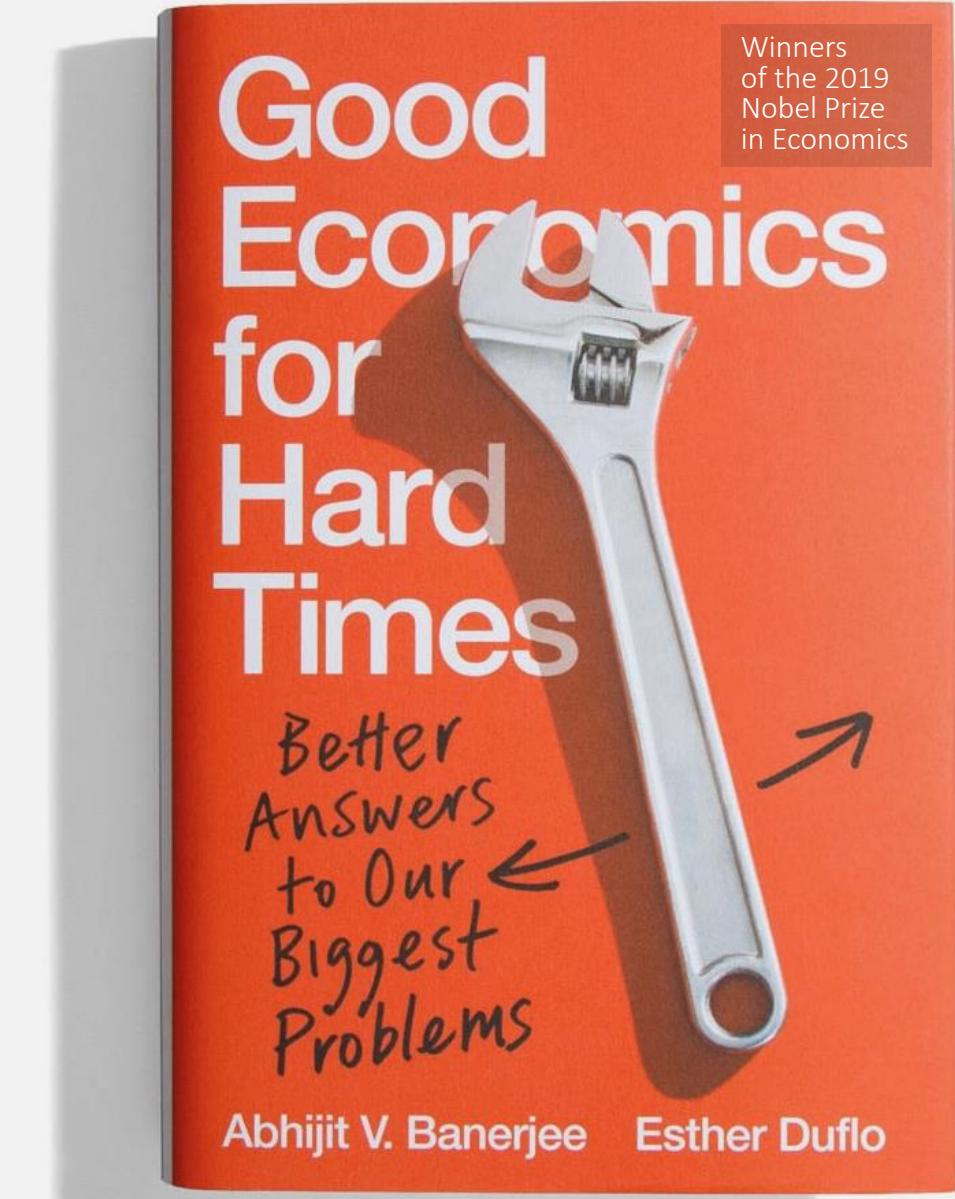




Good Economics For ~~Hard Times~~ ~~Harder Times~~ More Hopeful(?) Times

A course by Abhijit Banerjee
and Esther Duflo



Winners
of the 2019
Nobel Prize
in Economics

Lecture 14 and 15: player piano

Inequality, automation and all that

Welcome!

Jeff Bezos

K-shape recovery

Worldwide corporate tax

We are the 99%

Inequality

Artificial intelligence

Automation

Wealth Tax

Winner takes all

Falling wages

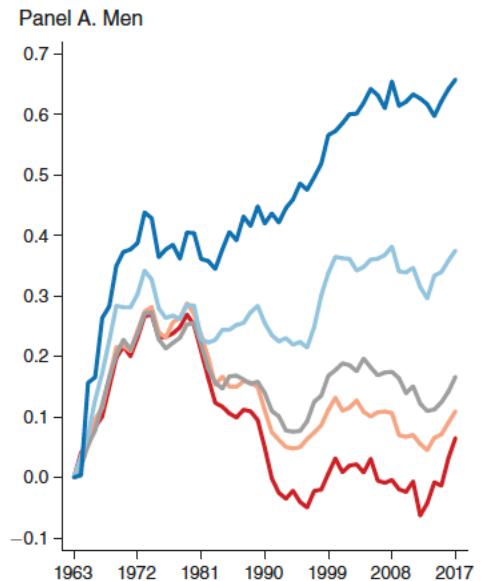
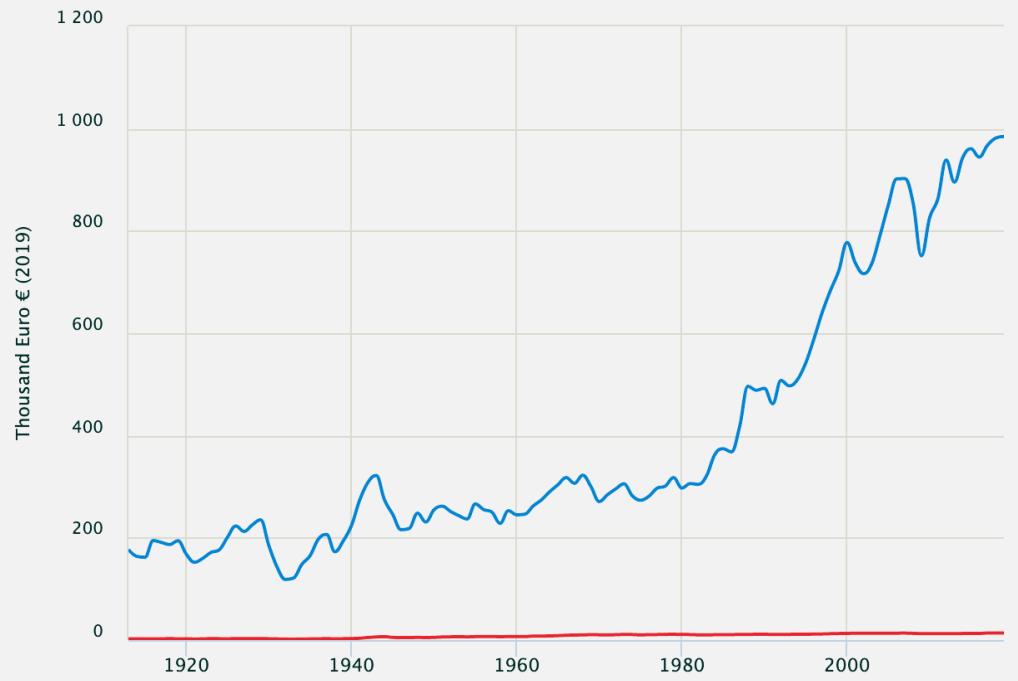


FIGURE 1. CUMULATIVE CHANGE IN REAL WEEKLY EARNINGS OF WORKING-AGE ADULTS AGES 18–64, 1963–2017

Rising income of the top 1%

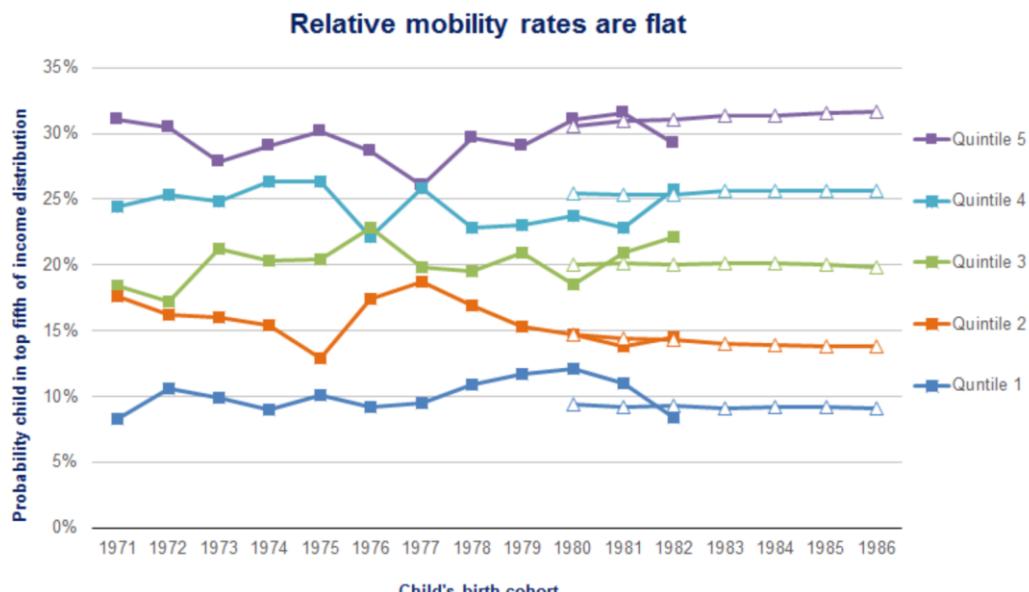
Pre tax national income top 1%
Pre tax national income bottom 50%



