

Inequality of income in Europe

Andrea Brandolini

Bank of Italy

Directorate General for Economics, Statistics and Research

*The views expressed here are mine and do not necessarily
reflect those of the Bank of Italy or the Eurosystem*

European Dialogue 2015: Prosperity in Europe*

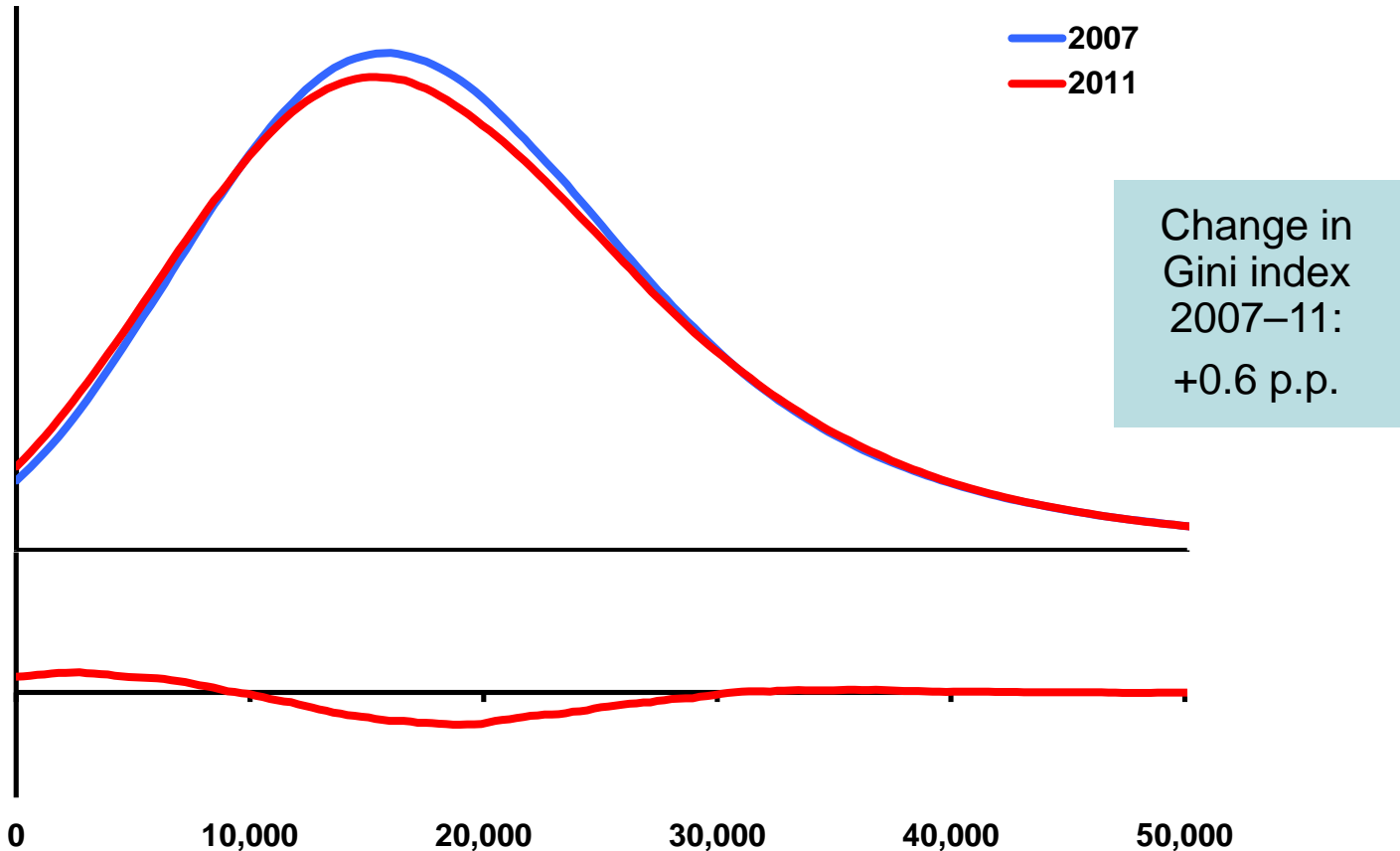
*only if we stop the growing inequality

16-17 April 2015, Brussels

Chapter 1: Europe

Income distribution in Euro Area

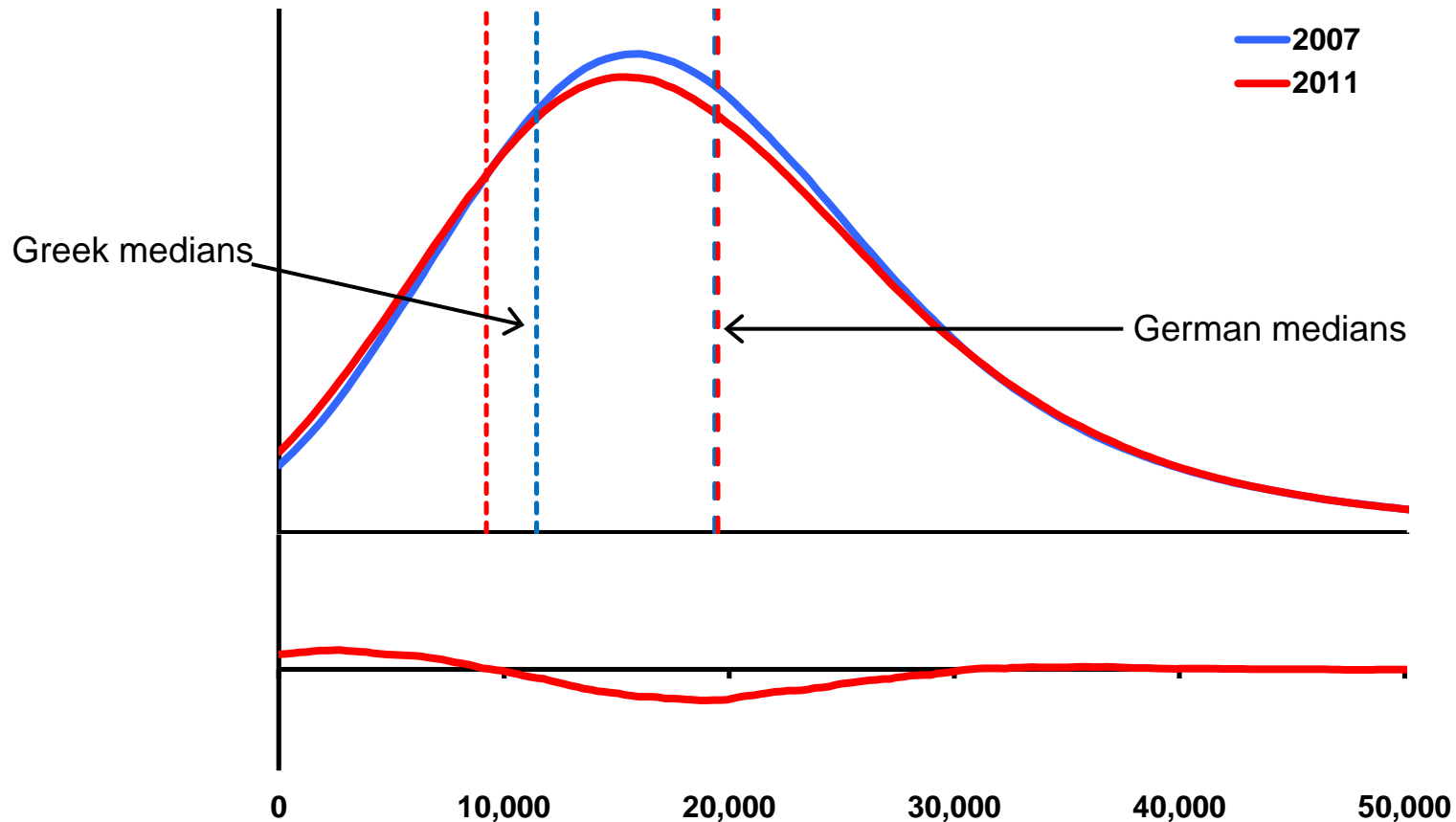
Kernel density distribution functions



Source: elaboration on EU-SILC data. Equivalent disposable income, modified OECD scale, divided by the implicit deflator of the household and NPISH final consumption expenditure for the Euro Area.

