The Distribution of Income and Wealth in the Works of Major Economists

(Paper given at the workshop "Wealth Inequality: Theory and Empirical Data", Österreichische Nationalbank, 20th June 2013, Vienna)

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Contents

1. The Greeks

Plato (427-347 BC)

- Despises profit seeking because great riches are said to spoil the character
- Interest taking is considered improper ("usury")
- Since great wealth involves political power, it may lead to tyranny
- A redistribution of wealth ought to prevent this

Aristotle (384-322 BC)

- “Chrematistics” is illicit: the accumulation of money for its own sake is “unnatural”, because it is unbounded, and thus incompatible with the “good life”
- All interest is usury, because its source of acquisition is money, which is barren: money cannot have offsprings
- Similarly the scholastics (Thomas Aquinus)

2. The Classical economists

Adam Smith (1723-1790)

- Property incomes (profits, interest and rents) are "deductions from the produce of labour"
- … but a potentially virtuous circle may emerge (not motives matter, but effects): profit seeking – capital accumulation – deepening of the division of labour – increase in productivity and incomes, especially profits – etc.
- The "science of the legislator" is to help to establish institutions and policies that support a regime of "natural liberty" characterised by "equality, freedom and justice"

“Invisible hand”

- Contention: “Adam Smith claimed that nothing more than selfishness is necessary to achieve optimal social outcomes” (Schotter, 1985: 2) – UTTERLY WRONG. (This applies to Mandeville, not Smith or Hume.)
- Smith: “… those exertions of the natural liberty of a few individuals, which might endanger the security of the whole society, are, and ought to be restrained by the laws of all governments” (regulation of the banking trade)
- the “wretched spirit of monopoly” (attack on mercantilism)

Laws of distribution (Smith)

- Wages, Profits and Rents
- Law of the falling tendency of the general rate of profit and of interest
- Rising wages and rents
- “Struggle” over the distribution of income decided in terms of three factors at work
  - Size of the party and thus the problem of collective action
  - Legal and political framework
  - Existing distribution of wealth

Wealth = happiness?

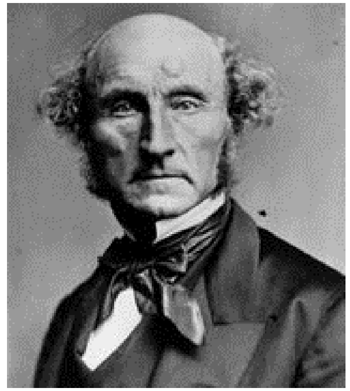
- Income and wealth – happiness
- “Parade of riches”
- Consumption takes time (Hermann Heinrich Gossen)

David Ricardo (1776-1823)

- After the Napoleonic Wars: a general tax on property in order to abolish U.K. public debt
- A similar proposal was made by Joseph A. Schumpeter (1883-1950) after World War I to solve the public debt problem of Austria

3. The Utilitarians

John Stuart Mill (1806-1873)

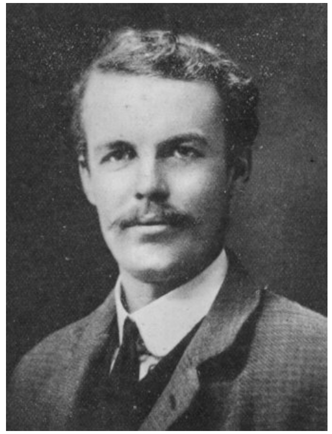


- Falling marginal utility of income
- “The greatest happiness of the greatest number” (Francis Hutcheson)
- Maximisation requires reduction of inequality: wealth and inheritance tax
- Equal opportunities at start: inheritance tax

Francis Ysidro Edgeworth (1845-1926)

- "Exact utilitarianism" – "Law of the falling marginal utility of income"
- With relatively similar preferences a more equal distribution of income increases the welfare of society: in favour of redistribution

Arthur Cecil Pigou (1877-1959)



- Bases his argument on the “law of the diminishing marginal utility of income”
- Is in favour of a redistribution of income provided it does not run counter to Marshall’s principle of “welfare maximization”

