

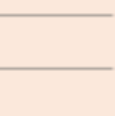
Structural reform in the EU

Lecture 1

Course for DG-Ecfin EU

Brussels

13 November and 1 December 2017



Agenda for today

- Part I. Morning: Macro & demography
 - Ageing & public debt
 - What can learn from Japan?
 - Reform & intergenerational transfers
 - Part II. Afternoon: Macro & labour market
 - Two shocking papers
 - Minimum wages
 - Macro implications
 - Policy implications
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Agenda for next week

- Part III. Morning: Regional disparities
 - Agglomeration, cities & house prices
 - Zoning policy
 - Social policy & taxation
 - Zoning policy
 - Geography & populism
 - Part IV. Afternoon: Monetary union
 - QE revisited
 - Monetary union & public debt
 - Political economy of reform & public debt
 - Summary: a to do list
-

Morning: Macro & demography

- Ageing & public debt
 - What can learn from Japan?
 - Reform & intergenerational transfers
 - Political economy of reform & public debt
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Quiz: what is Europe's problem?

1. Lack of investment in R&D?
 2. Unequal access to education?
 3. Too high public deficits?
 4. Too high deficits in the South?
-

Budget deficits 2017

Block	Deficit in % GDP
United States	-3.4
China	-3.9
Japan	-4.5
Euro-zone	-2.6
United Kingdom	-3.6

Deficits within Europe 2017

Country	Growth	Deficit in % GDP
France	1.5	-3.1
Italy	1.2	-2.3
Germany	1.9	+0.7
Euro-zone	2.0	-1.3
UK	1.5	-3.4

PofB imbalances 2017

Block	PofB in % GDP	GDP (\$)	PofB (\$bn)
United States	-2.5	17960	-449
China	+1.6	9810	+157
Japan	+3.6	5220	+188
Euro-zone	+3.2	11660	+373
United Kingdom	-3.4	2940	-100

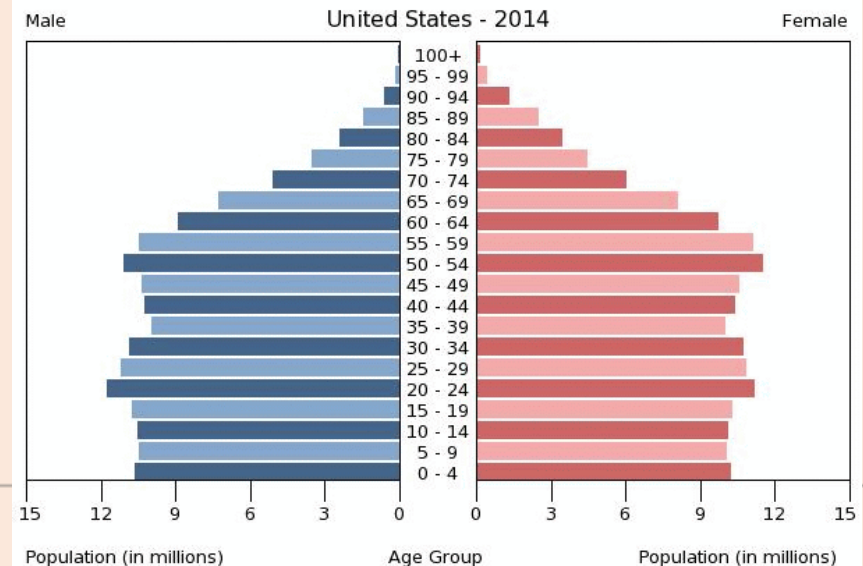
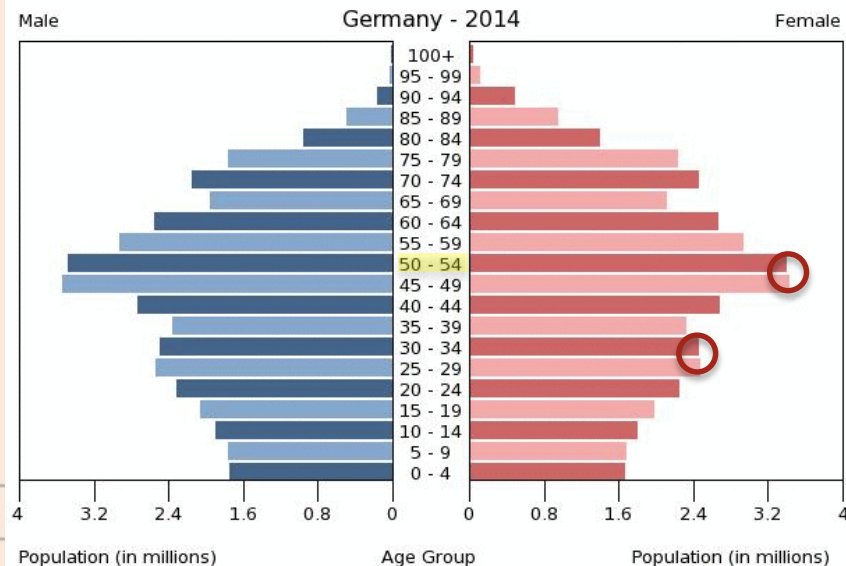
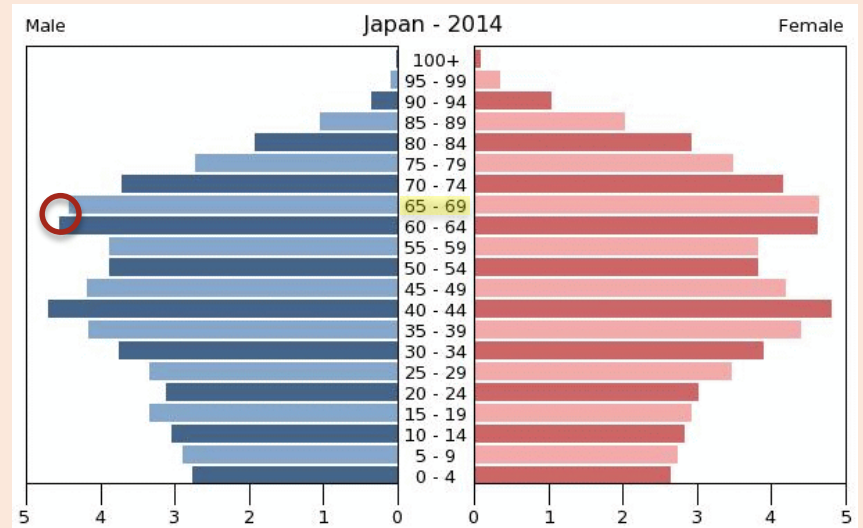
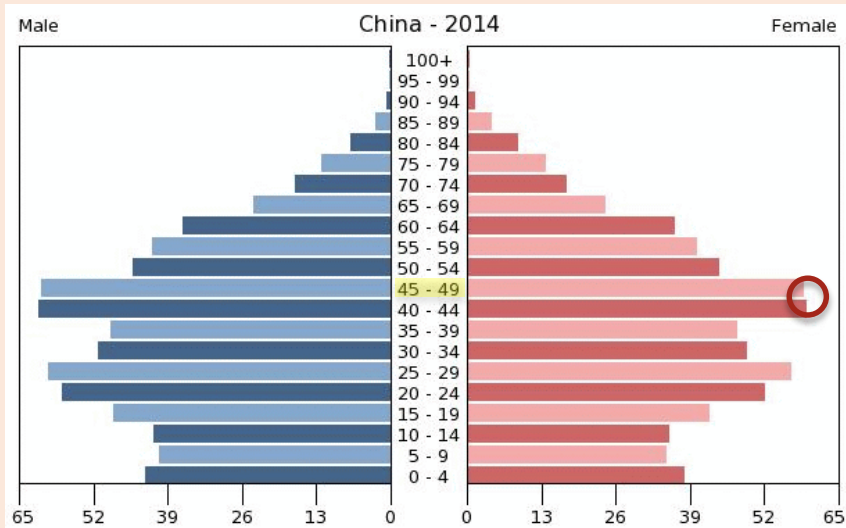
BofP within Europe 2017

Country	BofP % GDP	PofB (\$bn)	% Eur +BofP	% tot +BofP	% GDP
Germany	8.0	270	73	38	7
Netherland	10.0	68	18	11	2
Euro-zone	3.2	372	100	52	24
Japan+China	2.2	347	-	48	31
US+UK	-2.8	-588	-	-	39

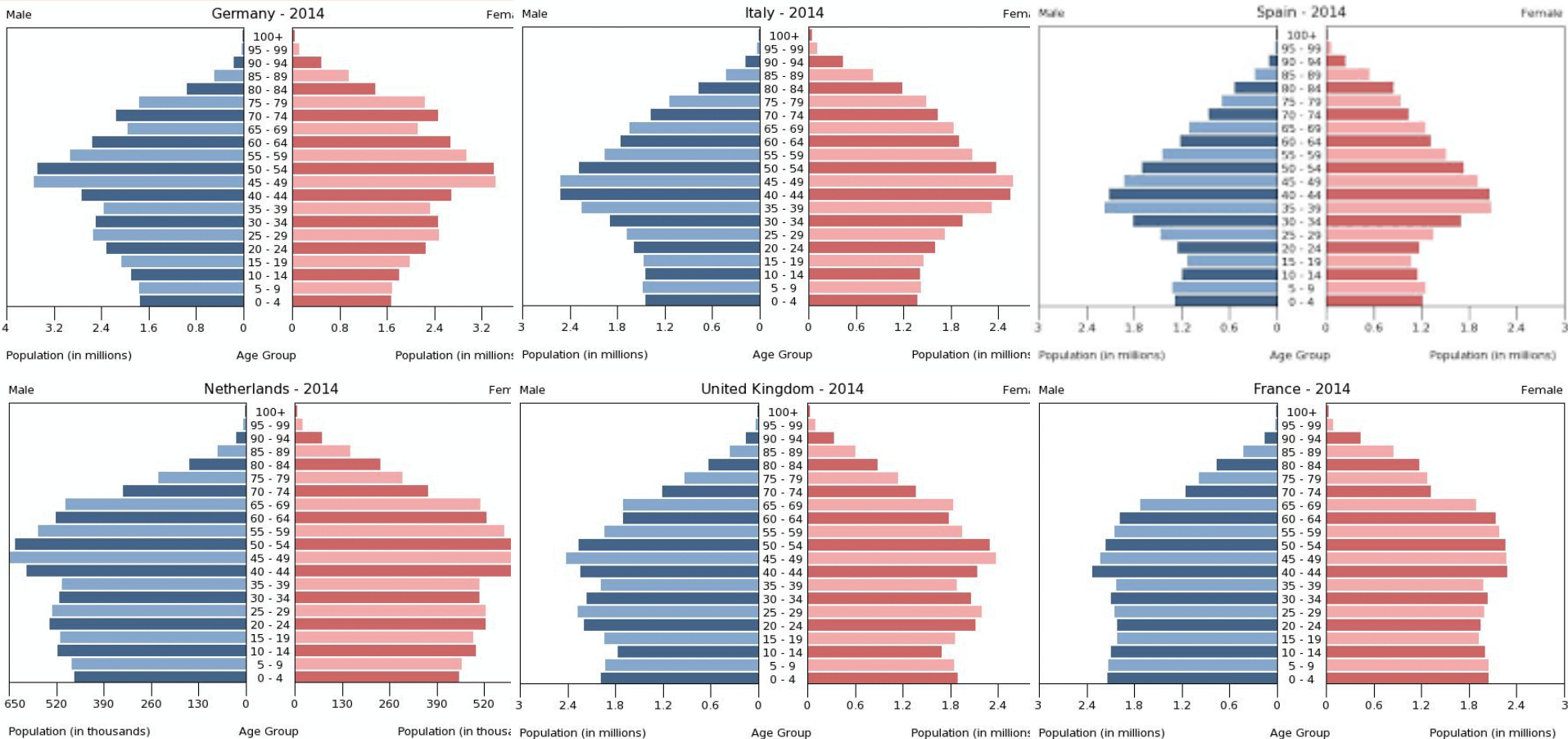
Analysis

1. Asian crisis → Savingsglut → financial crisis
2. Excess supply of capital
 - Lack of stores of value
 - Demand for capital intensive projects
 - Postponing investment useless
3. Sovereign debt as a store of value
 - Japanese response
 - Is Europe going to follow suit
4. **Simple economics: double accounting**