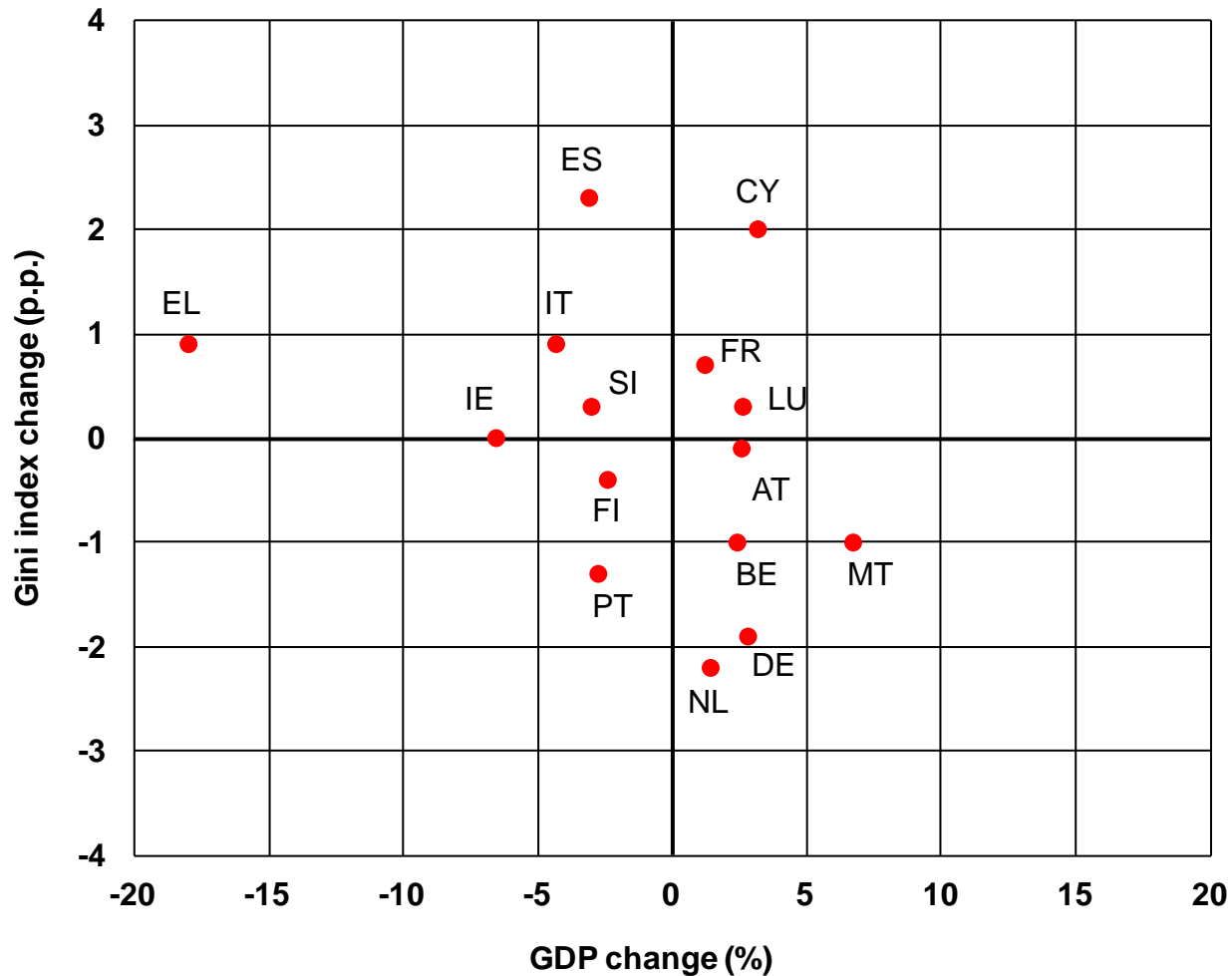
Income distribution in Euro Area

Kernel density distribution functions



Source: elaboration on EU-SILC data. Equivalent disposable income, modified OECD scale, divided by the implicit deflator of the household and NPISH final consumption expenditure for the Euro Area.

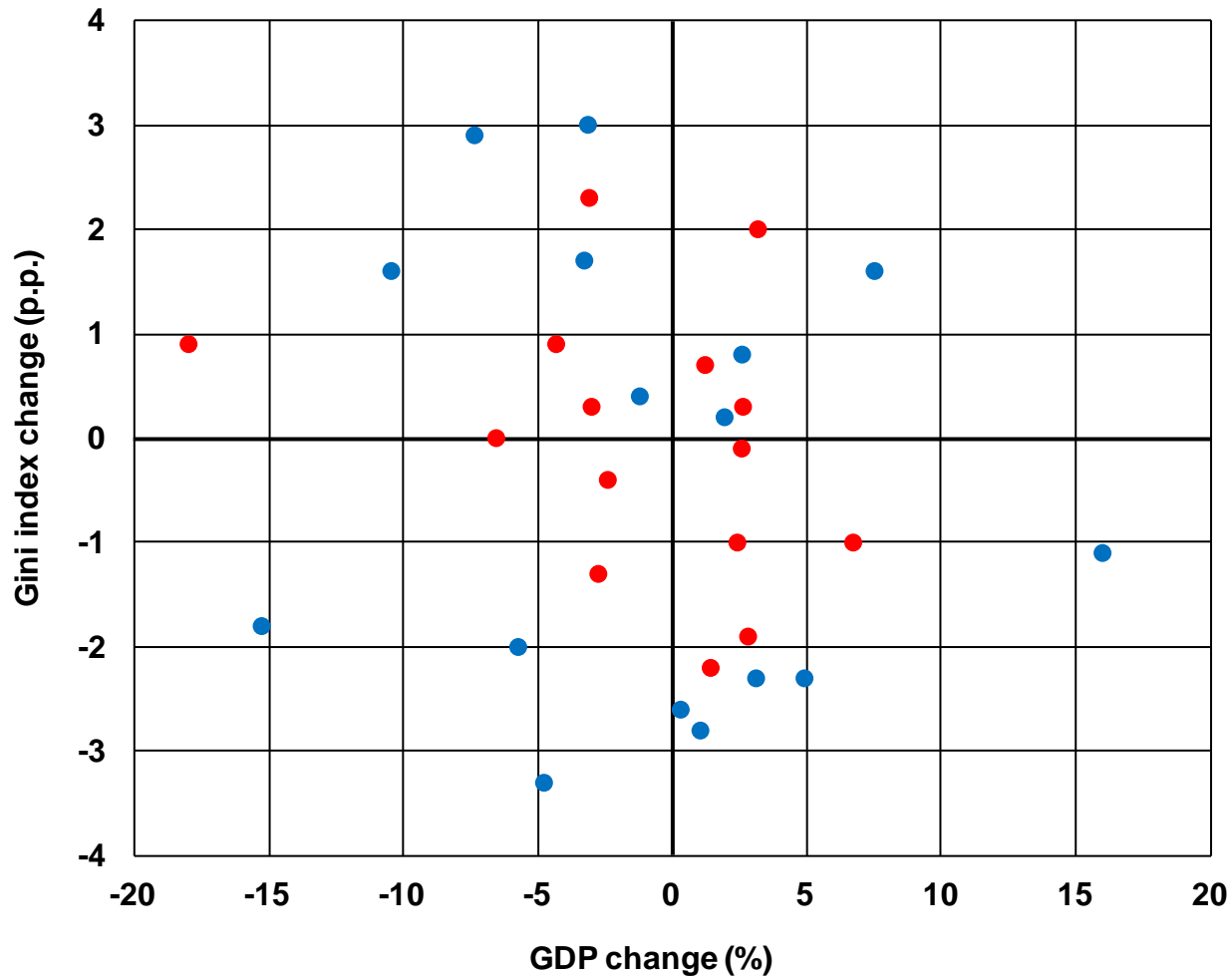
GDP and inequality change, 2007–11 Euro Area



Source: elaboration on Eurostat data.

GDP and inequality change, 2007–11

EU and non-EU



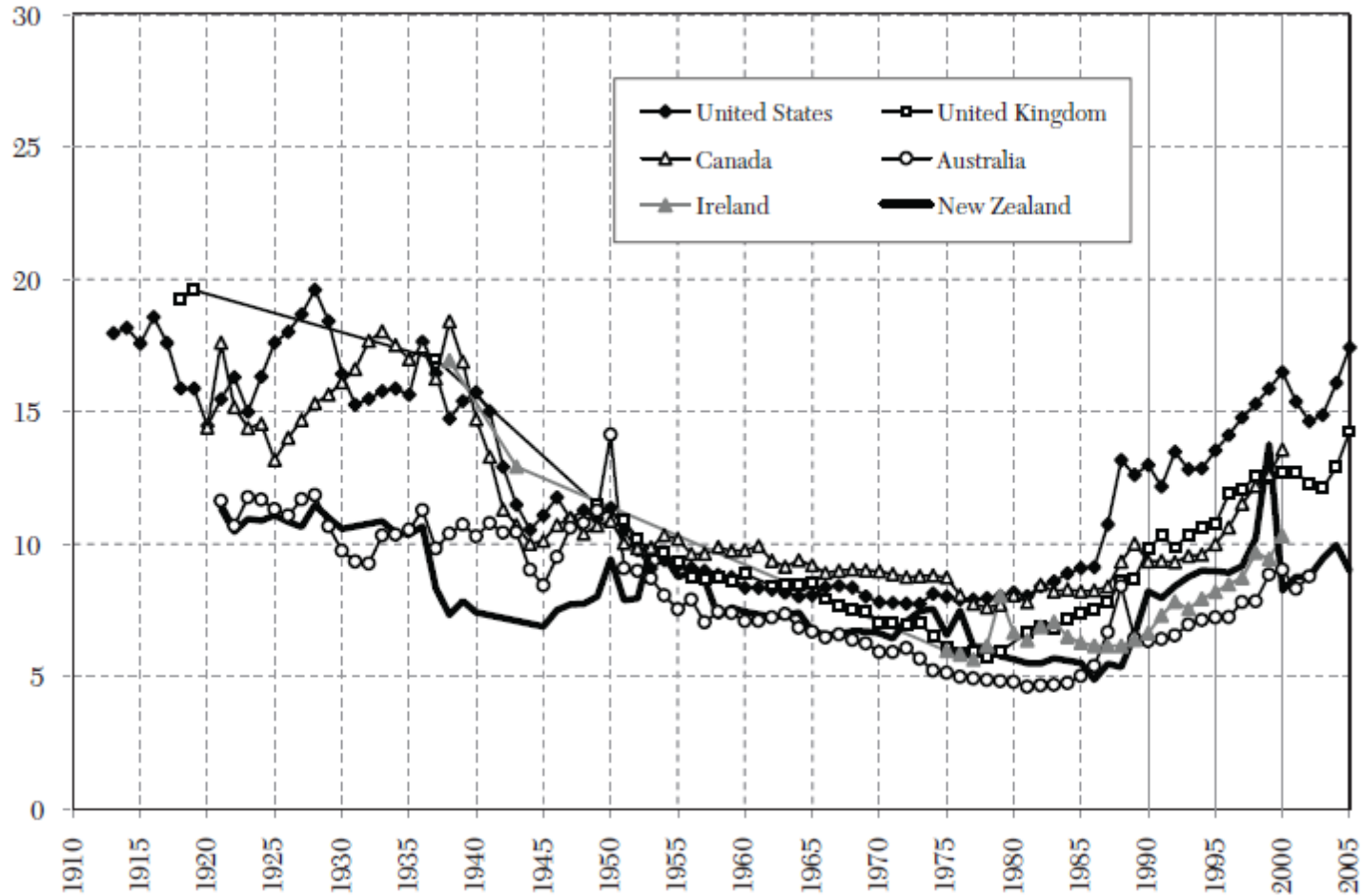
Source: elaboration on Eurostat data.

