

Inequality and Growth in the Knowledge Society

Joseph E. Stiglitz

Siena

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There has been growing inequality within most countries of the world

- Is this growth a result of forces of nature—the basic laws of economics?
 - Or is it result of “the laws of man”—what we *ourselves* are doing?
- Is it the result of the basic workings of the market?
 - An inevitable, if unpleasant, side effect?
- Or is it the result of how we have *structured* markets, of how we have changed the rules of the game in our market economy, in some cases *undermining* the market economy
 - And of the way we have structured globalization—the evolving geo-political situation

Explaining the growing inequality

- Is it because we have not done enough to *counter* the forces of nature?
- Is it because, rather than trying to stand against the tide, we have reinforced the effects of nature, of the laws of economics?
- And is it because the way our global governance has worked against ordinary citizens around the world?

The central theses of this lecture

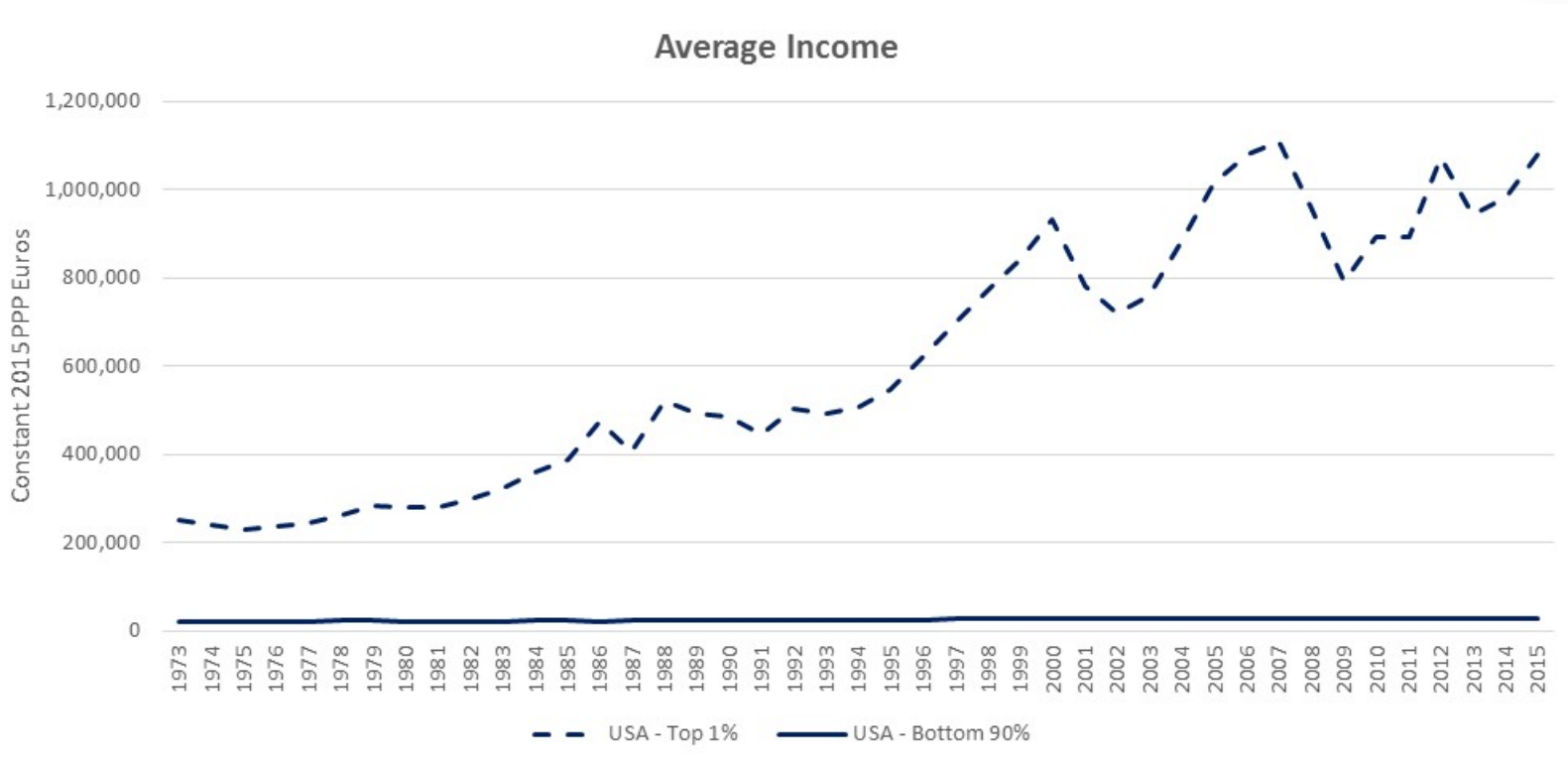
- The growing inequality is largely the result of the “laws of man”
- It is a result of how we have structured the market economy—more precisely, of how we have *restructured* it in the last third of a century
- Inequality has been a *choice*
 - In our democracy, a choice made through our political system
 - But our political system has often exhibited a “democratic deficit”
- What we have done has resulted not only in more inequality, but in lower growth, more instability, and overall poorer economic performance
 - Including extensive environmental destruction
- The knowledge economy presents special challenges, which, if not well managed could even lead to more inequality

I. A brief description of what has been happening

- More money at the top
- More people in poverty
- The evisceration of the middle

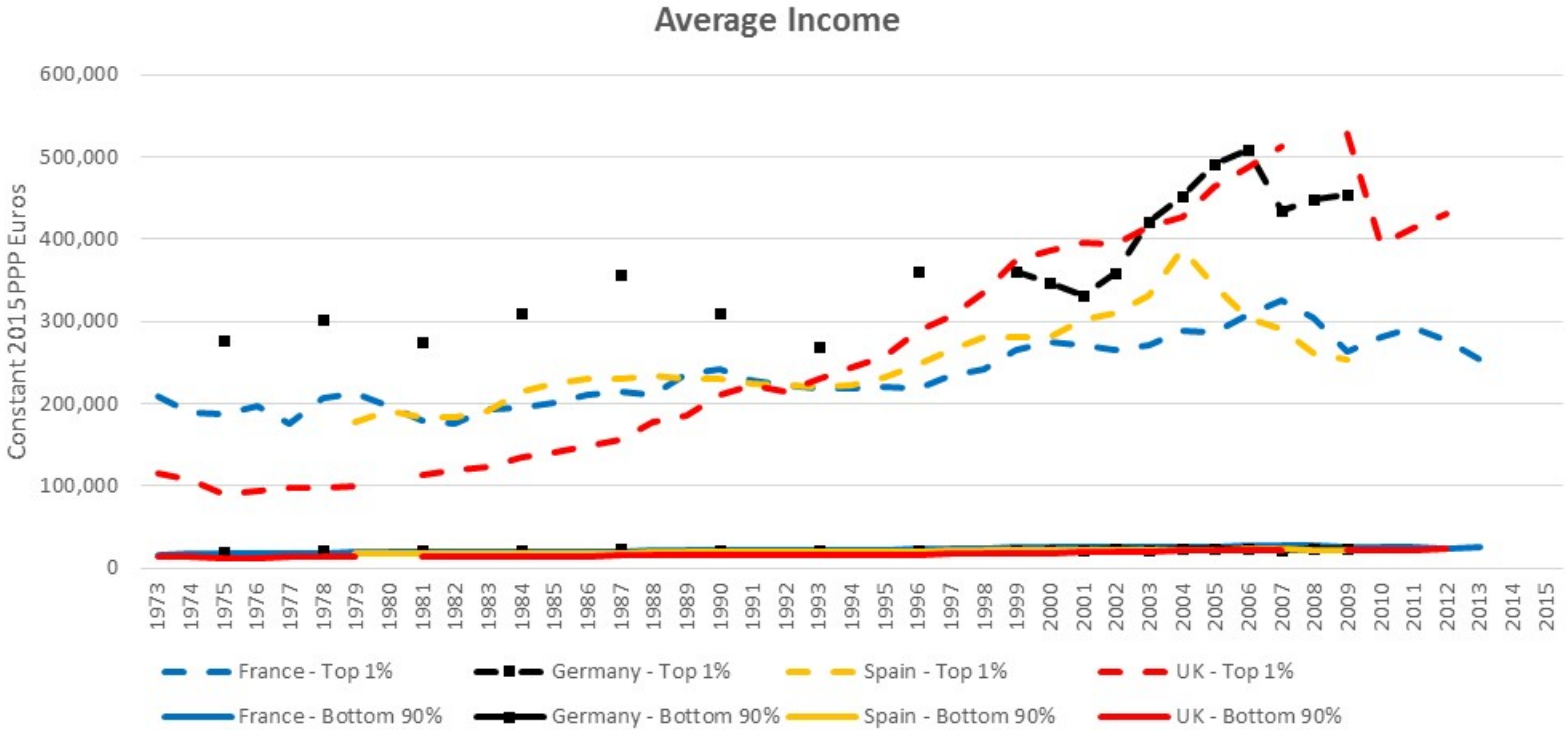
- US provides worst example
- But countries following US economic model are moving in the same direction