Source: WID

Source: Autor, 2018

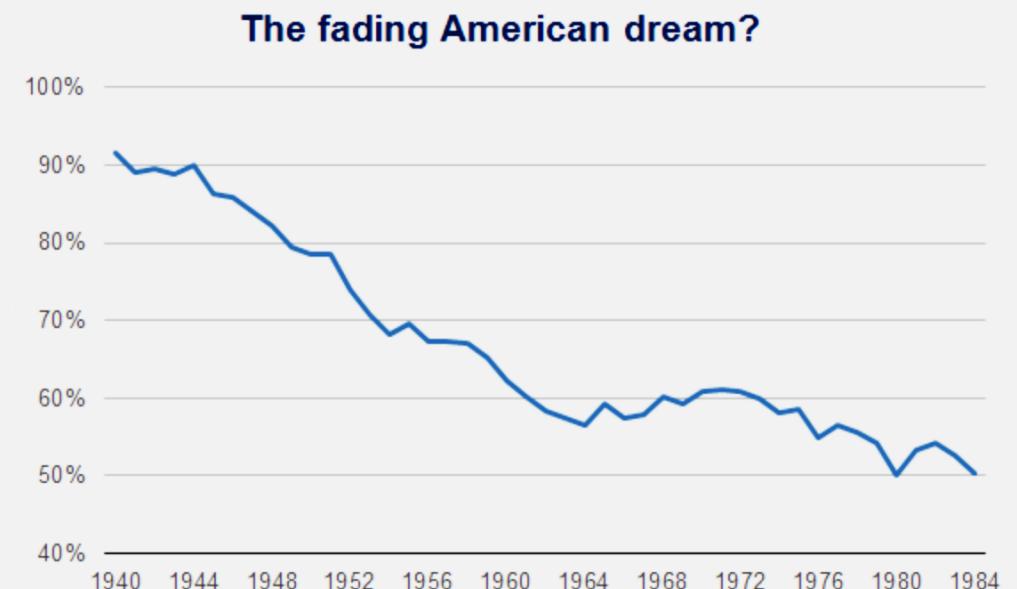
Flat mobility



Source: Chetty et al., "Is the United States still the land of opportunity? Recent trends in intergenerational mobility," Figure 3; Series in squares use SOI sample for 1971-1982 cohorts, while triangles use population-based sample for 1980-1986 cohorts; Quintiles refer to parental quintile

BROOKINGS

The fading American Dream



BROOKINGS

Will automation eliminate workers?

Automation and the future of jobs

The burger making robot

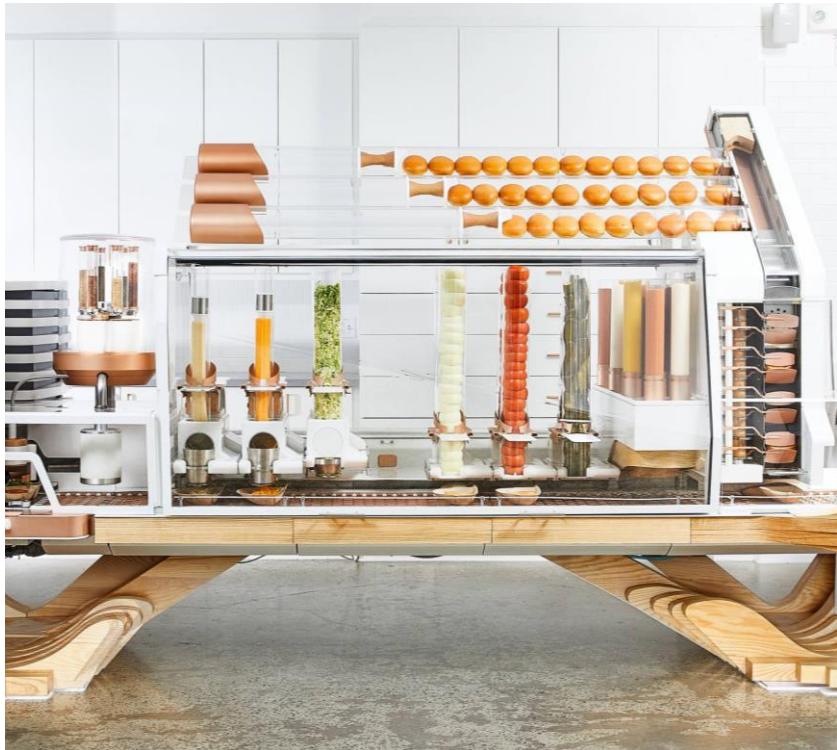


Photo: Aubrie Pick, Fortune.com

“

Rapid and accelerating digitization is likely to bring economic rather than environmental disruption, stemming from the fact that as computers get more powerful, companies have less need for some kinds of workers. Technological progress is going to leave behind some people, perhaps even a lot of people, as it races ahead. As we'll demonstrate, there's never been a better time to be a worker with special skills or the right education, because these people can use technology to create and capture value. However, there's never been a worse time to be a worker with only 'ordinary' skills and abilities to offer, because computers, robots, and other digital technologies are acquiring these skills and abilities at an extraordinary rate.

—The second machine age

The first IT revolution led to job polarization

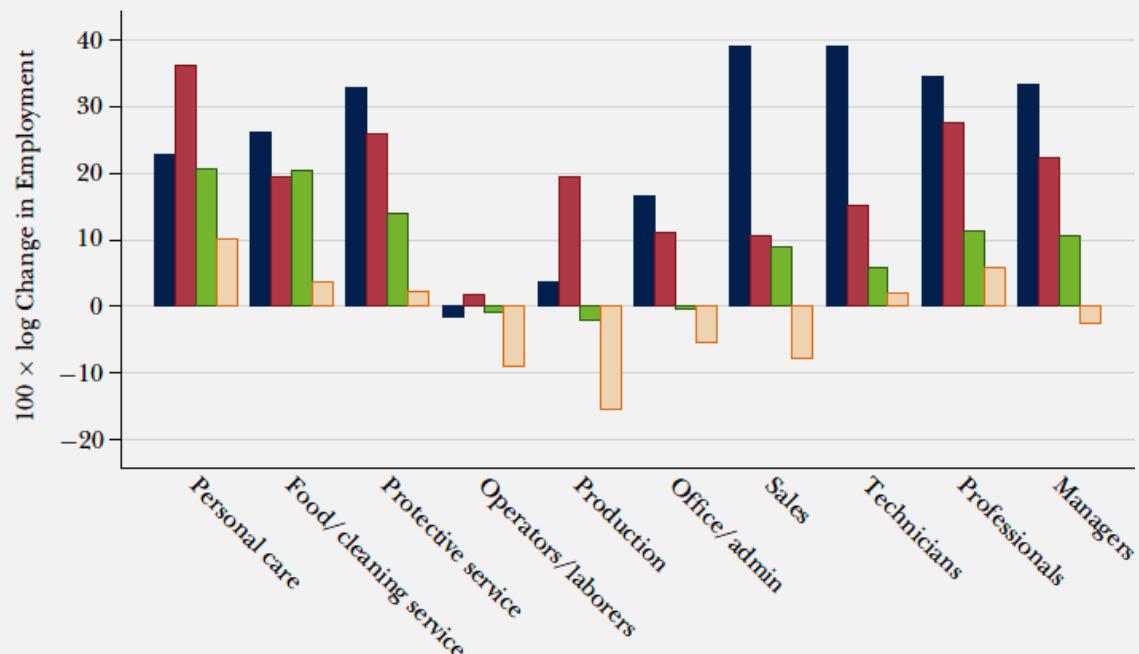
Computers could replace “routine” jobs, but not creative or non routine jobs

This led to a hollowing out of the middle of the “job distribution”

Change in Employment by Major Occupational Category, 1979-2012

■ 1979–1989 ■ 1989–1999 ■ 1999–2007 ■ 2007–2012

(the y-axis plots 100 times log changes in employment, which is nearly equivalent to percentage points for small changes)



Source: David Autor

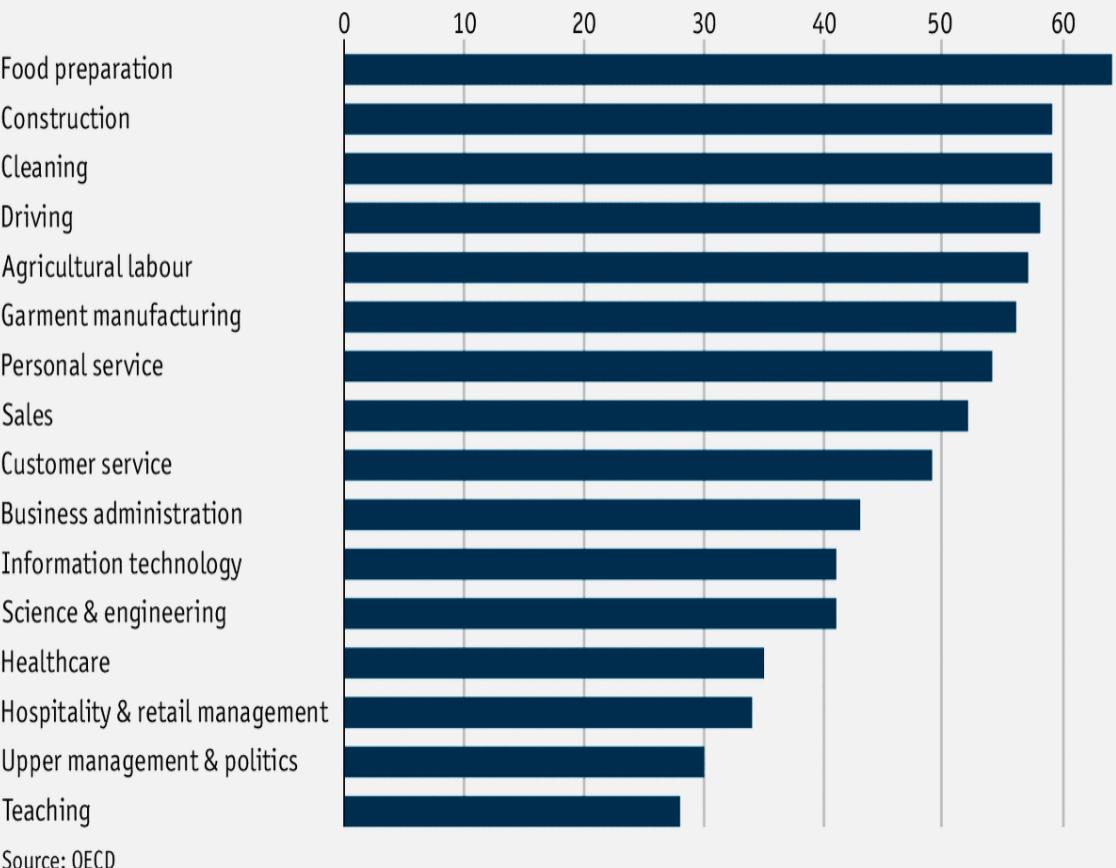
This time it is different?

