

We have been studying growth

- Our yardstick is rate of increase of real per capita income
- But that's measuring changes in a mean
- What about the variance?
- Raises questions of inequality—a big concern today

But not just today: inequality has been
with us for long time

- Appears after 2 things happen (archeological evidence)
 - Neolithic revolution ↑ income
 - States form
- Why? Political elites seize property and rents in return for security
- < 1900 only plagues and state collapse reduce
 - Wouldn't you prefer inequality to remedies?
- Are there other remedies today?

Inequality: What we'll do

- Reasons it is a concern
 - Ethics, economic and political consequences
 - But perfect equality → bad incentives
- Measuring inequality
 - How do we measure it
 - Trends over time
- Causes behind trends
- Remedies
- Related issue: social mobility

Reasons inequality is a concern

- Contrary view
 - “Of the tendencies that are harmful to sound economics, the most seductive, and in my opinion, the most poisonous, is to focus on questions of distribution...The potential for improving the lives of poor people by finding different ways of distributing current production is *nothing* compared to the apparently limitless potential of increasing production” Robert Lucas
 - Perfect equality → bad incentives
 - Example: USSR, North Korea

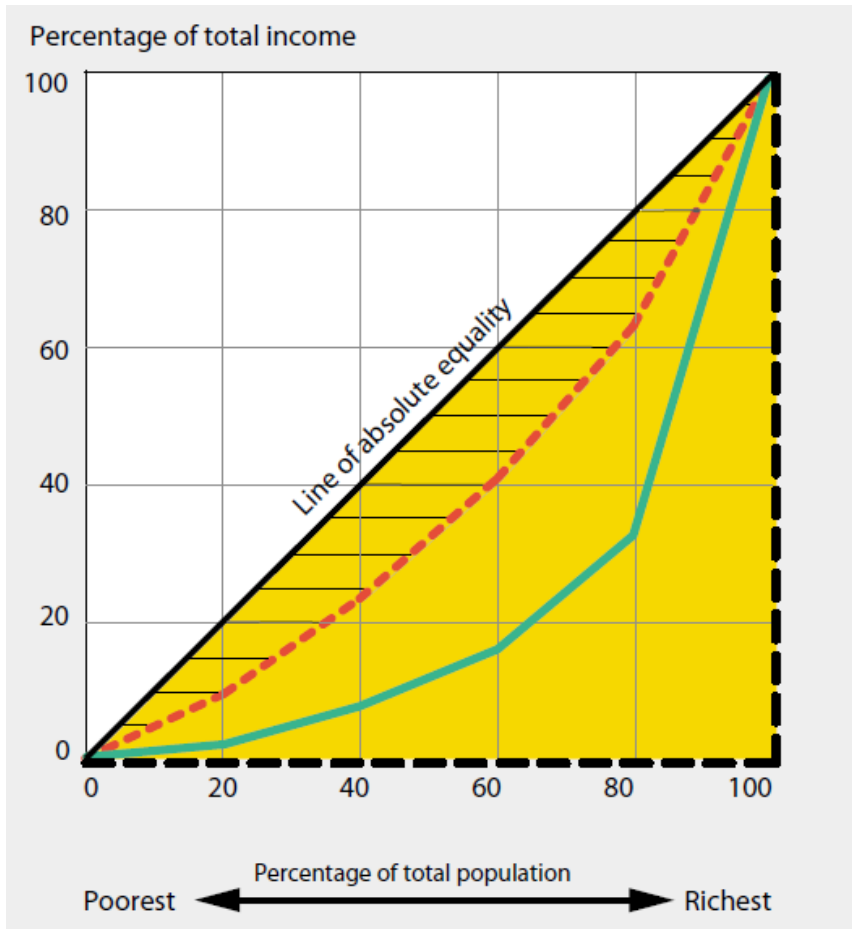
Why inequality does matter

- Ethics
 - What if people make bad choices?
 - But what about their children?
 - Or evidence that poverty itself causes bad choices
 - Hunger and human capital, poverty and behavior, peer group effects
- Political and economic consequences
 - Political and legal instability
 - Economic: inequality may itself slow growth
 - To see how, let's first discuss how to measure inequality

How do we measure inequality?

- Distinguish wealth and income
 - Related: wealth = accumulated saving
- Common measures (wealth or income)
 - Share of top x% (1%, 0.1%)
 - Kuznets ratios
 - Share of richest x% to poorest x% (10%, 20%)
 - Lorenz curves and Gini ratios

Lorenz curves and Gini ratios



- Brazil curve everywhere to right Hungary curve
 - Brazil more unequal
- Measure generalizes
 - Nice properties
 - Problems if curves cross
- Gini coefficient summarizes Lorenz curve
 - = shaded area/yellow area
 - 0.27 Hungary, 0.63 Brazil
 - Bigger Gini → more unequal

**Lorenz curve for Hungary (red) 1993;
Brazil (green) 1989**

Gini coefficients income 2005-2009

Country	Gini coefficient * 100	Year
Brazil	55	2007
Mexico	48	2008
USA	42	2007
UK	38	2007
France	32	2005
Germany	32	2007
Denmark	26	2007

**Latin America usually high; US used to be low, now rising.
European countries usually low.**

Now back to another reason for studying inequality

- Namely, impact it can have on growth itself
- Market failure when poor lack collateral
 - Bars way to potential entrepreneurs
 - Limits human capital
 - Can't borrow to finance education
- Also creates bad political incentives