US: bottom 90% have seen little increase in income over last third of a century



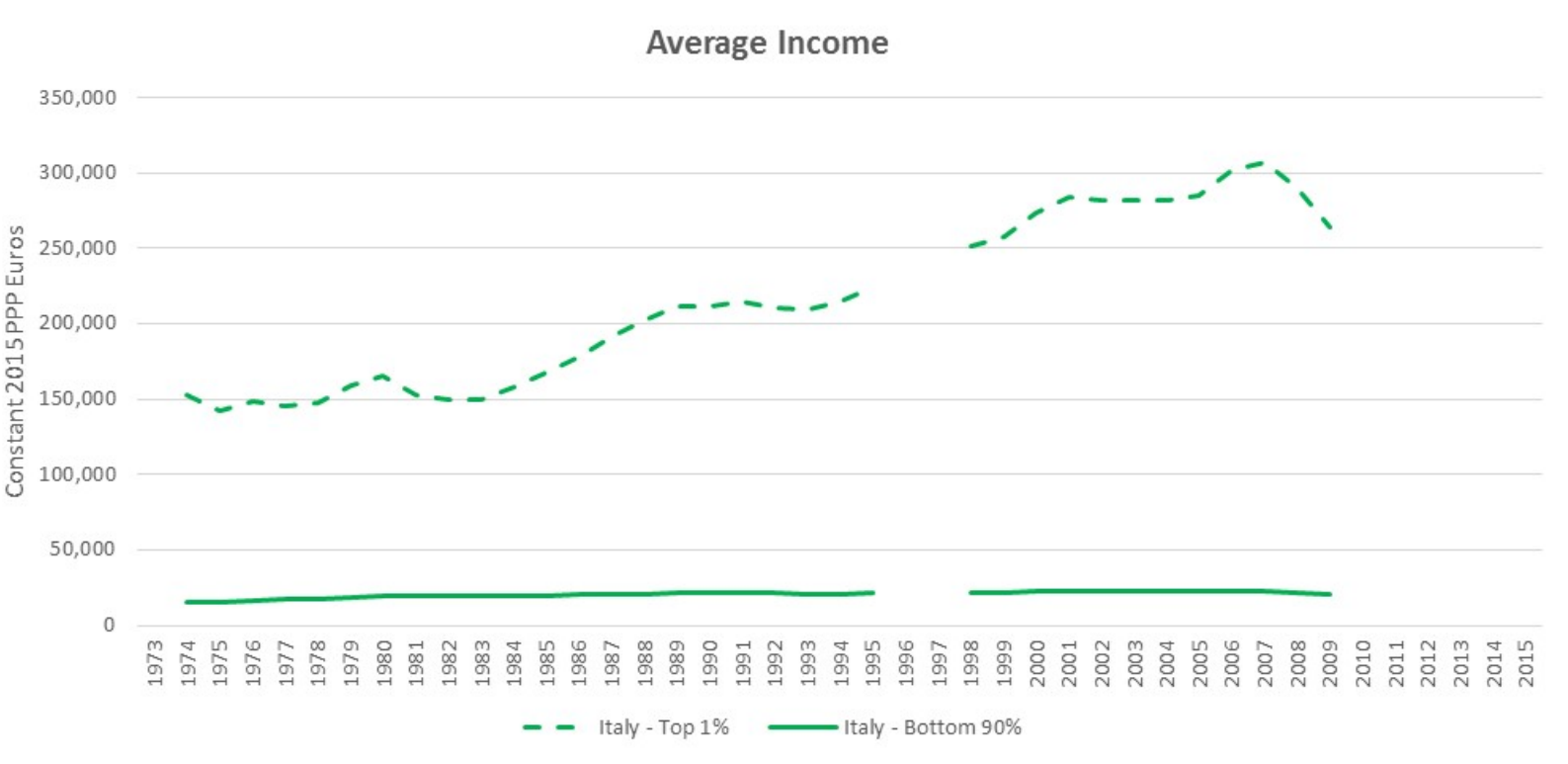
Source: World Wealth and Income Database

Europe: less increase in inequality in some countries than in others



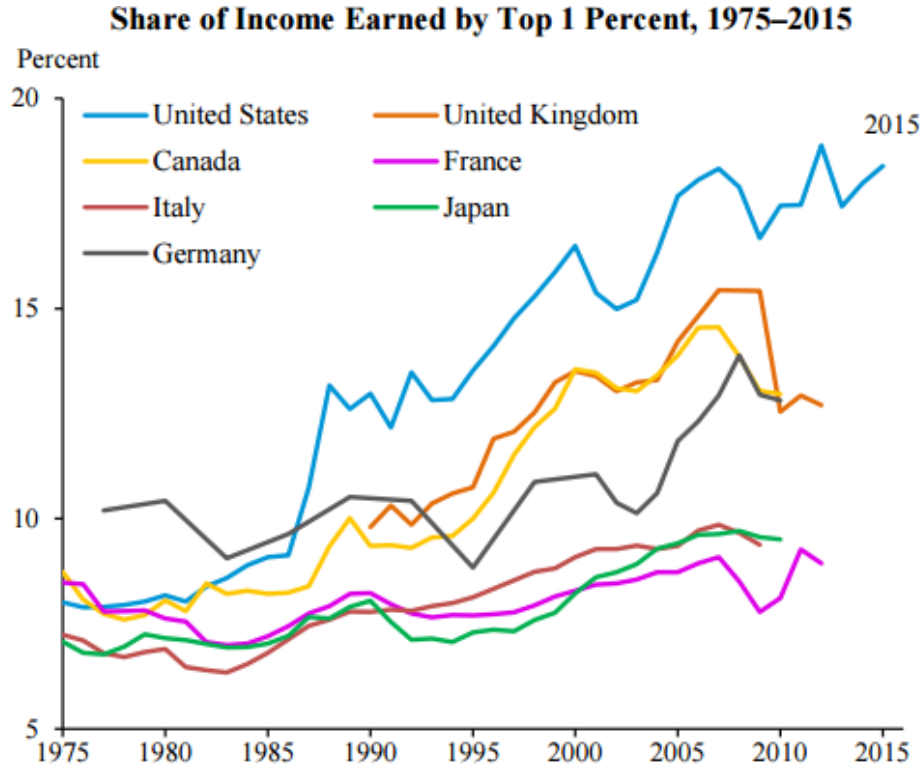
Source: World Wealth and Income Database

Italy: increase in inequality has been less extreme



Source: World Wealth and Income Database

Income share of the richest 1%



Source: World Wealth and Income Database.

Chart from: US Economic Report of the President, January 2017.