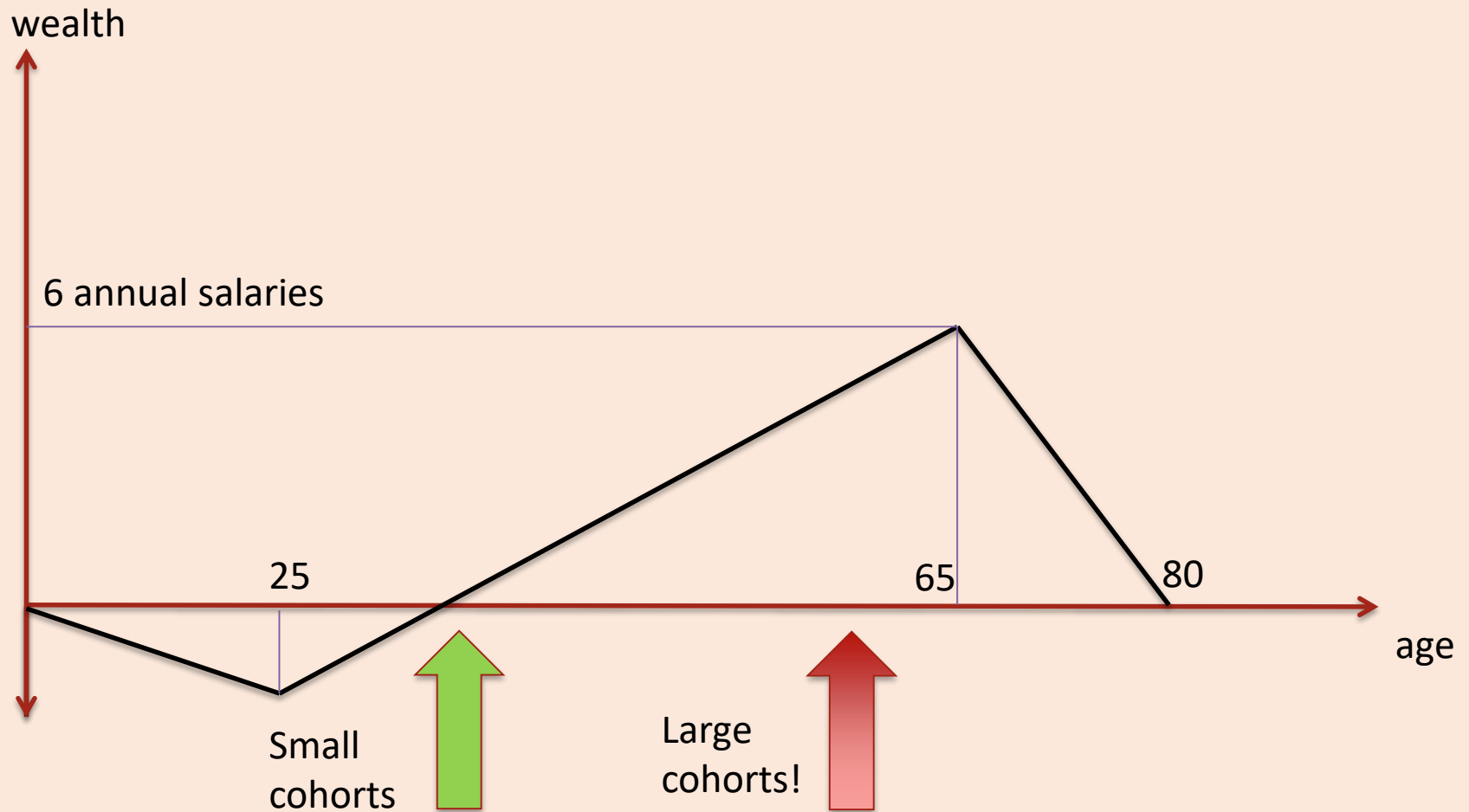
What is the role of demography?