Pigouvian "exploitation"

The price of one unit of factor service i, q_i, can be shown to be determined in the following way:

$$q_i = \mu' p\,(1 - 1/e)(1 + 1/h)^{-1}$$

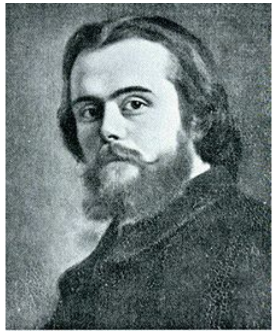
Where *m'* is the marginal product, *p* the product price, *e* the price elasticity of demand and *h* the elasticity of supply of the *i*-th factor service under consideration (i = 1, 2, …., n). If and only if

$$e = h = \infty$$

the marginal productivity rule applies in its well-known form.

4. The Marginalists

Léon Walras (1834-1910)



Arrives in terms of a fundamentally different framework at essentially the same long-term results as Ricardo:

- a falling rate of return on capital
- rising wages
- rising rents of land
- Advocates the nationalisation of land (like before him Gossen)

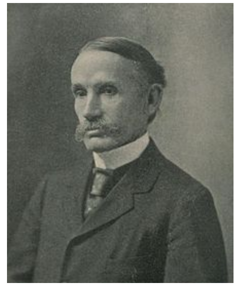
Knut Wicksell (1851-1926), Philipp Wicksteed (1844-1927)

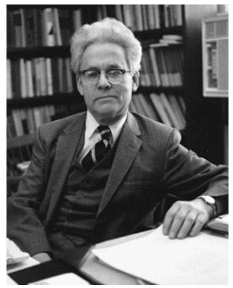
- Functional income distribution
- Find a functional form that keeps the aggregate shares of incomes (wages, profits and rents) constant
- They anticipated what is known as the "Cobb-Douglas function" ($Y = aL^{\alpha}K^{\beta}$, where $\beta = 1 - \alpha$)

  [CES functions (Arrow et al.)]

Does a market system bring about a “just” distribution of income?

- John Bates Clark (1899): yes
- Arthur Cecil Pigou: no (“Pigouvian exploitation“)
- Paul A. Samuelson: efficient, but not just
- Richard Musgrave: no (three branches of government, including the distribution branch)





5. Empirical Studies and Income Inequality Metrics

- Vilfredo Pareto
- A.L. Bowley
- Simon Kuznets
- Tony Atkinson
- Thomas Piketty and Emanuel Saez

Vilfredo Pareto (1848-1923)

- The *Pareto distribution* is a power law probability distribution originally used to describe the alloction of income or wealth among individuals.
- *Pareto principle* or the “80 to 20 rule”: 20% of the population control 80% of the wealth (and 20% of the most affluent 20% receive 80% of that 80%, and so on).

Pareto

Let X be a random variable with a Pareto distribution, then the probability that X is greater than some number x, i.e. the survival or tail function, is given by