CEO pay provides “worst” example

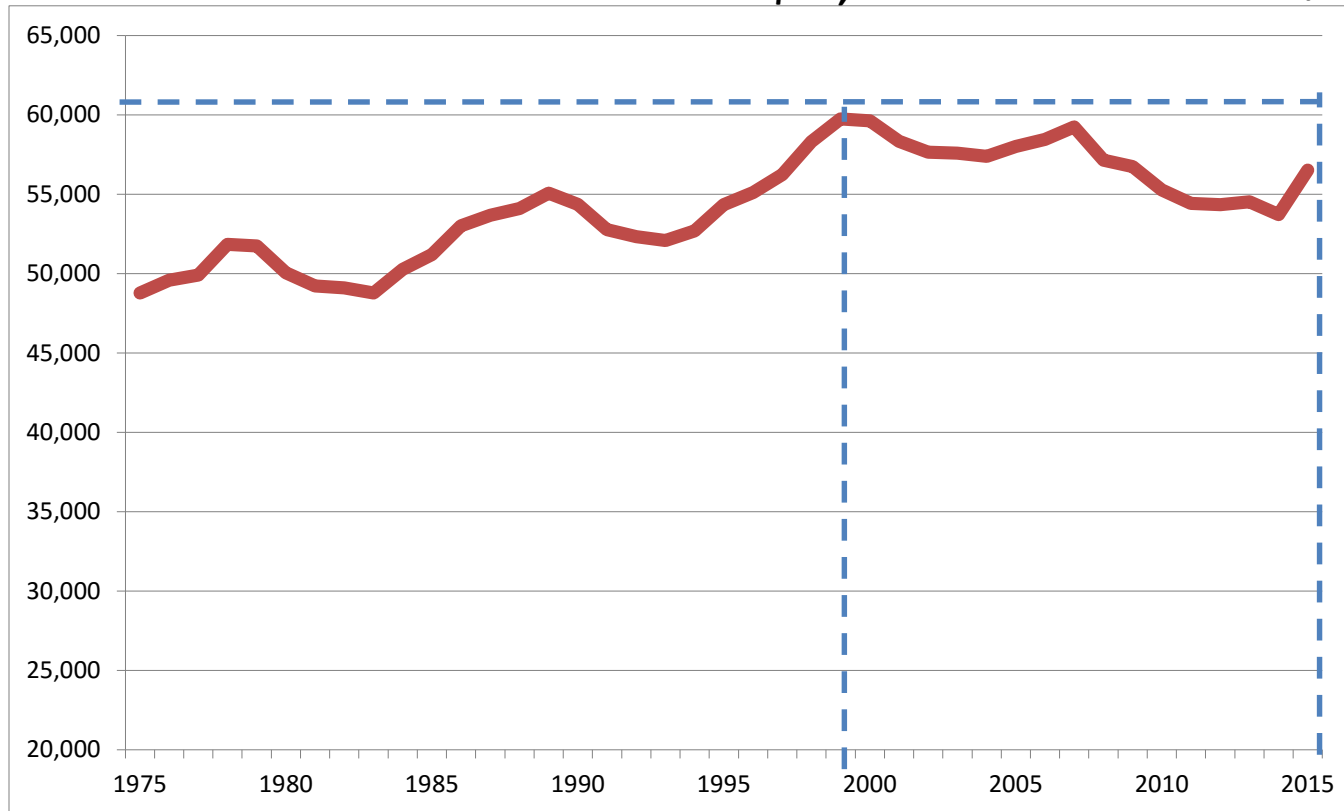
- In US, risen to more than 300 times that of the average worker
- Bankers walked off with major bonuses, even as they brought their firms—and the global economy—to the brink of ruin
 - Undermining “standard” theory that compensation in a market economy is based on social contributions (“marginal productivity”)

Stagnation: U.S. median household income

(constant 2015 US\$)

1998:
\$58,301

2015:
\$56,516

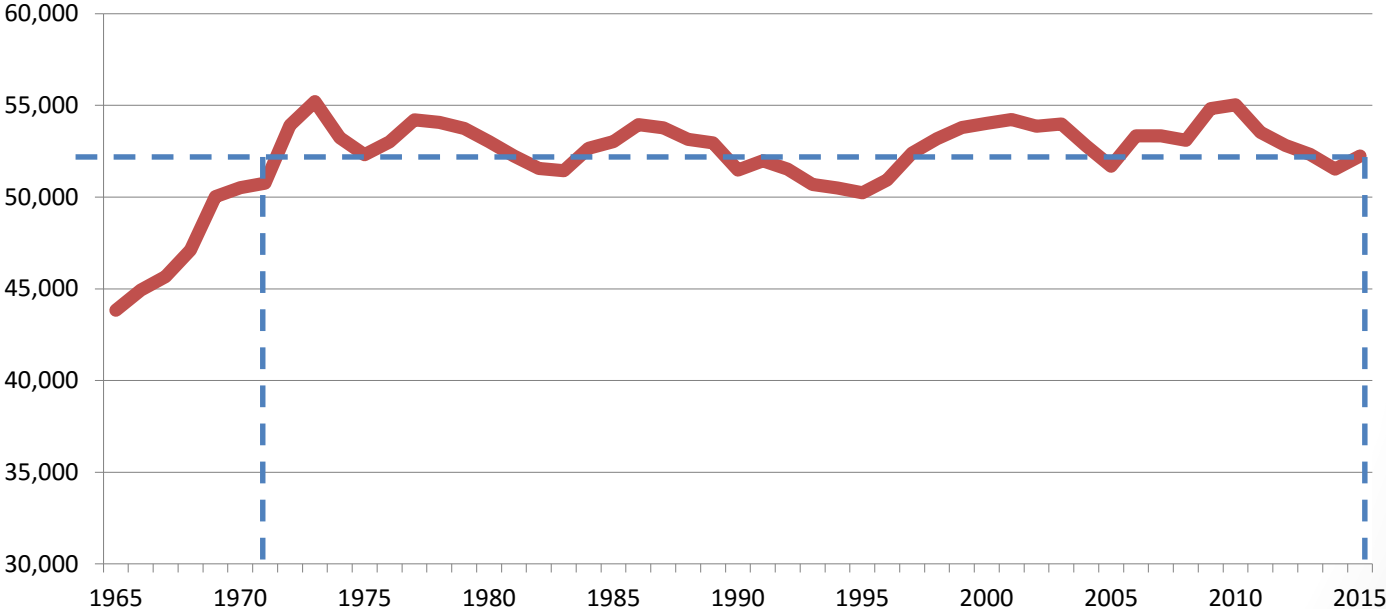


Source: U.S. Census Bureau

Note: Data is adjusted for the methodological change of 2013.

US: Median income of a full time male worker is at the level that it was more than 4 decades ago

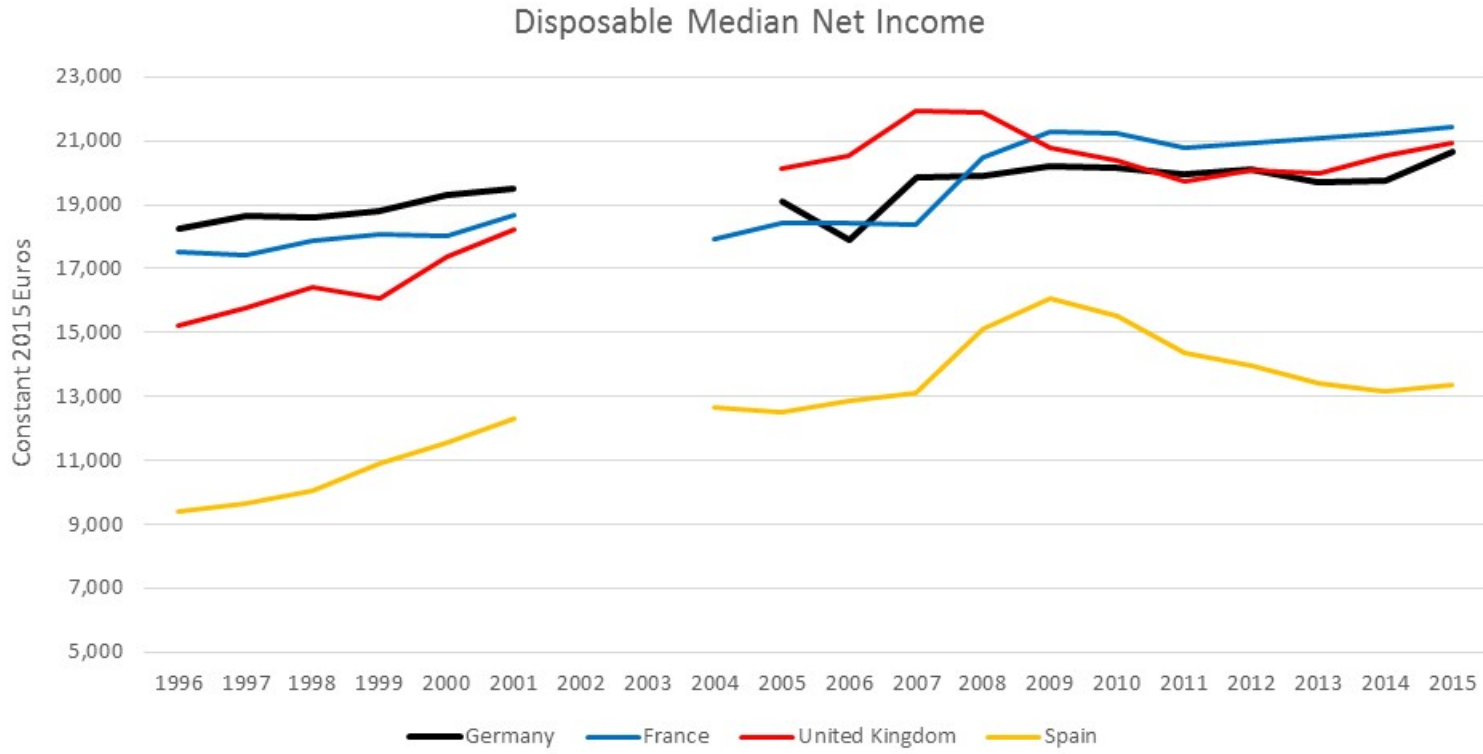
(constant 2015 \$)