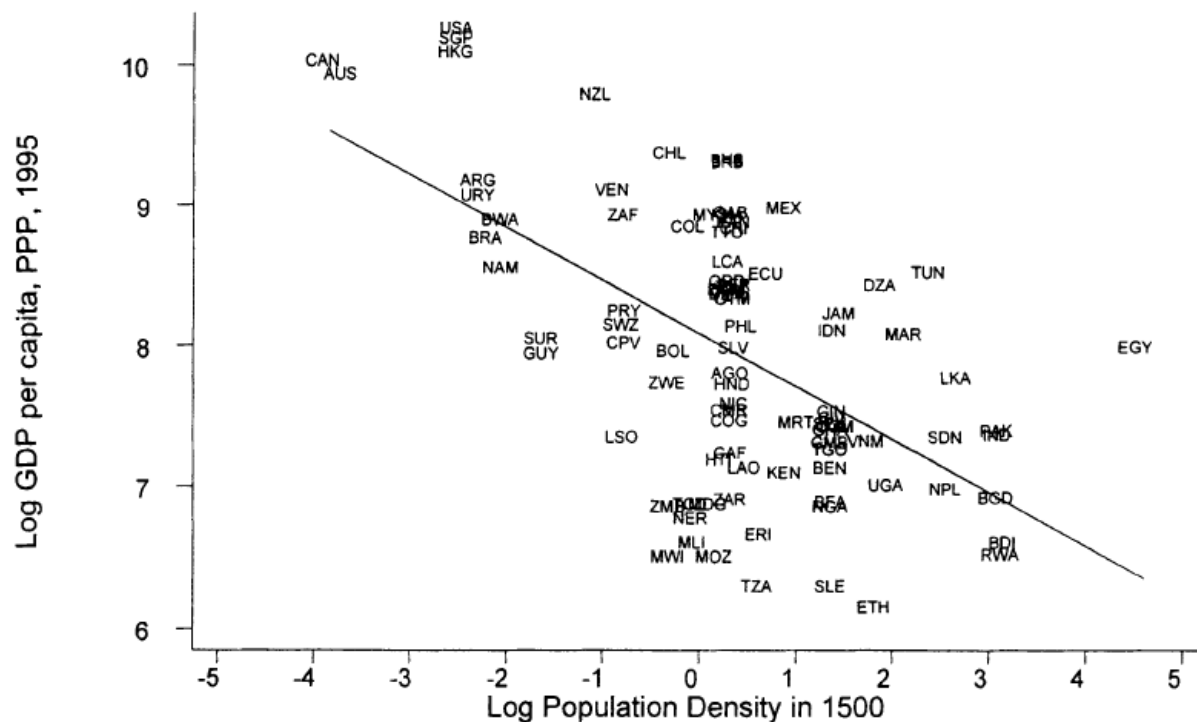
What are bad political incentives?

- To avoid redistribution, rich
 - restrict franchise, cut educational funding
- Policies limit
 - human capital accumulation, invention, financial development
 - examples from Latin America
- Institutions never become inclusive