Summary 1

- Time to take seriously the **European perspective** → EU as if it was a single country
 - Measurement problems need to be considered, but no more serious than for measurement at national level (see Brandolini, 2007)
- Not over-stress **impact of austerity** on inequality
 - patterns differ across countries → different mixture of measures (see Sutherland and co-authors Euromod-based estimates)
 - often across-the-board income reduction: of course, lower and middle classes suffered more
- To understand inequality (longer-run) patterns, we have to investigate **national experiences**

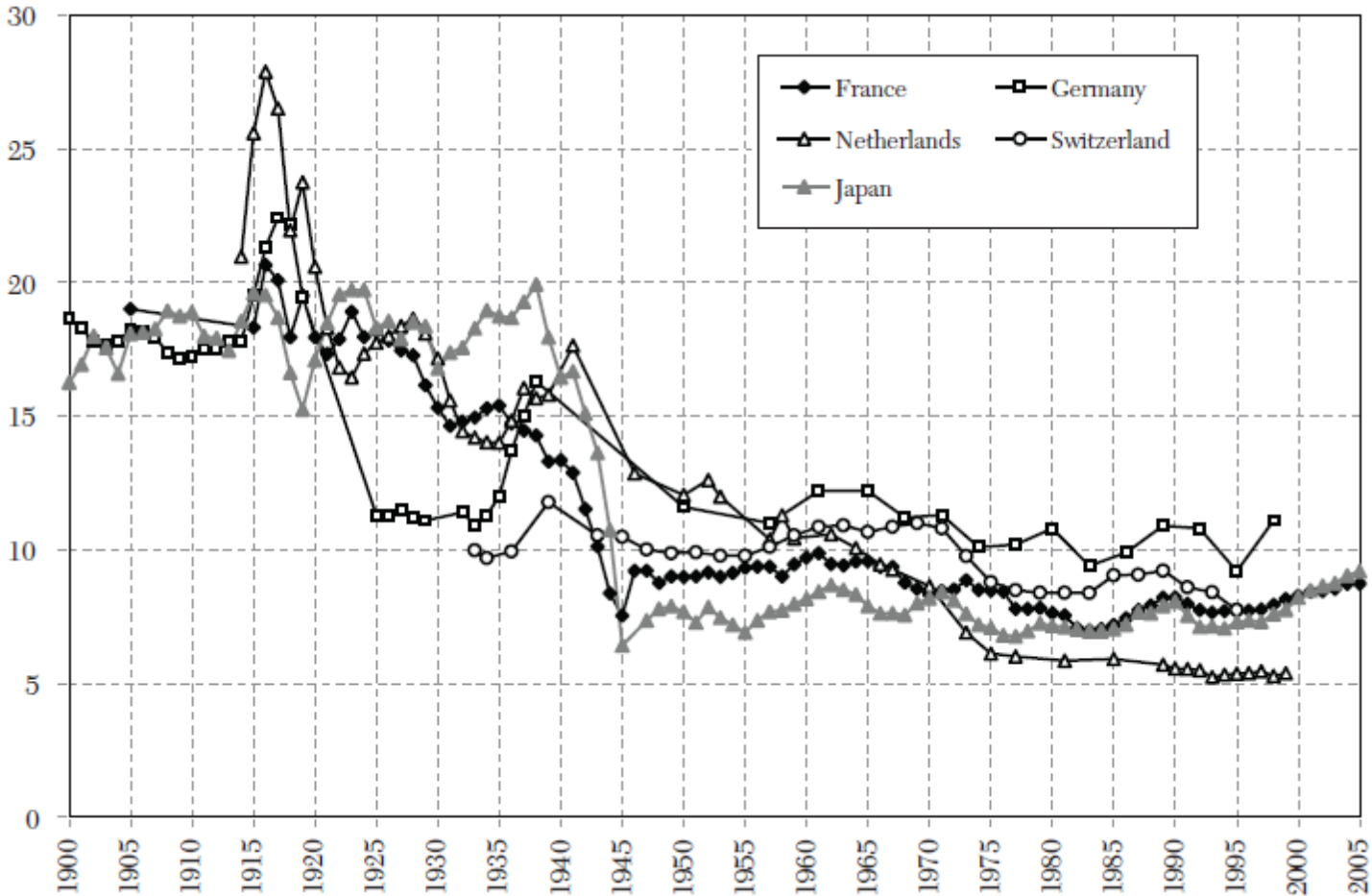
Chapter 2: National trends

Top 1% share (%): *U-shape* in English speaking countries



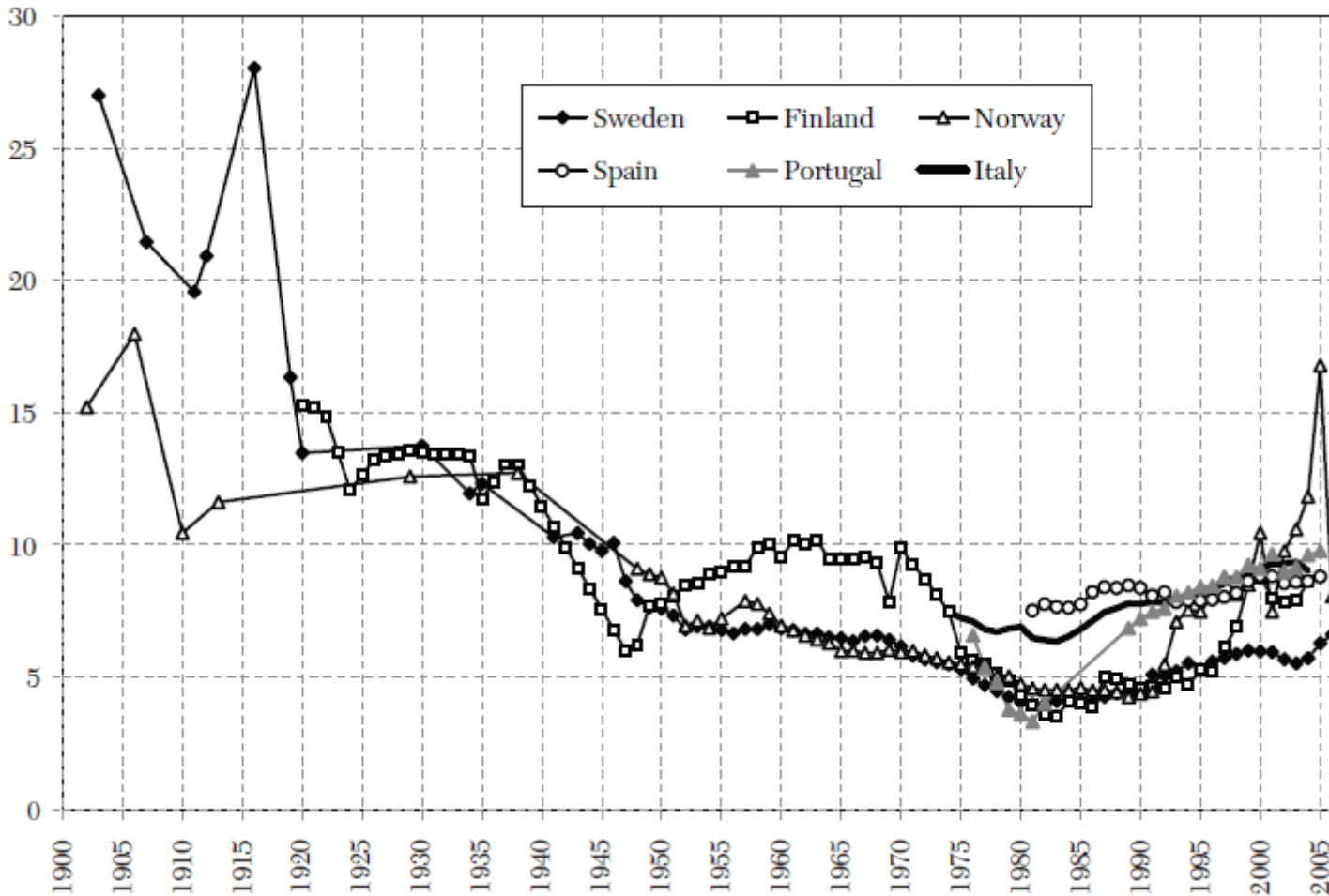
Source: Atkinson, Piketty and Saez, *Journal of Economic Literature* 2010.

Top 1% share (%): *L-shape* in Middle Europe and Japan



Source: Atkinson, Piketty and Saez, *Journal of Economic Literature* 2010.

Top 1% share (%): *U/L-shape* in Nordic and Southern Europe



Source: Atkinson, Piketty and Saez, *Journal of Economic Literature* 2010.

Gini coefficients but ...

... be aware of data definitions!

Indices consistent within countries but: *i)* breaks due to statistical discontinuities; *ii)* no cross-country consistency; *iii)* evidence may differ with other indices.

1. *Income definition:*

- Market: incomes from labour and capital
- Gross: market income plus public income transfers
- Disposable: gross income less taxes and contributions
- Imputed rents, capital gains/losses, in-kind benefits?