Using the task content of jobs, several studies find that about 50% of jobs are at risk of being automatized

OECD finds 46% of workers in the OECD countries are in occupations that are at high risk of being replaced or fundamentally transformed

Automated for the people

Automation risk by job type, %



Substitute or complements?

This calculation forgets that the AI technology could be complement to human skills

So workers who lose their jobs could be employed doing something else

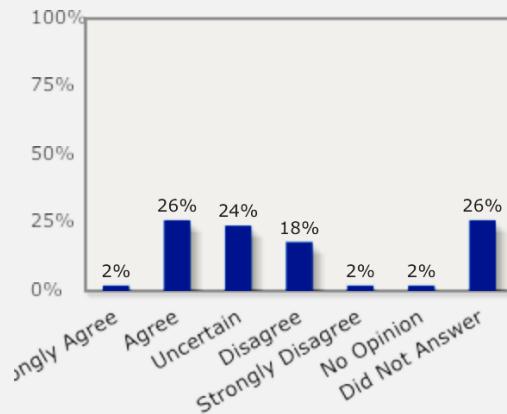
The net effect is not clear ...

Economists are very uncertain....

Question A:

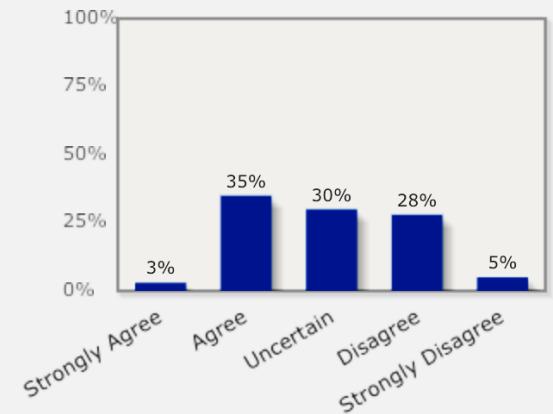
Holding labor market institutions and job training fixed, rising use of robots and artificial intelligence is likely to increase substantially the number of workers in advanced countries who are unemployed for long periods.

Responses



© 2021. Initiative on Global Markets.
Source: European IGM Economic Experts Panel

Responses weighted by each expert's confidence

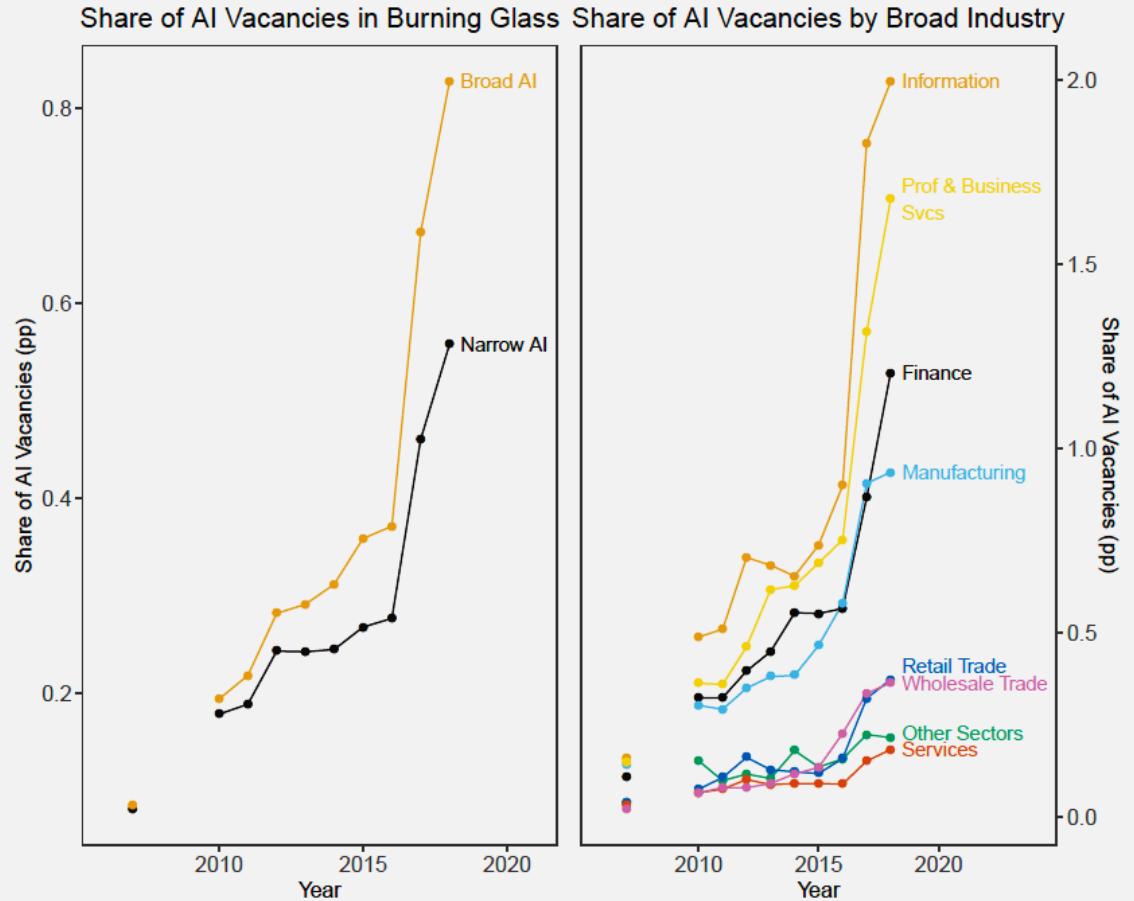


© 2021. Initiative on Global Markets.
Source: European IGM Economic Experts Panel

How bad will it be?

We don't know yet... The surge in AI activity is recent

The demand for workers with AI skills exploded around 2015



Source: Autor et al.

These changes are at specific establishments

At firms whose task structures
were compatible to AI
(according to different
measures of AI exposure)

For example Webb
measure: overlap between
AI patent text and
description of the tasks in
this job

TABLE 1: Effects of AI Exposure on Establishment AI Vacancy Growth, 2010-2018

	Growth of Establishment AI Vacancies, 2010-2018					
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel A: Felten et al. Measure of AI Exposure</i>						
Establishment AI	15.96***	13.82***	9.19***	16.53***	9.75***	16.87***
Exposure, 2010	(1.73)	(1.43)	(1.21)	(1.89)	(1.20)	(1.86)
Observations	1,075,474	1,075,474	954,519	1,075,474	954,518	762,672
<i>Panel B: Webb Measure of AI Exposure</i>						
Establishment AI	6.59***	5.08***	3.21***	5.91***	0.42	1.14
Exposure, 2010	(1.13)	(0.96)	(0.81)	(1.27)	(0.82)	(1.08)
Observations	1,159,789	1,159,789	1,021,673	1,159,789	1,021,673	824,803
<i>Panel C: SML Measure of AI Exposure</i>						
Establishment AI	3.76***	2.30**	-2.21**	-3.04**	1.95**	4.47***
Exposure, 2010	(1.19)	(1.04)	(0.96)	(1.38)	(0.89)	(1.34)
Observations	1,159,789	1,159,789	1,021,673	1,159,789	1,021,673	824,803
<i>Covariates:</i>						
Share of Vacancies in Sales & Admin, 2010					✓	✓
<i>Fixed Effects:</i>						
Firm Size Decile	✓	✓	✓	✓	✓	
Commuting Zone	✓	✓	✓	✓	✓	✓
3 digit Industry		✓		✓	✓	
Firm			✓		✓	✓

Source: Autor et al.

And they stop hiring other people

(only with 2 of the 3 measures of AI content)

TABLE 5: Effects of AI Exposure on Establishment Non-AI Vacancy Growth, 2010-2018

	Growth of Establishment Non-AI Vacancies, 2010-2018							
	Full Sample						Establishments Posting in 2018	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Panel A: Felten et al. Measure of AI Exposure</i>								
Establishment AI Exposure, 2010	-13.80*** (4.22)	-16.36*** (4.11)	-11.90*** (4.08)	-4.81*** (1.44)	-12.42*** (4.01)	-4.04*** (1.47)	-8.38** (3.46)	-3.56* (1.86)
Observations	1,075,474	1,075,474	954,519	1,075,474	954,519	1,075,474	324,901	341,525
<i>Panel B: Webb Measure of AI Exposure</i>								
Establishment AI Exposure, 2010	-17.24*** (3.72)	-18.21*** (3.63)	-6.73** (3.01)	-2.22** (0.93)	-8.30** (3.70)	1.51 (0.98)	-4.70* (2.66)	-1.44 (1.36)
Observations	1,159,789	1,159,789	1,021,673	1,159,789	1,021,673	1,159,789	337,758	355,529
<i>Panel C: SML Measure of AI Exposure</i>								
Establishment AI Exposure, 2010	7.02** (3.13)	5.74* (3.01)	2.05 (2.92)	0.95 (1.16)	2.21 (3.61)	-3.01** (1.22)	0.01 (2.94)	-0.91 (1.38)
Observations	1,159,789	1,159,789	1,021,673	1,159,789	1,021,673	1,159,789	337,758	355,529
<i>Covariates:</i>								
Share of Vacancies in Sales, Admin. in 2010							✓	✓
<i>Fixed Effects:</i>								
Firm Size Decile	✓	✓			✓	✓	✓	✓
Commuting Zone	✓	✓		✓	✓	✓	✓	✓
3 digit Industry		✓		✓	✓	✓		
Firm			✓		✓	✓		✓

Source: Autor et al.

