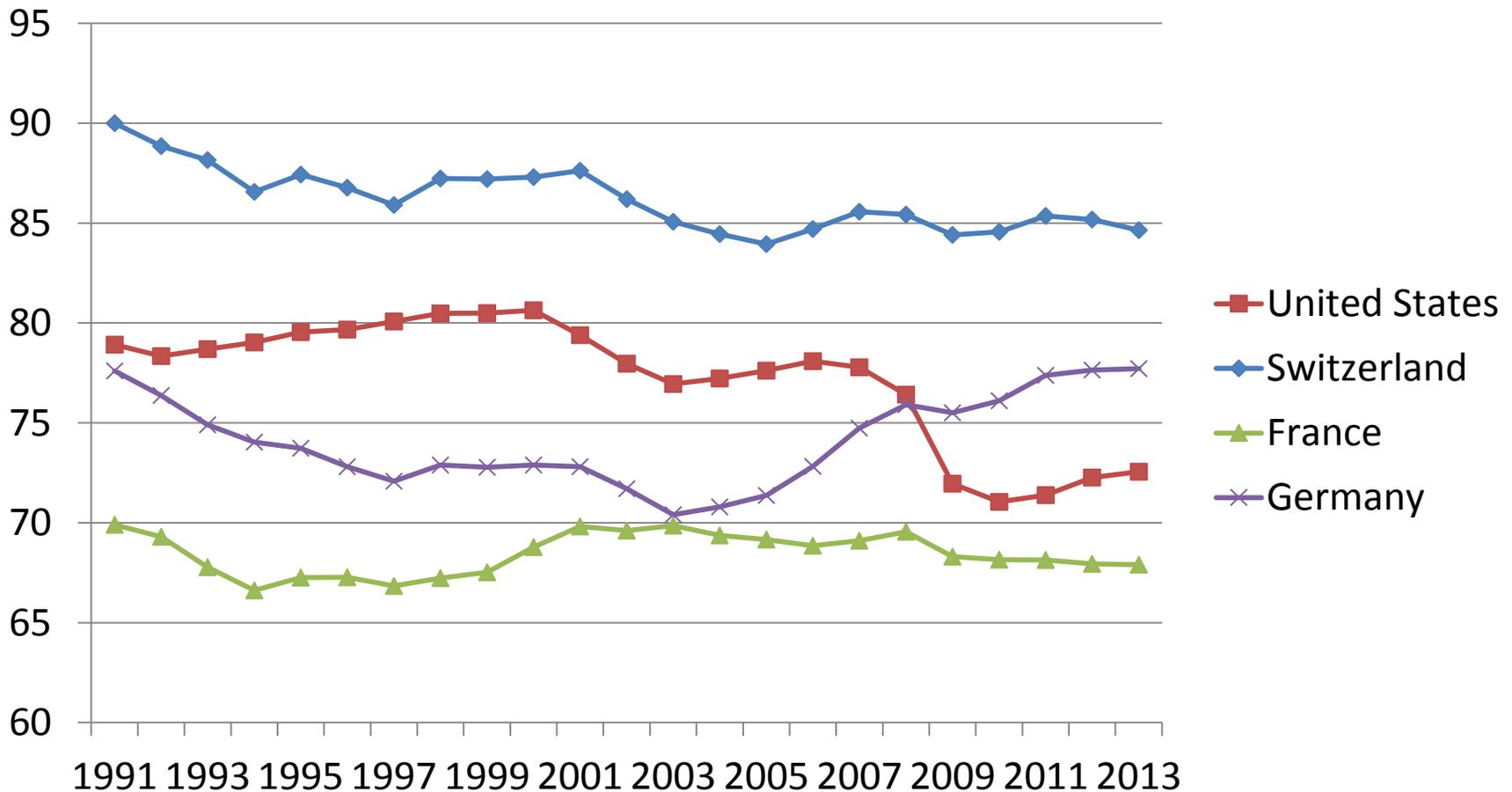
Source: Foellmi and Martínez (2014)

What about those who don't work?