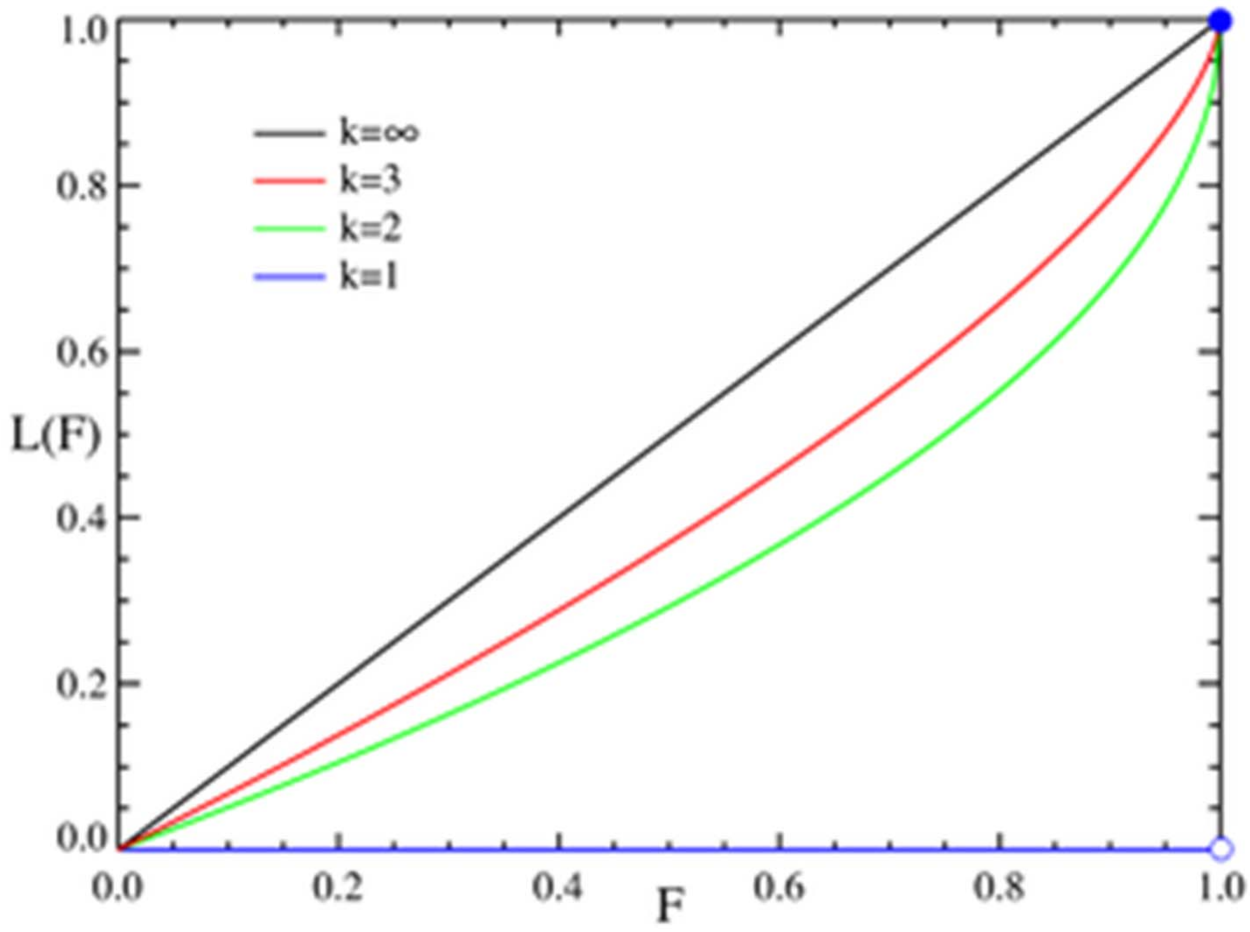
$$\overline{F}(x) = \Pr(X > x) = \begin{cases} \left(\frac{x_\mathrm{m}}{x}\right)^\alpha & \text{for } x \geq x_\mathrm{m}, \\ 1 & \text{for } x < x_\mathrm{m}. \end{cases}$$

where x_m is the (necessarily positive) minimum possible value of X, and α is a positive parameter (the Pareto index)

Lorenz curve and Gini coefficient

- The Lorenz curve is used to characterize income and wealth distributions (but also energy consumption etc.).
- The Gini coefficient is a measure of the deviation of the Lorenz curve from the equidistribution line which is a line connecting [0, 0] and [1, 1].