But do not hire or pay less on net

This is only the beginning....

But this is only employment
at those firms

So there is a lot left to discover
on the impact of AI on jobs!

TABLE 8: Effects of AI Exposure on Market Employment and Wage Growth

	Industry by CZ Employment Growth (CBP)			Occupation Employment Growth (OES)			Occupation Wage Growth (OES)		
	2003-2007 (1)	2007-2010 (2)	2010-2016 (3)	2004-2007 (4)	2007-2010 (5)	2010-2018 (6)	2004-2007 (7)	2007-2010 (8)	2010-2018 (9)
<i>Panel A: Felten et al. Measure of AI Exposure</i>									
Market AI Exposure, 2010	0.03 (0.17)	0.10 (0.20)	-0.05 (0.08)	0.34 (0.34)	0.86*** (0.32)	0.51 (0.35)	-0.00 (0.17)	0.02 (0.20)	-0.17*** (0.06)
Observations	10,937	10,926	10,929	736	700	680	680	648	629
<i>Panel B: Webb Measure of AI Exposure</i>									
Market AI Exposure, 2010	0.10 (0.15)	0.18 (0.17)	0.11 (0.09)	0.00 (0.17)	0.11 (0.21)	-0.17 (0.29)	0.11 (0.08)	-0.05 (0.10)	-0.02 (0.04)
Observations	10,981	10,968	10,968	713	704	717	660	653	663
<i>Panel C: SML Measure of AI Exposure</i>									
Market AI Exposure, 2010	-0.14 (0.17)	0.37** (0.18)	-0.01 (0.08)	0.00 (0.25)	-0.17 (0.29)	-0.37 (0.25)	-0.03 (0.08)	0.18 (0.12)	0.04 (0.05)
Observations	10,981	10,968	10,968	713	704	717	660	653	663
<i>Covariates:</i>									
Share of Vacancies in Sales, Admin. in 2010	✓	✓	✓						
<i>Fixed Effects:</i>									
Commuting Zone	✓	✓	✓						
Sector	✓	✓	✓						
3 Digit Occupation				✓	✓	✓	✓	✓	✓

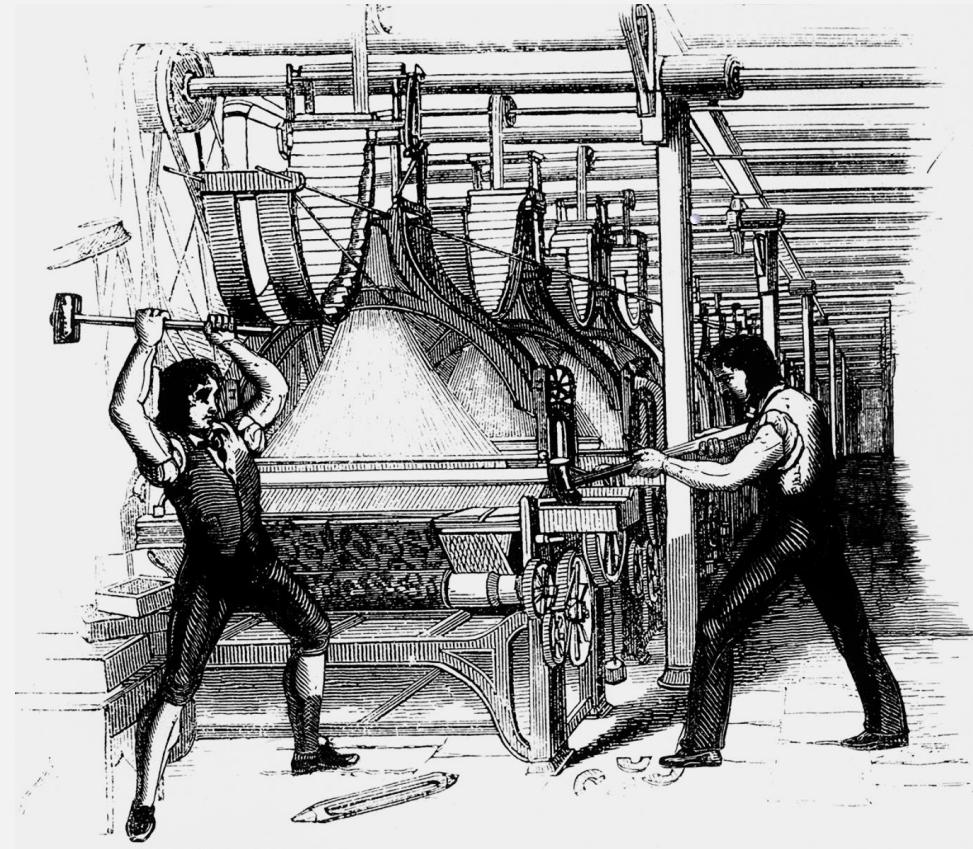
Source: Autor et al.

**What does
history suggest?**

The luddites

The luddites were skilled artisans whose jobs were replaced by machines, and objected by destroying them

Craft



The luddites

The luddites were skilled artisans whose jobs were replaced by machines, and objected by destroying them

Today we make fun of them: eventually their wages recovered!

But may be that is not fair to them

Craft

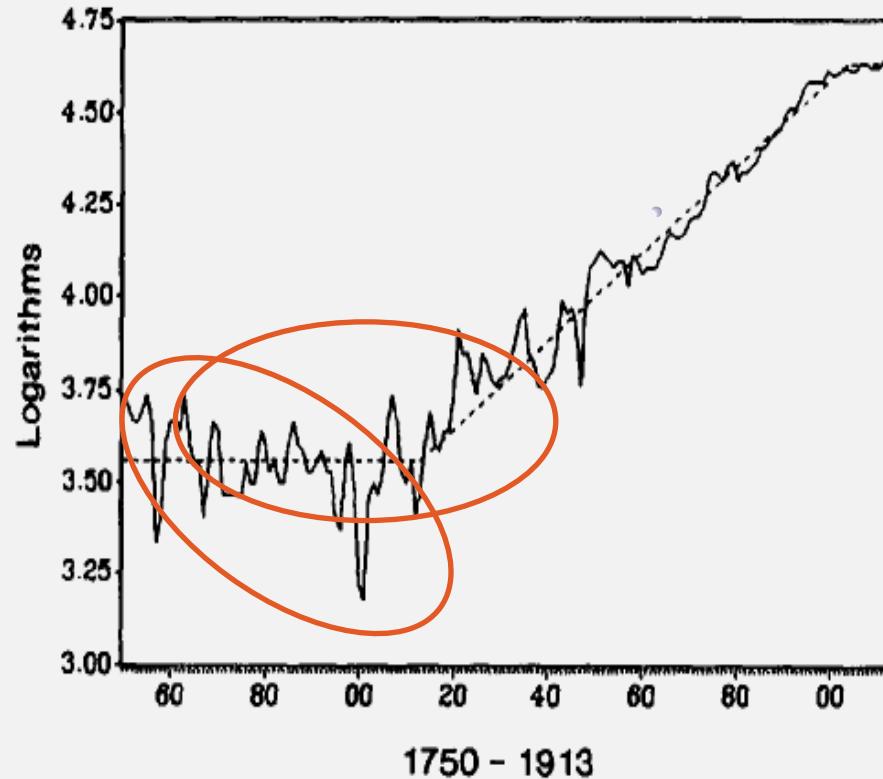


FIG. 2. "Cost of living" real wages (with segmented trend).

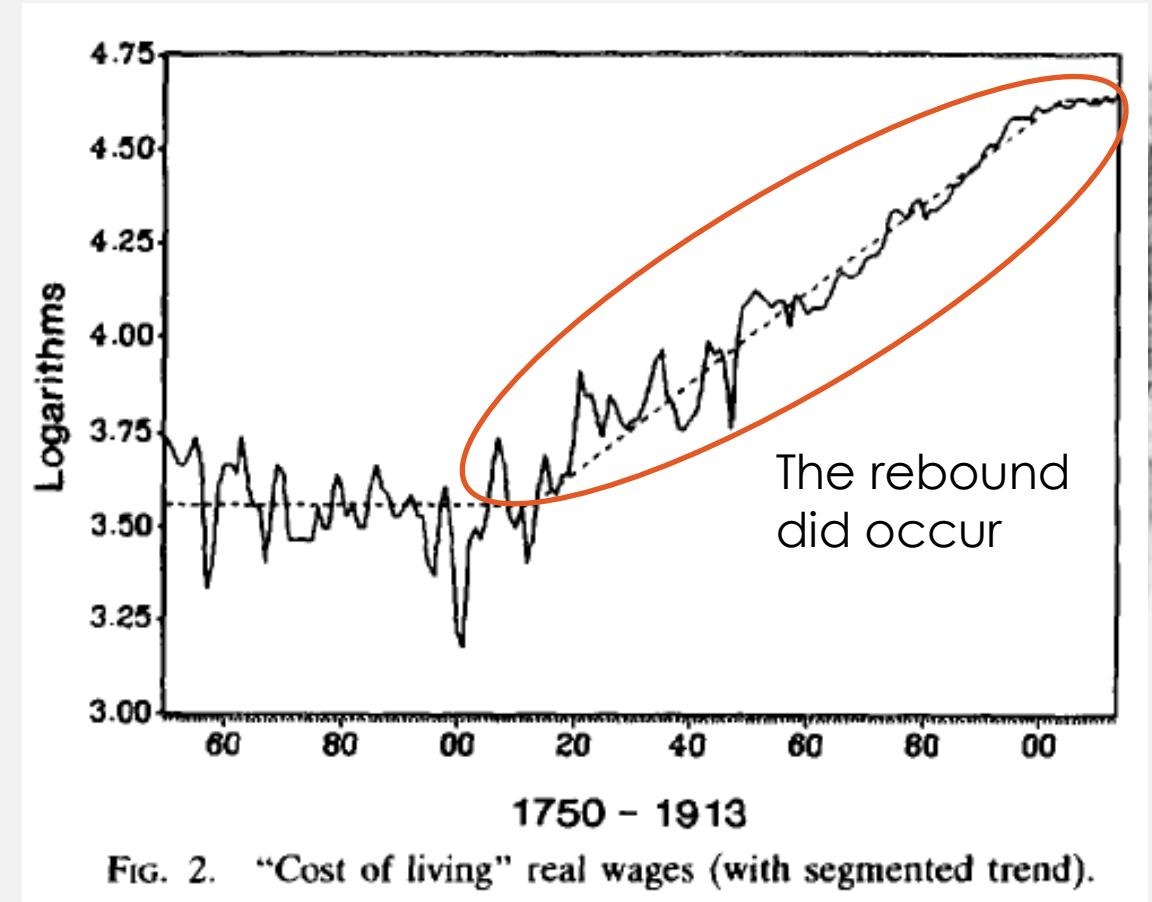
Wages almost halved from 1750 to 1802

Level of 1750 only durably recovered by 1820

The original “hard times”

This book is titled for Dickens
“Hard Times”

Boys in England during this period were significantly undernourished compared to even slaves in the US South.