Source: U.S. Census Bureau

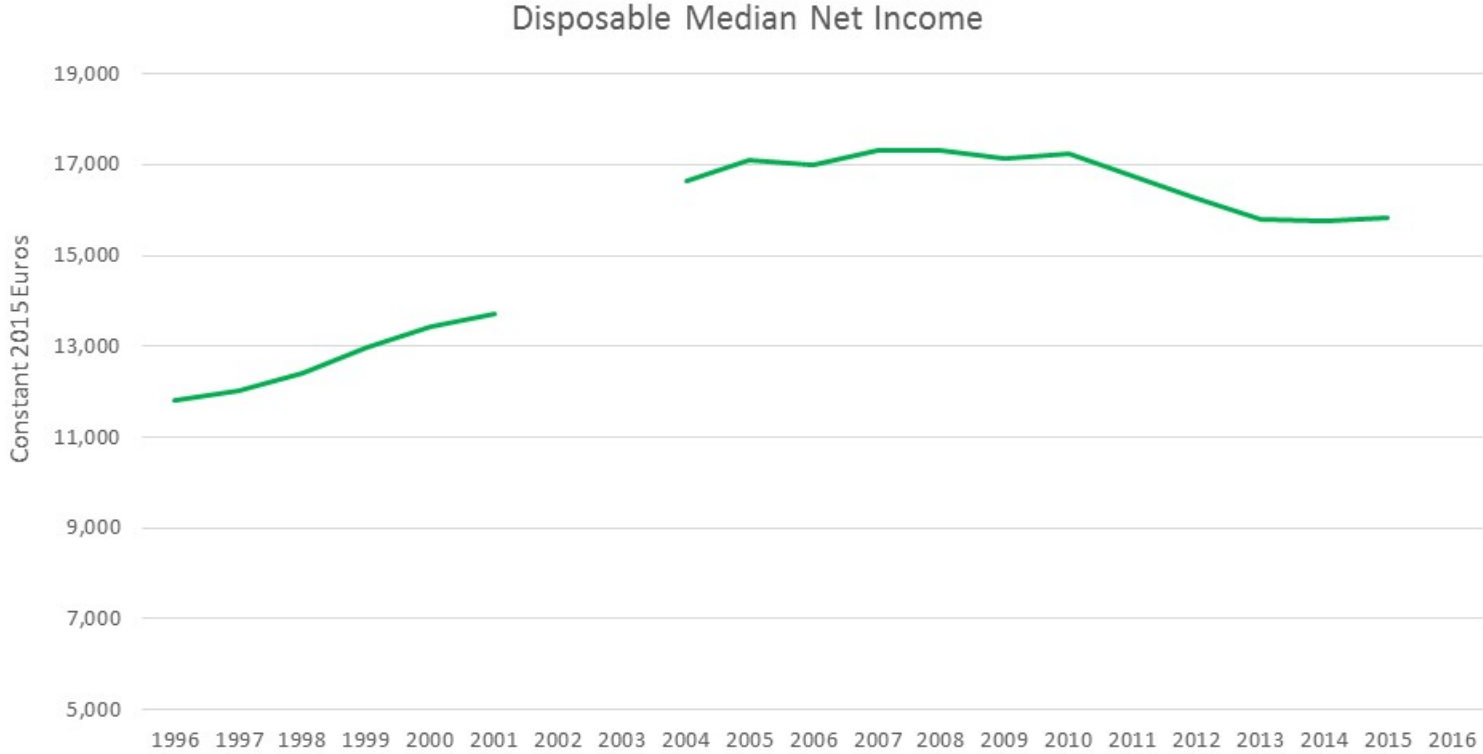
Note: Data is adjusted for the methodological change of 2013.

Median household income in Europe



Source: Eurostat

Median household income in Italy



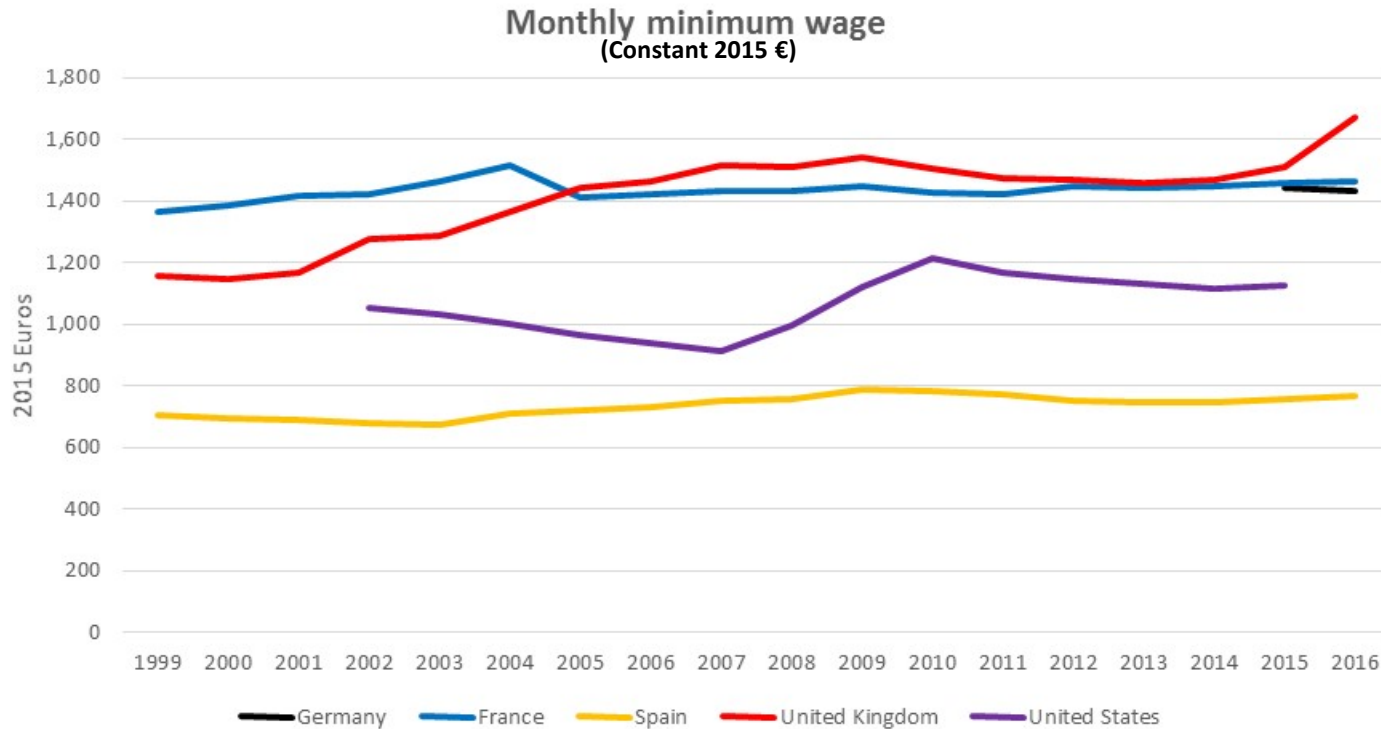
Source: Eurostat

US: Real wages at the bottom are at the level that they were roughly sixty years ago