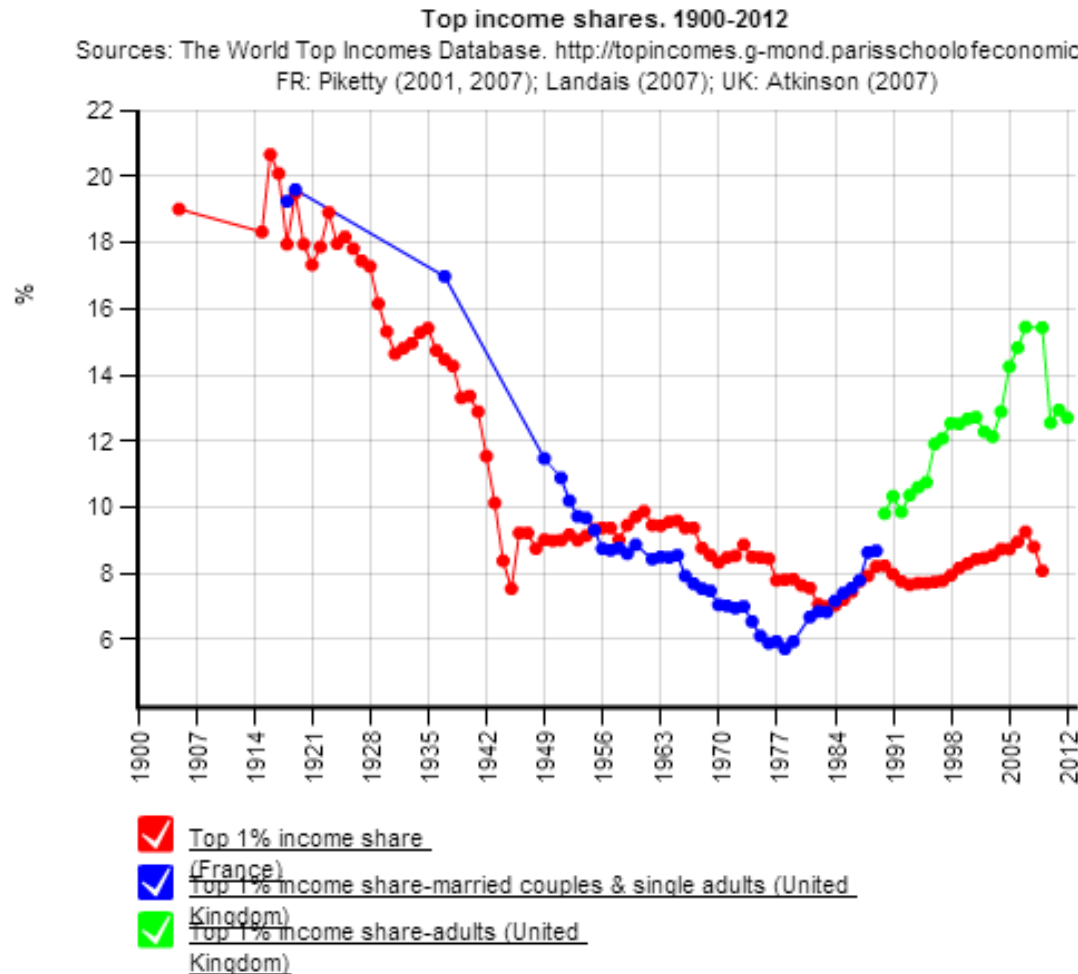
Effect in European colonies

- More rapid growth in US and Canada than rest of Americas
 - not culture, language
 - rather effect of inequality and impact on human capital
- Recall great reversal of European colonization
 - If colonization $\uparrow$ inequality, bad institutions result
 - Acemoglu et al.; Engerman and Sokoloff; Dell says no
- Could also be barriers to technology

Great reversal in ex colonies



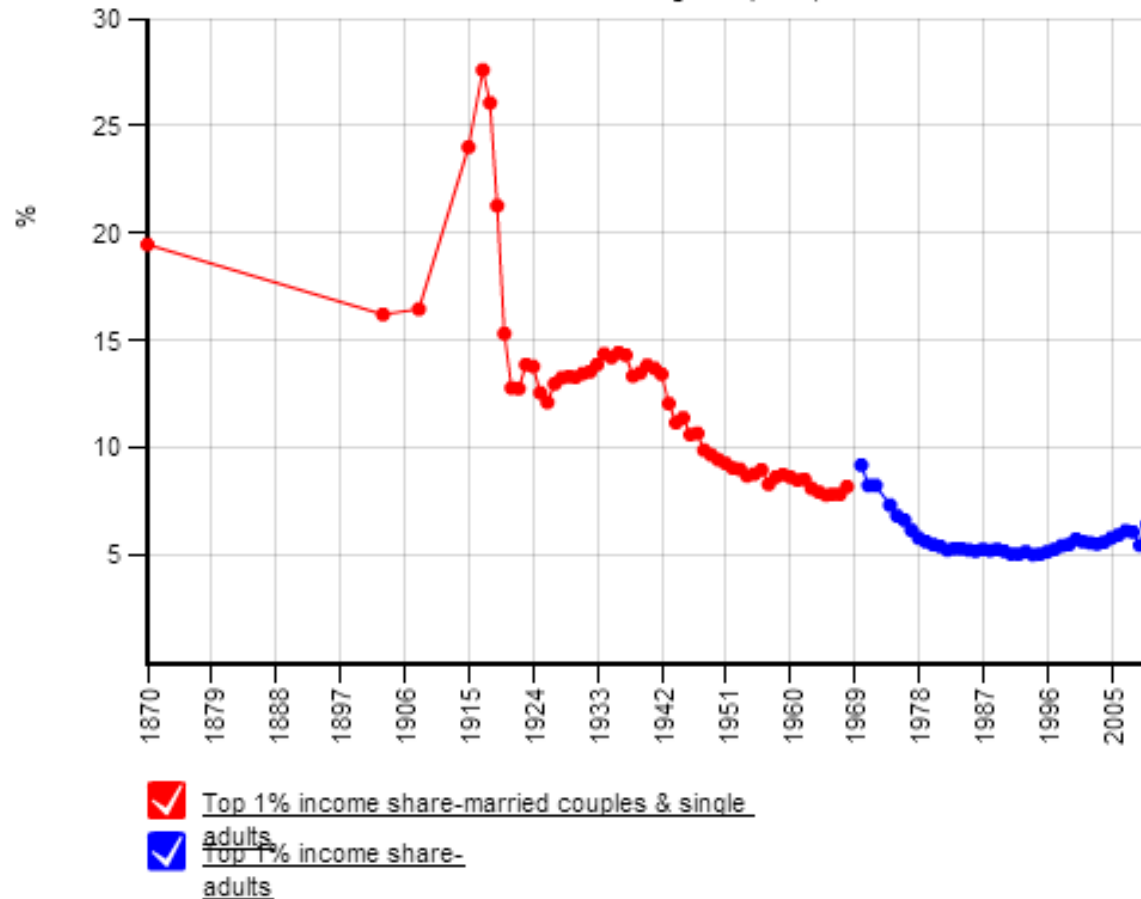
Now to trends in inequality



Income inequality falls in depression
WWII: adverse shocks, taxation.
It is rising again in UK.