But there is no law of economics to guarantee it will always work out that way.

The first IT revolution: Hollowing out of mid-level occupations

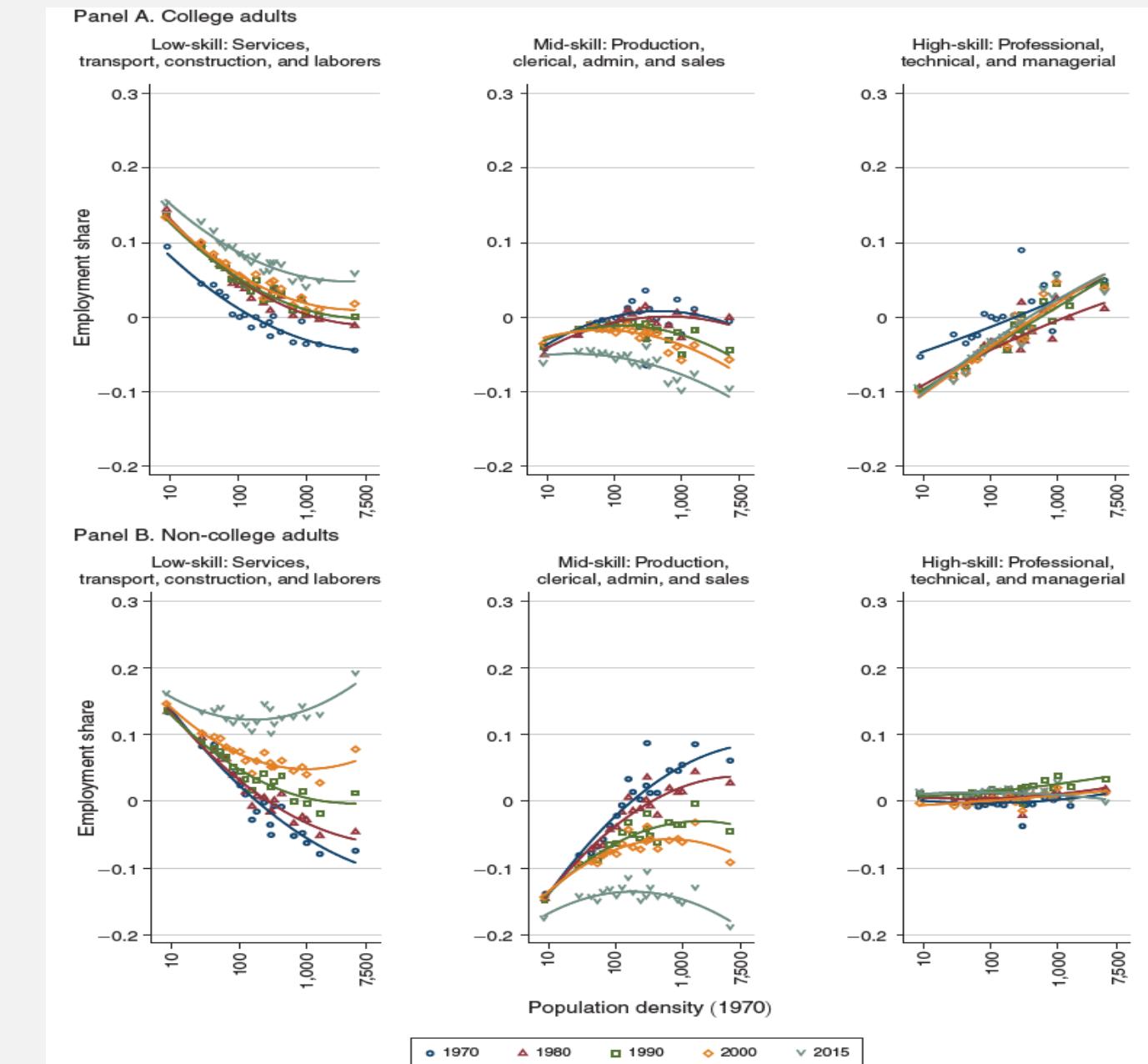


FIGURE 8. OCCUPATIONAL EMPLOYMENT SHARES AMONG (A) COLLEGE ADULTS AND (B) NON-COLLEGE ADULTS BY COMMUTING ZONE POPULATION DENSITY, 1970–2015: LEVEL RELATIVE TO 1970 MEAN

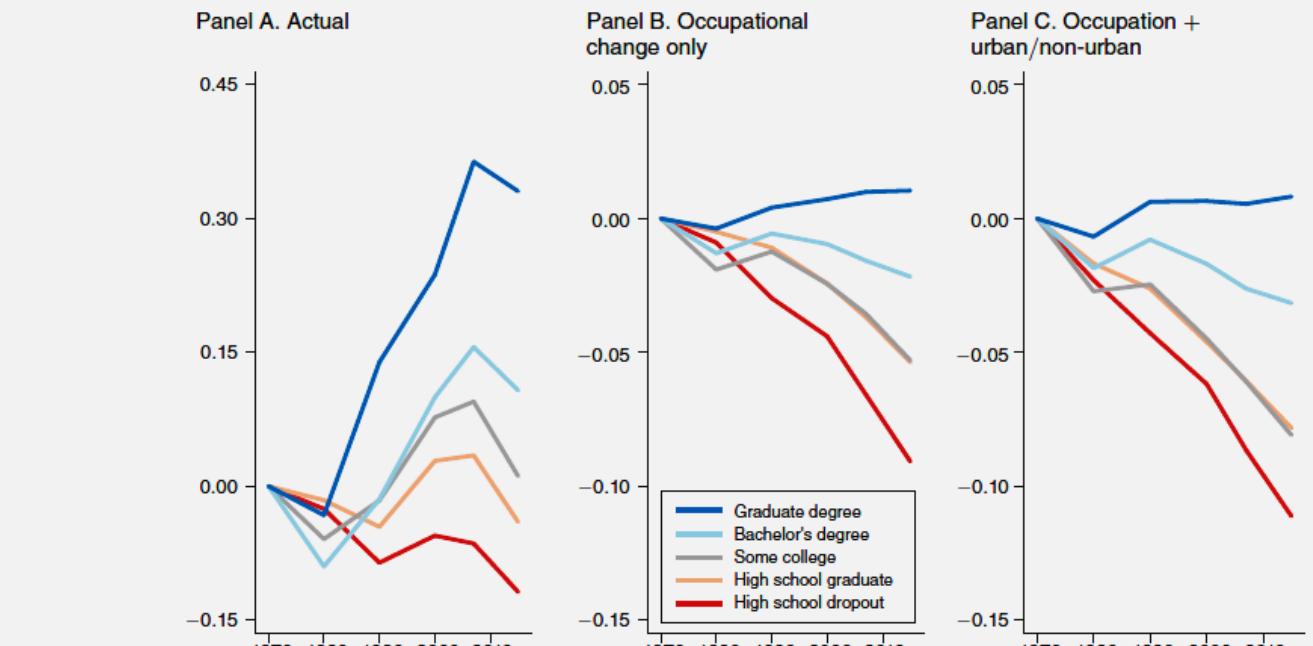
Source: Autor, Ely lecture

Impact on wages

Imagine that the wage for each occupation (panel B) or occupation*sector (panel C) stayed the same

The only thing that changes is the fraction of people in each category that are in each occupation

How would wages have evolved for different groups?



Source: Autor, Ely lecture

Occupational reallocation accounts for a substantial share of the decline in wages for low skills people