Source: Federal Reserve. <https://www.quandl.com/data/FRED?keyword=>

Europe: Real Minimum Wages



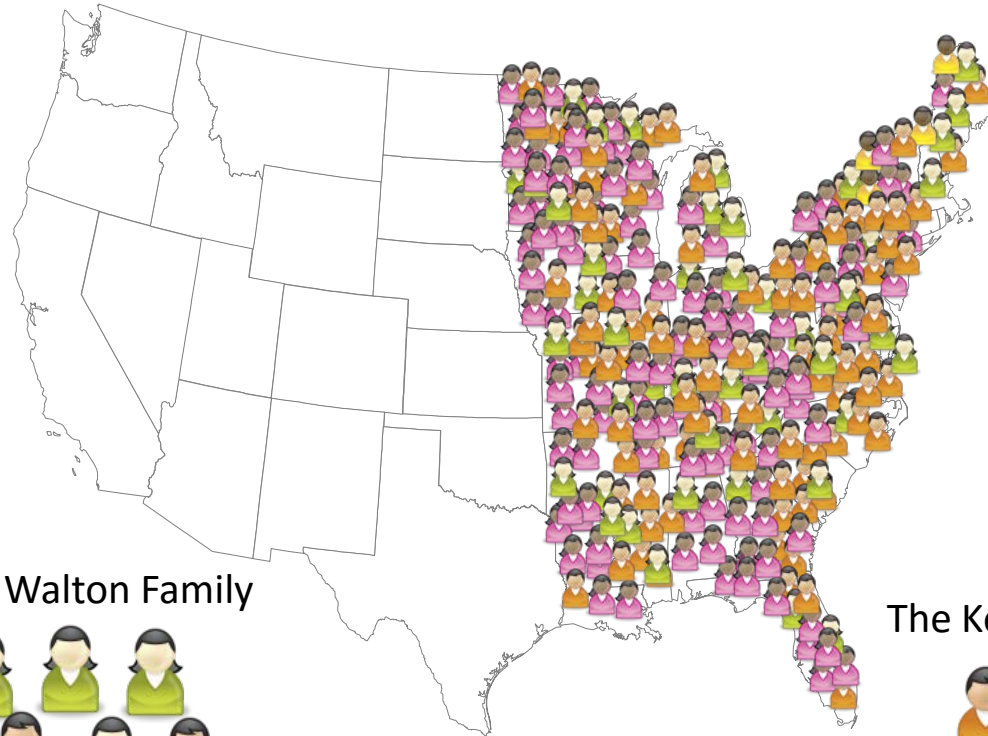
Source: Eurostat.

Multiple aspects of inequality

- Voice
 - Attempts in US at disenfranchisement
- Access to justice
 - Mass incarceration
 - Mass evictions
- Wealth inequality greater than income inequality

The Walton Family and The Koch Brothers' net worth = \$230 billion

That's the net worth of 150 million Americans or 44% of the country.



The Walton Family



The Koch Brothers



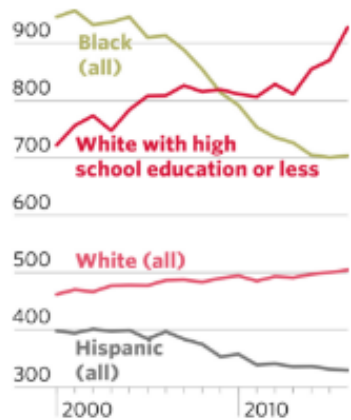
Health inequalities

A Rising Toll

New research shows the increasing mortality rate among white Americans spans age groups and is most acute among the less-educated.

White deaths are rising...

Mortality rate by race, ages 50-54

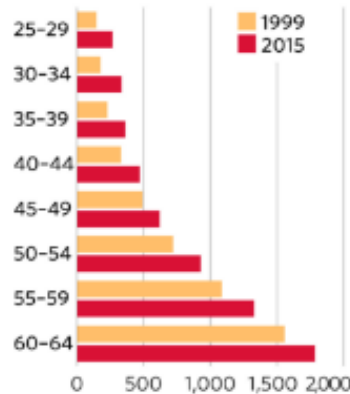


Mortality rate=deaths per 100,000

Anne Case and Angus Deaton of Princeton University

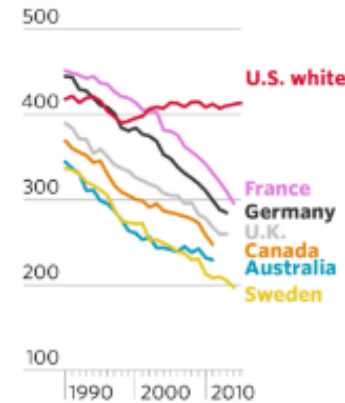
...among all age groups of less-educated whites...

Mortality rate for whites with high school education or less, by age



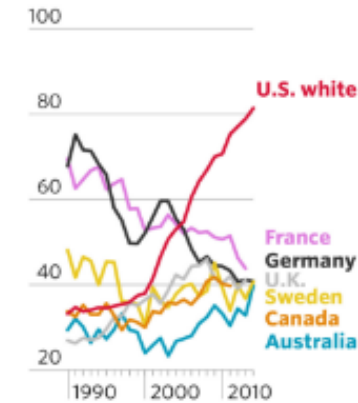
...in contrast to elsewhere...

Mortality rate for all causes, ages 45-54



...due in part to increases in 'deaths of despair'.

Mortality rate due to alcohol, drugs and suicide, ages 50-54

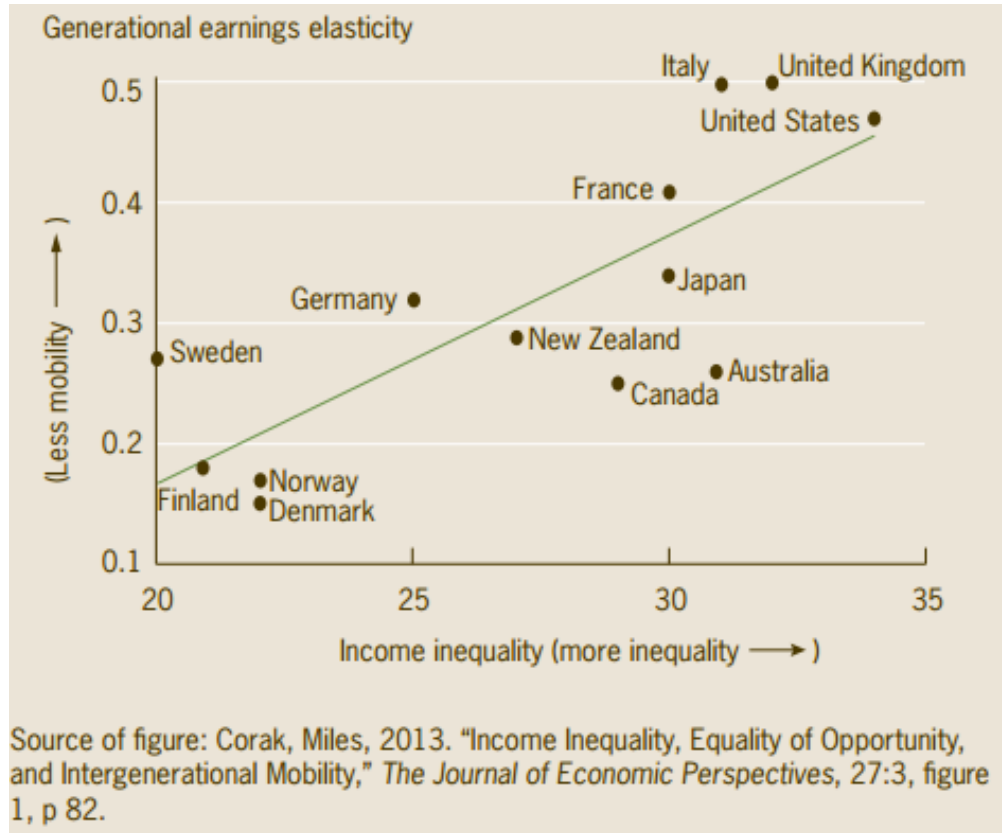


Source: Anne Case and Angus Deaton of Princeton University, charts published in Wall Street Journal.

Most invidious aspect: inequality in opportunity

- America among the countries with the least opportunity—in spite of the notion of the country being the land of opportunity (American dream)
 - Life prospects of a young American more dependent on the income and education of his parents than in other advanced countries
- Not a surprise: systematic relationship between inequality in incomes (outcomes) and inequality of opportunity
 - Other countries with high levels of inequality also have low levels of equality of opportunity