Top income shares, Denmark, 1870-2010

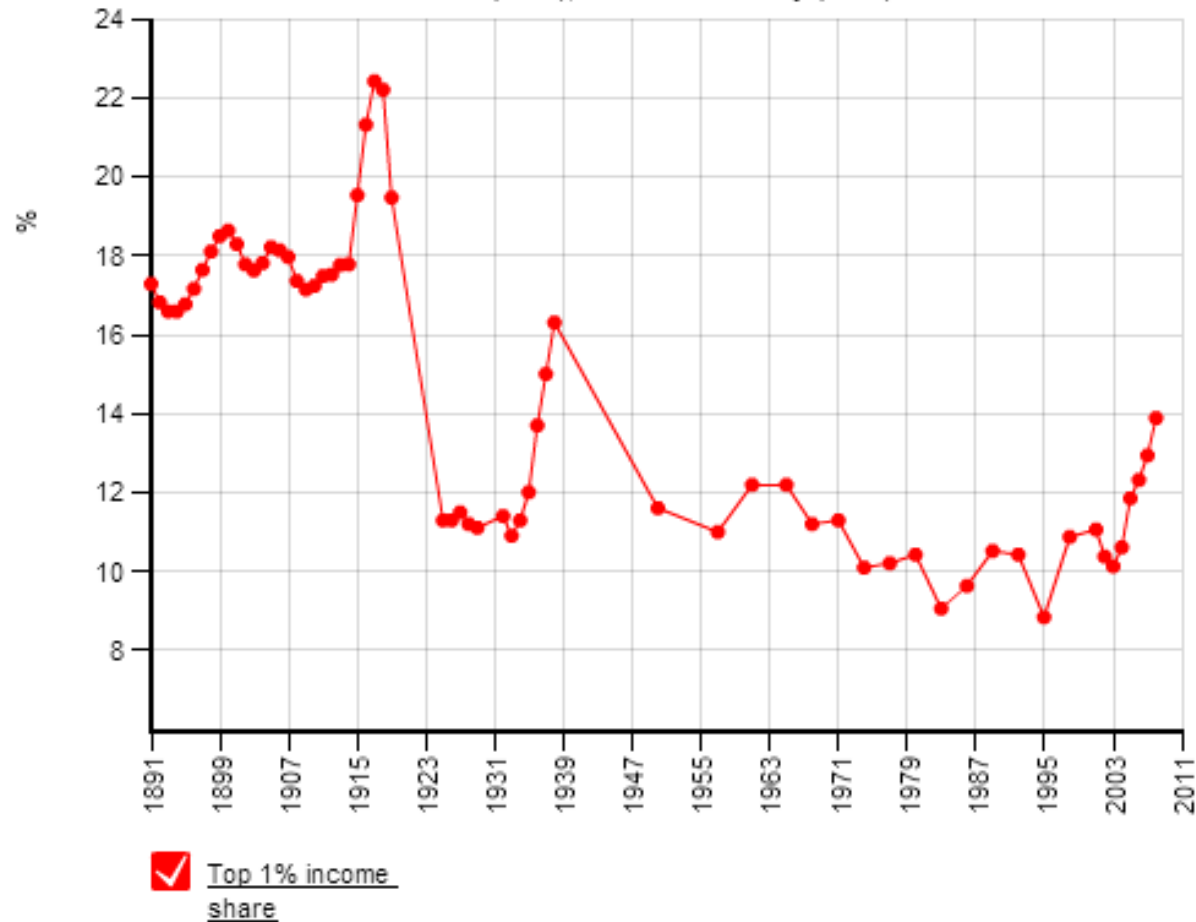
Sources: The World Top Incomes Database. <http://topincomes.g-mond.parisschoolofeconomics.eu/>
Atkinson and Søgaard (2012)