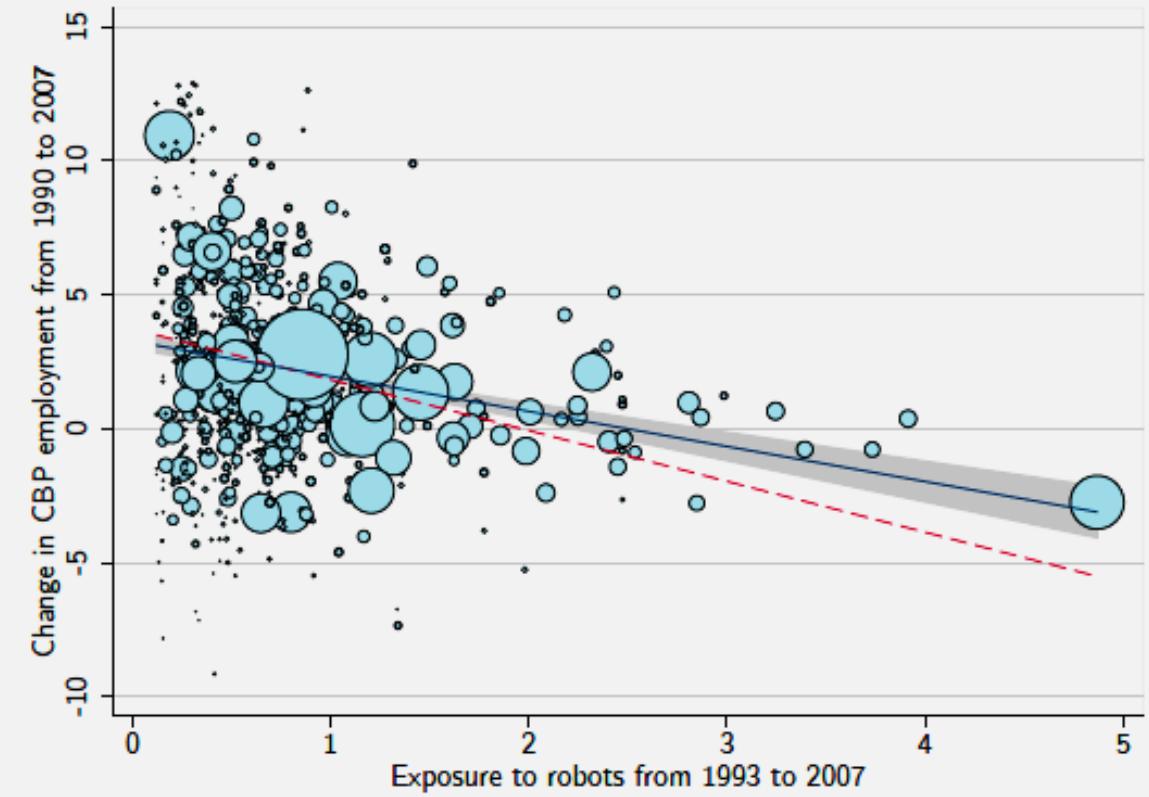
But not the increase in wage for the college educated!

The impact of industrial robots

Since workers are not moving, we can use the same strategy as for trade to measure the impact of automation

Exposure to industrial robots as a function of the industry mix in the commuting zone

More robots, fewer jobs



Source: Acemoglu Restrepo

“so – so” Automation



Daron Acemoglu observes that much of automation today is devoted to automate existing tasks as opposed to invent new activities or do things better

The tax code tends to be favorable to robots, compared to workers

And robots are much less demanding than workers

So employers may decide to replace workers with machines even if they are not more productive

Remember the migrants replaced by machines when they left, not by native workers

What about a robot tax?

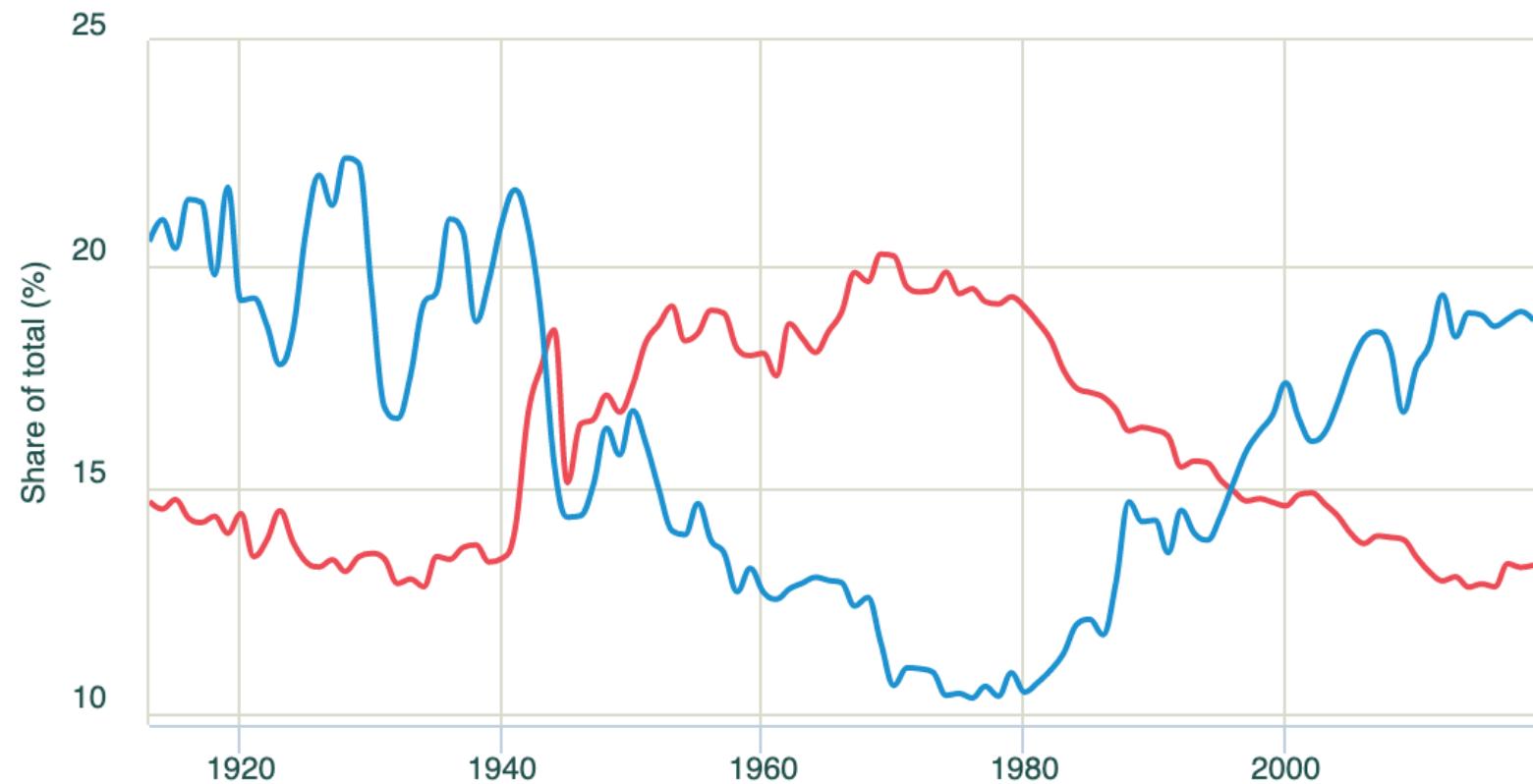
- Bill Gates
- European Parliament
- Korea

Difficulty is to identify a “robot”

Robots, like trade, are probably here to stay: we do need to help workers deal with the disruption they will cause. But inequality has not waited for them to increase....