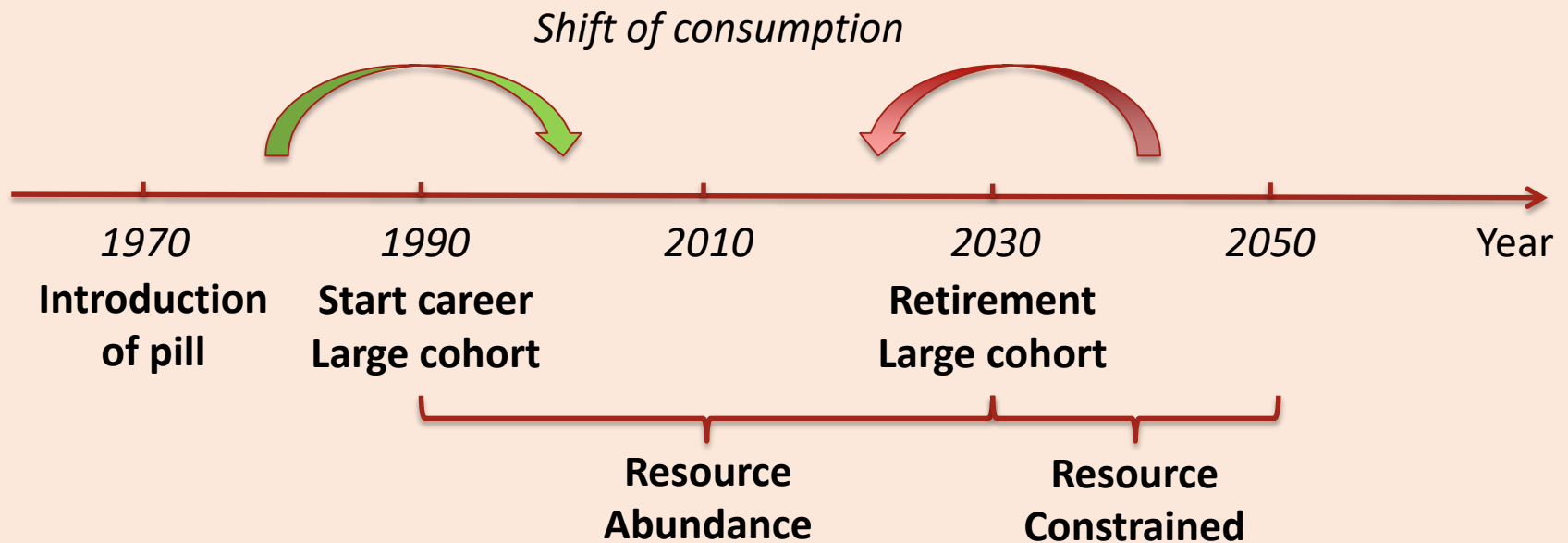
Demography in Europe



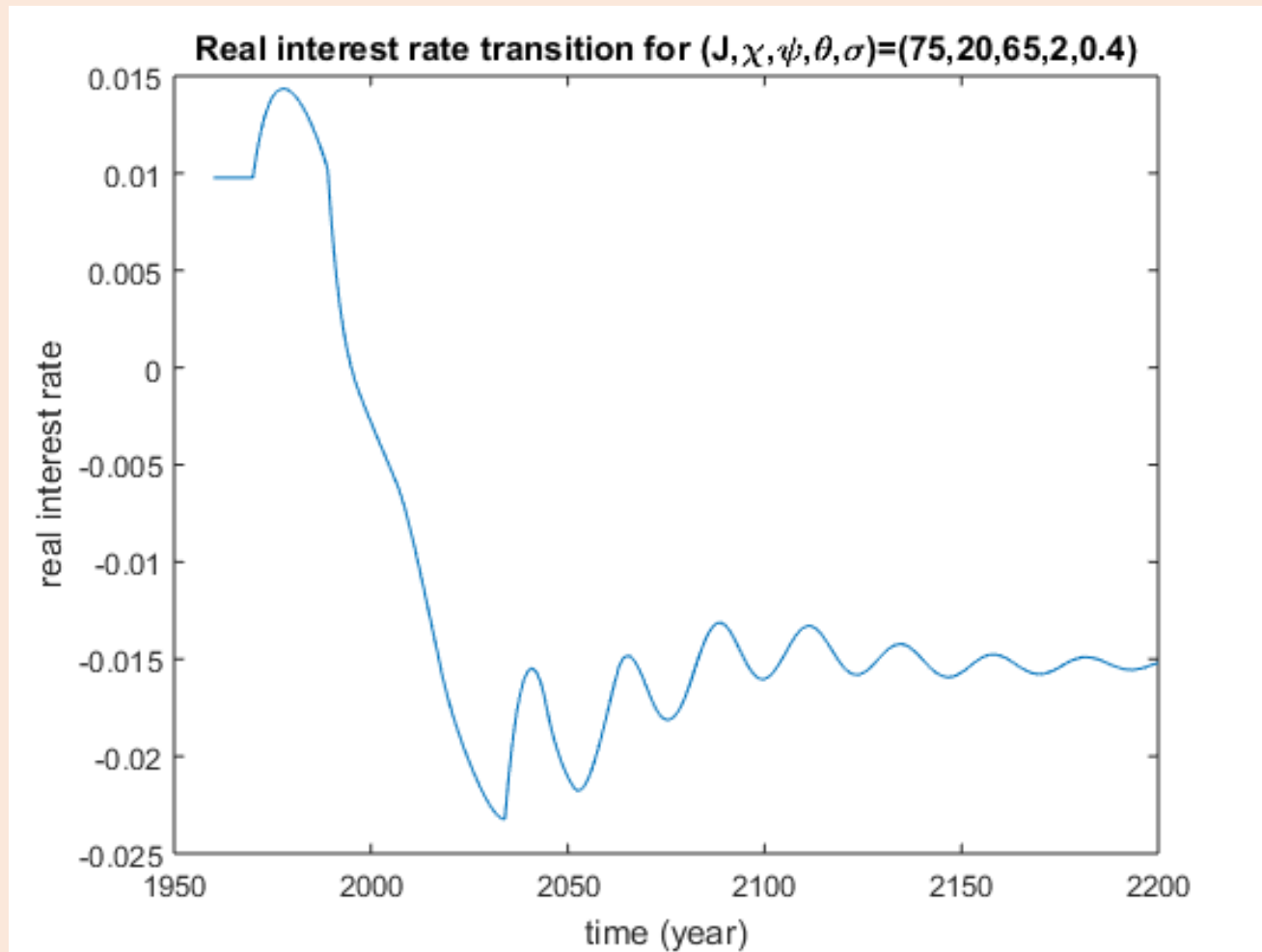
Savings and the life cycle



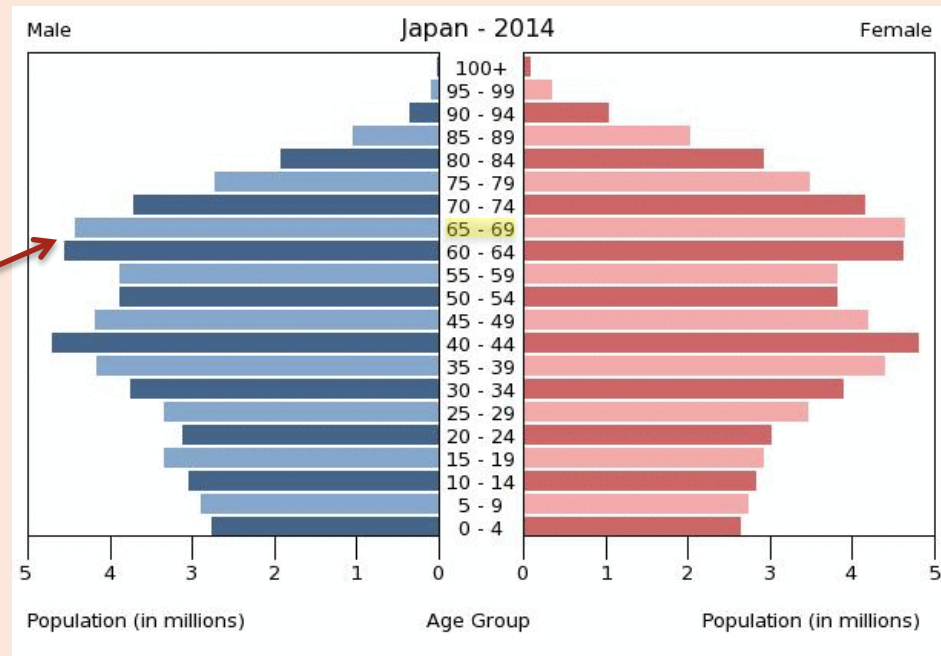
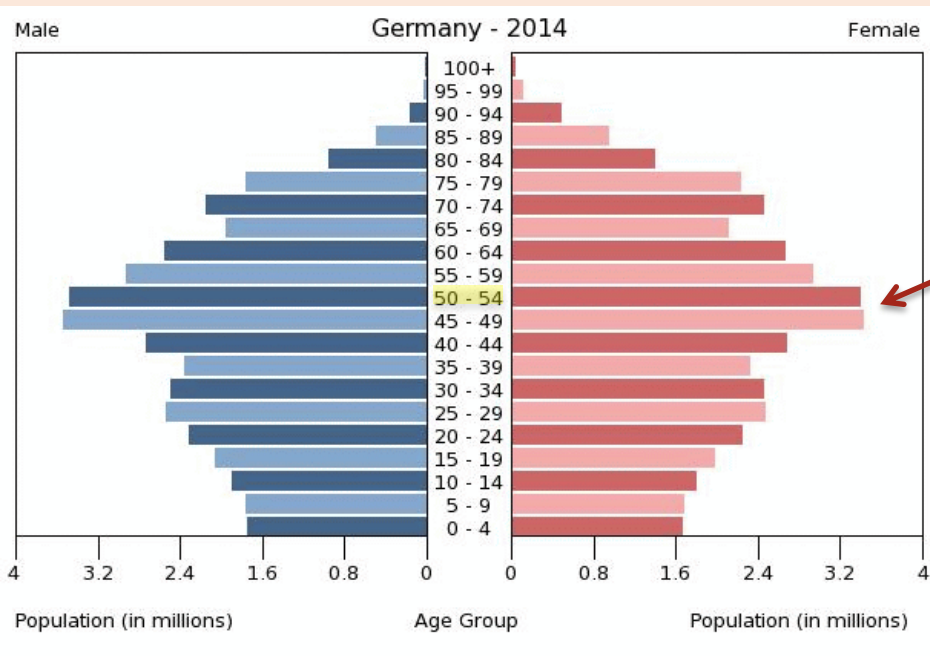
Shifting consumption over time



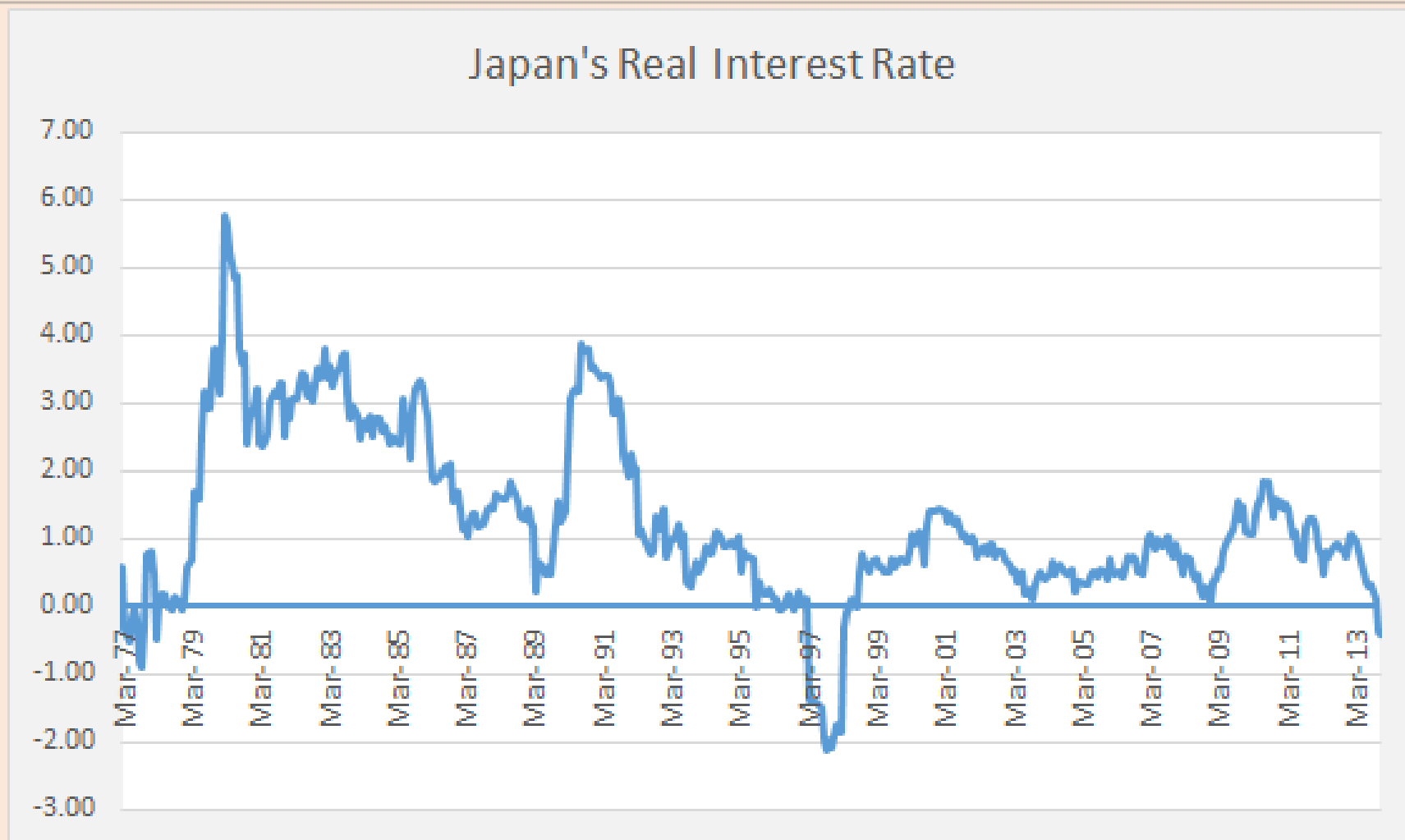
Expected effect on German real interest rate



Compare Germany and Japan



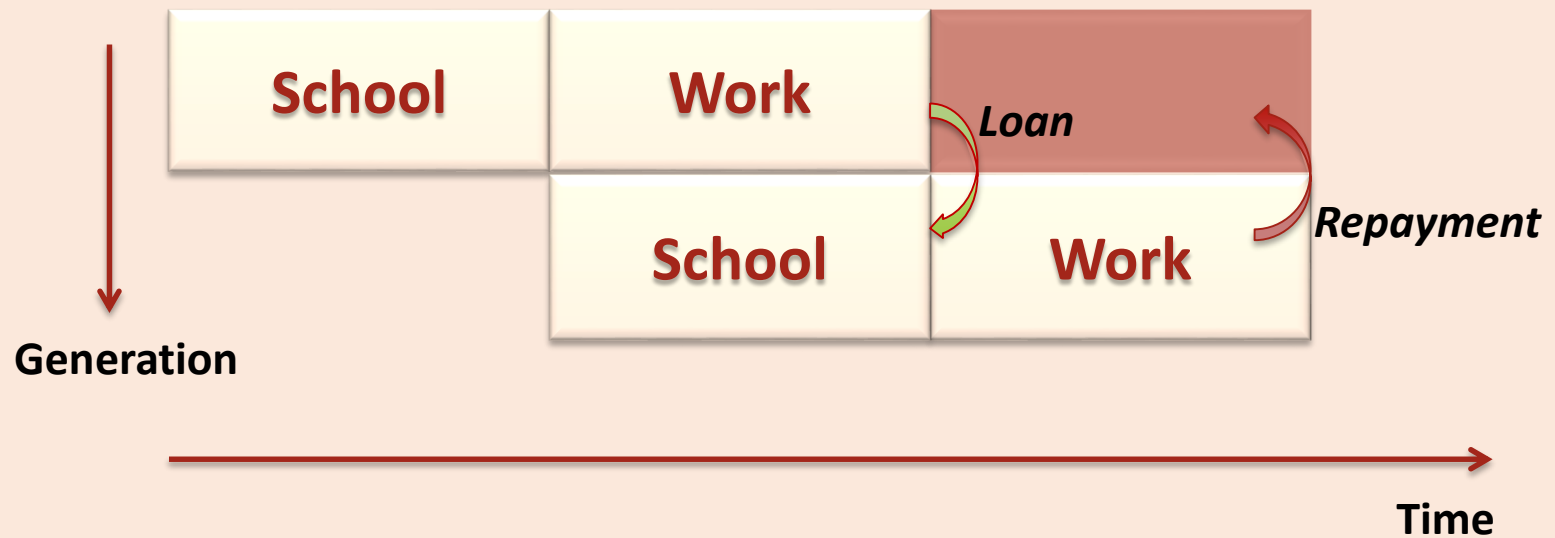
Japan's real interest rate



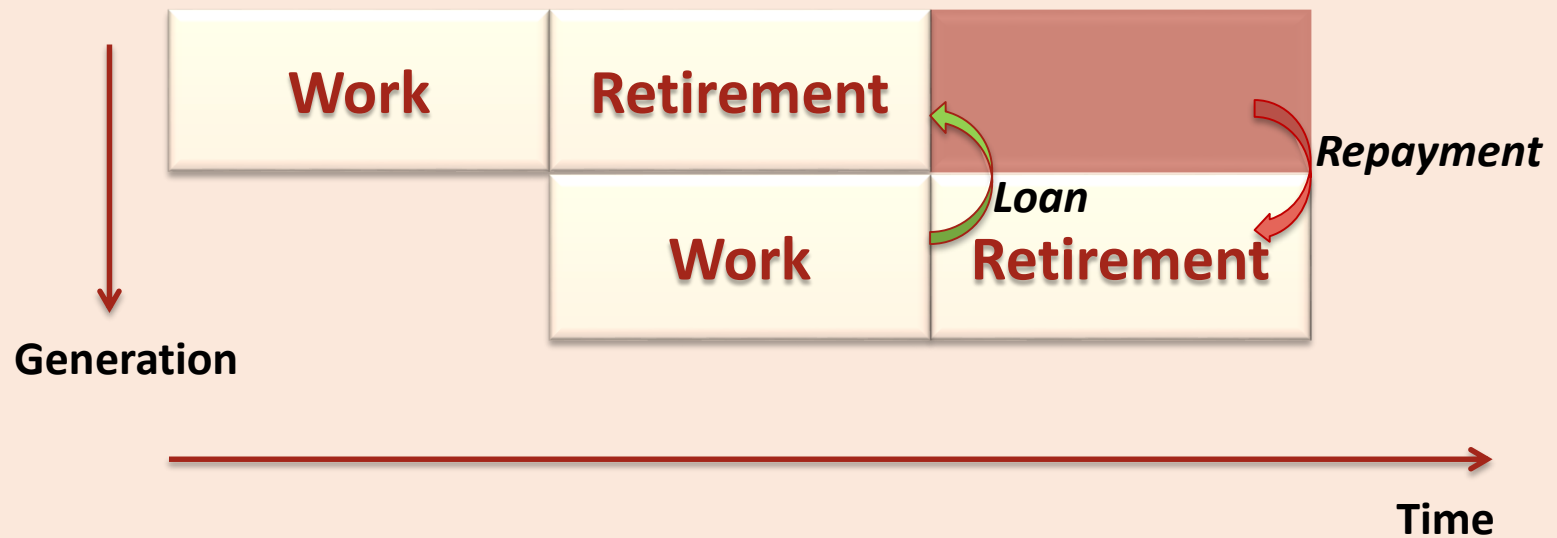
Japan preceding the Euro-zone?