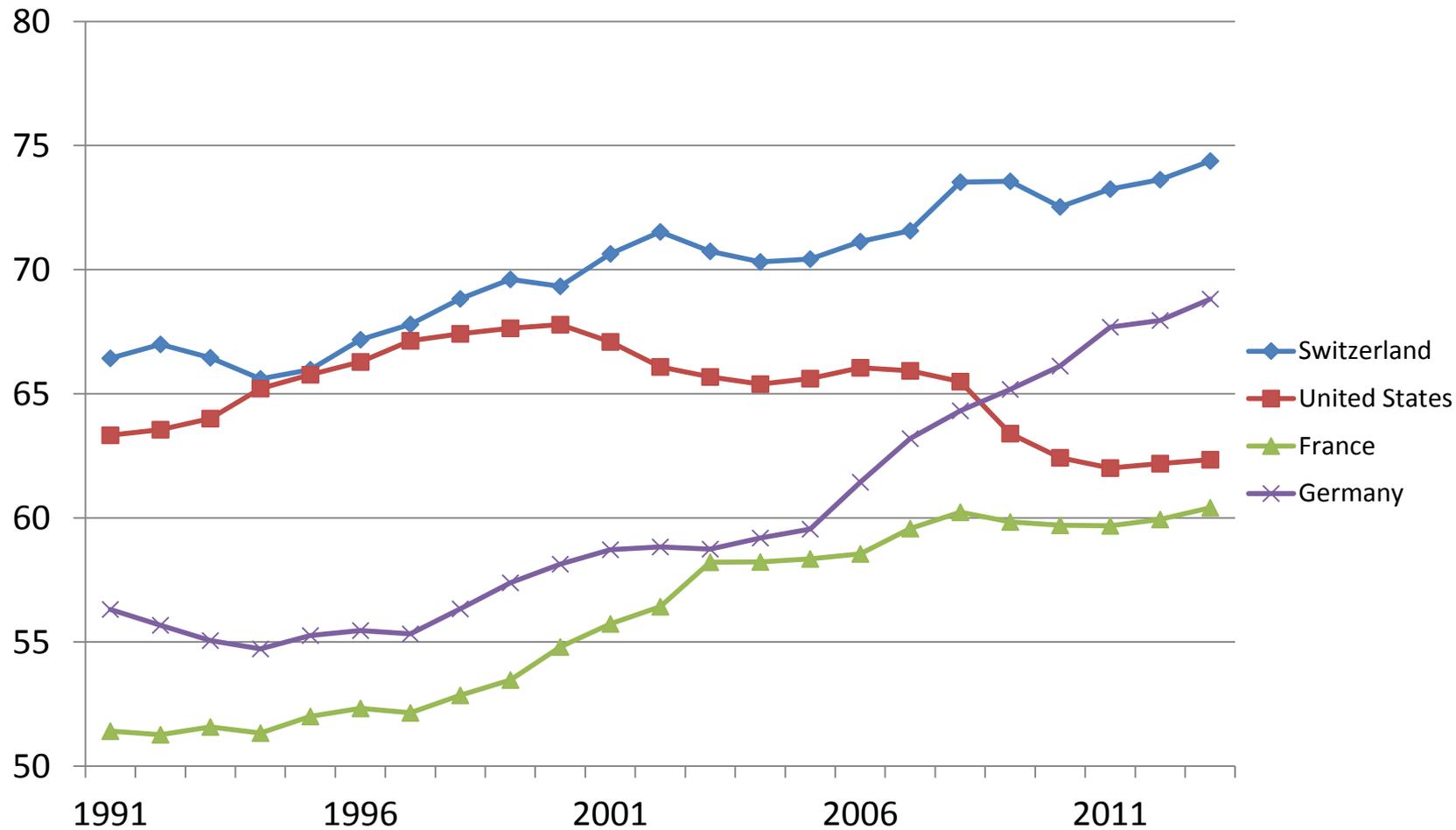
Quelle: Eurostat 2012

Employment rate of men



Notes: Graph reports the employment to population rate of individuals aged 15-64 years.
Source: OECD, Labor Force Statistics.

Employment rate of women



Notes: Graph reports the employment to population rate of individuals aged 15-64 years.
Source: OECD, Labor Force Statistics.

Recap of evidence

- All incomes grow, low and especially high incomes grow faster than middle incomes
- Low level of wage inequality but important increase in Gini since 1994
- No strong job polarization in recent years
- Wage inequality mirrors overall income inequality also for top income earners
- More women and fewer men work, may decrease wage inequality

What shapes inequality?

Labor market institutions

- Unions
 - Density, Coordination
- Minimum Wage
 - Kaitz Index: Minimum to Avg. Wage
- Tax Wedge
 - Employment tax, direct tax, indirect tax
- Unemployment benefits
 - Benefit replacement rate (Avg. over family types)

What Matters?

	Gini 1	Labour share	Decile ratio	Unemployment rate
Bargaining coordination	- 0.304*	0.382*	- 0.128	0.211
Union density rate	0.866*	- 0.097	- 0.554*	2.179*
Ratio minimum/median wage	1.327*	- 0.418	- 1.240*	3.978*
Tax wedge	- 0.960*			- 1.165*
Unemployment benefit	0.037	- 0.153	0.037	0.017
Log capital per worker	0.549*	1.373*	0.081	1.571*
Average years of education	- 0.599*		- 0.334*	
Exports plus imports as % of GDP	- 0.630*			- 0.218
Log oil price in national currency	0.934*	- 1.437*		

Notes

Estimates used are those reported in Table 5. The effect on the endogenous variables is measured as fraction of standard deviation of the latter.

*Significant at 10% (at least).

Note: This table says how an increase by one standard deviation in the variables listed on the left affects the measures of inequality: Gini 1, Labour share, Decile ratio (90/10 percentile), and unemployment rate. Data cover 16 OECD countries over the period 1960-2000. Gini 1 measures inequality of personal income from Brandolini (2003)

Source: Checchi and Garcia-Penalosa (2009).

Empirical results

- Institutions
 - Unions compress the wage structure but increase unemployment
 - Minimum wages compress the wage structure but generate unemployment
 - Higher taxes on work reduce unemployment and thereby inequality
 - Unemployment benefits not significant
- Other aspects
 - Physical capital increases inequality; human capital decreases it
 - Openness reduces inequality by generating jobs
 - Higher oil prices reduce the labor share

Should we do anything?

- Perfect competition
 - No. Market outcome is Pareto efficient
- Imperfect competition
 - Yes. Market outcome inefficient
 - What are policies that restore optimality?

Reforms for Leroy

- Minimum wage
 - Higher wage for Leroy
- Foster high-skilled immigration
 - Overall vs skill-bias
 - Reduces wage inequality but certain limits in Switzerland
- Relax zoning restrictions
 - Reduces rents benefitting low-income people
- Expand early child-hood education
 - Tackles inequality of opportunity

Reforms for Henry

- Cap on high salaries (1:12 initiative)
 - What is the right cap?
- Strengthen company owners (Minder initiative)
 - Right direction but hardly any effect so far
- Wealth (Piketty) tax
 - Addresses the root of the problem but requires global coordination