The great reversal

Income inequality, USA, 1913-2019

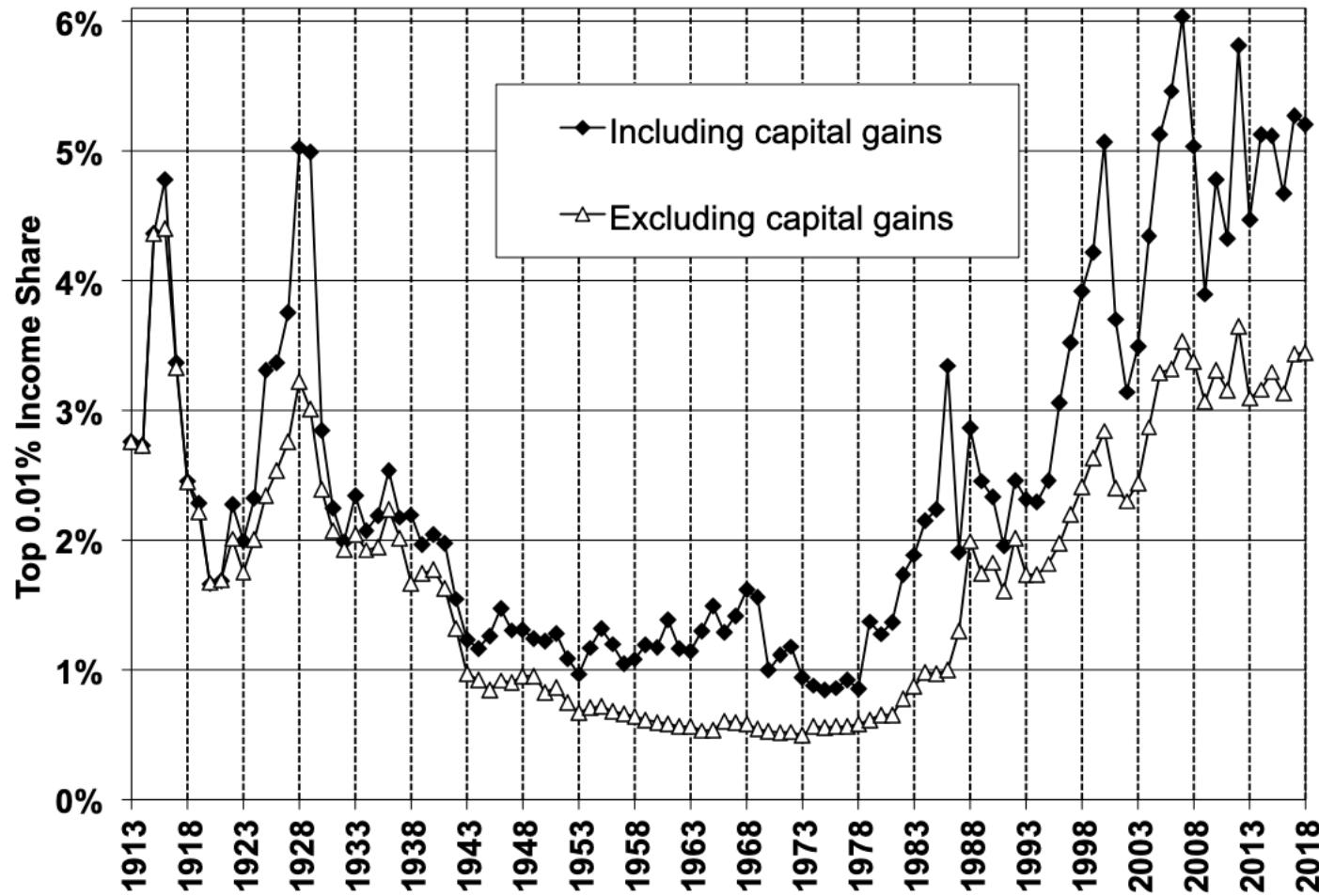


— Pre-tax national income | Bottom 50% | share | adults | equal split

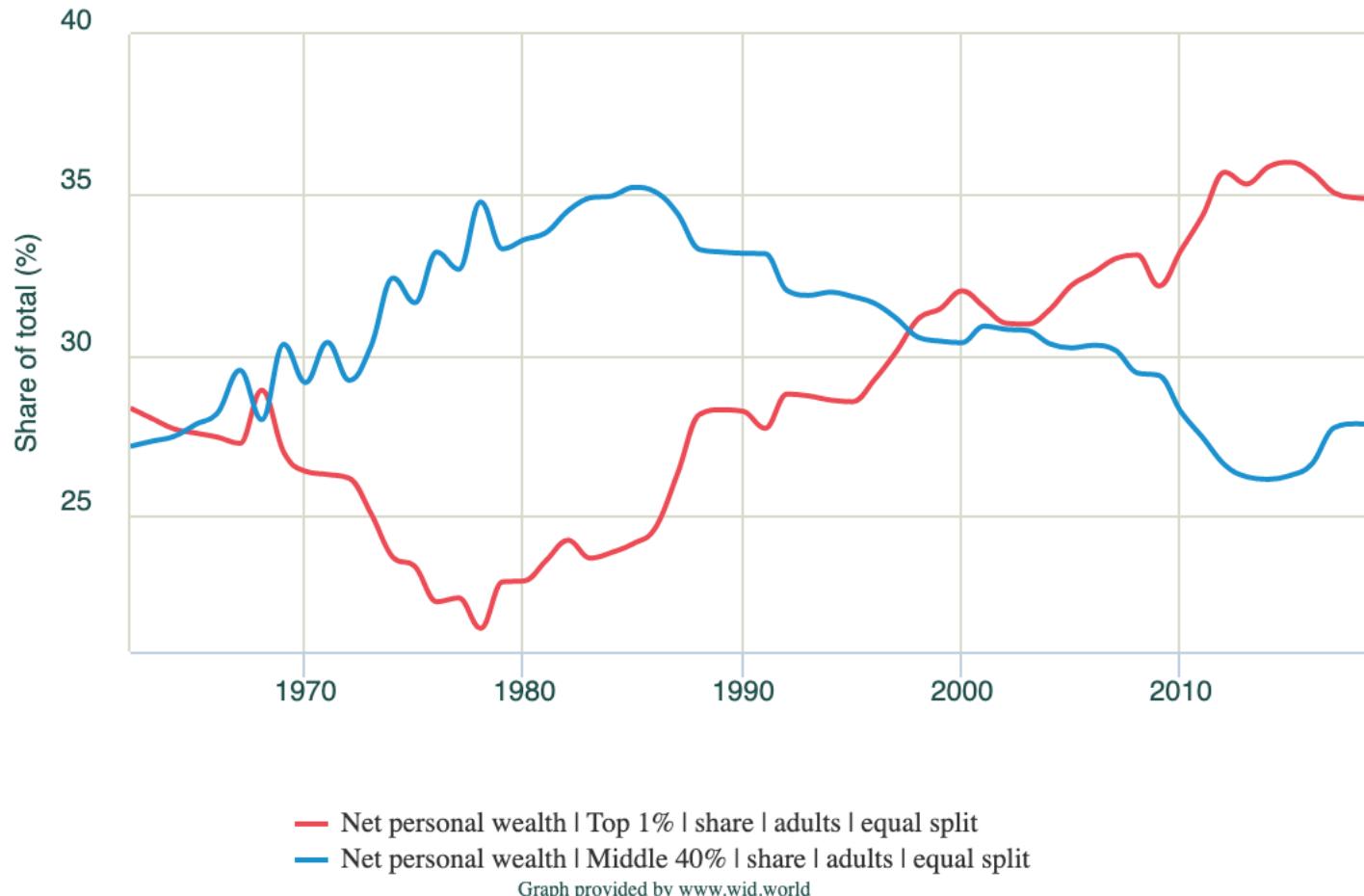
— Pre-tax national income | Top 1% | share | adults | equal split