- 1970's: fastest growing economy in world
 - Would it overtake the US?
 - Real estate crisis in 1990
 - Deflation and low interest rates
 - Bankruptcy life insurance companies
 - Low growth
 - Response: high sovereign debt
 - Was Japanese policy response a success?
 - High public debt: acts as a store of value
-

Capital shortage: $r > g$



Asset shortage: $r < g$



3 equivalent solutions for asset shortage

Pay-As-You-Go (PAYG)	Sovereign Debt	Bubbles/Land
Mandatory pension contributions	Voluntary bond purchase	Voluntary bubbly assets/land purchase
Government guaranteed pensions	Government guaranteed debt servicing	Market sale of bubbly assets/land

Policy conclusion

- BofP surplus Eurozone reason for worry
 - In particular Germany and the Netherlands
- What is a stable deficit
 - 2% real growth + 2% inflation
 - Public debt 60% of GDP
 - “Equilibrium” deficit $60\% \times 4\% = 2.5\%$ of GDP
- Stability and Growth pact needs an update

Afternoon: Macro & labour market

- Two shocking papers
 - Macro implications
 - Minimum wages
 - Policy implications
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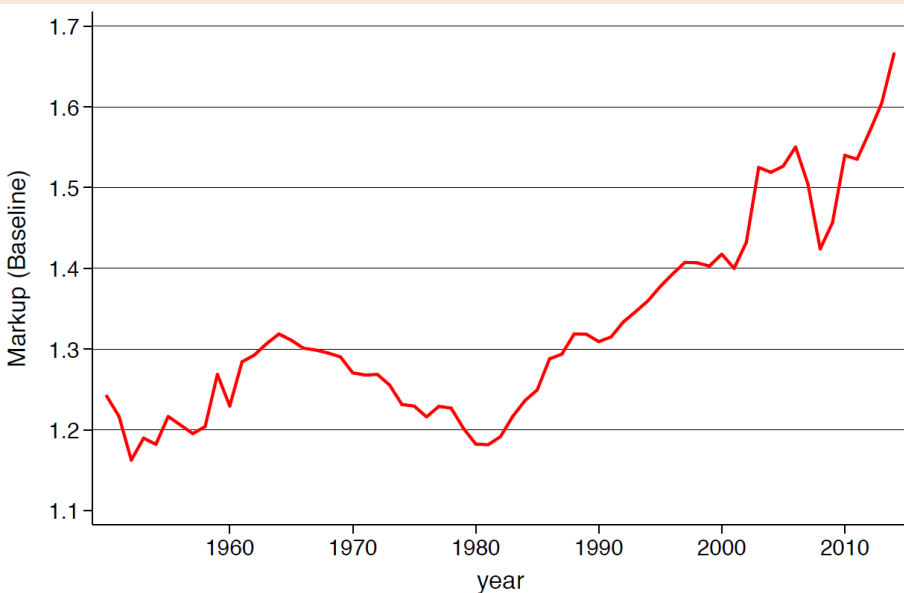
Two shocking papers

- De Loecker, Jan, and Jan Eeckhout. *The rise of market power and the macroeconomic implications*. No. w23687. National Bureau of Economic Research, 2017.
- Bloom, N., Guvenen, F., Price, D. J., & Song, J. (2015). *Firming up inequality* (No. dp1354). Centre for Economic Performance, LSE.

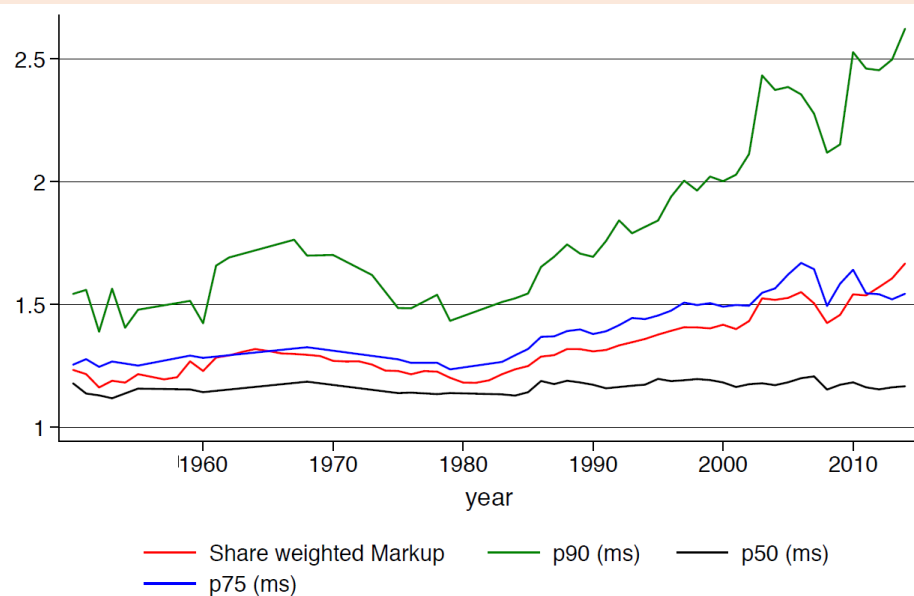
Sharp increase mark up over MC

evidence by Jan de Loecker & Jan Eeckhout on United States

In levels



Dispersion



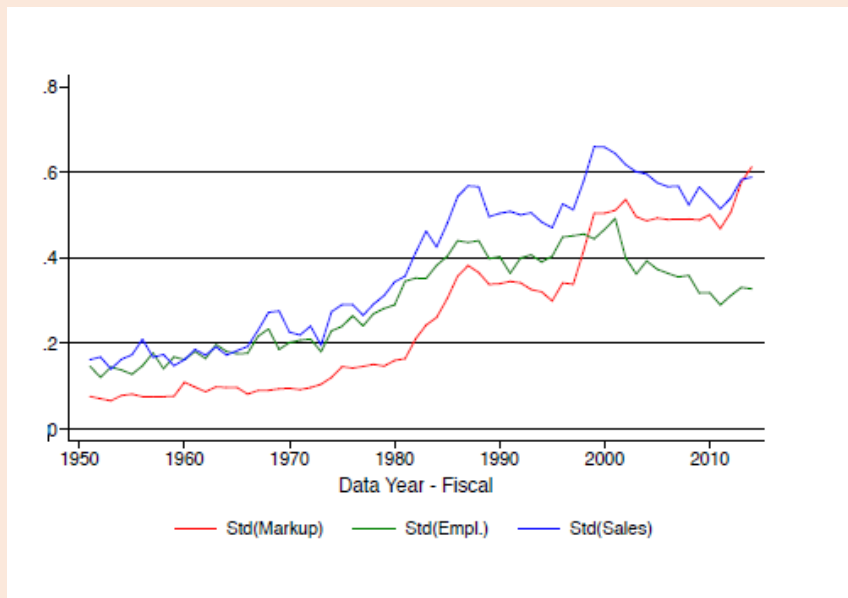
Mainly within industry

	Markup	Δ Markup	Δ Within	Δ Between
1964	1.319	0.135	0.067	-0.011
1974	1.231	-0.088	-0.084	0.042
1984	1.236	0.004	-0.008	0.025
1994	1.360	0.124	0.126	0.004
2004	1.519	0.159	0.116	0.031
2014	1.667	0.151	0.187	-0.018

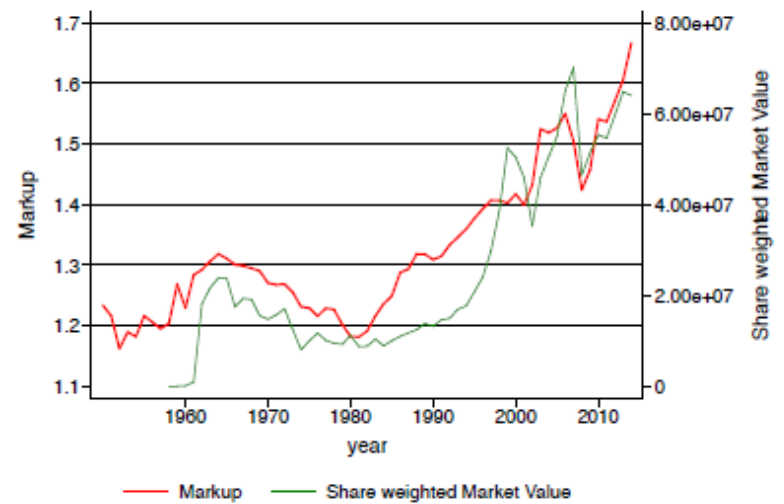
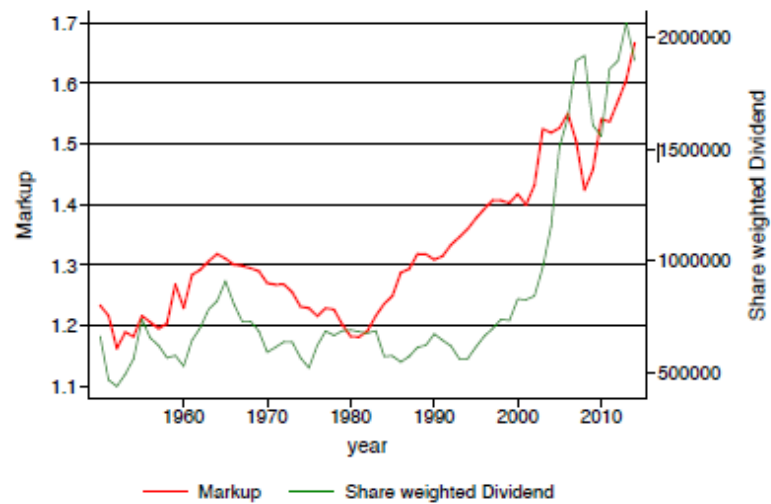
By firm? Larry Page!

	Markup μ_i			Sales S_i millions (2010 \$)			Empl. L_i thousands		
	1980	1990	2014	1980	1990	2014	1980	1990	2014
Google (Alphabet)			2.71			60,600			53
WalMart	1.17	1.10	1.15	3,702	48,800	444,000	27	328	2,200
Mylan	1.05	1.49	1.87	49.9	136	7,093	0.23	0.51	30
Apple	1.50	1.97	1.49	263	8,324	168,000	1	14	97
General Electric	1.19	1.45	1.71	56,200	86,500	134,000	402	298	305

Sales drive increase in mark up



- Employment (input) does not drive increase mark up
- You would expect so in a Cournot model
- $\text{Mark up} = \text{MR}/\text{MC}$
- Might be due to fixed cost?
Test: market capitalization
- Might high markups explain soar of equity prices?



Summary

1. Main effect within industries
 2. Across industries: mainly smaller firms
 - Large degree of product differentiation
 3. Within industries: large firms
 4. Sharp increase in dispersion of mark ups
 5. Reveals increasing barriers to entry
 6. Network industries
 7. Lower elasticity investment for cost of capital
 8. **Winner takes all**
-

Puzzle: globalisation increases markups?