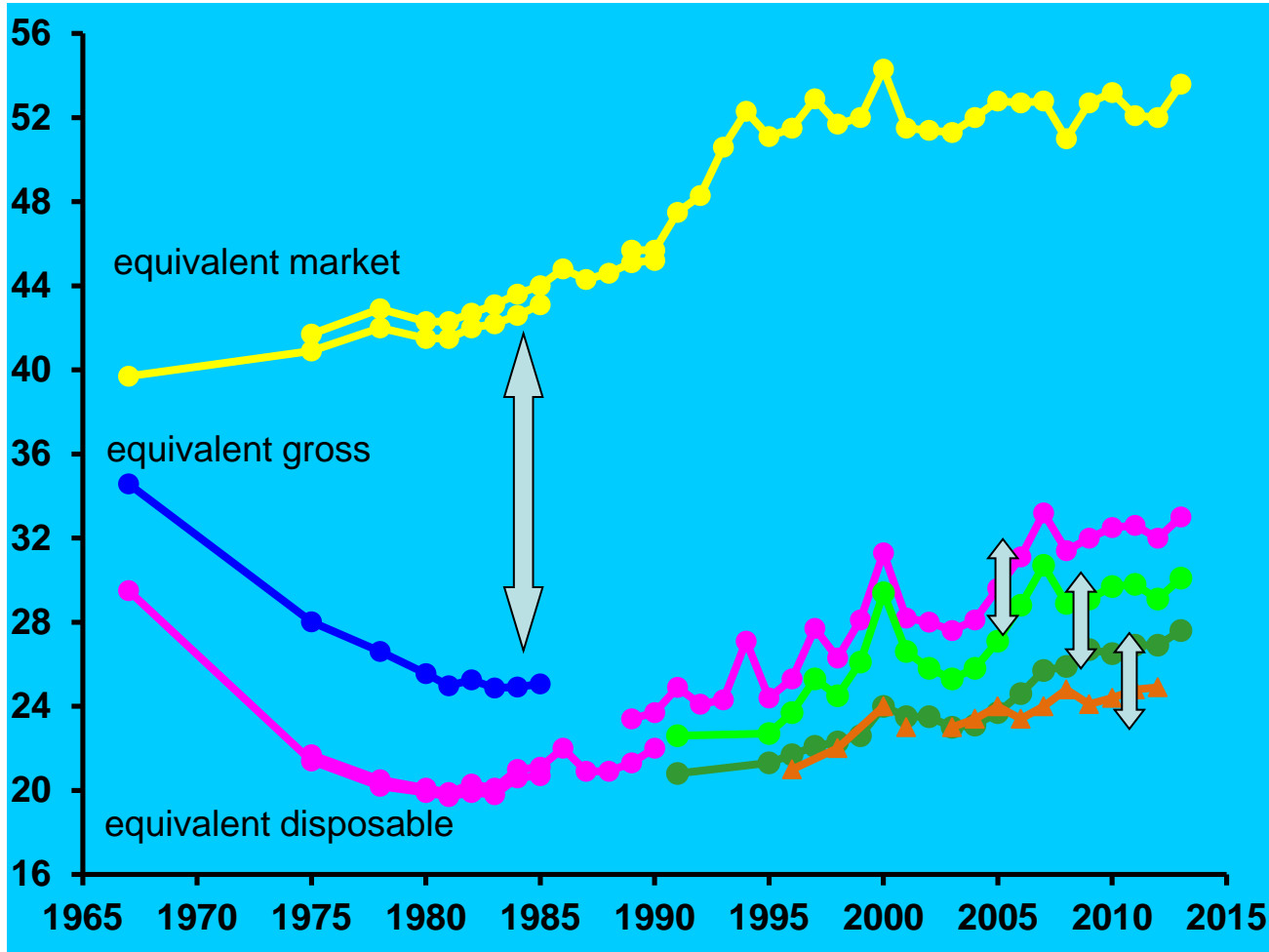
2. *Reference unit:* household, inner family, tax unit, person, ...

3. *Welfare weighting:* households, persons, equivalent persons

4. *Equivalence scale:* adjustment for size and composition of reference unit (economies of scale, needs)

Sweden

Gini coefficient (%)