Lorenz curve



Simon Kuznets (1901-1985)

Income distribution, structural change and technical progress (industrialisation; urbanisation; shift away from agriculture towards manufacturing)

Tony Atkinson: (1970)

Atkinson Index or Measure: a measure of income inequality

$$A_\varepsilon(y_1,\ldots,y_N) = \begin{cases} 1 - \frac{1}{\mu}\left(\frac{1}{N}\sum_{i=1}^N y_i^{1-\varepsilon}\right)^{1/(1-\varepsilon)} & \text{for } \varepsilon \in [0,1) \cup (1,+\infty) \\ 1 - \frac{1}{\mu}\left(\prod_{i=1}^N y_i\right)^{1/N} & \text{for } \varepsilon = 1, \end{cases}$$

Atkinson

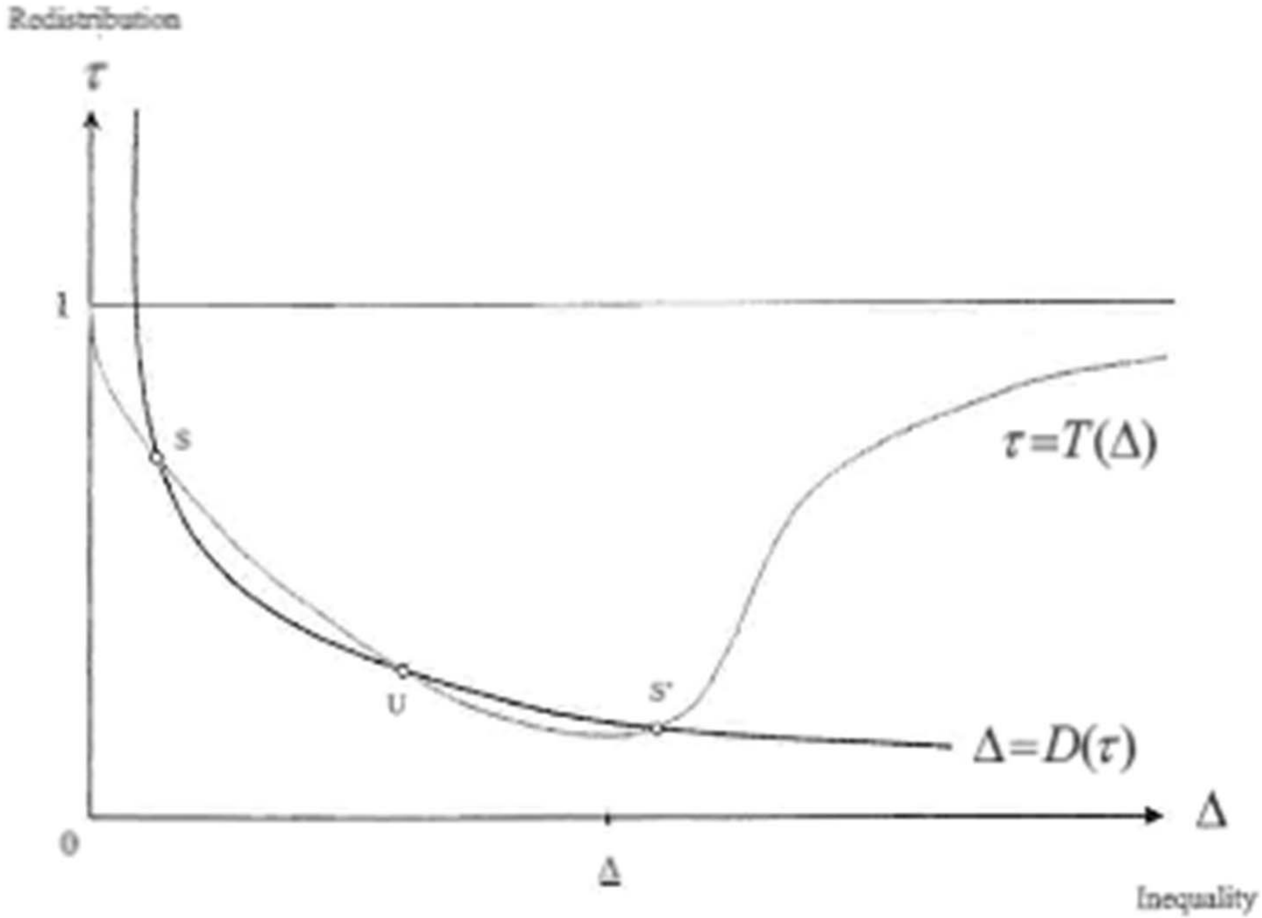
Taxation in a period of stagnant growth

(*The Graz Schumpeter Lectures*, 2012)