Thanks for your attention

Literature

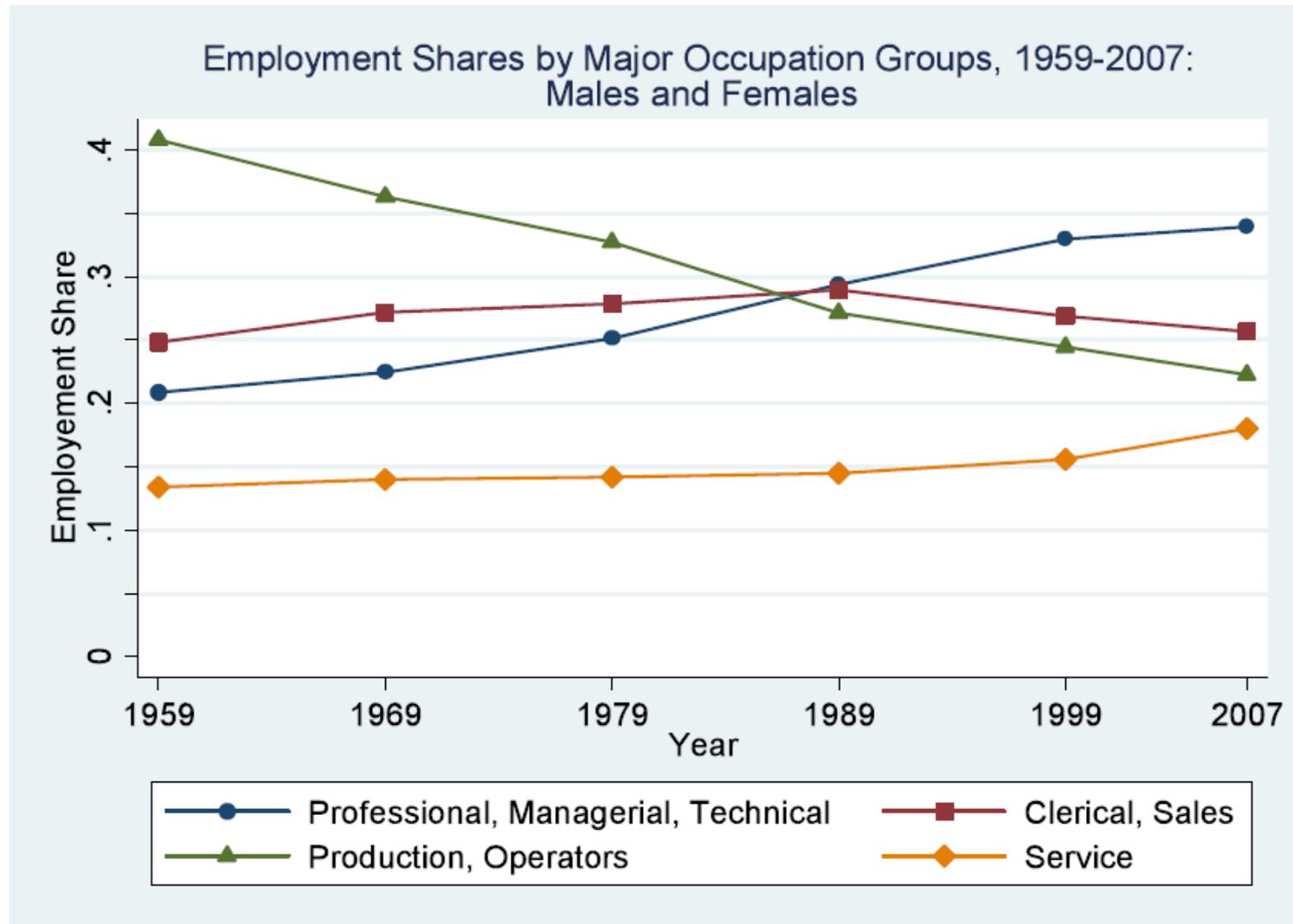
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- Checci and Garcia-Penalosa (2010), Labour Market Institutions and the Personal Distribution of Income in the OECD.
- Daolio, Tomassini and Bitkov (2011), The Swiss Board Directors Network in 2009, arXiv.
- Favre, Föllmi and Zweimüller (2012), in: Der Strapazierte Mittelstand, Avenir Suisse.
- Föllmi and Martínez (2014), Volatile Top Income Shares In Switzerland? Reassessing The Evolution Between 1981 And 2009, CEPR Discussion Paper.
- Manning (2011), Imperfect Competition in the Labor Market, Handbook of Labor Economics.
- Murphy and Oesch (2015), Is employment polarization inevitable? Occupational change in Ireland and Switzerland, 1970-2010, Working Paper.

Additional Slides

Technology vs Supply

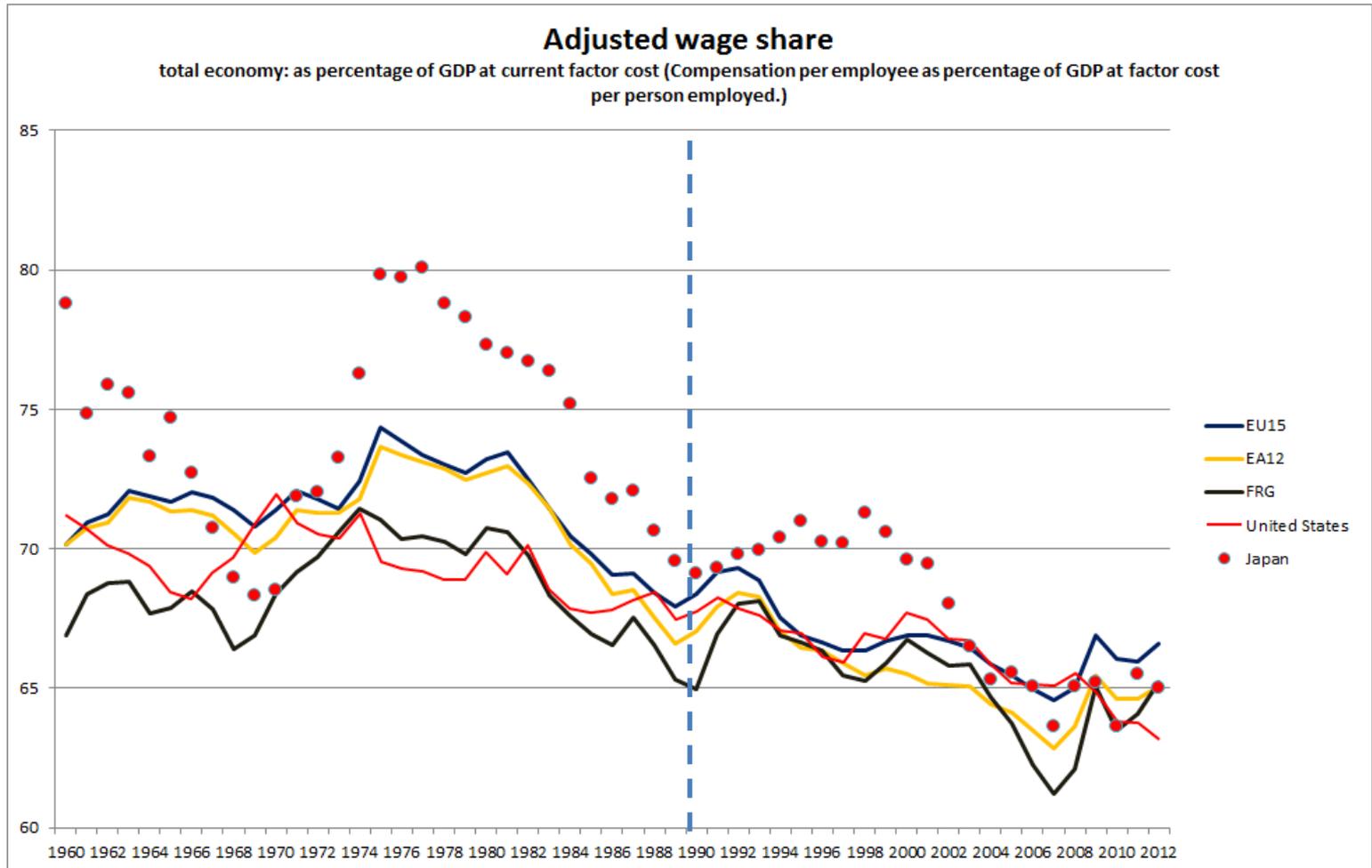
- Evidence suggests strong skill bias in technology
- But what is skill bias?
 - Computers
 - Automation
- Skill-bias should displace routine jobs
- How do occupations evolve over time?