- Increasing return to scale?
 - Fixed cost of production
 - **Critical:** free entry assumption
- Globalization & monopolistic competition
 - Dixit & Stiglitz: more diversification (fixed markup)
 - Baldwin: more competition (lower markup)
 - Aghion & Griffith: competition fosters growth
- Hence: globalization reduces markups
 - Puzzle: if so, why have markups gone up?
 - Potential solution:
 - Melitz: fixed cost of exporting

Two puzzles might have the same answer

1. Why does market power increase in era of globalisation?
2. How can profit share go up, while the cost of capital (= interest rate) is low?
 - Elasticity substitution labour-capital < 1
 - Hence: low cost of capital reduces profit share

Potential answer

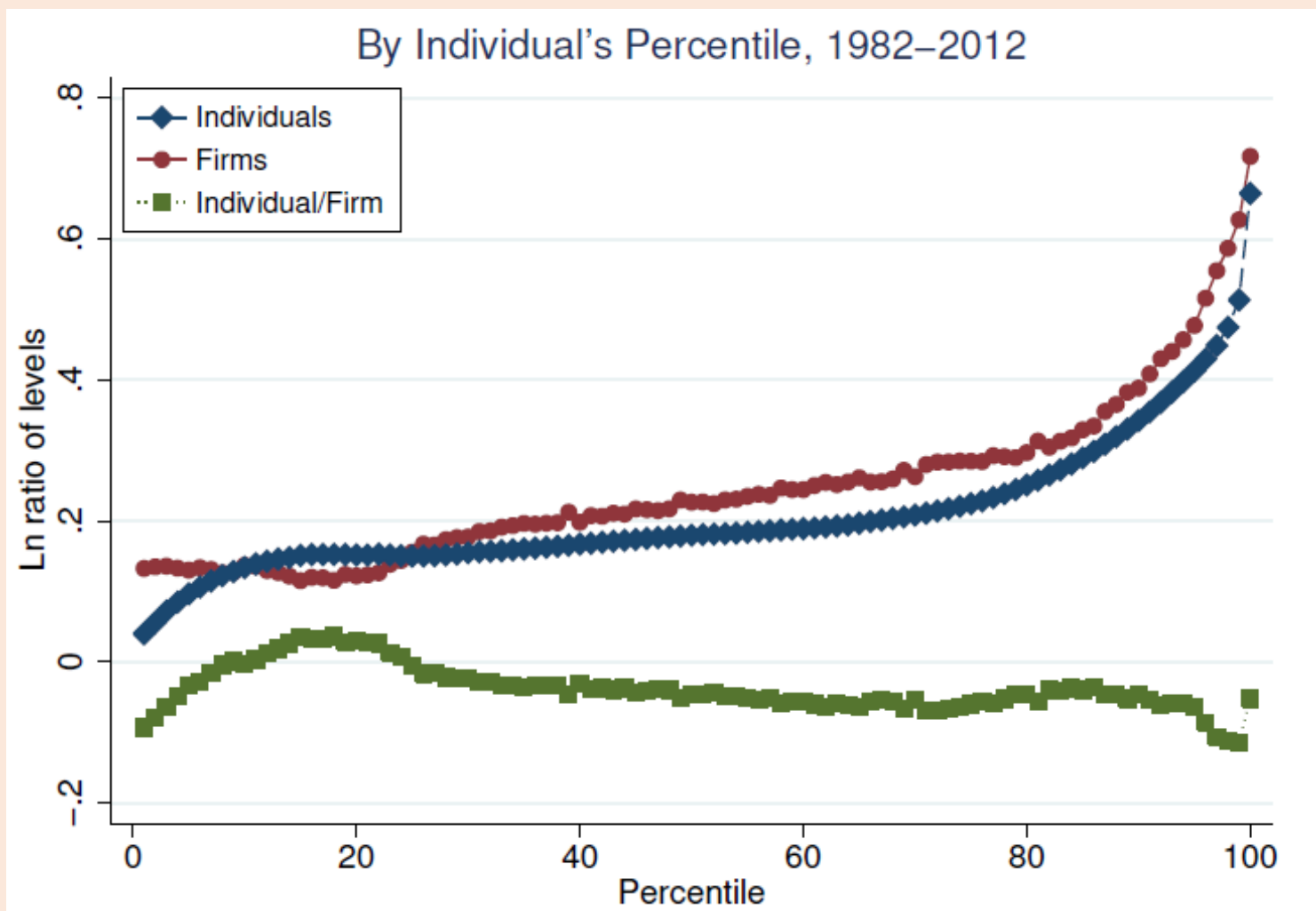
- IT technology, network industries
 - Free entry disrupted by network externalities
 - Hence: larger rents
 - Logical outcome in a knowledge economy
 - R&D is a public good
 - Should we organize network industries as public utilities?
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Macro implications

- Demography yields savings surplus
 - Larger rental income lowers consumption even further
 - Disruption free entry lowers elasticity of investment with respect to stock prices
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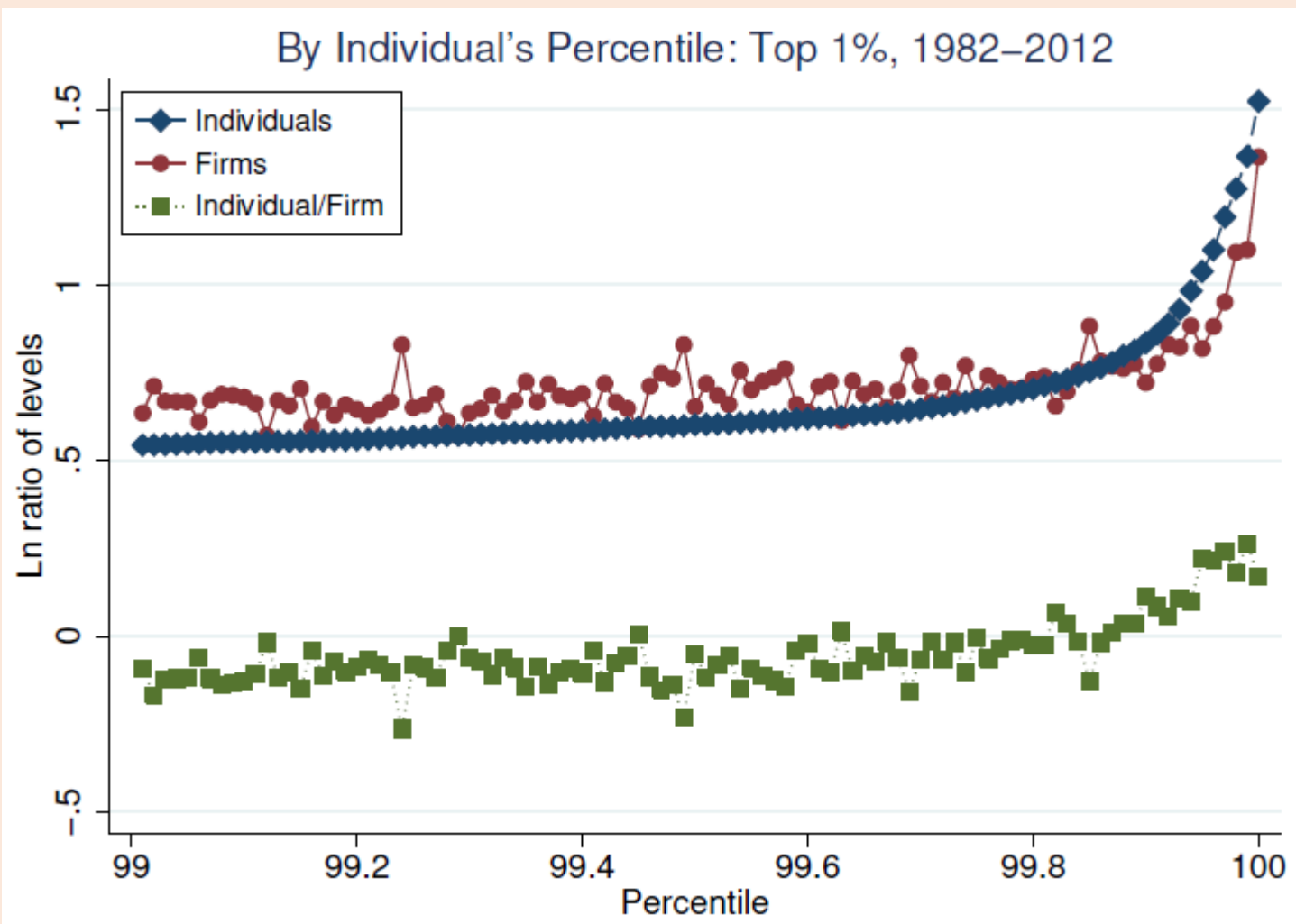
Firming up inequality I

(Bloom et.al. 2015)



Firming up inequality II

(Bloom et.al. 2015)



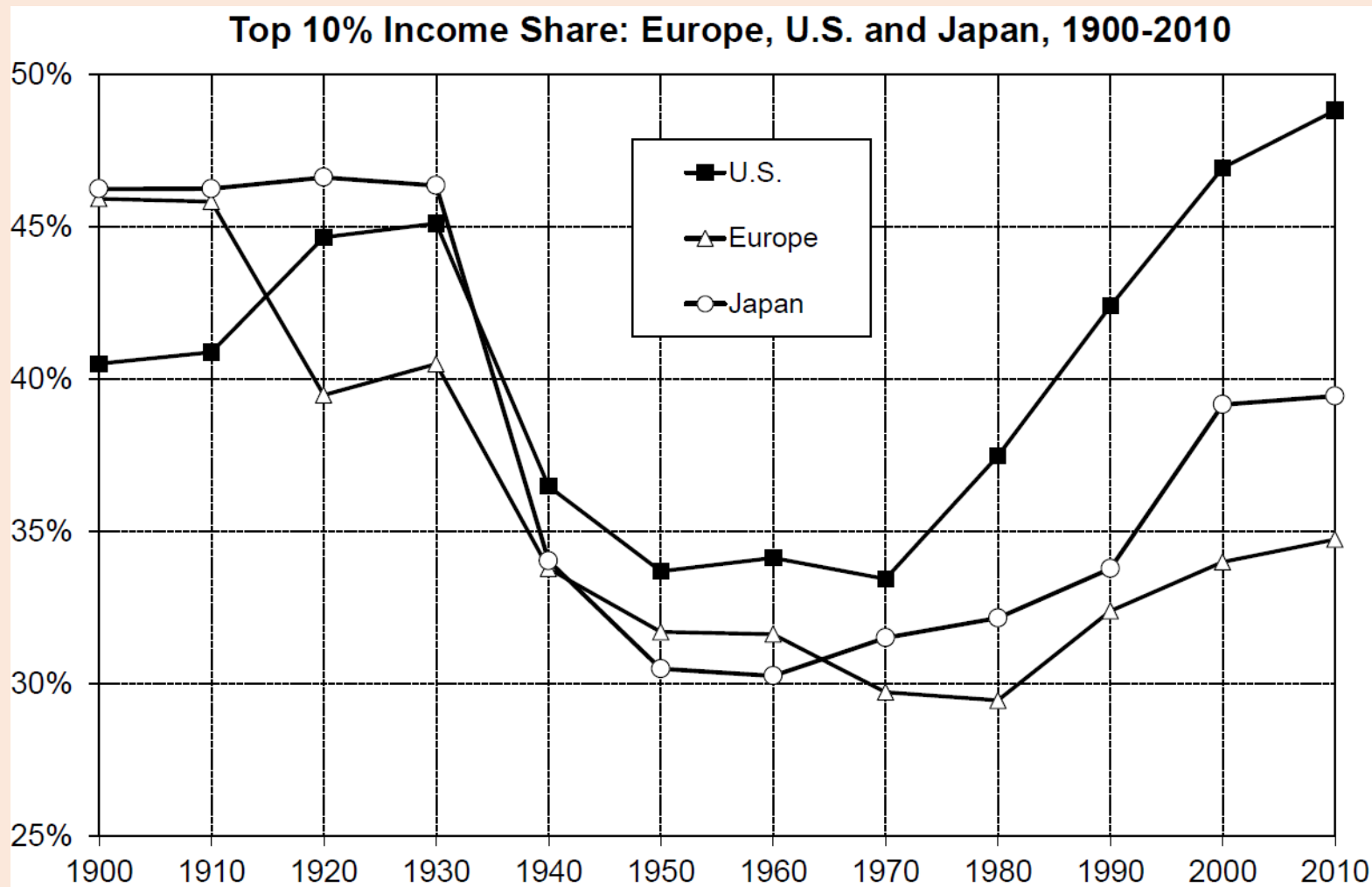
Firming up inequality III

(Bloom et.al. 2015)

- Income inequality due to CEO pay?
 - Krugman's thesis
 - Incorrect
- Inequality largely between firms
- What is the driving force?
 - Outsourcing?
 - Innovation?
 - Knowledge spill overs? (= agglomeration?)
- By the way: similar evidence for Germany