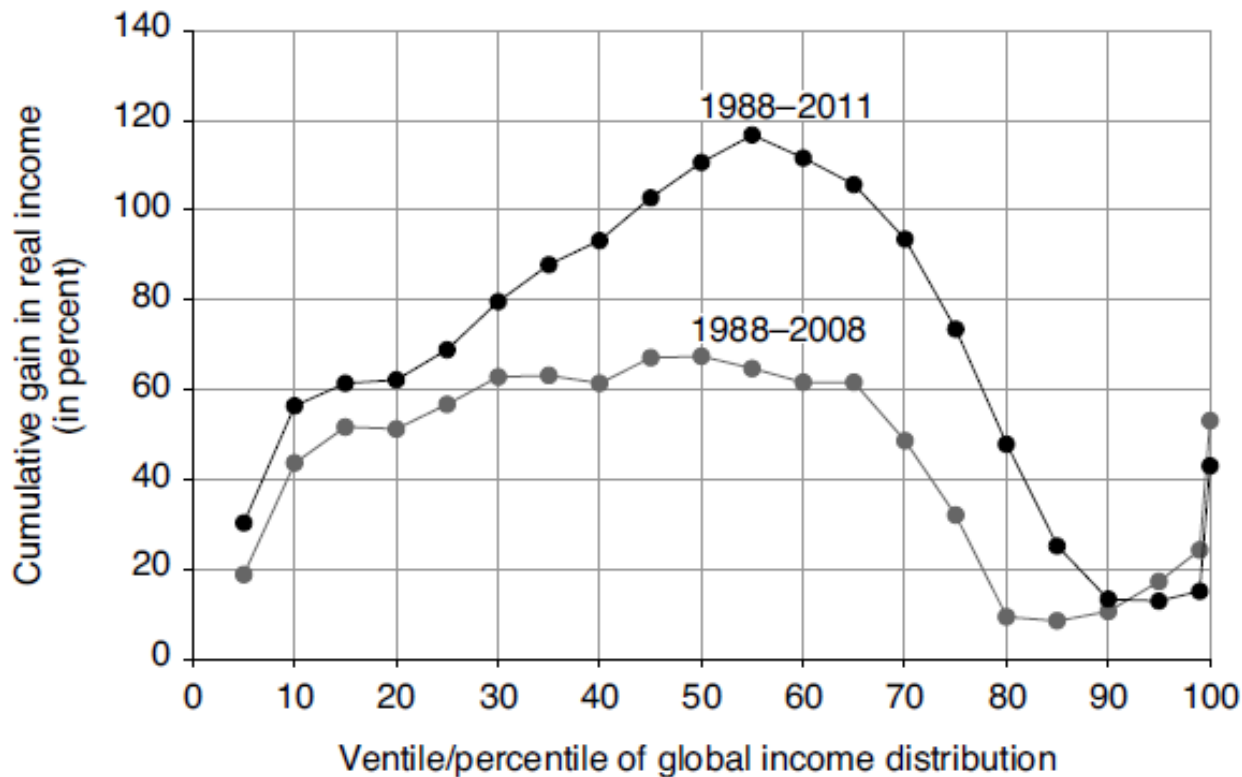
Income inequality and earnings mobility



Global inequality

- Almost all advanced countries have seen increased inequality in last 30 years
 - But some have seen much greater increase than others
 - Cannot explain these differences by “economic laws”
- The trend around the world is somewhat mixed, but remains a concern almost everywhere
 - Some countries (especially in Latin America) have even managed to reduce inequality
- **Inequality is a choice**

Global inequality: income growth by percentile



Globally, matters are even worse

Oxfam reports on wealth concentration at the top: how many of the richest people have as much wealth as bottom 50% (bottom 3.6 billion!)

- In 2014: 85
- In 2017: just 8 *men*

Big winners during last quarter century

- Global 1% and global middle class (middle class in China and India)

Big losers during last quarter century (not sharing in gains)

- Those at the bottom and the middle class in advanced countries

II. Major changes in understandings of inequality

1. Trickle down economics doesn't work
2. Large differences in outcomes/opportunities among advanced countries
 - Suggesting that it is policies, not inexorable economic forces that are at play
3. Economies with less inequality and less inequality of opportunity perform better
 - Many reasons for this
 - Lack of opportunity means that we are wasting most valuable resource
 - Erosion of trust—which is important for the functioning of the economy
 - In last few years, this view has become “mainstream”

Major changes in understandings of inequality

4. Kuznet's law—that while in the initial stage of development there is an increase in inequality but thereafter, there will be a decrease—has been repealed.

III. Explaining change

- Key question
 - Was period after WWII, the “golden age of capitalism,” an aberration, the result of the social cohesion brought on by the war?
 - With the economy now returning to the natural state of capitalism?
 - Or is the increase in inequality after 1980 a result of a change in policies?

Alternative Theories Driving Inequality

- Competitive Model
 - Increase inequality in assets (human capital, financial capital)
 - Result of worse intergenerational transmission of advantage
 - Privately: savings, assertive mating, connections, education
 - Public: public education, other public services
 - Changes in factor prices
 - Skill biased technological change
 - General equilibrium effects of education
 - Changes in savings

Alternative Theories Driving Inequality

- Changes in distribution of endowments and factor prices affect market income
- Changes in taxes and transfers

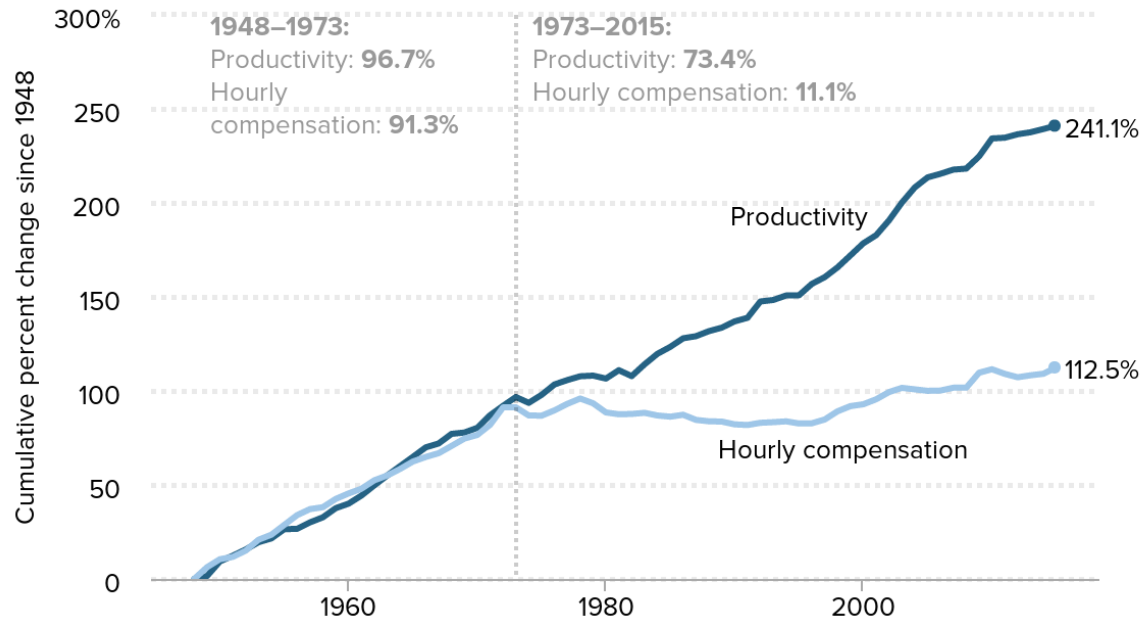
Piketty's model is an example

- With $r > g$, the share of income going to capitalists increases

Critique of Piketty's interpretation

- Even for capitalists, $s < 1$; what matters is $s r$, and in standard models, $s r < g$
- Return on capital is endogenous
 - Models need to have macro-/micro- consistency
 - If W were K (wealth and K were same), then law of diminishing returns would imply r would fall
 - And wages would rise
- Can't explain large differences between growth in average wages and productivity
 - Even if technical change is skill-biased