US: Some gain some loose



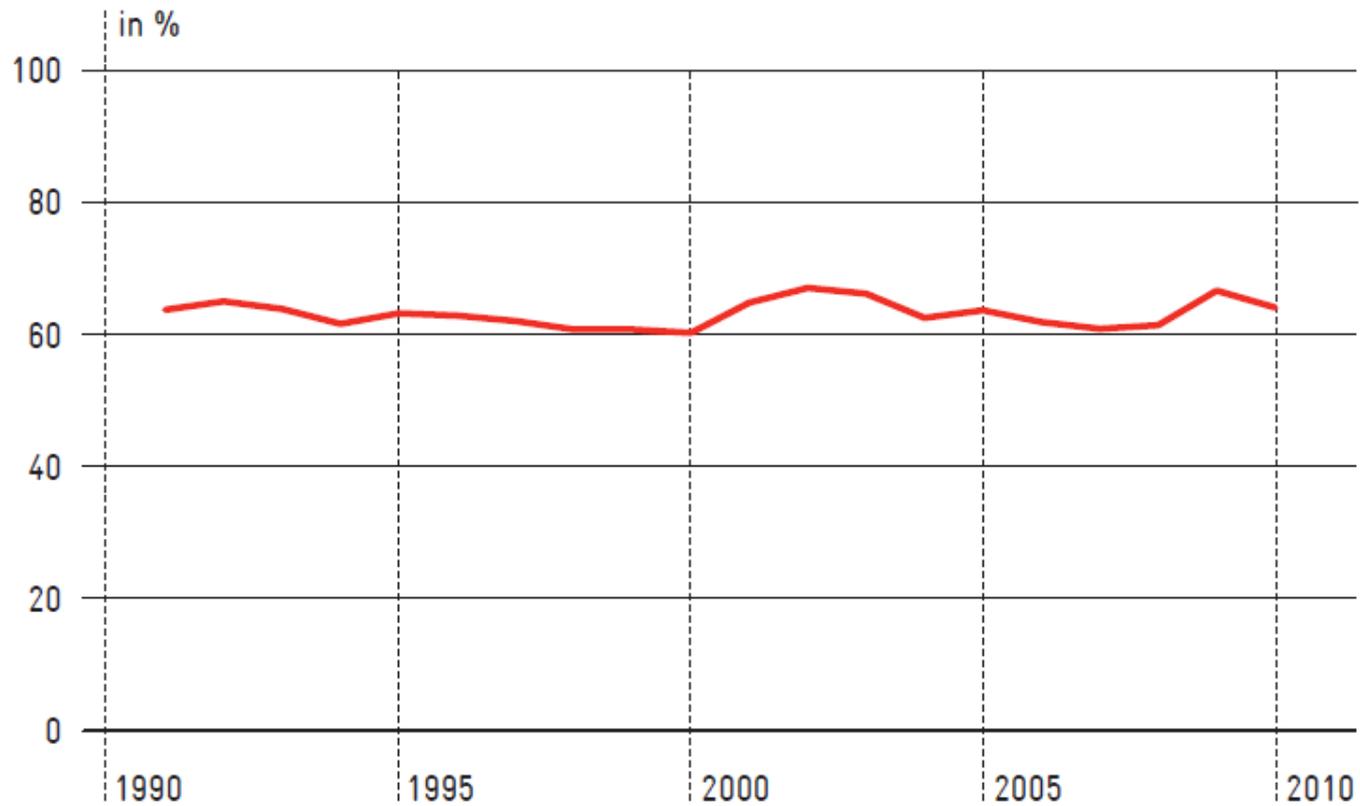
Source: Acemoglu and Autor (2011). This graph reports the fraction of employment of four occupation groups.

Labor (Wage) Share



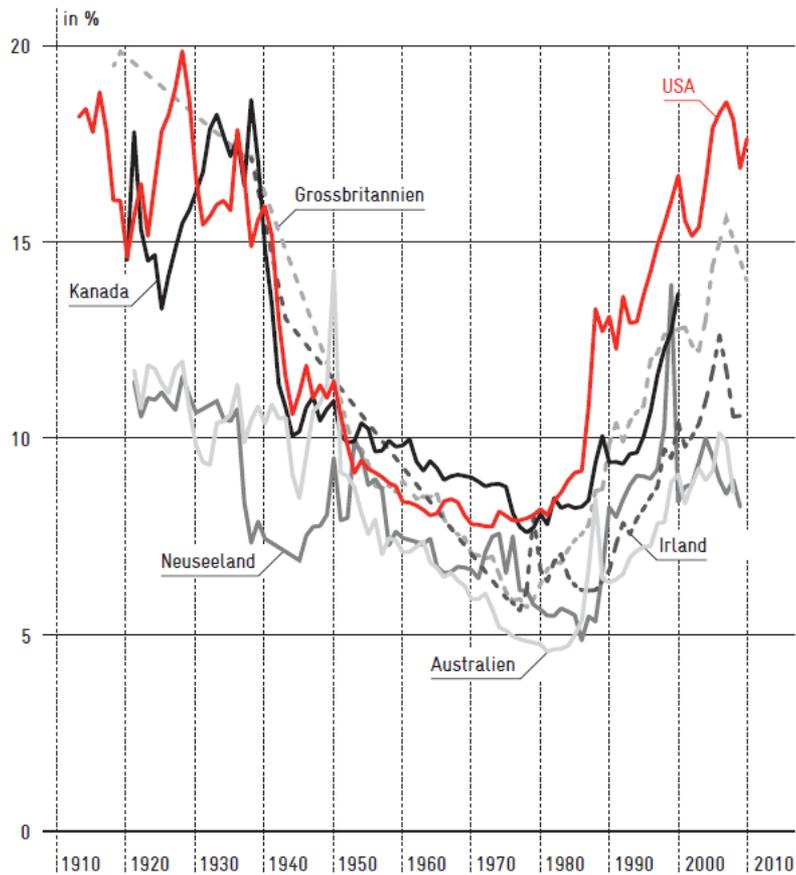
Source: Wikipedia article http://en.wikipedia.org/wiki/Wage_share , accessed March 13, 2015. This graph reports ...