Market vs.
gross →
transfers

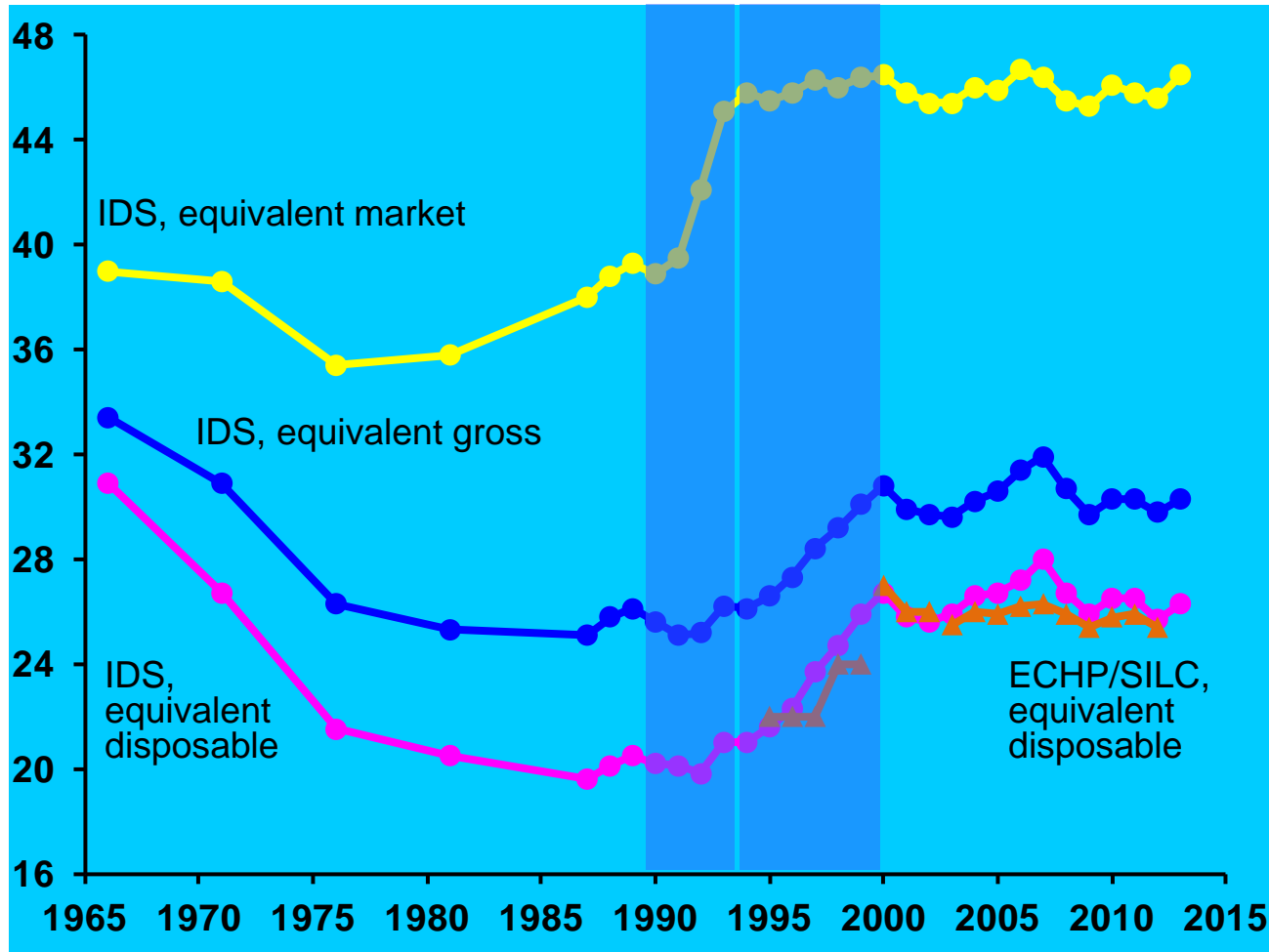
Family vs.
households

Impact of
capital
gains

Different
sources
IDS vs.
ECHP/SILC

Finland

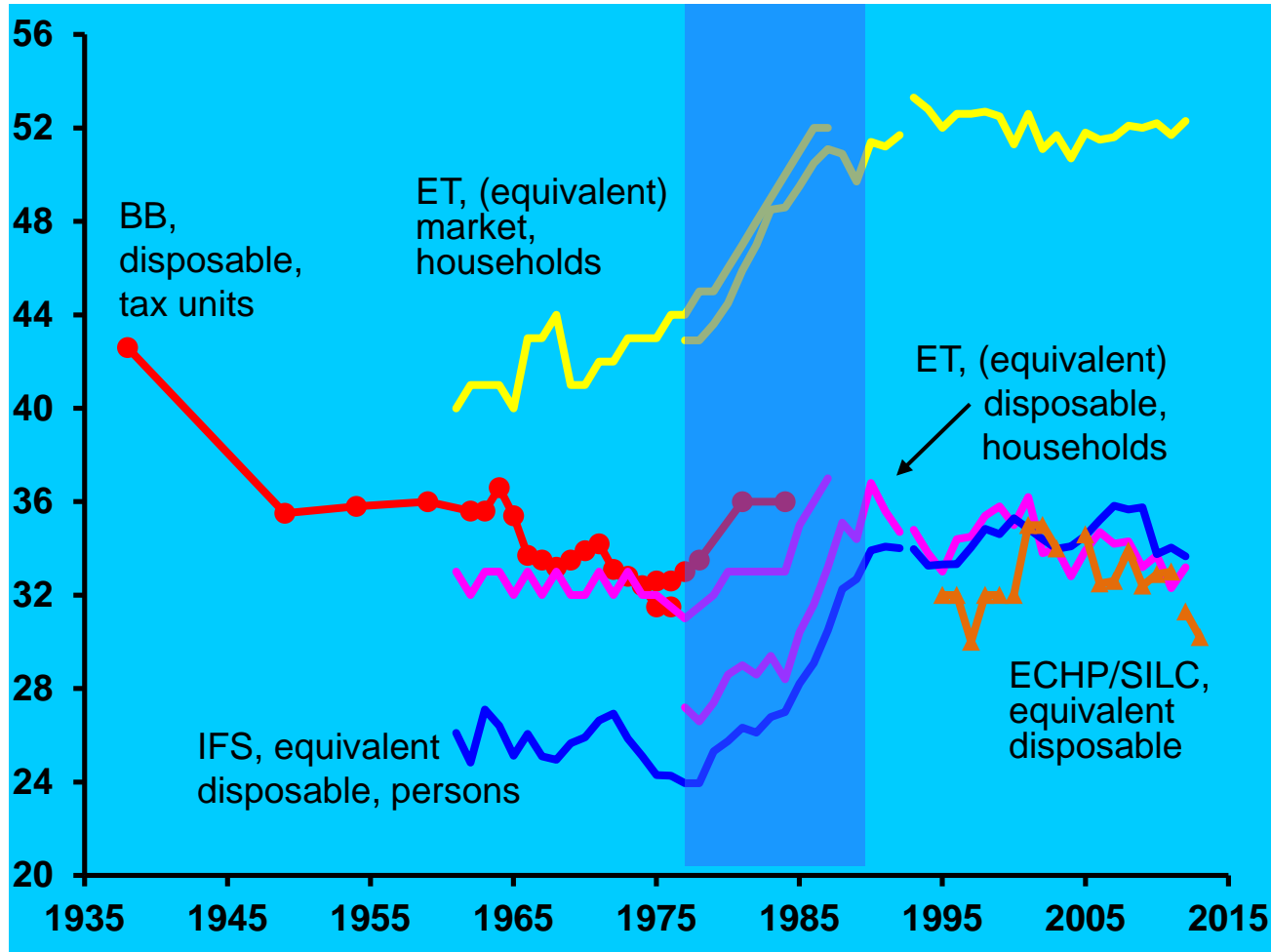
Gini coefficient (%)



Role of transfers in mitigating effects of recession in early 1990s
→ unemployment rate from 3% in 1990 to 17% in 1994
Second half of 1990s?

United Kingdom

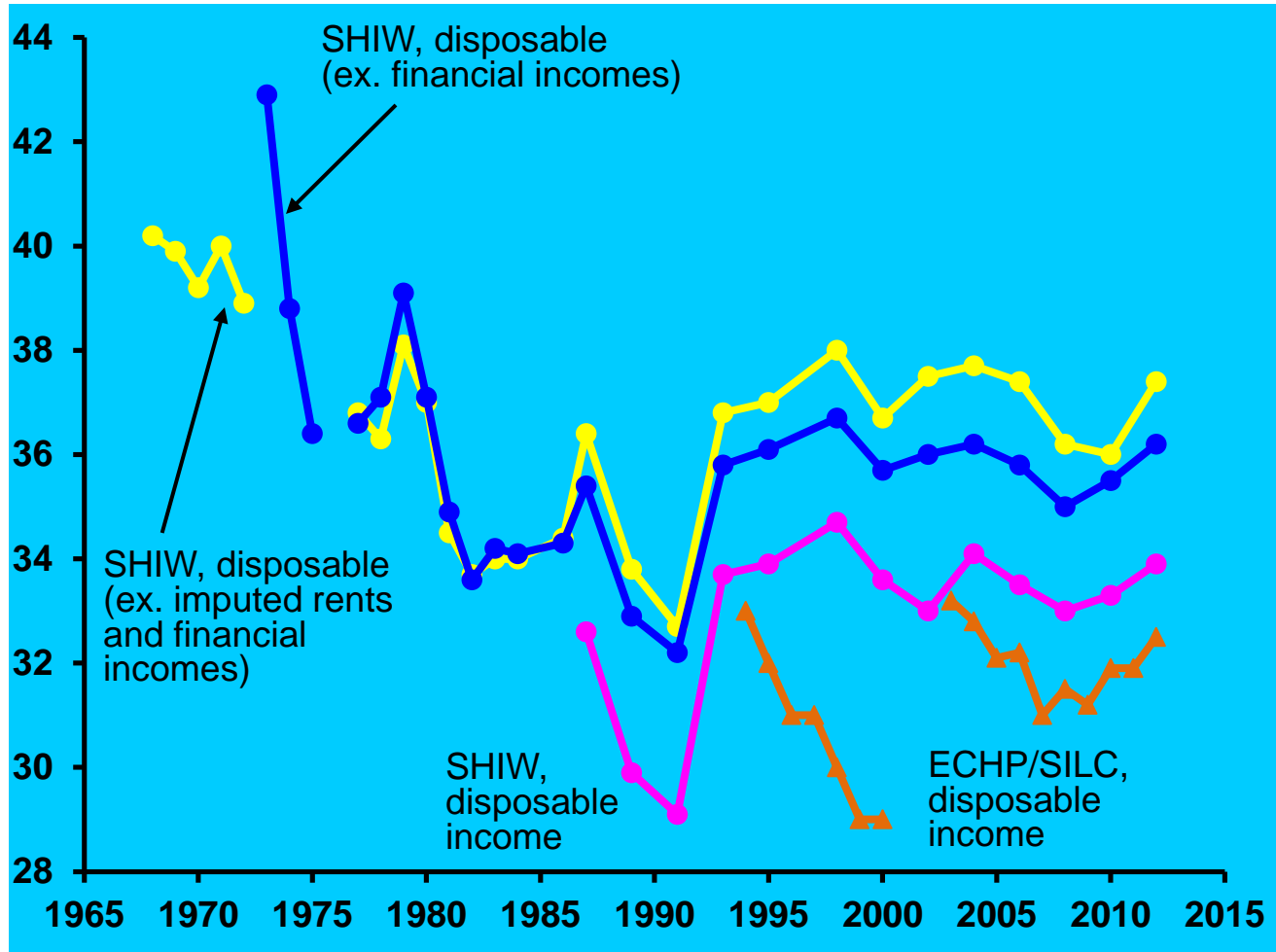
Gini coefficient (%)



1977-1990: $\Delta\text{GINI}(\text{market}) = \Delta\text{GINI}(\text{disposable}) = 9$ p.p.

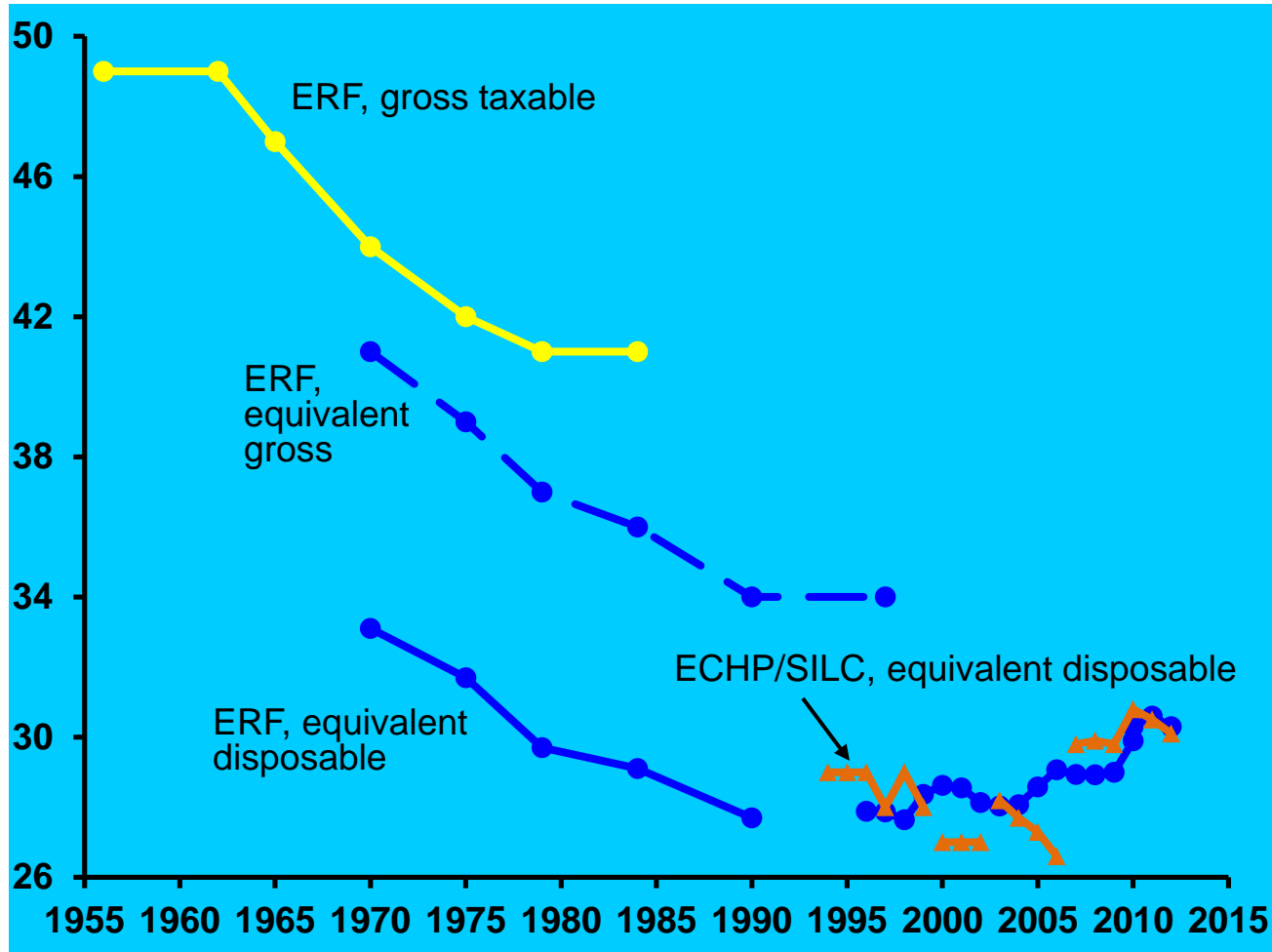
Italy

Gini coefficient (%)