6. Skilled-based technical progress

Similar levels of development – widely different “social contracts”

(S: European-type welfare state; S’: US-type.more laissez-faire state)

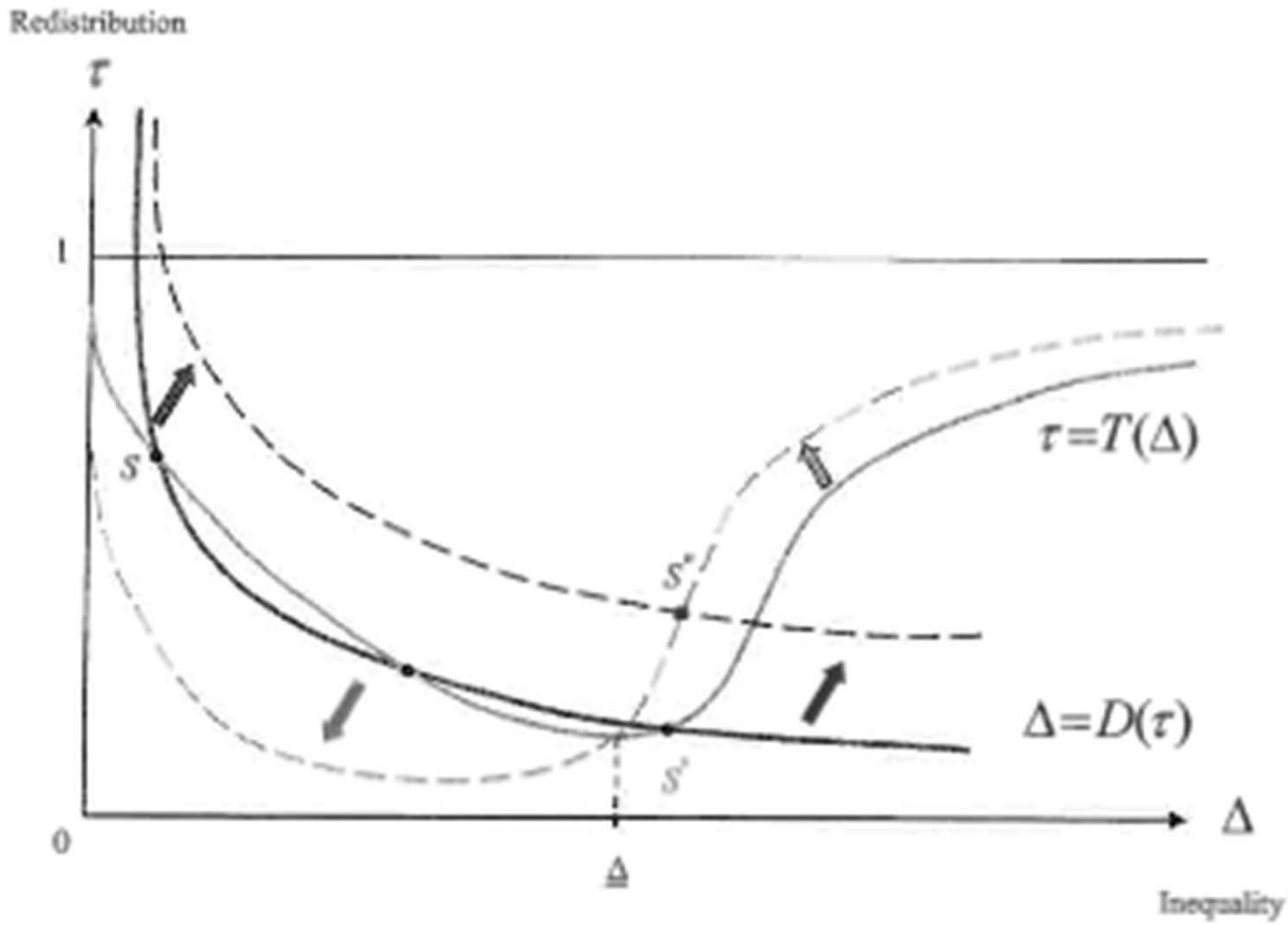


Questions:

- How do particular forms of technical and organisational change affect the sustainability of “welfare-state” and “laissez-faire” social contracts?
- Does skill-based technical change undermine and eventually unravel the “welfare state”?