Wage share

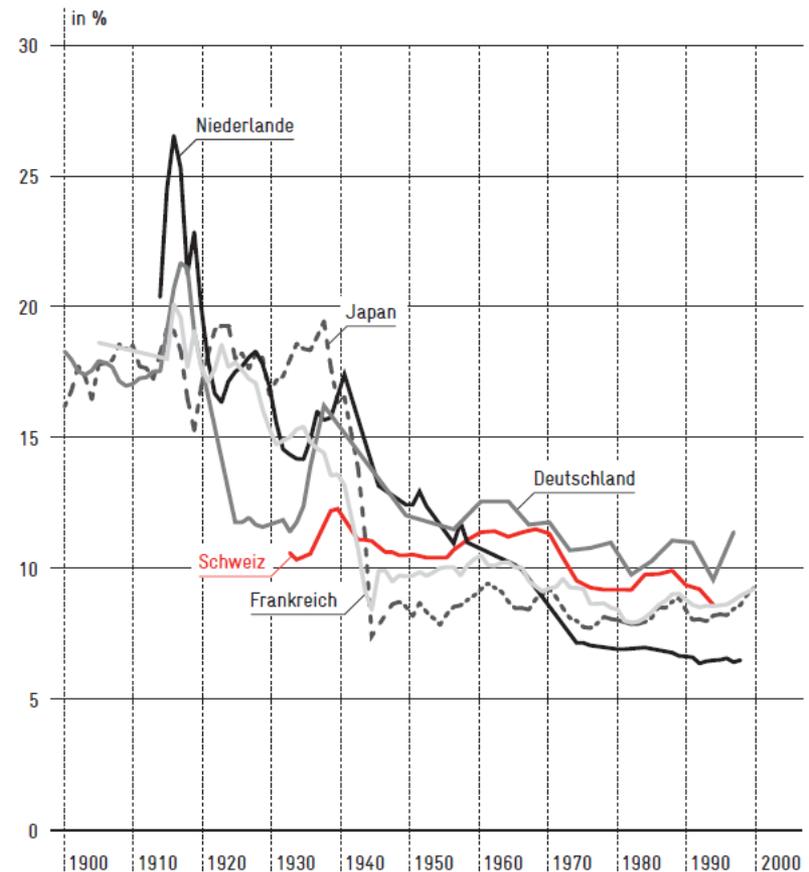


Quelle: BFS 2011C

World: Top incomes



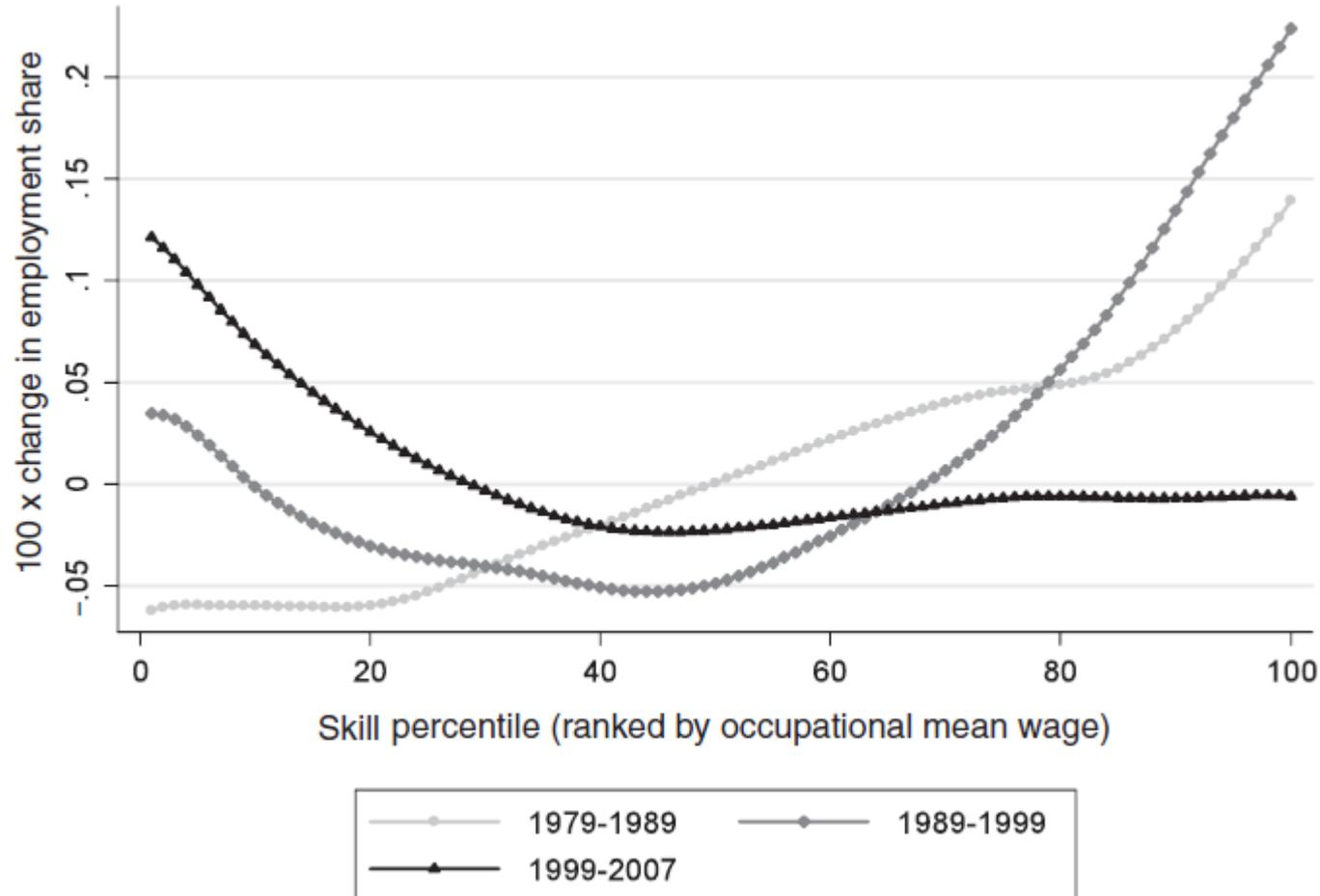
Quelle: Alvaredo et al. 2012



Quelle: Alvaredo et al. 2012

US: Occupational change

Smoothed changes in employment by occupational skill percentile 1979-2007



Source: Acemoglu and Autor (2011). This graph reports the change in the employment share ...

Men

Employment shares by major occupation groups, 1959-2007:

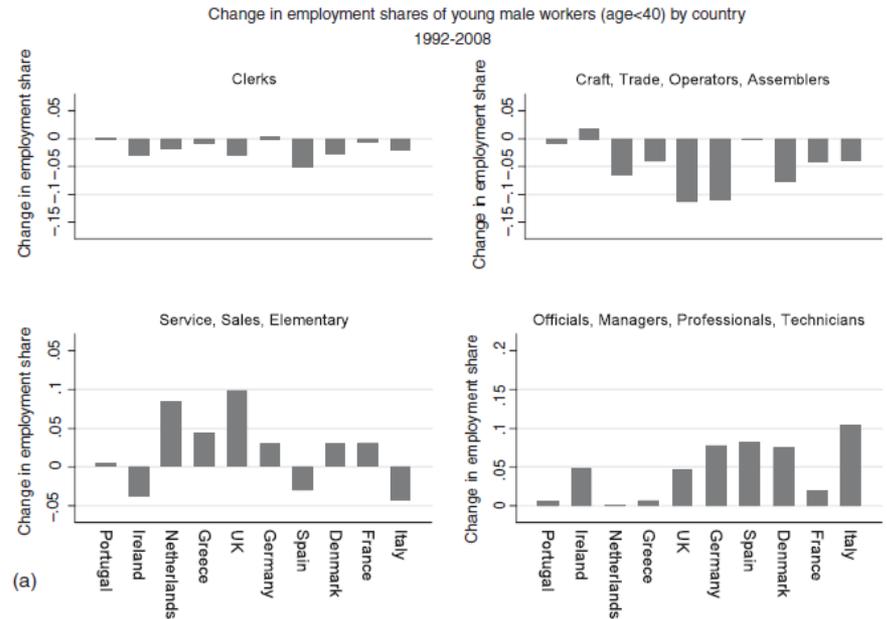
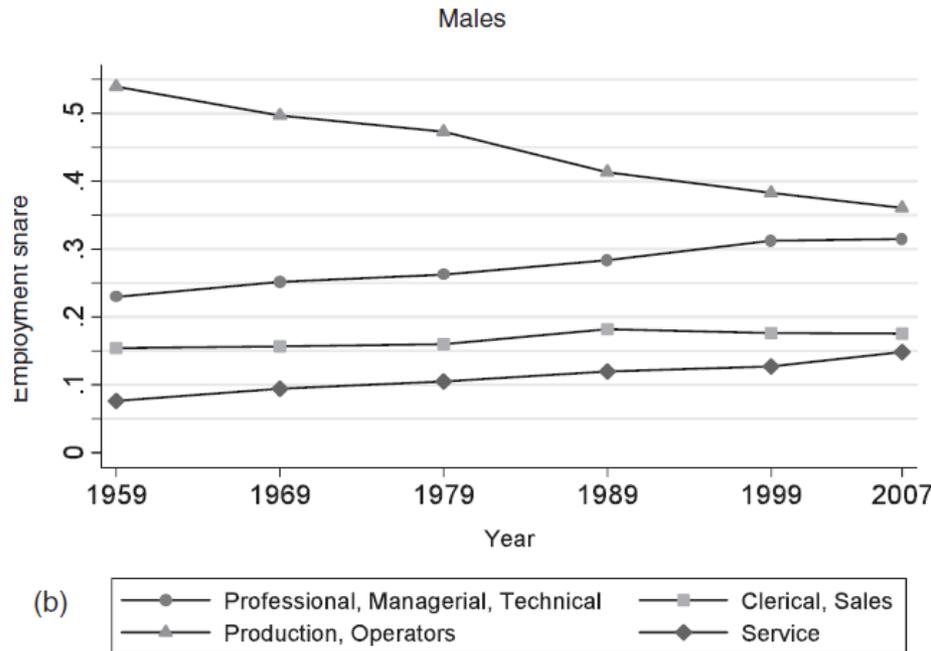


Figure 16 Source: European data from Eurostat data 1992-2008. See note to Fig. 15. Employment shares are calculated for each of the ten European countries individually, for workers under 40 years of age.

Source: Acemoglu and Autor (2011). Left graph reports the fraction of employment of four occupation groups in the U.S. The right graph shows the change in the fraction of employment for the same four occupation groups in several European countries.

Women

Employment shares by major occupation groups, 1959-2007:

Females

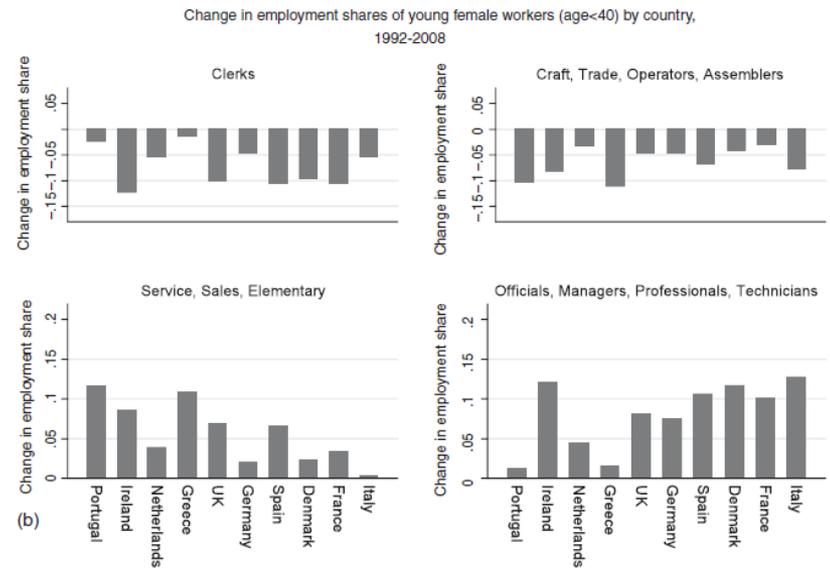
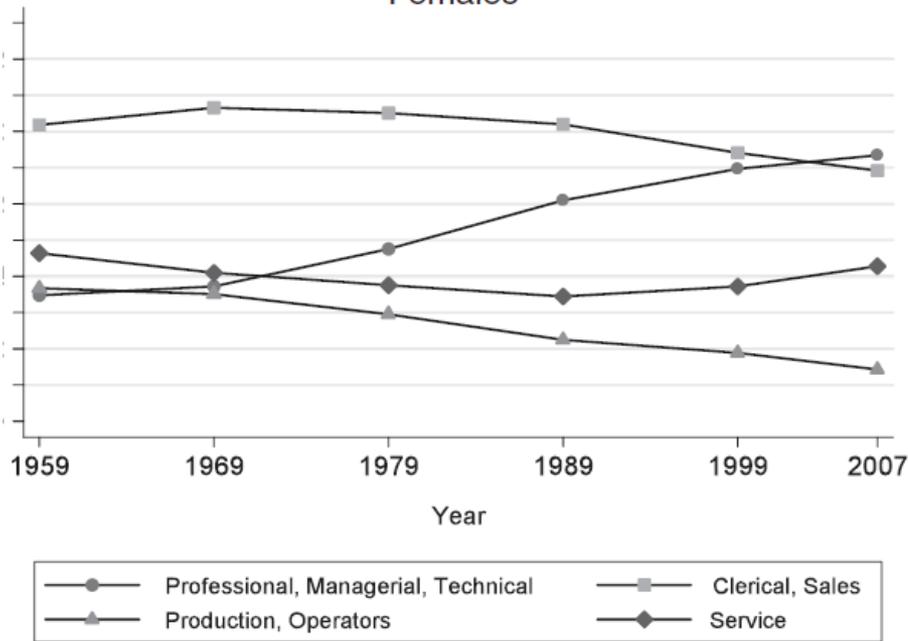
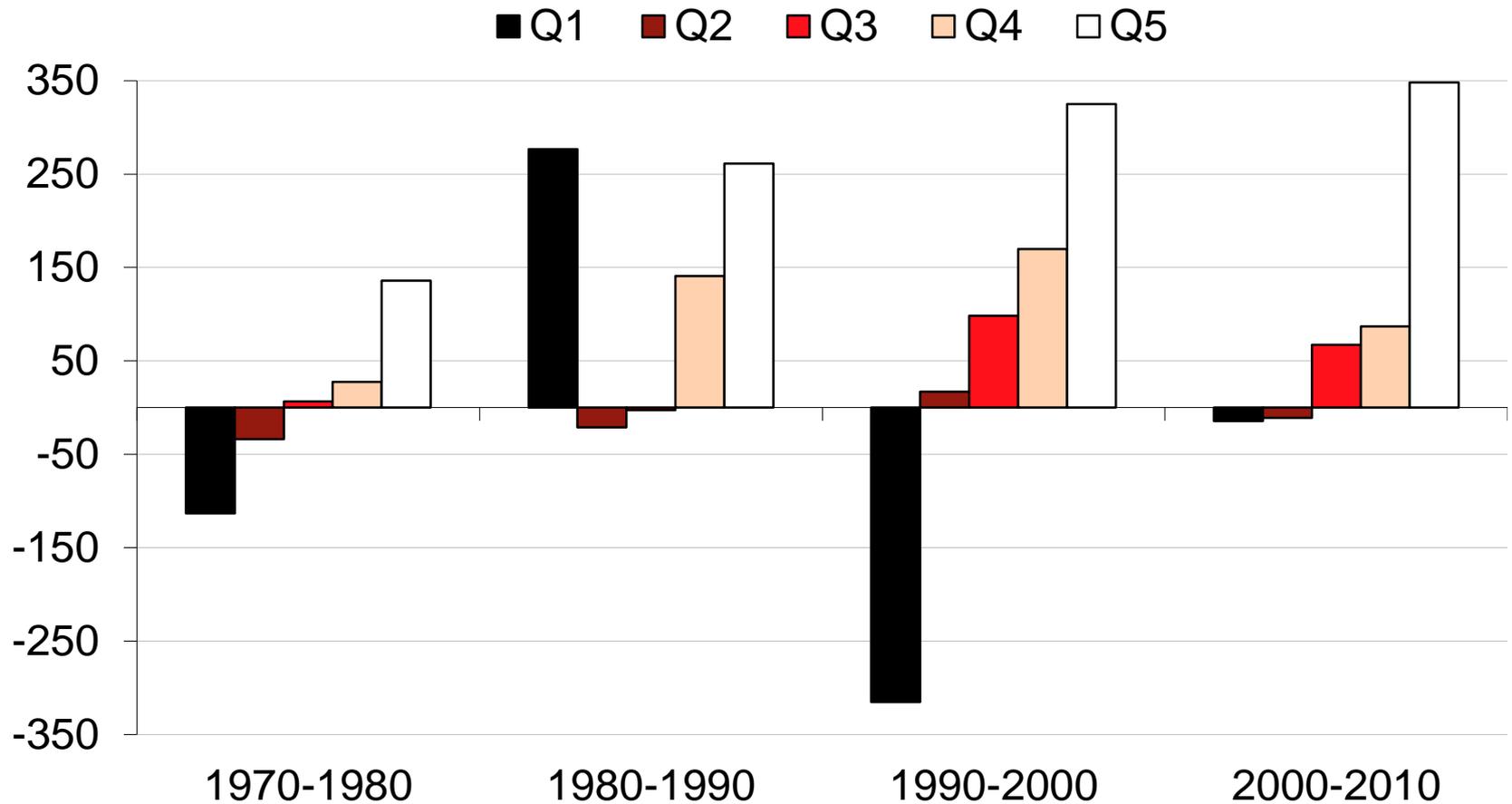


Figure 16 (continued)

Source: Acemoglu and Autor (2011). Left graph reports the fraction of employment of four occupation groups in the U.S. The right graph shows the change in the fraction of employment for the same four occupation groups in several European countries.

Switzerland: absolute change by decades

in 1000 jobs



Data: Swiss population census. Source: Murphy and Oesch (2014)