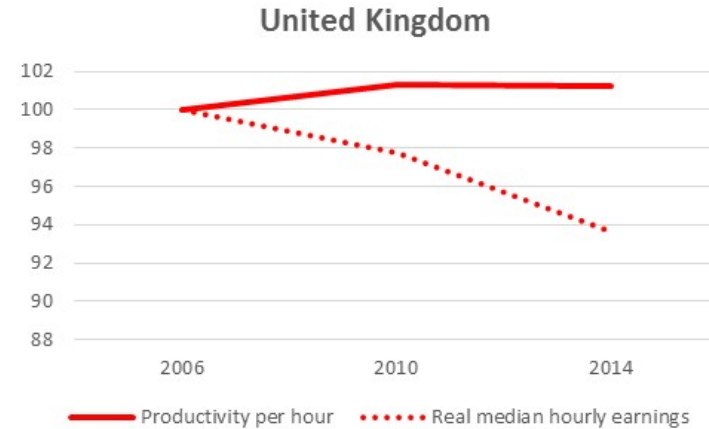
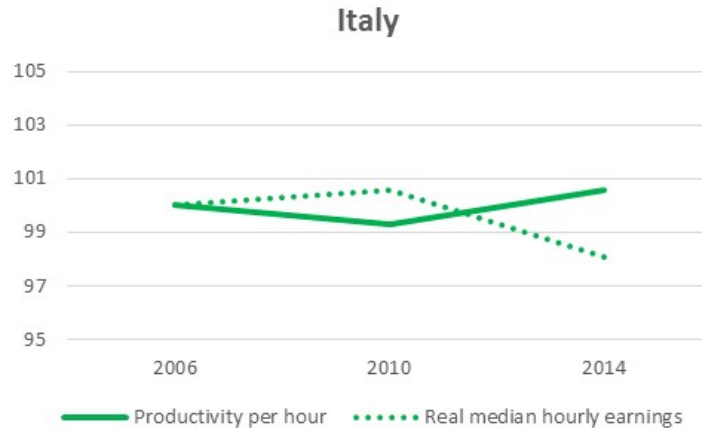
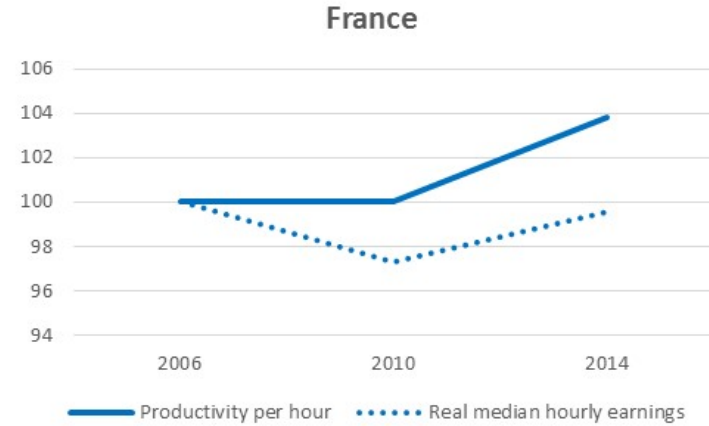
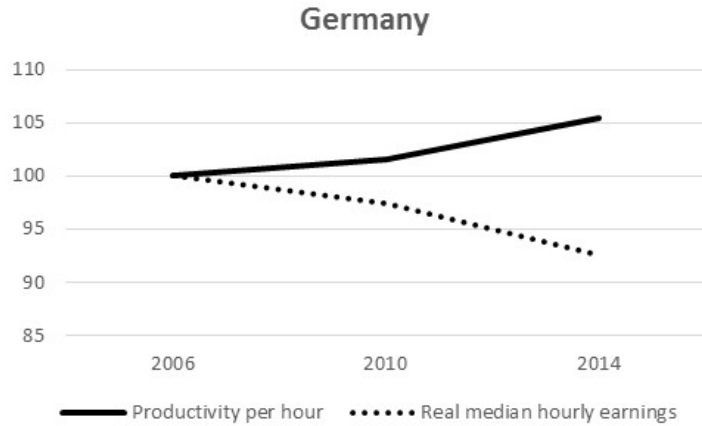
US: Disconnect Between Productivity and a Typical Worker's Compensation, 1948-2015



Note: Data are for average hourly compensation of production/nonsupervisory workers in the private sector and net productivity of the total economy. "Net productivity" is the growth of output of goods and services minus depreciation per hour worked.

Source: EPI analysis of data from the BEA and BLS (see technical appendix of *Understanding the Historic Divergence Between Productivity and a Typical Worker's Pay* for more detailed information)

Europe: Disconnect in Productivity and Compensation



Source: Eurostat.

Objections to competitive theory

- Marginal productivity theory—private rewards equal social returns
 - “Just rewards” for wealth creation
 - No one is self-made
 - Disagreements about relative role of luck, contributions of others
 - Innovators who have made most important innovations typically not among the richest
 - But bankers that had led their firms to near bankruptcy got richly rewarded
 - And social returns were clearly negative
 - We know that the form of compensation is inefficient

- Widespread market failures; and whenever there is market failure, private rewards and social returns differ
 - Agency issues (corporate governance)
 - Externalities (imposing costs on others)
 - Monopolies (major source of inequality)
 - **Discrimination**
 - Taking advantage of information asymmetries
 - Unemployment—weakening bargaining power of workers
- Many of these can be grouped as examples of “market exploitation” or “rent seeking”

Alternative explanation

- Beginning about a third of a century ago, we began a process of rewriting the rules
 - Lowering taxes and deregulation was supposed to increase growth and make everyone better off
 - In fact, only the very top was better off—incomes of the rest stagnated, performance of the economy as a whole slowed
- **Markets don't exist in a vacuum—government sets rules of game, and how it sets rules and policies and how it enforces them affects efficiency and distribution**

Consequences

- Financialization of the economy
- A distorted or mismanaged globalization
- A loss of competition

Together, these and other changes led to

- More inequality
 - basic necessities of a middle class society being increasingly out of reach of large proportion of population
 - Retirement security, education of one's children, ability to own a home
- Slower growth

Example: Financialization of the economy

- A result of changes in legal framework
- Financialization of the economy contributed significantly to inequality (directly and indirectly) and to slower growth
 - Led to short-termism—CEOs focused on short term returns (and their profits), not long term growth and societal benefits (including workers)
 - Led to financial and economic instability
 - Instability led to lower growth
 - And brunt of costs borne by ordinary citizens

Example: Mismanagement of Globalization

- Was supposed to lead to faster growth from which everyone would benefit
- Obvious—didn't happen: with grave political consequences
- Agenda was in fact based on interests and ideology
 - The result was that globalization was not well managed
- Economic theory *predicted* that there would be large distributive consequences, and, if not well-managed, globalization could lead to more instability, slower growth and even more economic concentration and less competition

All of this has come to pass.

Theories which ignored these possibilities were based on special and unrealistic model of market economy.

Competition

- Conventional theories simply *assumed* there was competition
 - Competition Policy needed to promote and ensure competition
 - Economy increasing marked by market power
 - But more than anti-trust policy
 - Need public option in retirement (opting into *additional* social security benefits), health care (“the public option,” expanding Medicare, in countries like US without public health system), publicly provided income contingent student loans, and publicly provided income contingent mortgages
 - US mortgage system was exploitive—and now is totally broken

More generally: increasing importance of rents

- Associated with changes in technology, demand and changes in the rules
 - Weakening bargaining power of unions
 - Weakened enforcement of anti-trust rules
 - Greater urbanization (land rents)
 - Globalization (as its been managed)

Examples of Rents

- Getting public resources at low prices
 - Natural resources
 - Privatizations
 - Spectrum
- Selling to government at high prices
 - Military contracts
 - Drugs
- Corporate welfare
 - Hidden tax provisions
 - Open subsidies

Rent seeking within corporations

- Managers have used their managerial discretion to seize a larger fraction of corporate rents
 - Sometimes in the name of “incentive pay”
 - But incentives have actually been perverse
 - Increase in executive pay may come at the expense of investment in people, technology, plant and equipment—i.e. long run performance of enterprise

Knowledge rents

- Systems of IPR give rise to knowledge rents
- IPR leads to static inefficiency—knowledge is not being used efficiently
 - Often is leveraged into monopoly power—a greater distortion in production
- Justification was supposed to be that it led to faster growth
 - But theory and evidence is ambiguous
 - Experiment: government ended patent on BRAC genes
 - Result: lower prices and faster innovation

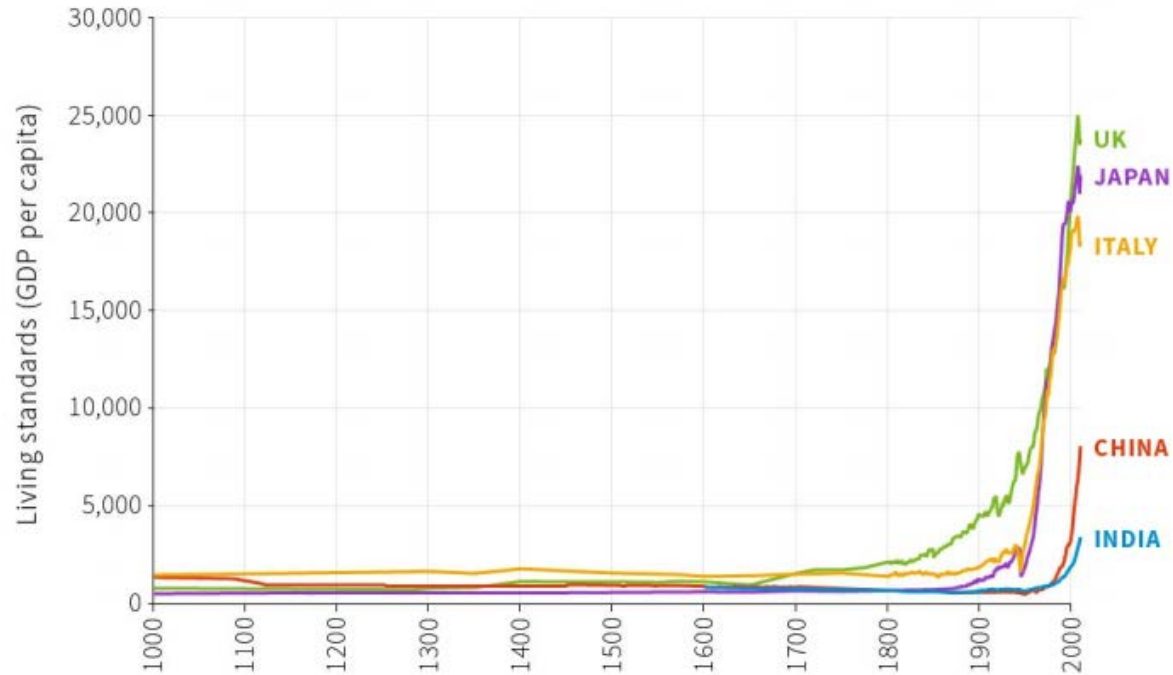
Multiple reasons why innovation may be reduced