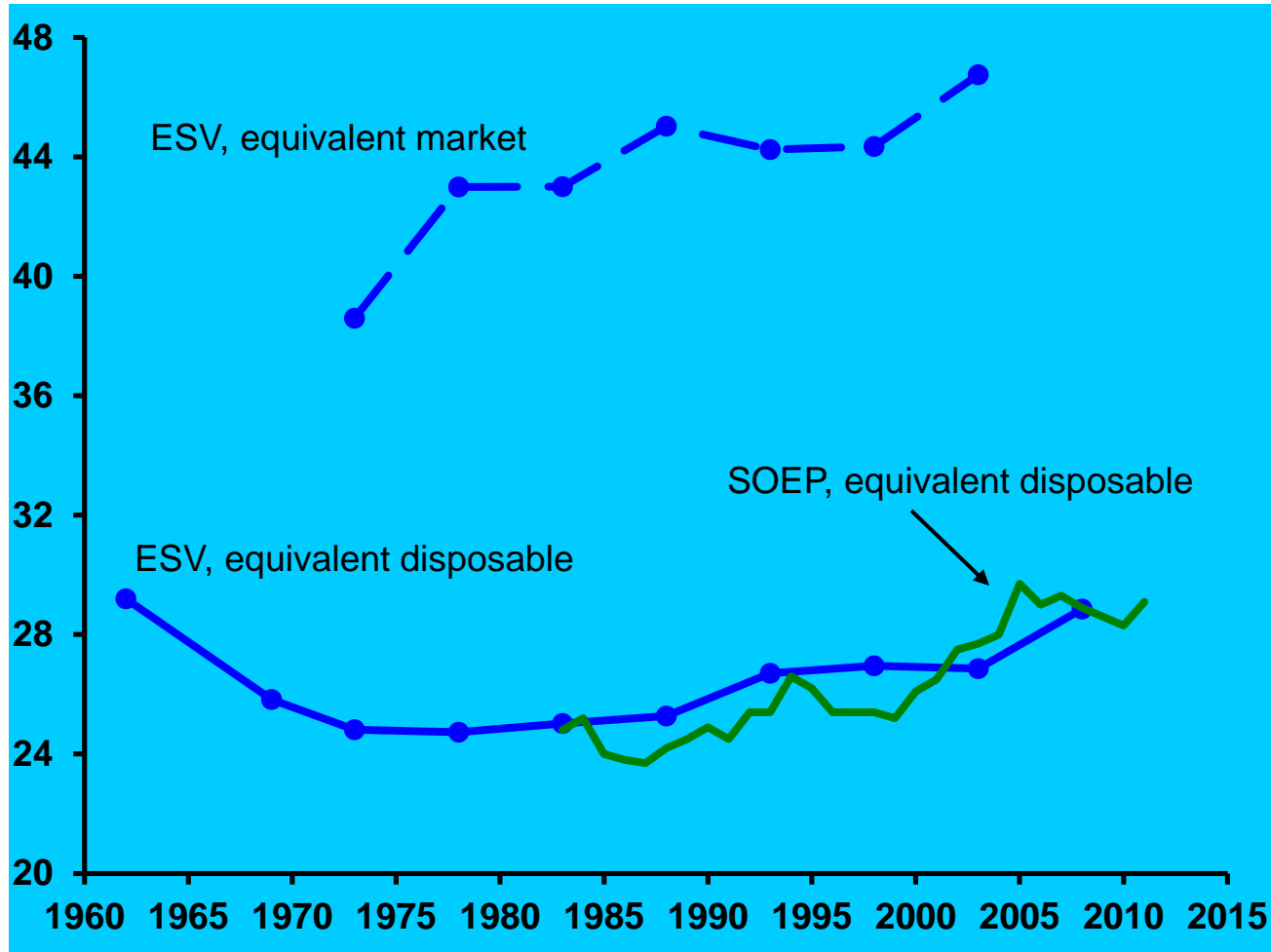
France

Gini coefficient (%)



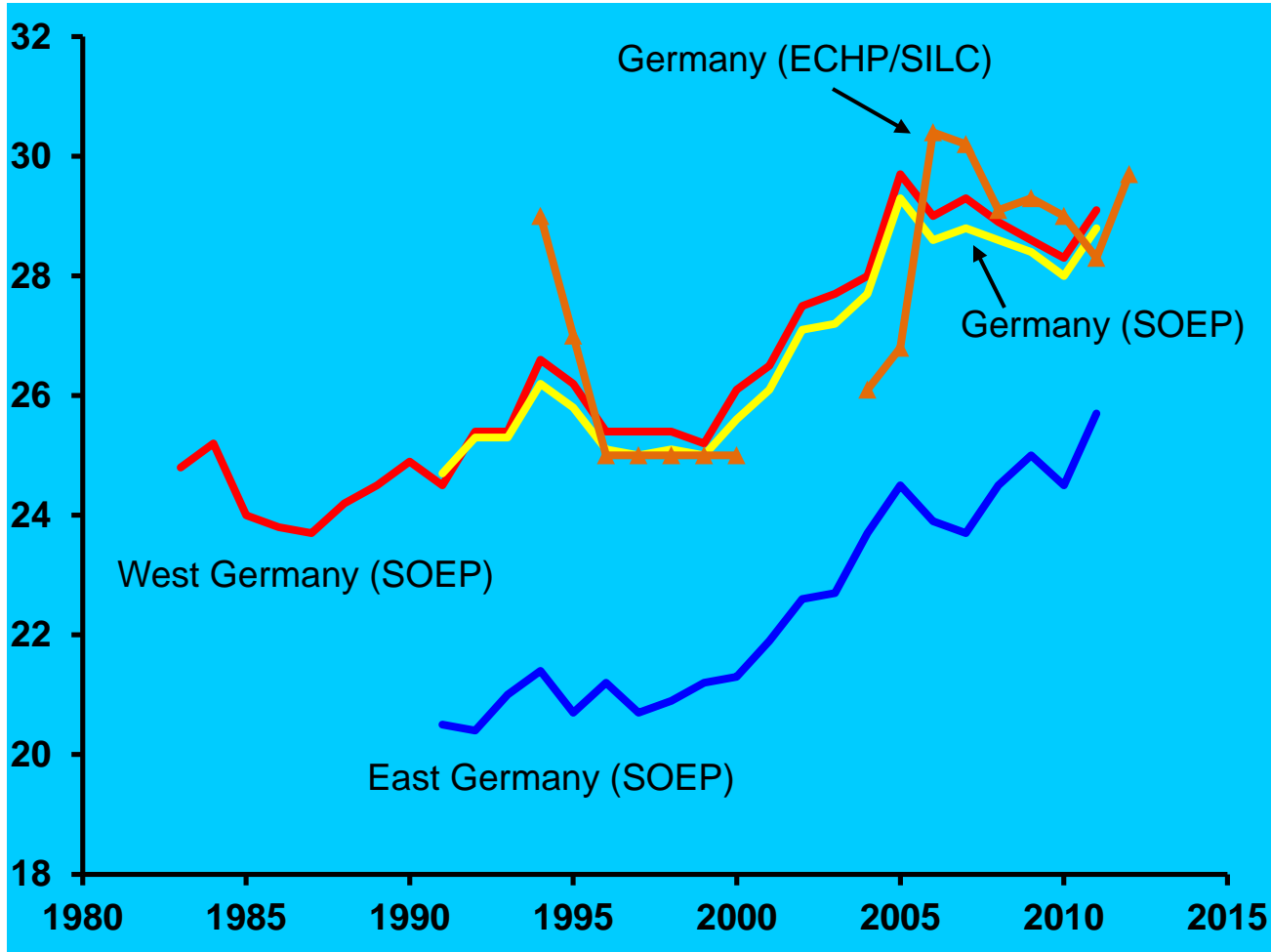
West Germany

Gini coefficient (%)



Germany

Gini coefficient (%)



Summary 2

- National experiences vary: no overarching common story
- Yet, some broad patterns:
 - increase of market income inequality somewhat more general → common **‘demographic/market forces’**?
 - general tendency of disposable income inequality to rise from lowest levels
 - reached between 1970s and 1990s, depending on countries → **different timing** → role of **institutions** and **policy** (including **public redistribution**, but not only)

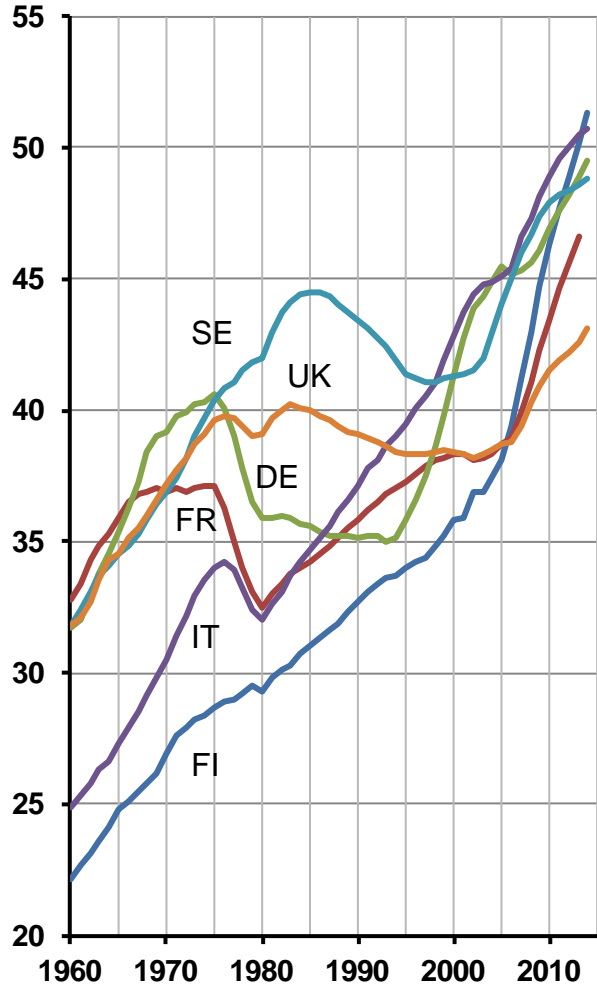
“... it is misleading to talk of ‘trends’ when describing the postwar evolution of the income distribution. ... It may be better for a number of countries to think in terms of ‘episodes’ when inequality fell or increased.”