Possibilities to collude

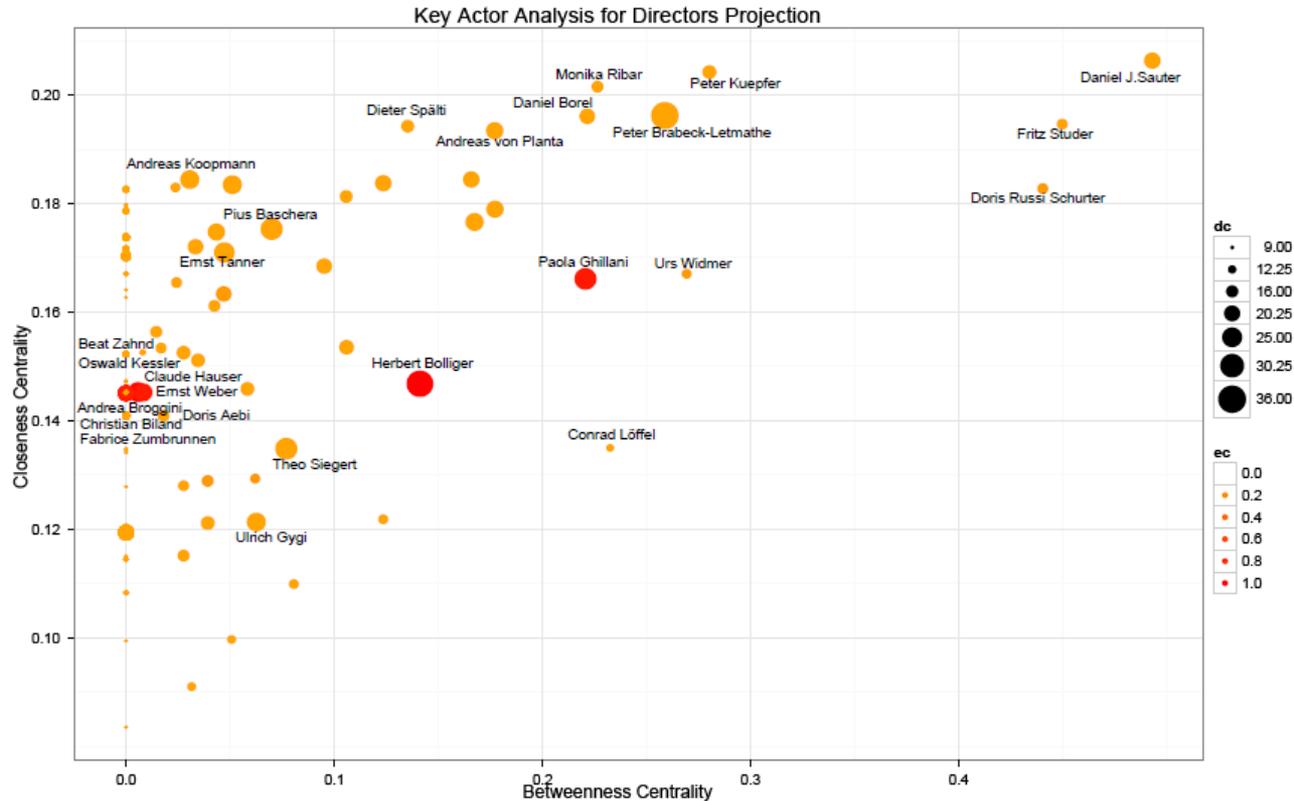
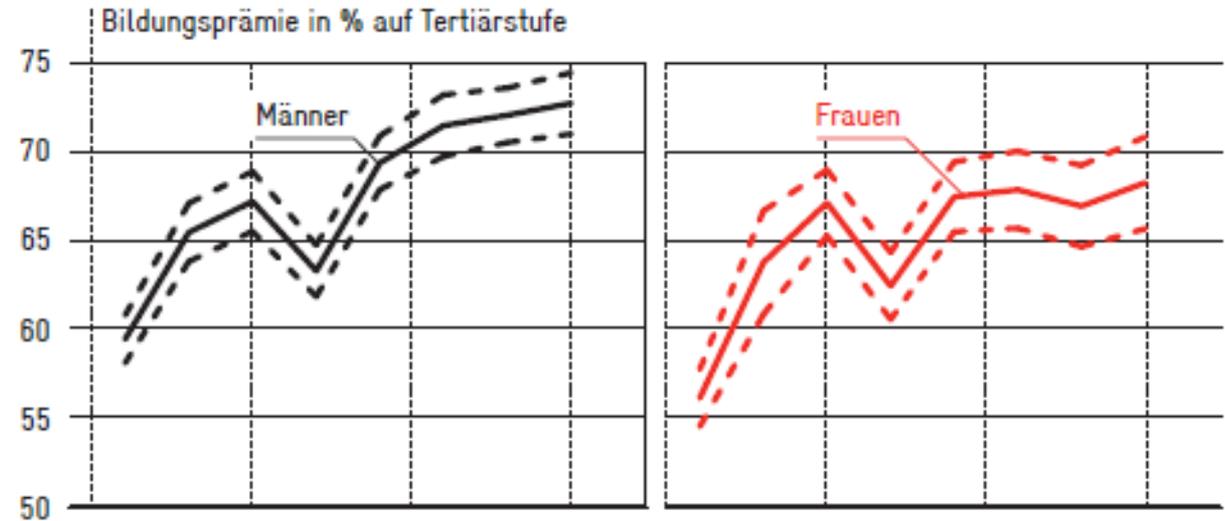
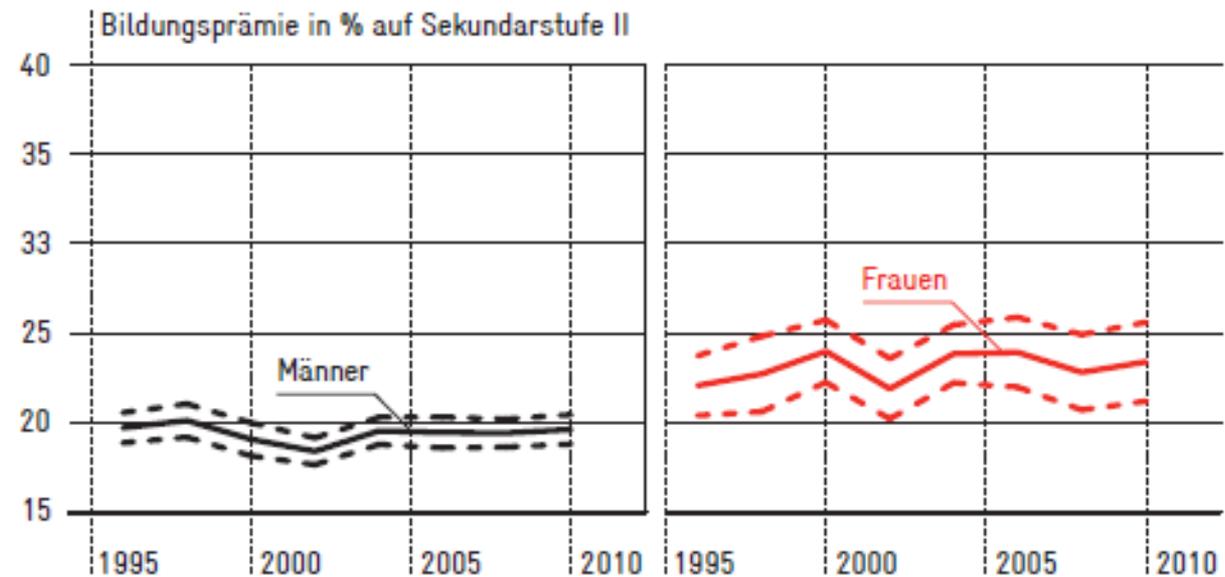


Fig. 6. Directors network: key-actors analysis. Each point in the plane corresponds to a director; x and y coordinates define its betweenness and closeness centrality scores, respectively. Point size grows with degree (dc), color gets darker with eigenvector centrality (ec) score (see legend on the side). Due to readability reasons, only those who rank higher are labeled (refer to Table 2).

Tertiary



Secondary



What about employment protection (labor market inflexibility)?

Protection of
permanent workers
against individual
and collective
dismissals

Increase in top 1%
share of national
income

Switzerland	2.10	2.14
United States	1.17	8.65
Germany	2.98	3.69
France	2.82	0.26

Unions

- Union coverage
 - Union members relative to wage earners
 - Measures strength of union relative to employers
- Bargaining coordination
 - Degree of centralization in bargaining
 - Calmfors-Driffill Hypothesis

Minimum Wage

- CH: No national minimum wage, but many workers are covered
- USA: Minimum wage is 27% of mean (37% of median, 2013)
- Germany just introduced a minimum wage (8.50 EUR)
- France: Minimum wage is 51 % of mean (61 % of median, 2013)
- Kaitz-Index

Tax wedge

- Tax wedge is a measure of the total tax paid on labor
 - Employment tax: Employer's social security contributions (SSC) relative to net wage
 - Direct tax: $(\text{Income tax} + \text{Employee's SSC}) / \text{Household Current Receipts}$
 - Indirect tax: $(\text{Indirect taxes} - \text{Subsidies}) / \text{Final Expenditures}$

Unemployment benefits

- Replacement rate
 - Unemployment benefit (in first year) relative to wage before unemployment (average over several family types)