- Most important input into the production of knowledge is knowledge
 - IPR reduces access to knowledge
 - By reducing pool of innovations innovators have to draw upon, innovation is reduced (Stiglitz, 2014)
- Patent thicket, patent trolls reduce returns to innovative activity
- Because opposing a patent is a public good, there is excessive patenting

On the importance of Creating a Learning Society

- The transformation to “learning societies” that occurred around 1800 for Western economies, and more recently for those in Asia, appears to have had a far greater impact on human well-being than improvements in allocative efficiency or resource accumulation.
- For hundreds of years standards of living had remained essentially unchanged

Historical living standards



Source: INET

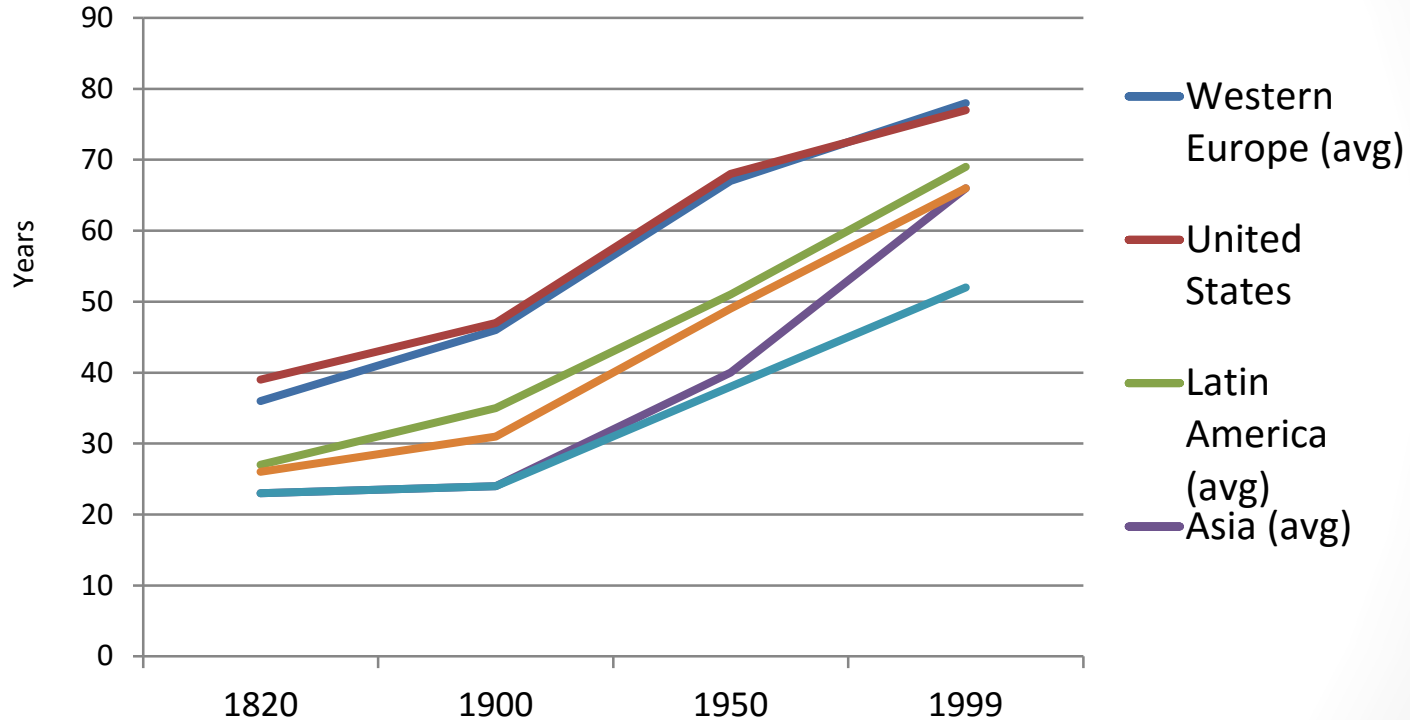
Real wages of London craftsmen, 1200-2000



Figure 3. Real wages over seven centuries: craftsman (skilled worker) in London (1264-2001).

Source: INET

Improvements in life expectancy since 1820



Data are estimates from A. Maddison, 2001, "The World Economy: A Millennial Perspective," OECD.

The challenge

- Technological changes may not be Pareto improving
- They may move out the “utility possibilities curve”
- But the new competitive equilibrium may entail some group being worse off.
- Alternative ways to ensure that the change is Pareto improvement (complementary)
- Redistributive taxation/systems of social protection
- Rewriting rules of market economy to ensure that market incomes are more equitable
 - Changing IPR regime—with knowledge more freely available, fruits will be more widely shared

Helping the economy restructure

- Economy will be shifting towards a service sector economy
- Among key service sectors are education, health, and other public services
- Value of those services is largely socially determined—not “just” a market process
- If we value those services highly—pay good wages, provide good working conditions, and create sufficient number of jobs—that will limit growth in market income inequality
 - Including jobs with limited skill requirements
 - Higher pay will result in such jobs having higher “respect”
 - Private sector wages will follow public sector wages
 - May need also to provide wage subsidy for low wage jobs, to encourage demand for such jobs and increase wages

Redirecting the production of knowledge

- In a well functioning economy innovation is directed at scarcity
 - Real scarcity is “environmental boundaries”
 - But unskilled labor is in abundance
- Yet our innovation system is directed in just the opposite way
 - Failure to price carbon and other environmental resources
 - Underpricing capital—through distorted monetary policy
- Misdirection of innovation exacerbates problems of inequality

IV. Severe Economic and Political Consequences

- Inequality itself led to more instability and poorer economic performance
- Economic inequality led to political inequality
- Leading to even worse “rules of the game”—favoring the 1%.
- The discrepancy between promises and what has been delivered too has had consequences
 - Citizens know that the “establishment” has either lied to them, or been totally incompetent
 - They feel (rightly) that the economic system is rigged
 - They saw how the bankers were saved in the economic crisis—but not the rest: they have lost trust in their government and the fairness of our *economic and political system*

Even worse moral and societal consequences

- Single minded focus on profits and financial incentives has changed who we are
 - Preferences and beliefs are endogenous
 - Society has become more selfish
 - Moral turpitude pervasive—from the bankers to the auto industry

There are alternatives

- Alternative ways of organizing our economy and society—such as not for profits
- Institutional innovations that deliver better for ordinary citizens
- And even lead to faster overall growth
- Partly because of a growth in trust and loyalty—important for economic performance
 - Lower turnover, greater effort
 - More shared prosperity

Alternatives to for-profit model based on selfishness

- The best performing institutions in the US are its not-for-profit universities
 - Among the worst performing are its for-profit universities
- Micro-credit schemes in Bangladesh based on non-profit cooperative model have brought tens of millions out of poverty
 - Micro-credit scheme in India based on for-profit model re-invented old-style money lender, and became India's sub-prime lender
- Profit-sharing has become central in 2016 US presidential campaign
 - Based on wealth of evidence that firms with profit sharing actually perform better, especially for workers and especially over the business cycle

Our society *as a whole* helps create risk

- And individuals *on their own* can't manage many of these risks well
- Need better systems of societal risk sharing—social protection
- But there is a broader need for collective action to ensure middle-class living standards, and that our economy works for all
 - Regulations to prevent abuses
 - The Entrepreneurial State to promote innovation

We have choices

- There are alternatives to the current system
 - Even if the advocates of the system suggest there are not
 - And seem to suggest that, at most, we need just minor tweaks on the system
- The problems are deep and fundamental
- Some of these alternatives have proven their value over decades
- We should learn from these experiences
 - We can reshape our economy
 - We can reshape globalization
- And we can construct a world where the economy performs better for all, or at least for the vast majority