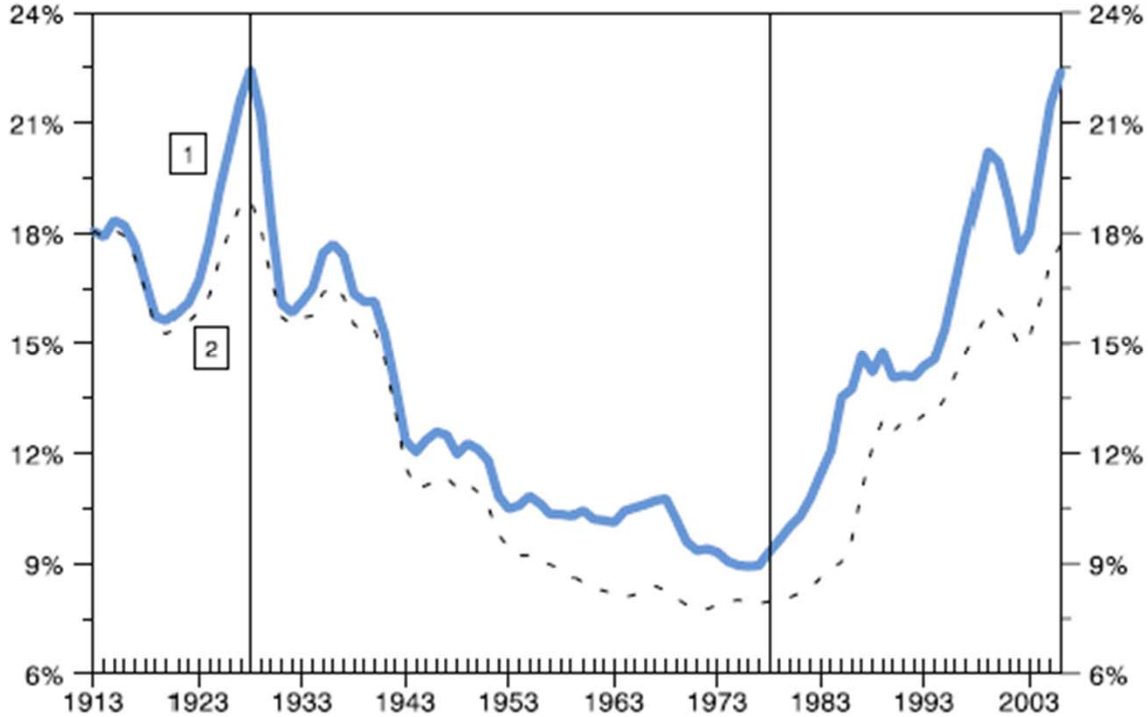
  [Co-evolution?]

Skill-based technical change and the social contract (R. Bénabou)