**Income
inequality
is falling in
France,
Denmark**

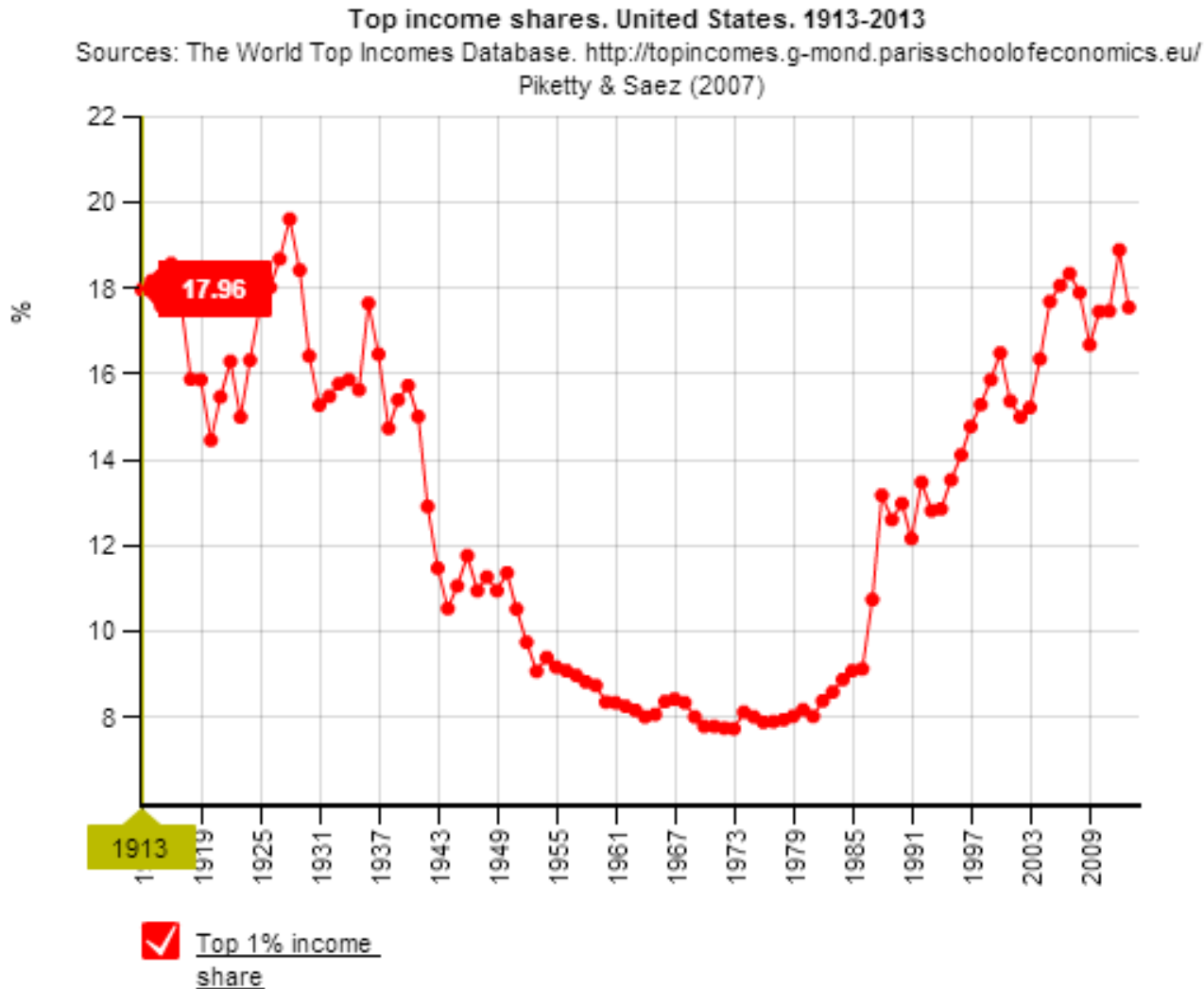
Top income shares. Germany. 1891-2010

Sources: The World Top Incomes Database. <http://topincomes.g-mond.parisschoolofeconomics.eu/>
Dell (2007); Bartels & Jenderny (2015)



**Not clear if
it is starting to
rise again in
Germany**

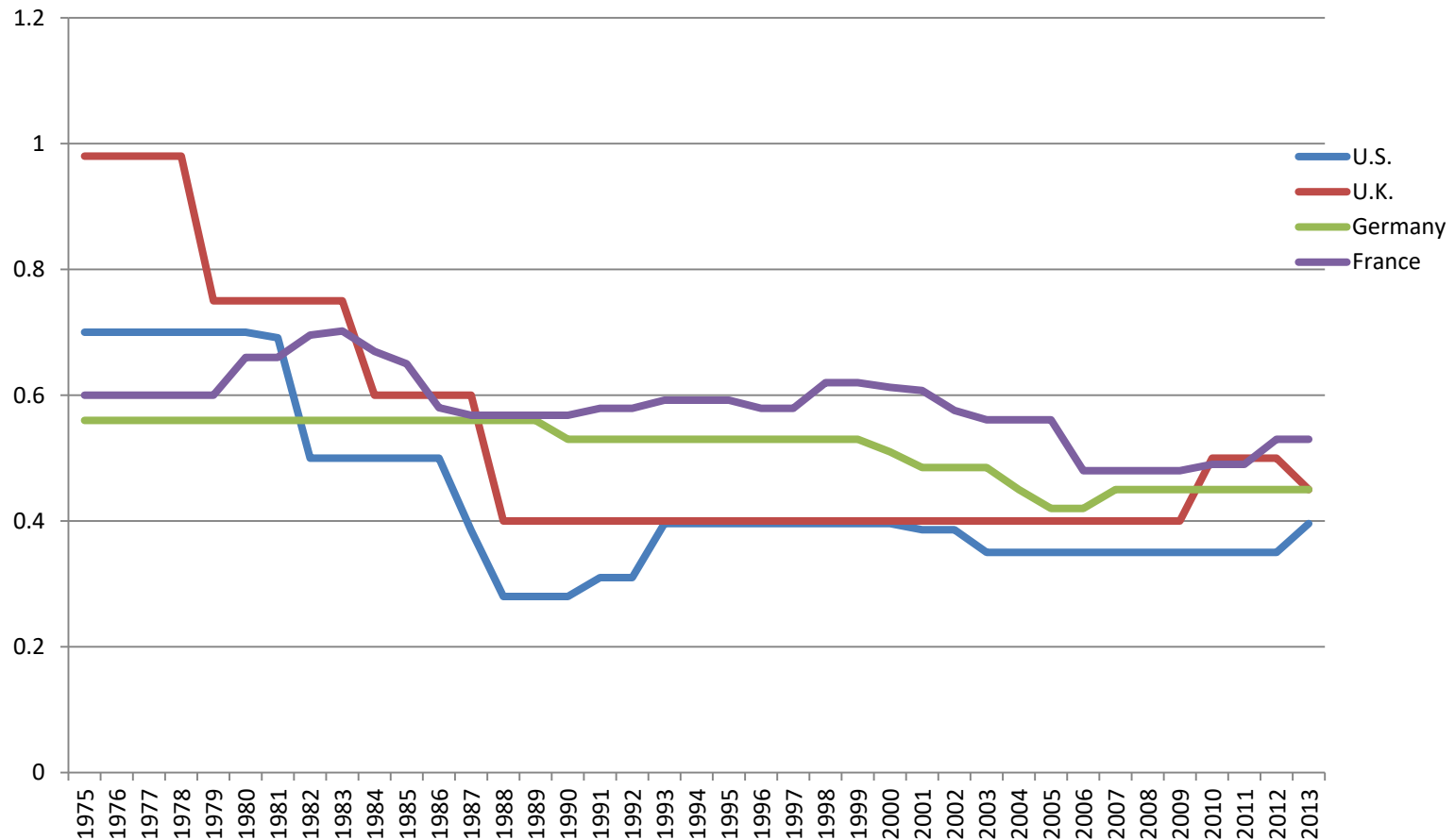
Definitely rising in USA



Why clear upturn in US and UK?