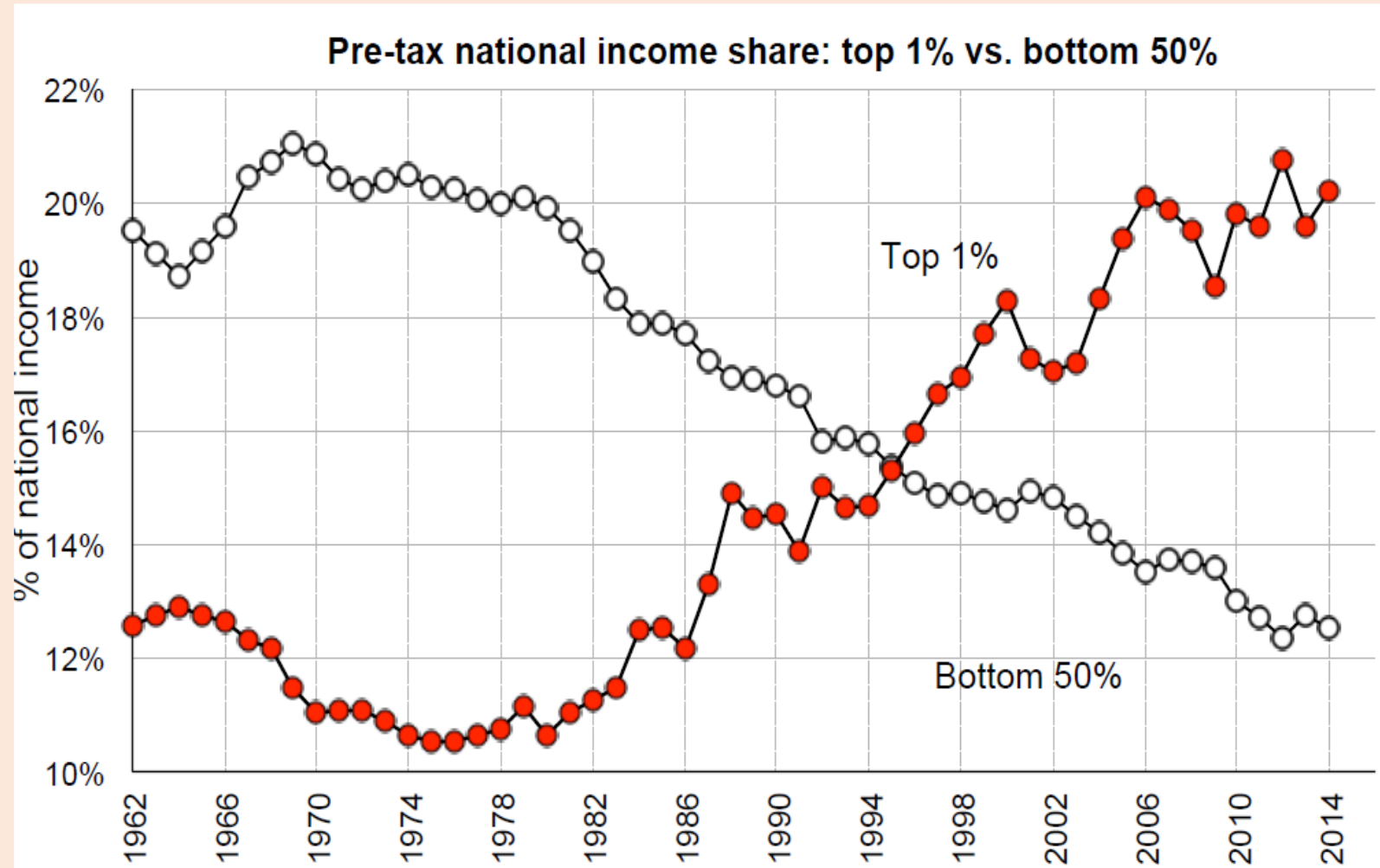
US much more unequal today, not in 1900

Piketty (2016)



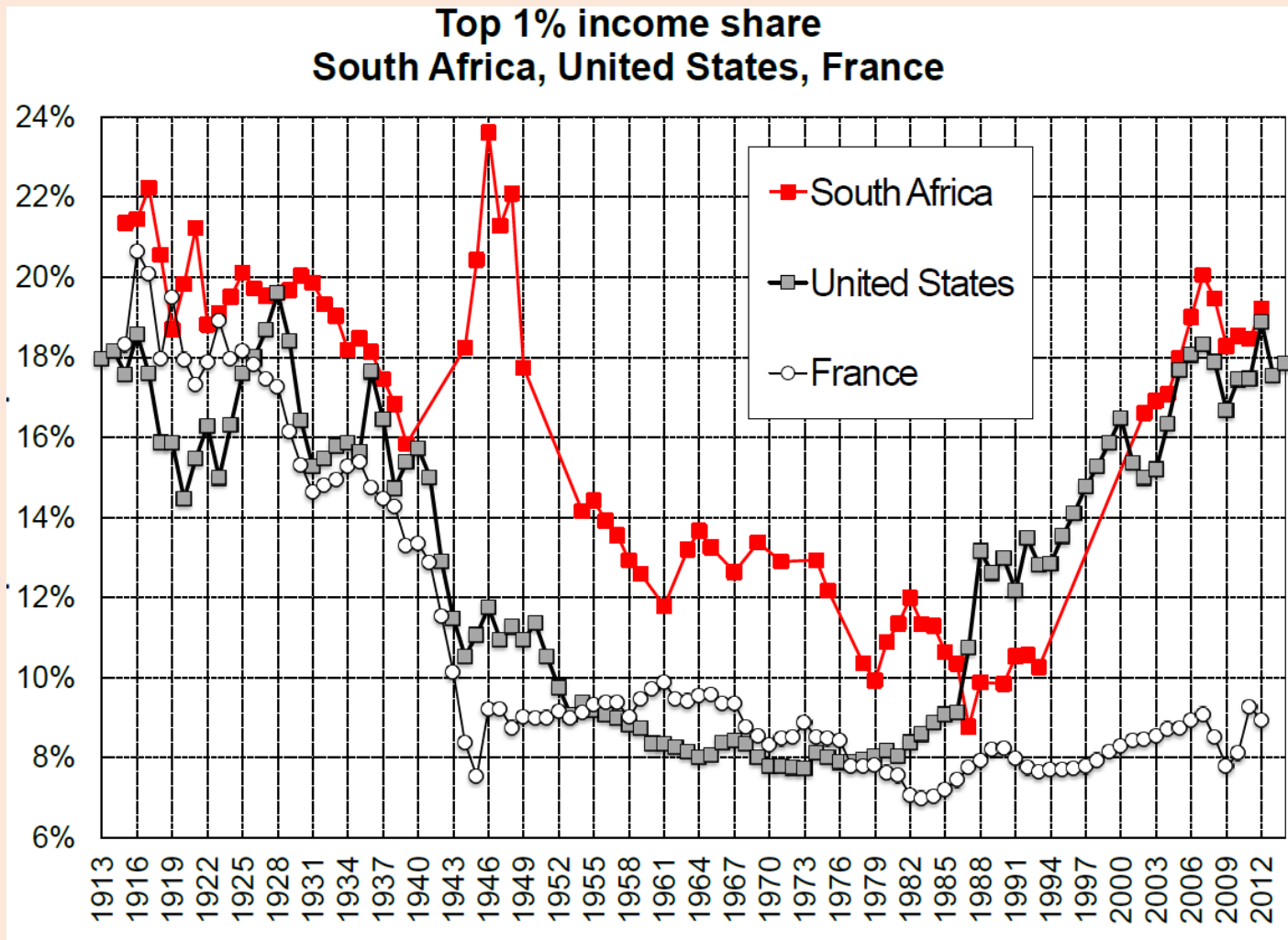
Reversal of income shares in US

Piketty (2016)



Comparing S.Africa, US & France

Piketty (2016)

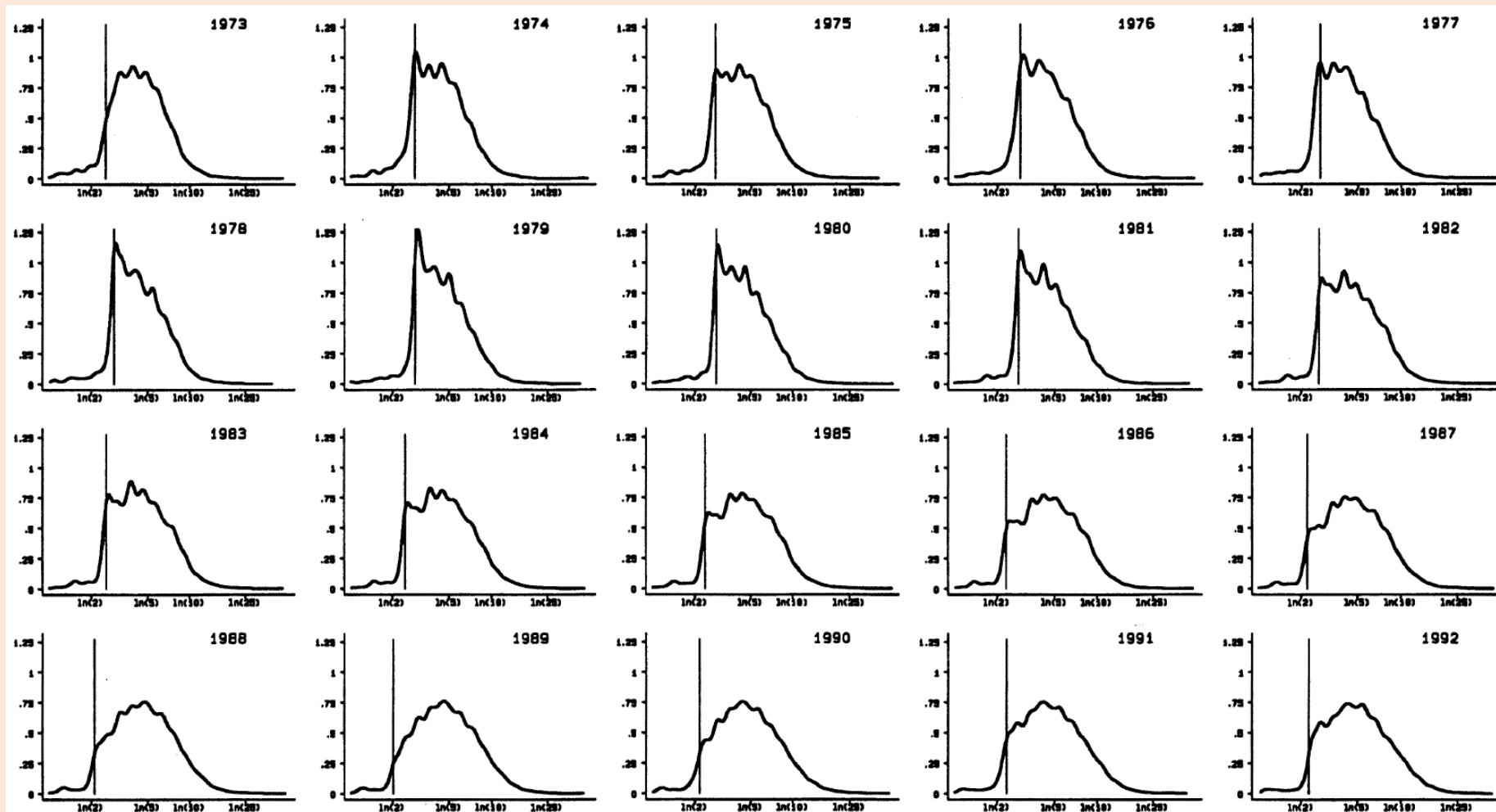


Conclusion

- Large increase in inequality, in particular US
 - Also in UK and Germany (but less)
 - Even less in France and Sweden
 - Not at all in the Netherlands and Denmark
- Contrast France and Germany since 2000
 - Germany: inequality up, unemployment down
 - France: not much change
 - But: Ndl and Denmark: low inequality and low unemployment