Atkinson, *Economic Journal* 1997

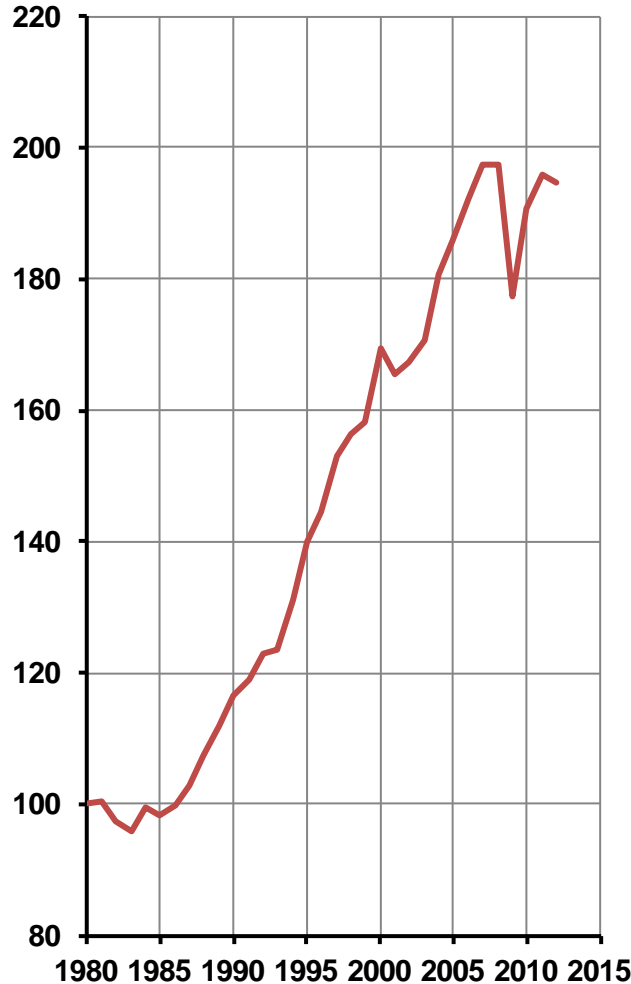
Chapter 3: Determinants

Demographic & market forces

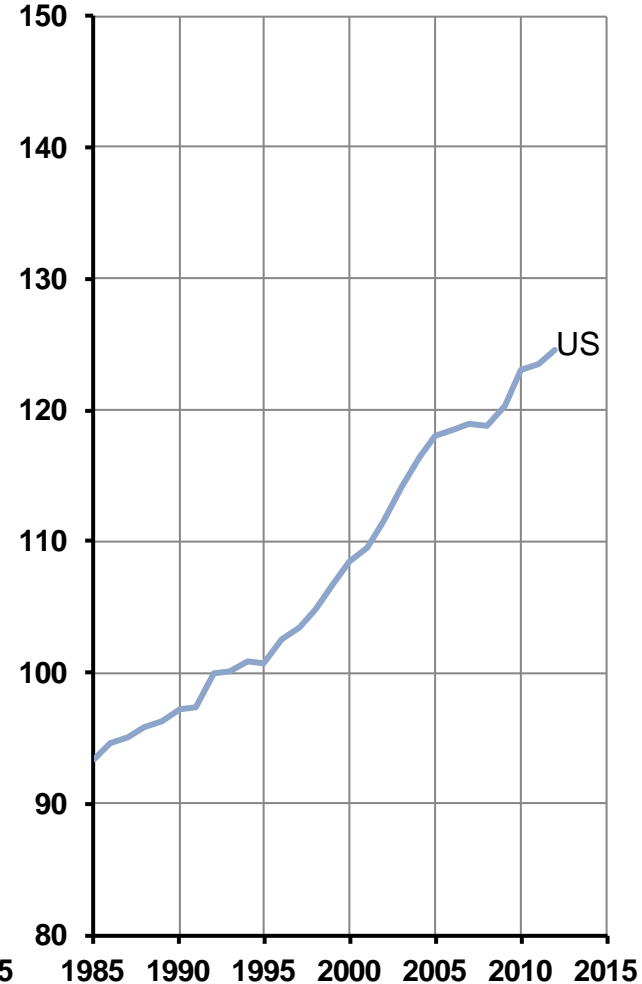
Population 60+ to population 20-59 (%)



World trade/GDP ratio (index: 1980=100)



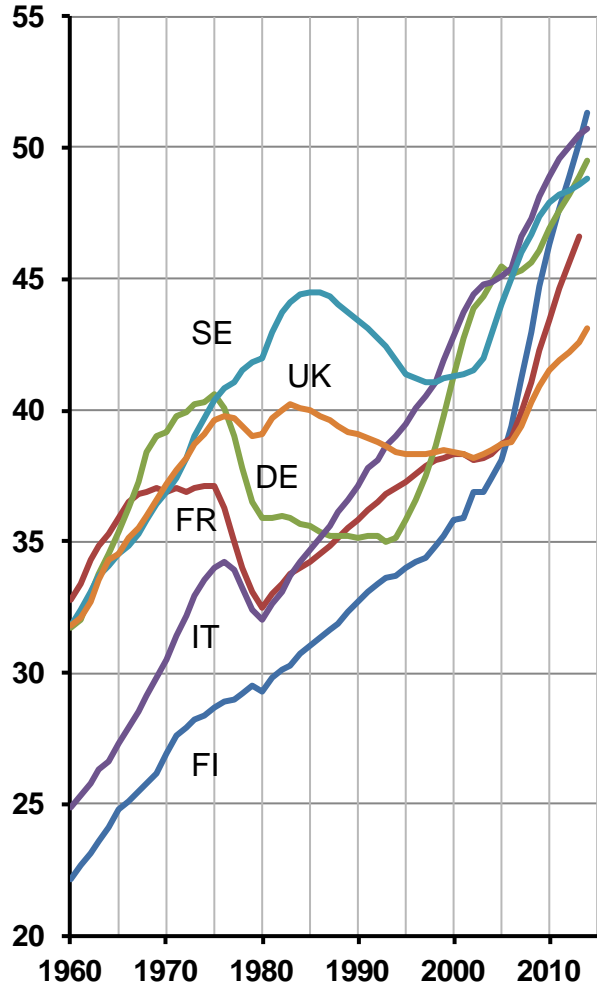
Multifactor productivity (index: 1992=100)



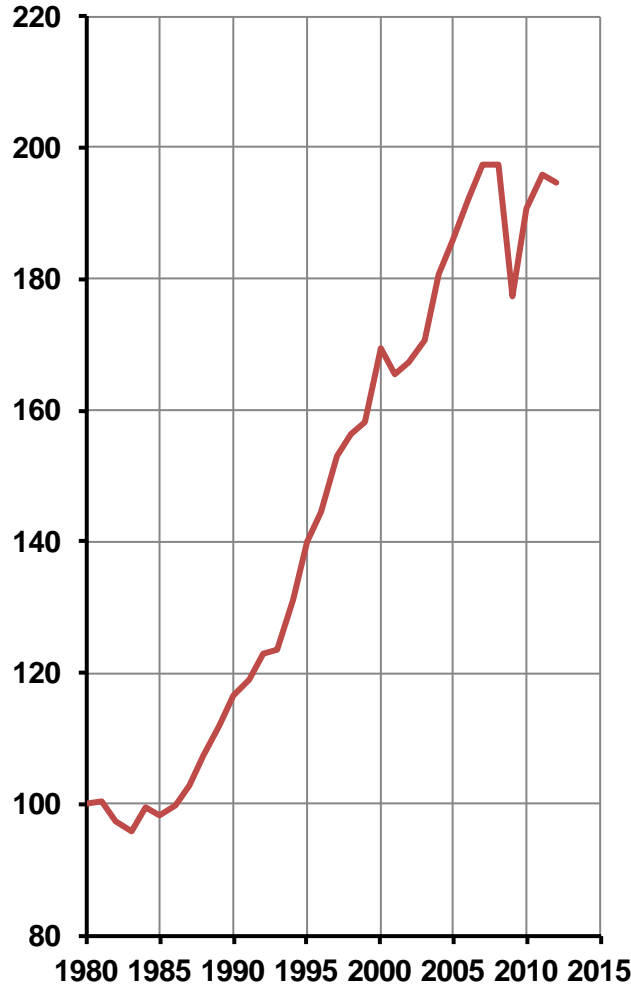
Source: elaboration on Eurostat and IMF data.