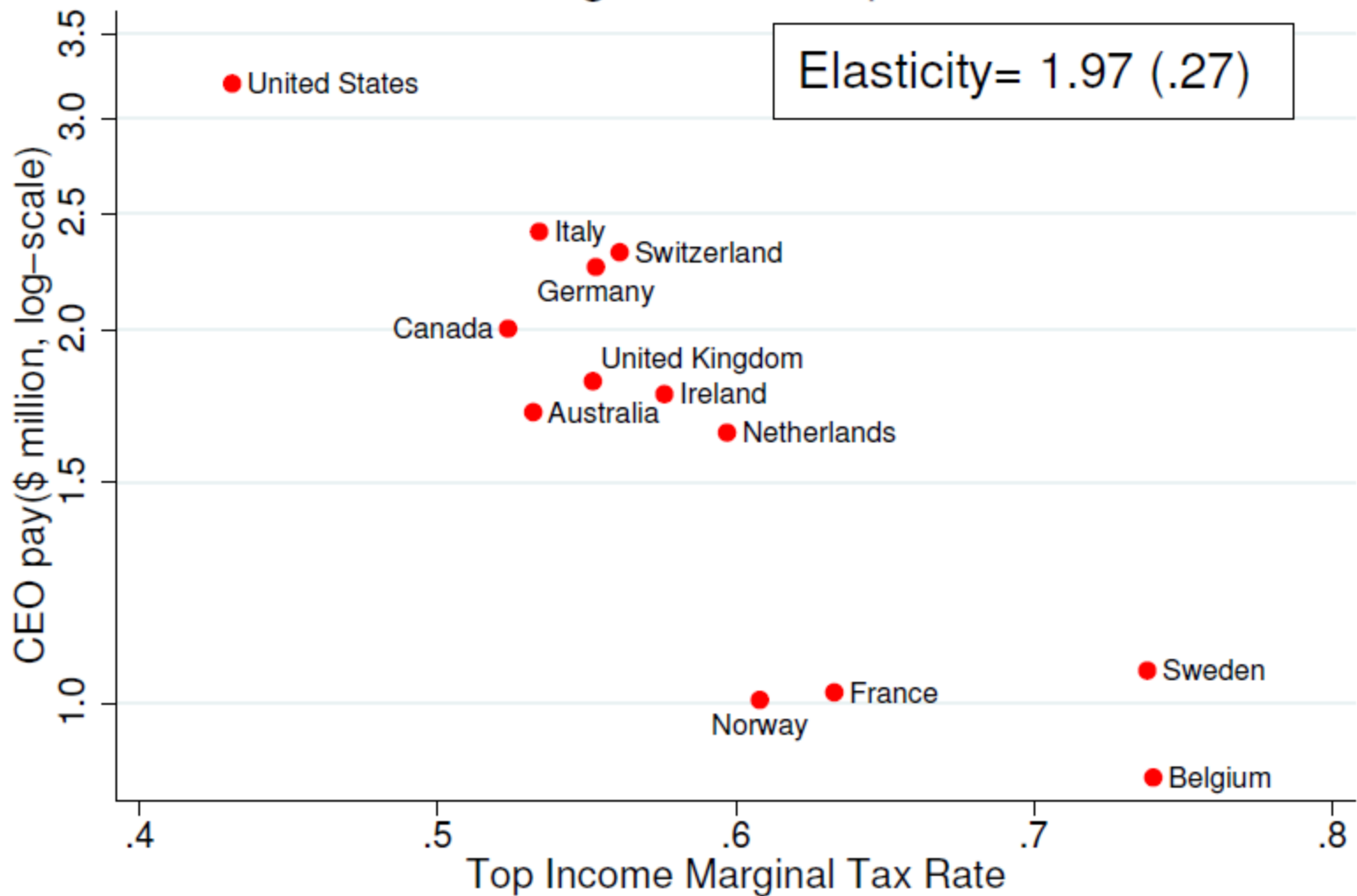
- Human capital and changing demand for skills?
 - Decline of factory work
 - But that can't explain US and UK difference
 - More likely to affect 10/90 division, not 1/99
- Pernicious effects of poverty?
 - Child care, transportation, peer groups, non cognitive skills; again, though, not peculiar to US & UK

Maybe it's taxes: US and UK cut top marginal tax rates



Compare taxes elsewhere

A. Average CEO compensation



So are tax rates the explanation?

- Claim: lower taxes increases incentive to extract rent from corporations
 - Piketty, Saez, Stantcheva argument
- Fits their data, but not necessarily other data
 - Frydman Mollow US evidence on individual executive compensation 1946-2005
 - Total compensation, but may miss capital gains
 - They control for firm characteristics (size, etc.)

Other factors at work too

- Unions and norms? In US evidence supports
 - Local union membership 1940s correlated with less inequality 1940-1960
 - Conditional on local observables and trends
 - Not due to sorting by workers or firm movement
 - But doesn't work in other countries
- ↑ subsidy + protection from competition in domestic services US & UK versus rest world
 - finance, health care, law
 - Top 1% not top 0.1%

Remedies for inequality

- Ancient remedies terrible (disease, state collapse)
- Social spending
 - Quality education
 - Quality child care, transportation (as in Finland)
- Taxes to redistribute?
 - Strong negative correlation between top tax rates and 1% income shares
 - Effect on growth?
 - No effect on growth
- Work to change norms (difficult)