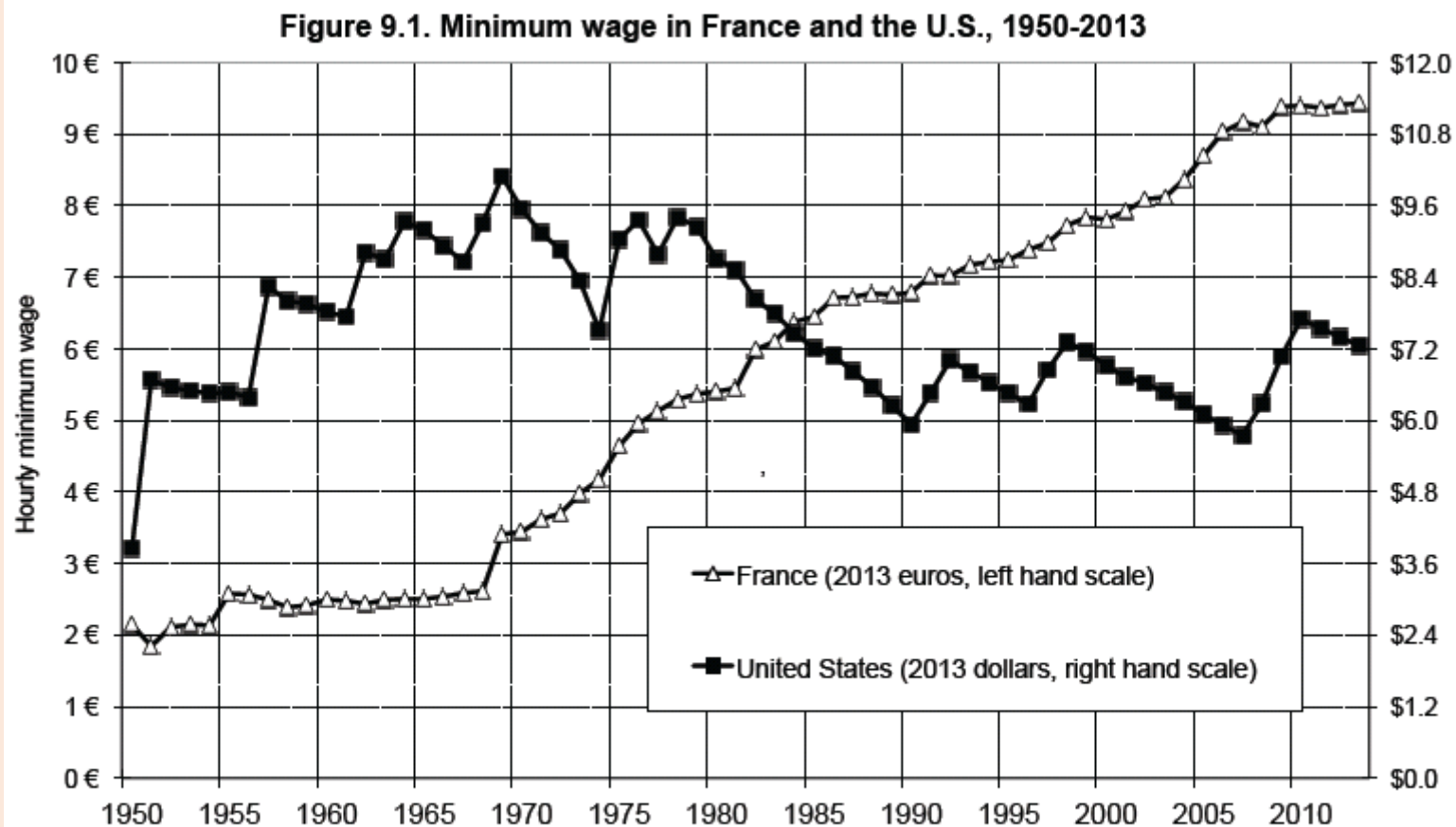
Role minimum wage in US (women)

DiNardo, Fortin & Lemieux



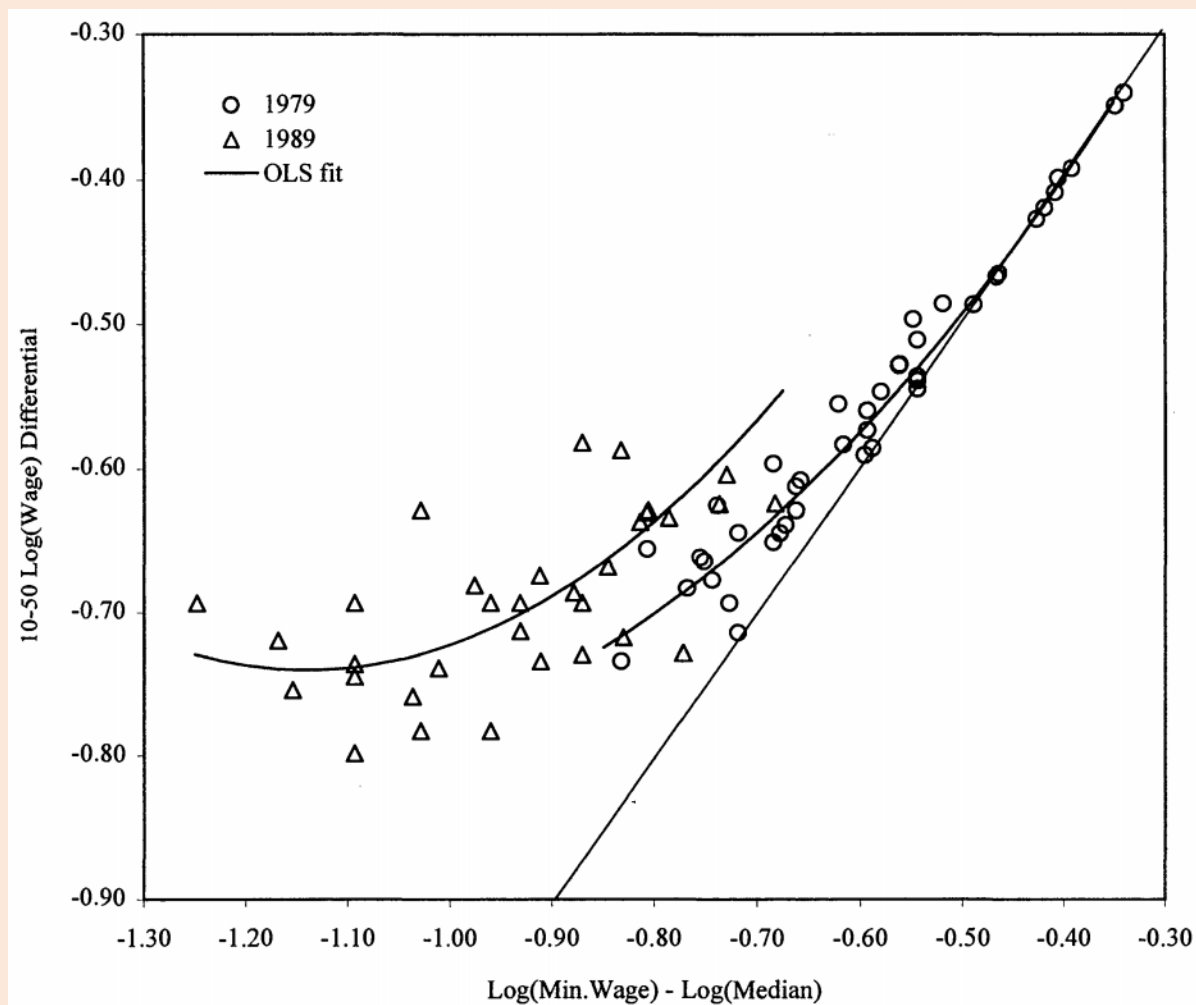
Minimum wages in France & US

Piketty (2016)



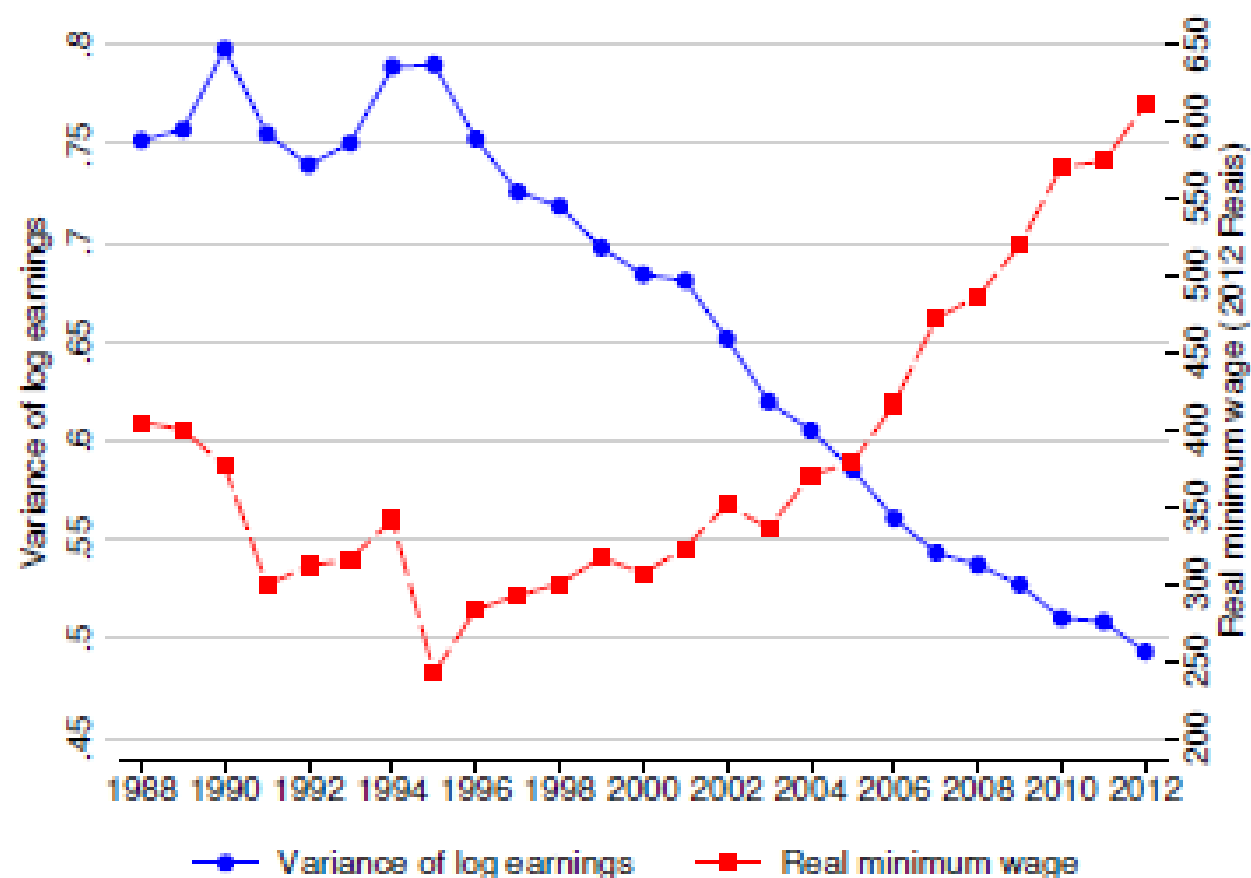
Minimum wages and wage distribution

Lee (1998)



Minimum wages in Brazil

Figure 4. Evolution of earnings inequality versus the minimum wage, 1988–2012



Some stylize facts about minimum wages

- Large effects on wage distribution
 - Some non-compliance
 - Spike
 - Large spill-over effects
 - All of the increase in 10-50% differential in US in '80 due to decline in minimum wage
- Small effects on employment
 - As long as the spike is smaller than 5% (?)
 - Spike in France is 10% (?)
- Discussions on minimum in UK, France & US
 - No longer a left wing issue

What explains these stylized facts? Job search

Burdett & Mortensen (1998), Gottfries & Teulings (2016)

- In Walrasian market, wages fully determined
- Search frictions distort perfect competition
- Employment cycle
 - k = Job offer arrival rate (*40 % per month*)
 - d = Job destruction/lay off rate (*2% per month*)
 - Selection of ever better jobs until next lay off
- “Climbing the hill of rents”
- Upon lay off: “fall of the hill of rents”
 - Strong empirical evidence for this for the US
 - 10-15% std.dev. of wages due search frictions
 - 10-20% wage loss after displacement