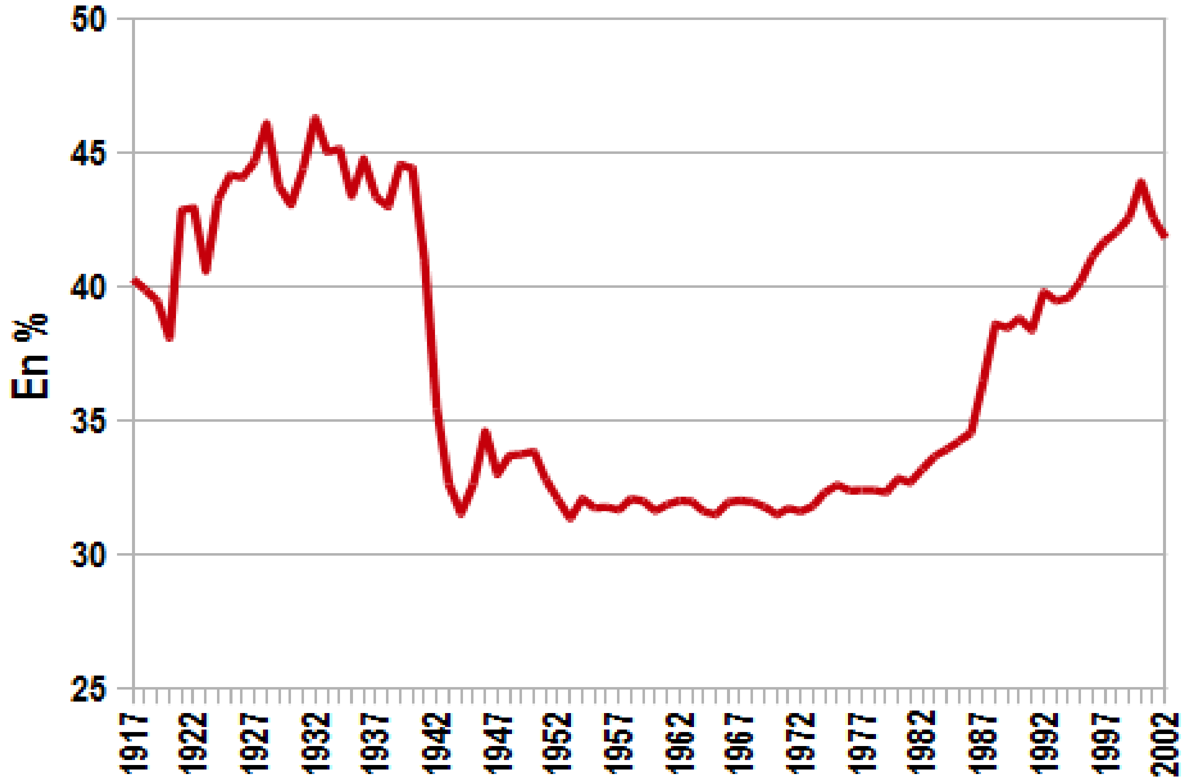


7. Economic policies and income and wealth distribution

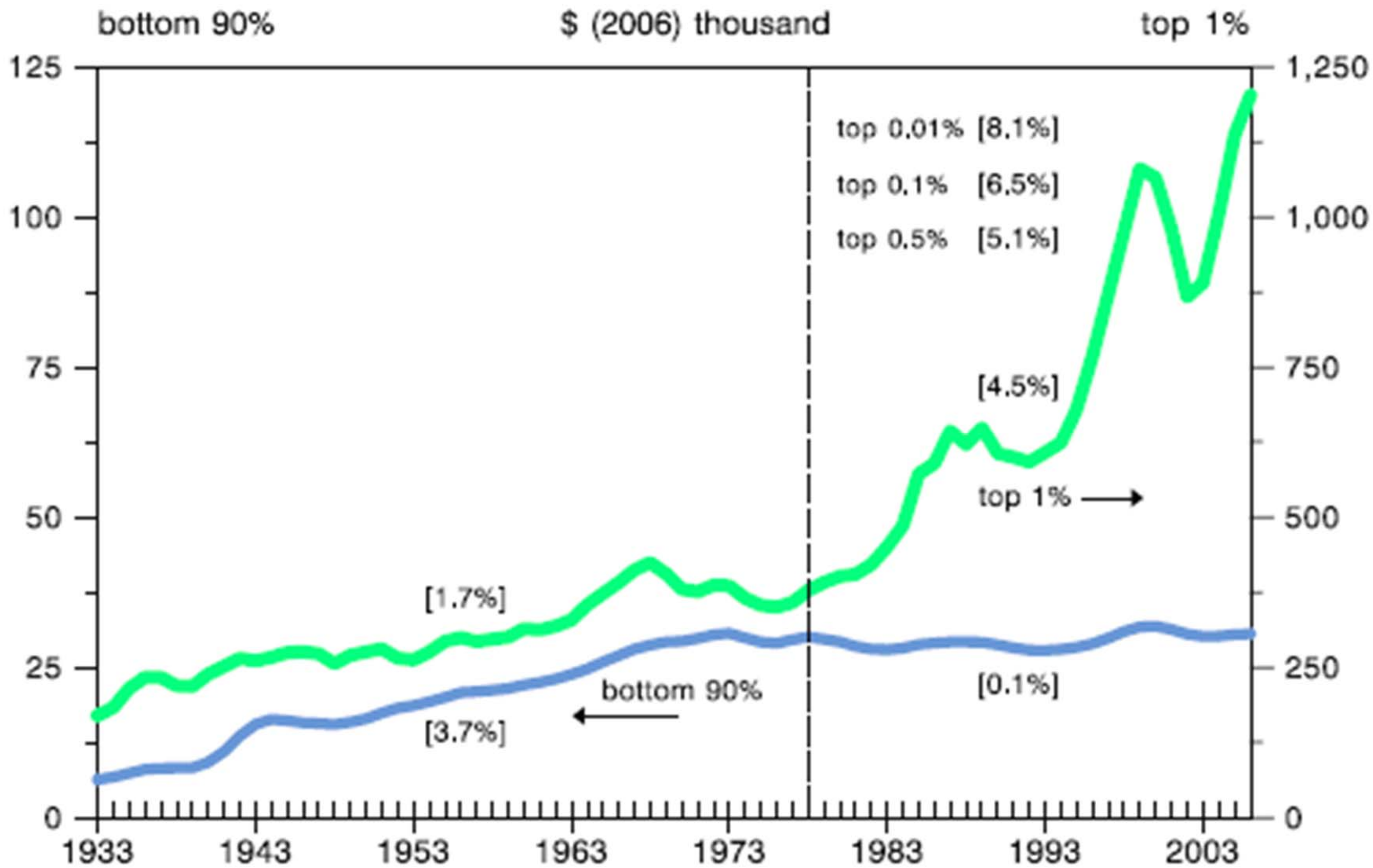
Share of income of the 1% richest in the US (Palma)



Share of income of the 10% richest in the US (Saez and Piketty)



Income growth in the US



Fall in the "share of wages": what does it mean?

Problem: One ought to distinguish between the wage for unskilled labour and the profits on human capital

$$\omega_\tau = a + (1 + r)p_t - p_{t+1}$$

w_t= total payment

a = ordinary wage rate for unskilled labour

p_t = value of human capital incorporated in the skills of the worker in the t^{th} year of its utilization (t = 1, 2, …)

r = rate of profits

Financial Sector, Economics and Politics