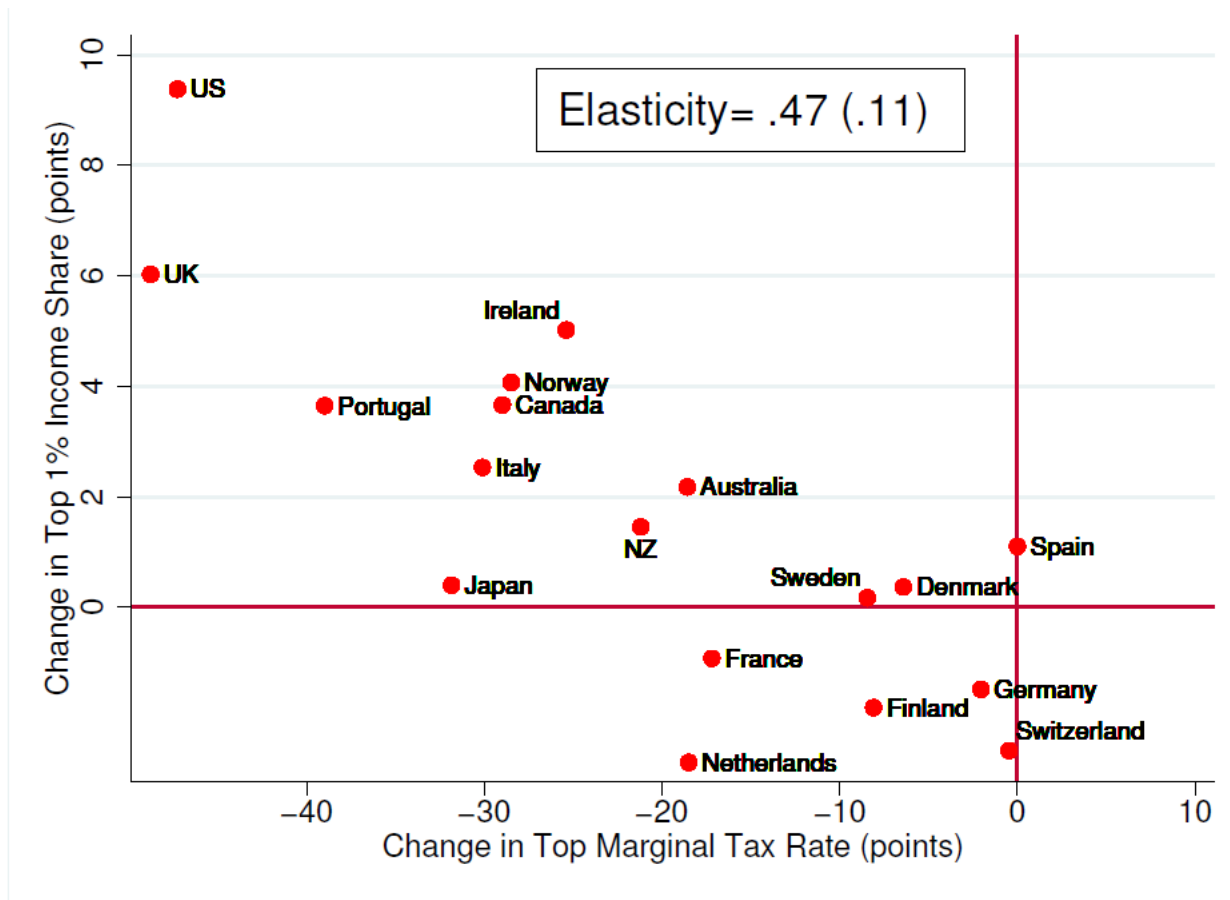
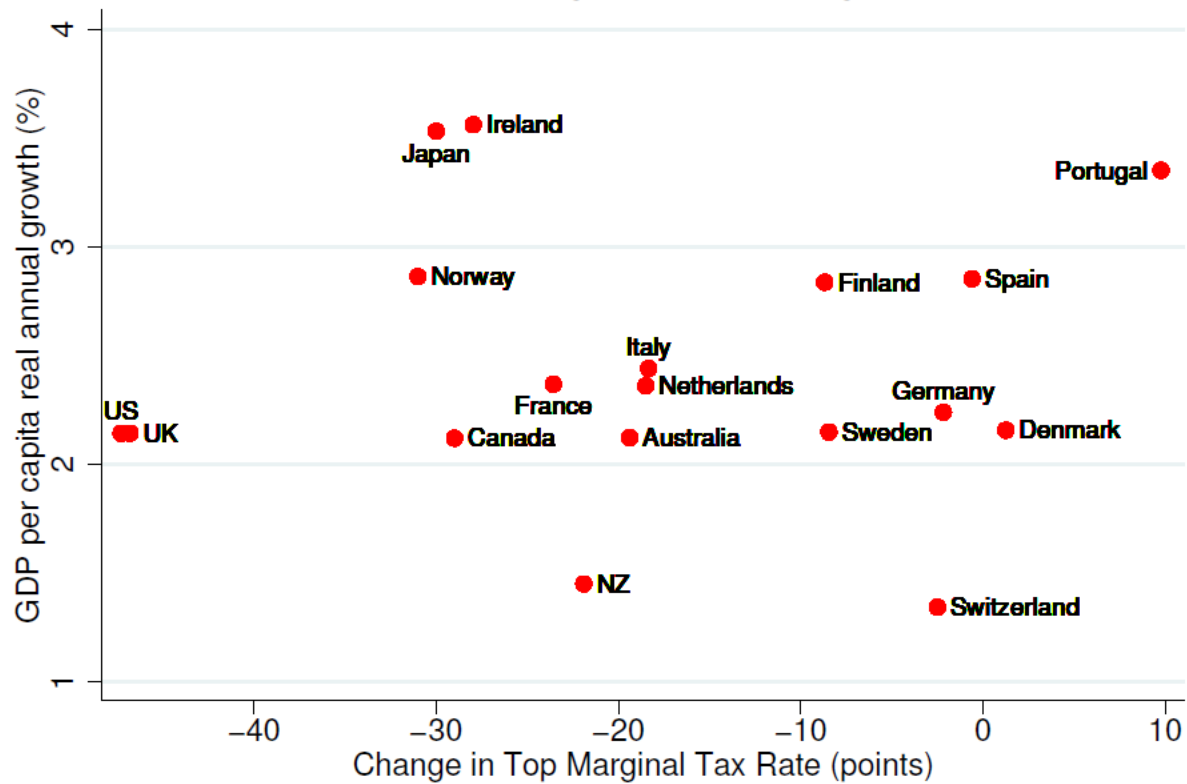
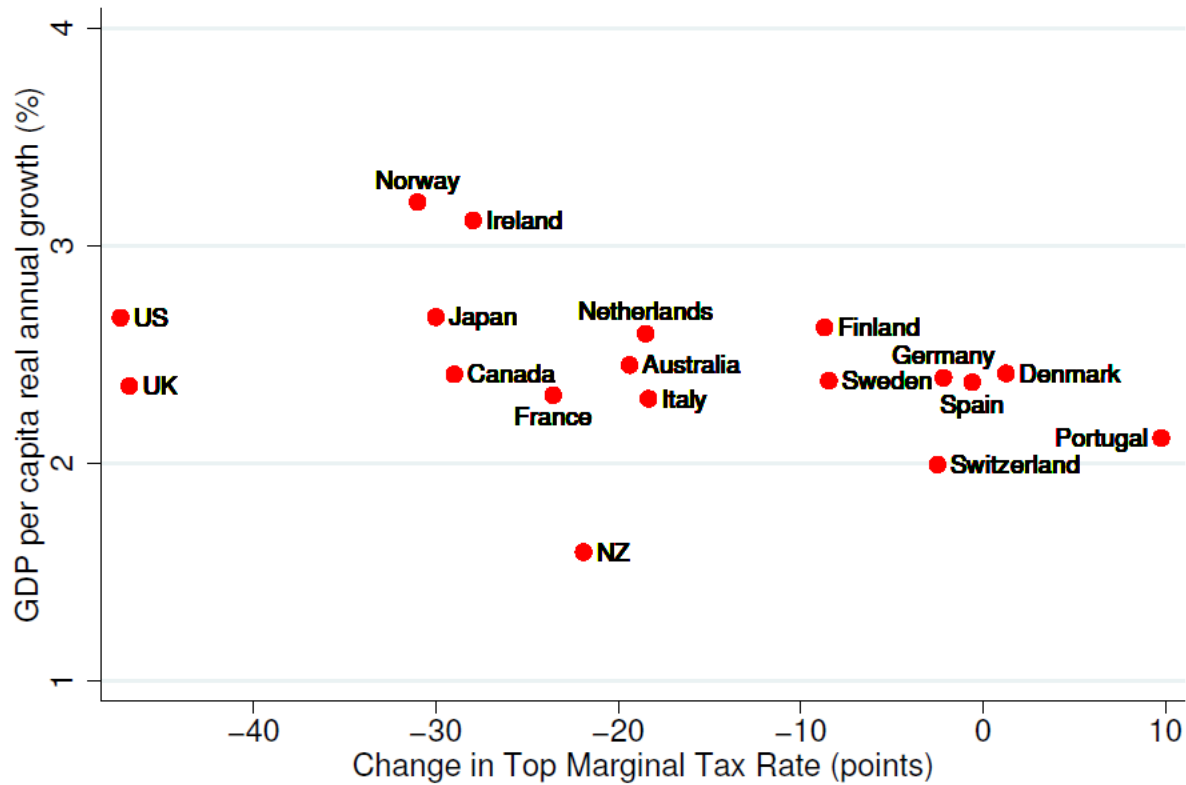