Job search: equilibrium flow, wage premiums

Burdett & Mortensen (1998)

- Job offer and employment distribution
 - $F \sim [0,1]$ = mismatch (inverse job quality, 0 = best job)
 - $G(F)$ = distribution of jobs better than F
 - Hence: unemployment $u = 1 - G(1)$
 - Workers take ever better jobs
- Equilibrium flow condition
 - Inflow = Outflow: $d G(F) = k [1 - G(F)] F$
 - $G(F) = k F / (d + k F)$
 - Unemployment $u = 1 - G(1) = d / (d + k)$
- Wage setting
 - Hiring and retention premiums
 - Focus on retention premiums

Job search: wage setting

Burdett & Mortensen (1998)

- Asset value of a firm derived from Bellman
 - $r V(W,F) = X(F) - W - [m F(W) + d] V(W,F)$
 - r = interest rate, m = job seeker arrival rate
 - By definition: $k u = m v$ (v = vacancies)
 - $X(F)$ = output in job F , W = wage
- Limiting case: $X(F) \rightarrow X$; $V(W,F) \rightarrow V$
- Monopsony: firms make profit max. offer
 - $W(F) = W_{\min} + m V (1 - F)$, holds for all F
 - Hence, for $F = 1$: $[r + m + d] V = X - W_{\min}$

Job search: interpretation

Burdett & Mortensen (1998)

- Trade off: wage bill \leftrightarrow worker retention
- Wage distribution even for equal X
- Lowest wage can be either of two
 - Reservation wage
 - Legal minimum wage
- Higher minimum wage
 - Lower profits V
 - Flatter wage distribution (slope is $m V$)
 - Explains the data
- **Institutions matter!**

Job search: what about (un)employment

Burdett & Mortensen (1998)

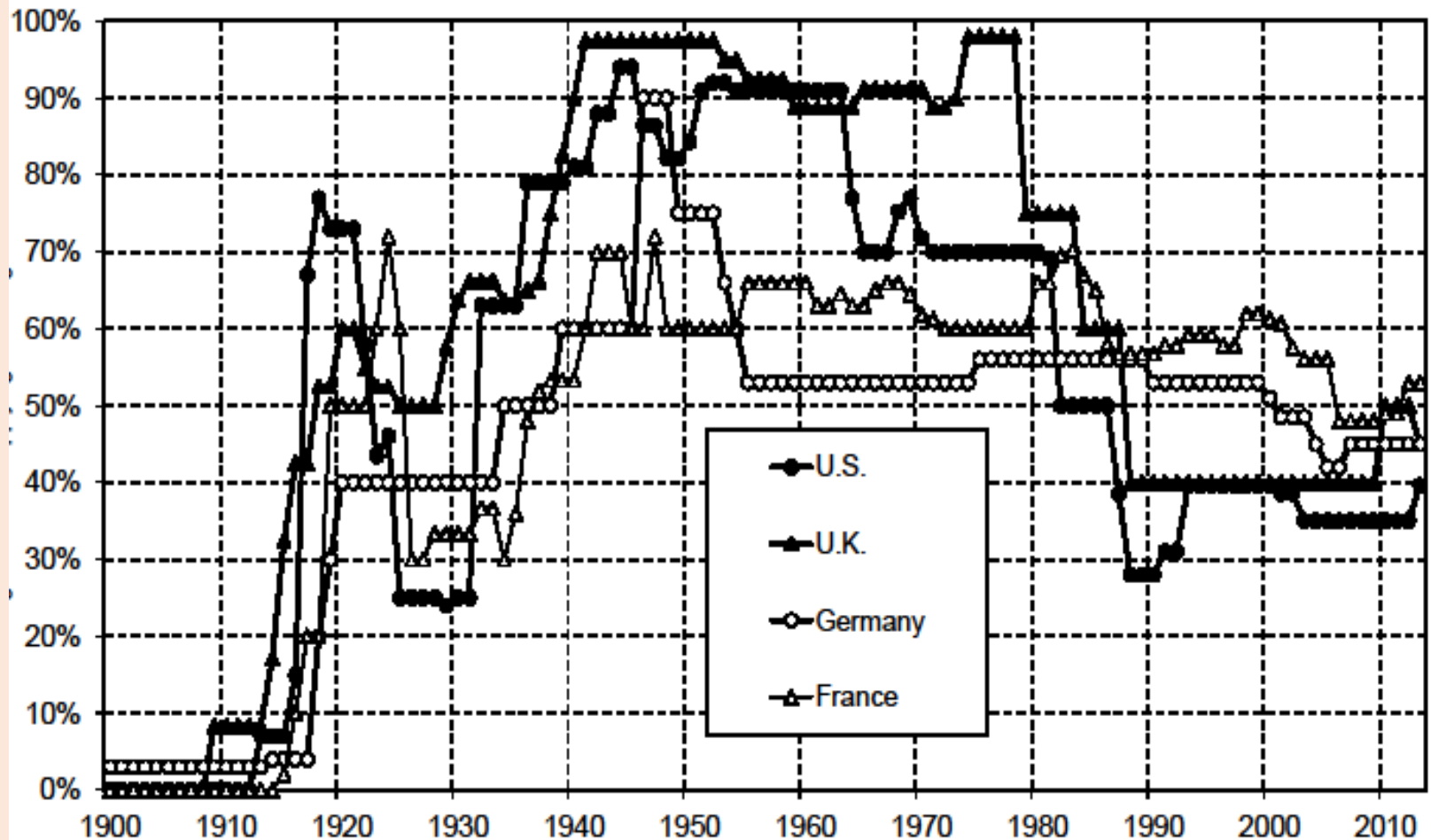
- Lower profits: less vacancies
 - Standard: minimum wage bad for employment
 - v and hence k goes down
- Higher wage: more search by job seekers
 - Firms set wage to maximize V : monopsony
 - m goes up
- Hold up problem, Hosios condition
 - Each party should be properly compensated for its input
 - Wages set after investment in search
 - No feed back to achieve efficient wage level
 - Monopsony: suggests there is too much power for firms
 - Optimal degree of market power, institutions matter

Search and minimum wages

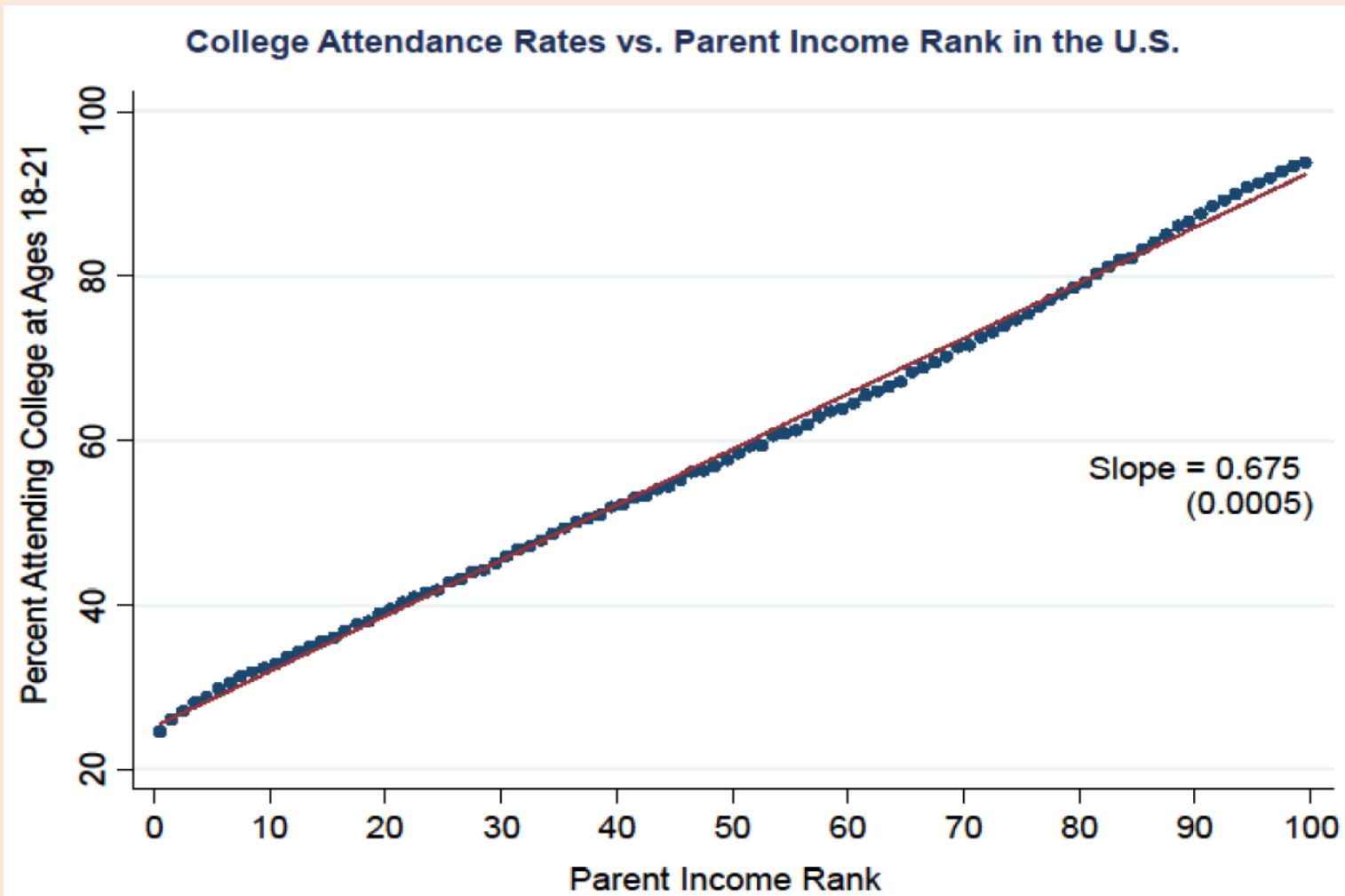
- No accepted conclusions on optimal level
 - Not even agreement on previous analysis
- My guess
 - Spike on minimum wage of 4% might be good
 - More is potentially bad for employment
 - US and Ndl: far below 4%
 - France: far above
 - Increase in UK “challenging”

Marginal top taxes rate in various countries

Figure 14.1. Top income tax rates, 1900-2013



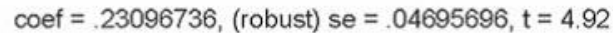
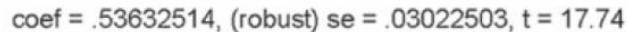
Meritocratic education



Two models of education and the evidence

- Human capital: you actually learn something
 - Cross country regressions
 - Within country inter-regional regressions
 - Suggests large spill overs (see afternoon)
- Signalling: you show your ability
 - Why do we have exams?
 - My experience as a Cambridge professor

Geniaola et.al. (2013)



Welfare implications of signalling

- Without sorting
 - Signalling is redistribution to high ability workers
 - Hence: Pareto indifferent
 - Hicks-Kaldor inefficient
 - “Universities”: comparative advantage in sorting
 - Crucial for sorting: elasticity of effort with respect to ability keeping constant the signal : math exams
 - Reputation is critical
- With sorting: offsetting gains
 - Sorting has social value

Signalling and intergenerational transfer

- What contributes most to the signal
 - Entry or exit from university?
- Reputation critical
 - Allows you to share high tuition fees
 - Makes you attractive to the best students
- Reputation milking: extreme fees for the rich
 - Simply selling the admission ruins the signal
 - Mixing some rich among the signal raises income
 - 10 milion for a place
 - Noise in selection
 - Trade off: reputation – income/salary (= good staff)
 - EU – US: global competition, no fee

Rise of populism: reform helpful

- Has globalisation gone too far? Rodrik
- Politics and globalisation Autor et al.
 - Import competition from China in congress districts
- Free trade as a repeated PD Bown & Crowley
- Trade restrictions or institutions?
 - Is the agenda of Blanchard & Summers still right?
 - Revival of the Beveridge agenda
 - Though: success of the Hartz reforms

References Part I (incomplete)

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