"The financial crisis of 2008 was not an accident. It was the result of *a long period of political decadence in the United States* aided and abetted by a *growing hole in economic science*. ... Because of the *central role of both the dollar and Wall Street* in the global financial system, and because of the *centrality of US economic thinking* in shaping global economic policies and institutions, the rest of the world has been carried with it into the fury."
(Jeffrey Sachs, 2009)

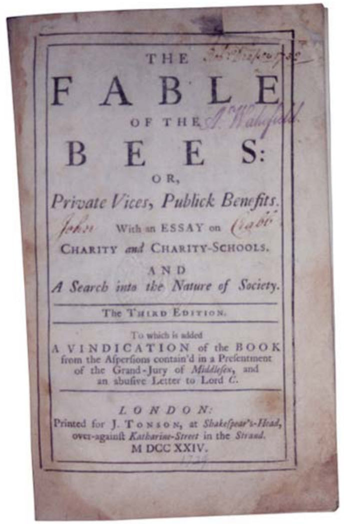
“Das Finanzkapital” and Democracy

Can politics regulate the financial sector?

Sachs is skeptical:

“Congress and White House are set to let this happen, so as not to cross their campaign financiers”

Can we rely on what Bernard Mandeville wrote in 1705?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"The Worst of all the multitude Did something for the common good."

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