Figure 3: Changes in Top Income Shares and Top Marginal Tax Rates

A. Growth and Change in Top Marginal Tax Rate



B. Growth (adjusted for initial 1960 GDP)



Related issue: social mobility—topic of current interest in Europe and USA

- Example: claims that intergenerational mobility always small, wherever we look (Clark)
 - Europe in past centuries, Asia, US:
 - Descendants of rich in Florence 1427 are rich today
 - Based on regressions of $\ln(\text{son's wage or status})$ on $\ln(\text{father's wage or status})$
- Claims government programs do not affect
 - Implications: they don't help
- But that assumes his evidence can be trusted

Clark's additional claim--controversial

- Results driven by genetic inheritance within families: explains 64% variance
 - Or cultural: how to be thrifty, obey in school
- But Clark's evidence suffers from fatal econometric problems
 - Relationship highly non linear; regressing rank on rank much better method (Chetty, et al.)
 - Econometric assumptions dubious
 - Clark would get same result in apartheid society and wrongly attribute it to genetics or cultural inheritance.

And other evidence suggests we can promote mobility (US evidence from Chetty et al.)

- Reduce income inequality and residential segregation
- Improve primary schools
- Encourage greater family stability
- In other words, same measures that would reduced inequality.

Inequality and social mobility

- Inequality is a concern
 - Can have bad consequences for growth
 - Politically, ethically too
- Causes for high inequality
 - Wealth inheritance, pernicious effects of poverty
 - Changes in labor/factor markets
 - Bad institutions
 - Taxes, protection, ↓ unions in rich countries
- Remedies: social spending, taxes
 - No need to give up economic growth
 - Boost social mobility too