Demographic & market forces

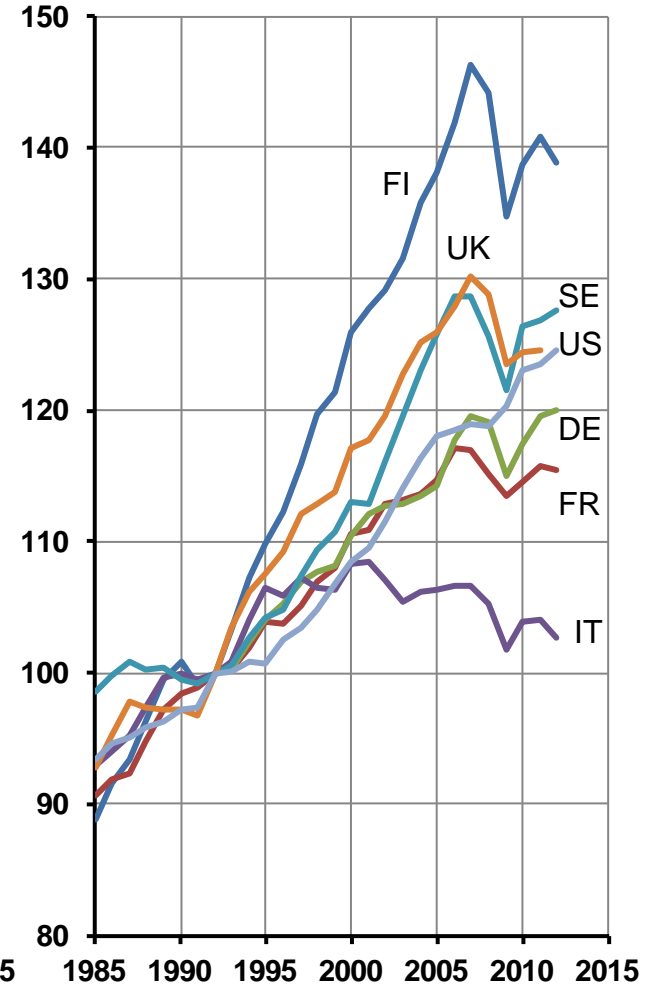
Population 60+ to population 20-59 (%)



World trade/GDP ratio (index: 1980=100)



Multifactor productivity (index: 1992=100)



Source: elaboration on Eurostat and IMF data.

Technological forces

- **Skill biased technological change**: shift away from unskilled work, but requires insufficient supply of college workers
- **Job polarisation**: computers substitute routine tasks and intermediate jobs (see Autor, Katz and Kearney 2006; Goos and Manning 2007; Goos, Manning and Salomons 2009)
- But:
 - **Institutional changes**: decline in real minimum wages, fall in unionisation rate (DiNardo, Fortin and Lemieux 1996)
 - **Technology adoption** varies across countries: careful to extend US story to other countries
 - **Diverse effects** on wage & disposable income distribution
Checchi and García-Peñalosa 2008: union density reduces wage inequality, but increases disposable income inequality (employment effect prevails)
 - **Public redistribution** may offset market forces

Difficult to disentangle interactions

Hyper-stylised income distribution (Atkinson and Brandolini 2006)

- skilled/unskilled employed
- insured/uninsured unemployed

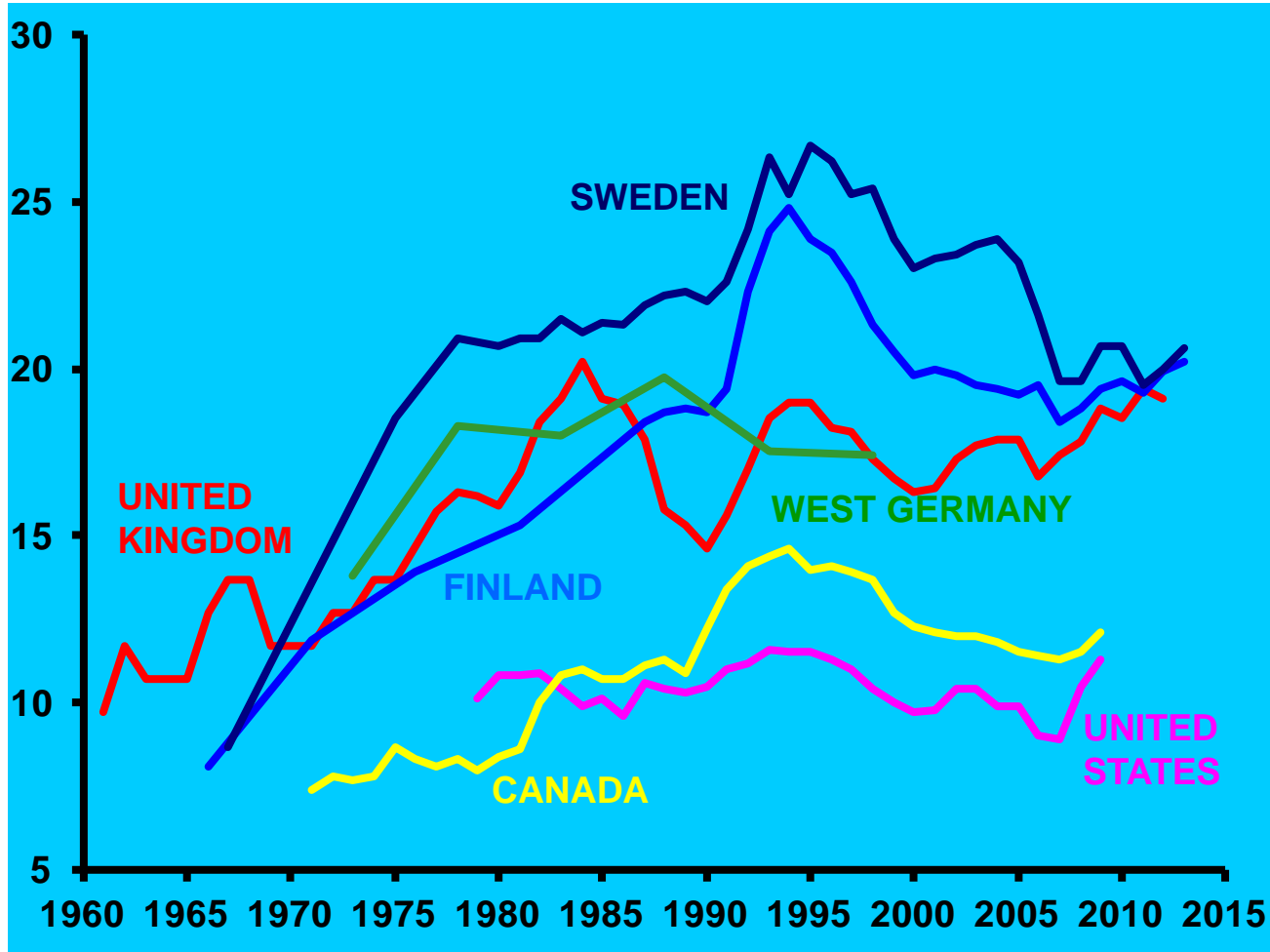
$$\text{Gini (disposable income)} = \frac{\varphi(1-\varphi)s + u(1-u) + bcu(1-2u+cu)}{(1-\varphi)s + (1-u) + bcu}$$

φ = share of unskilled
 s = skill premium
 u = unemployment rate

b = ratio of benefit to unskilled wage
 c = share of insured unemployed

Trends in redistribution by tax and transfers

Gini(market income) – Gini(disposable income) (%)



Summary 3

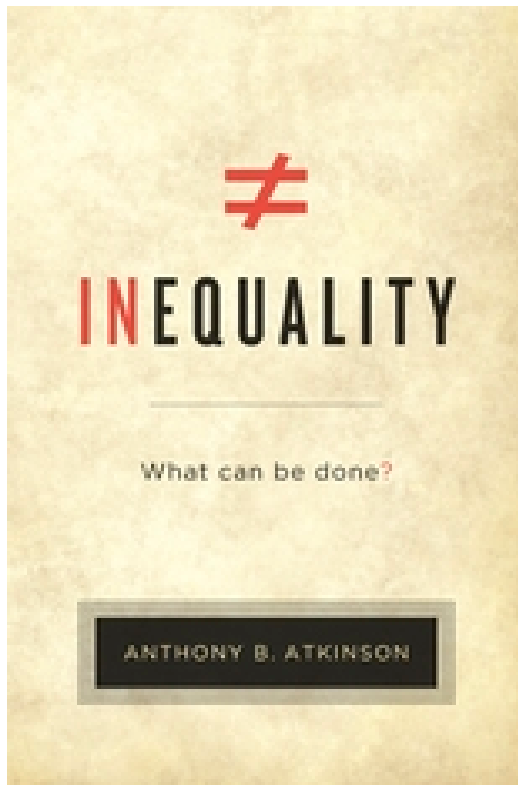
- **No single cause** (e.g. de-industrialization, skill-biased technological progress, or globalization) can give a whole account of changes in income distributions
- Income distribution is the result of **multiple factors** which sometimes balance out, sometimes reinforce each other
- There is a **role for policy** to counteract 'exogenous' demographic and market forces

Note: Are technological change and globalisation entirely exogenous? They may be partly businesses' choices that have led to a weakening of the labour bargaining position (see Acemoglu, Aghion and Violante 2001)

Chapter 4: Policies?

A portfolio of policies

- Multiple factors imply that no single policy is going to work
- International dimension of policies
- Not only redistribution, but how?



Tony Atkinson's *Inequality – What can be done?*

15 proposals

Proposal 1: The direction of technological change should be an explicit concern of policy-makers, encouraging innovation in a form that increases the employability of workers, emphasizing the human dimension of service provision

→ *EU2020 targets*

Conclusions:
Why do we care?

Thank you for your attention!