Graph provided by www.wid.world

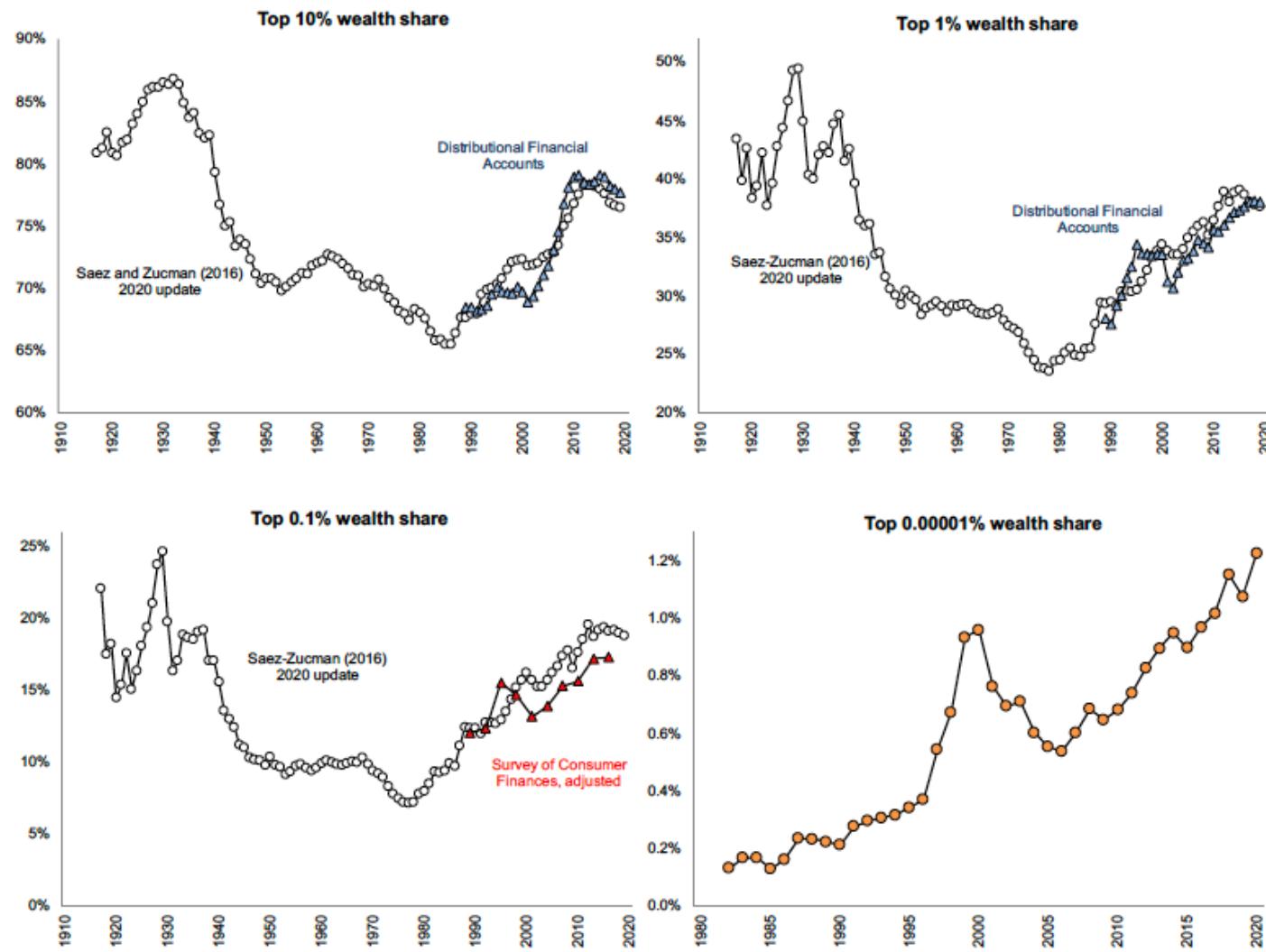
The Top 0.01% Income Share, 1913-2018



Wealth Inequality, USA, 1962-2019

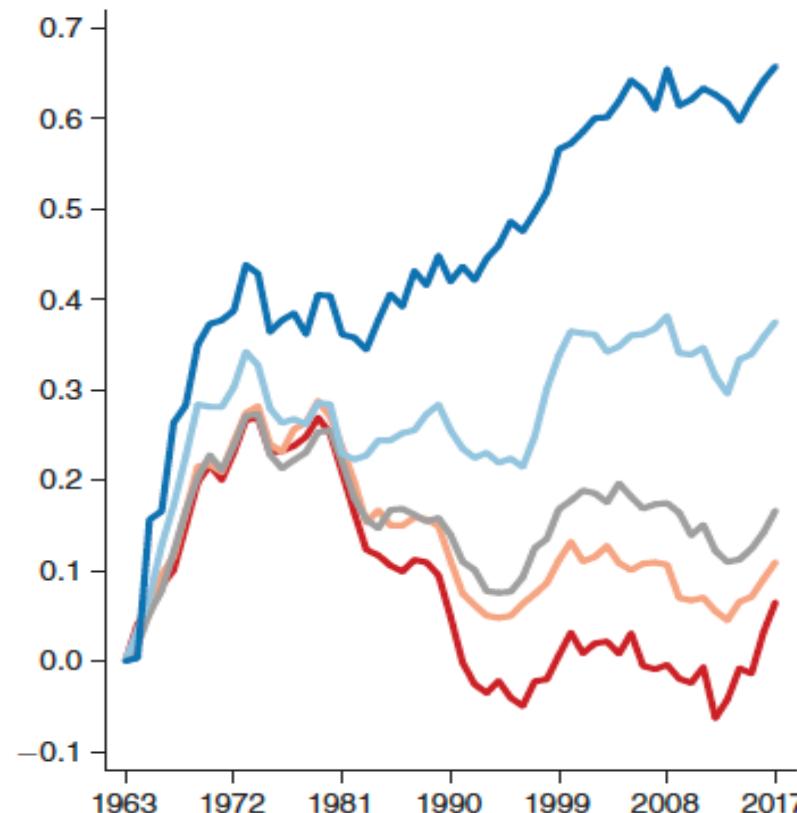


Top Wealth Shares in the United States: Comparing Estimates

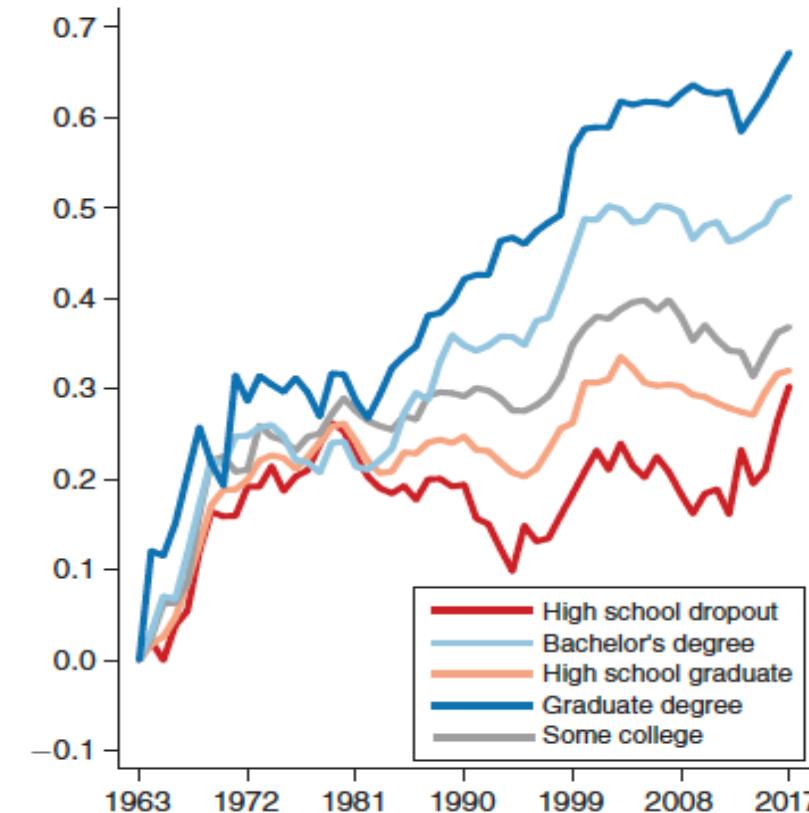


Cumulative Change in Real Weekly Earning of Working-Age Adults 18-64, 1963-2017

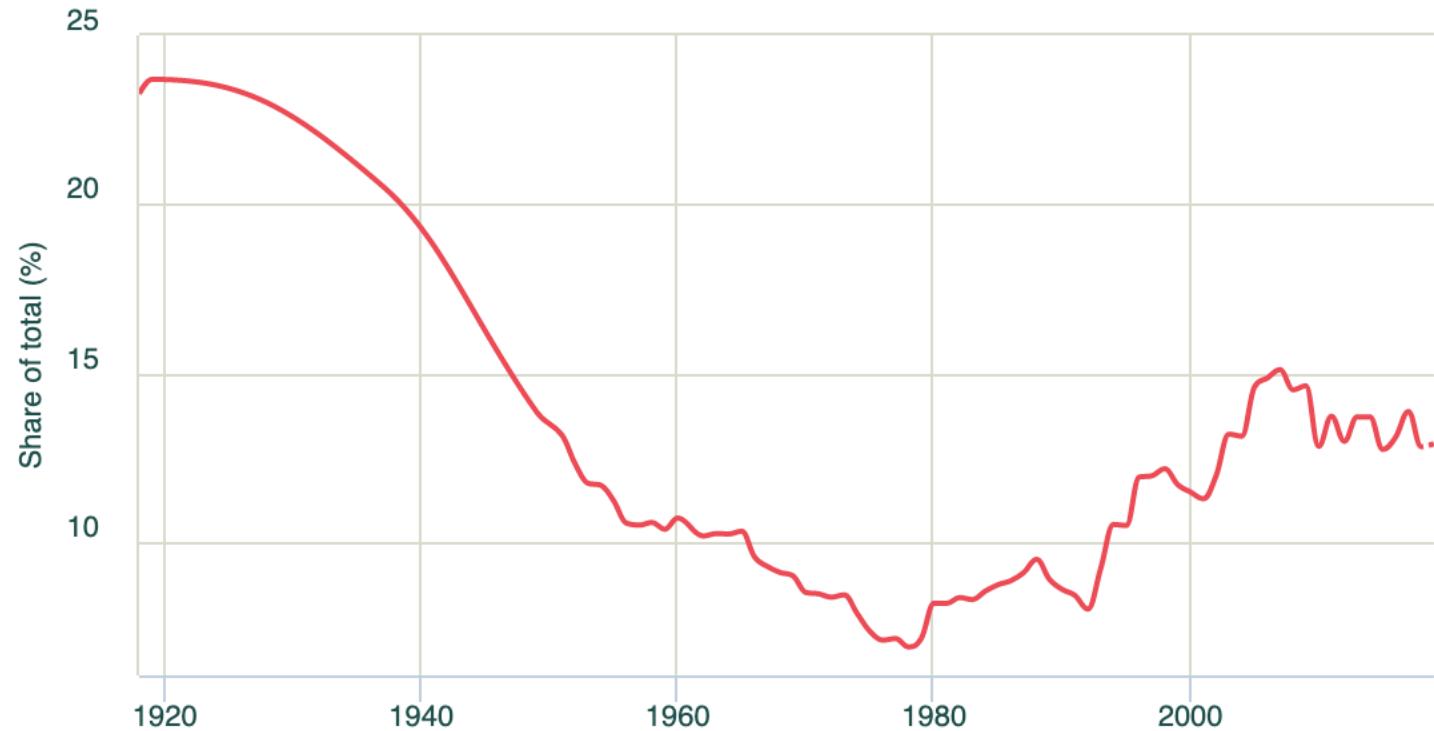
Panel A. Men



Panel B. Women



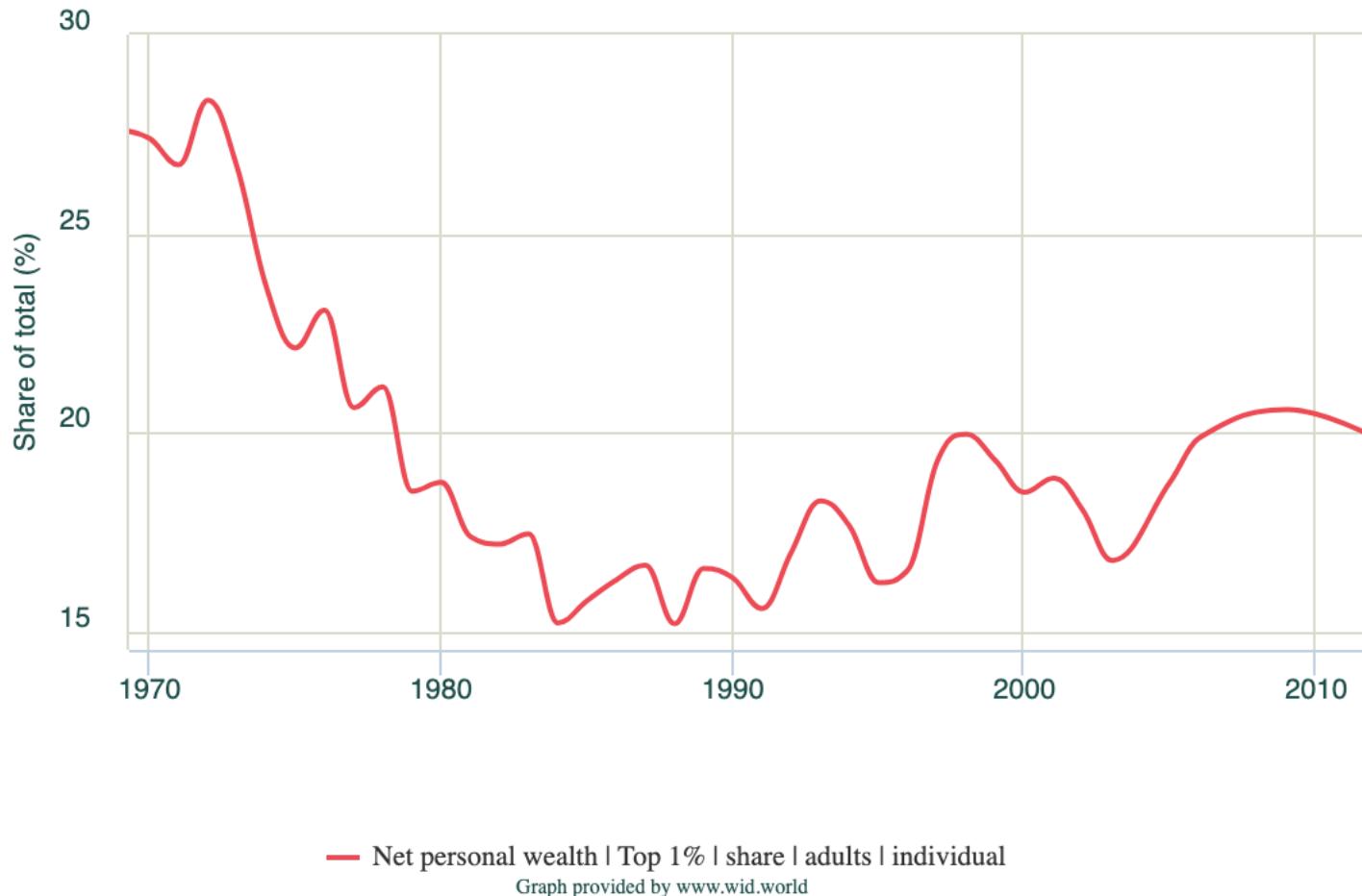
Top 1% National Income Share, United Kingdom, 1918-2019



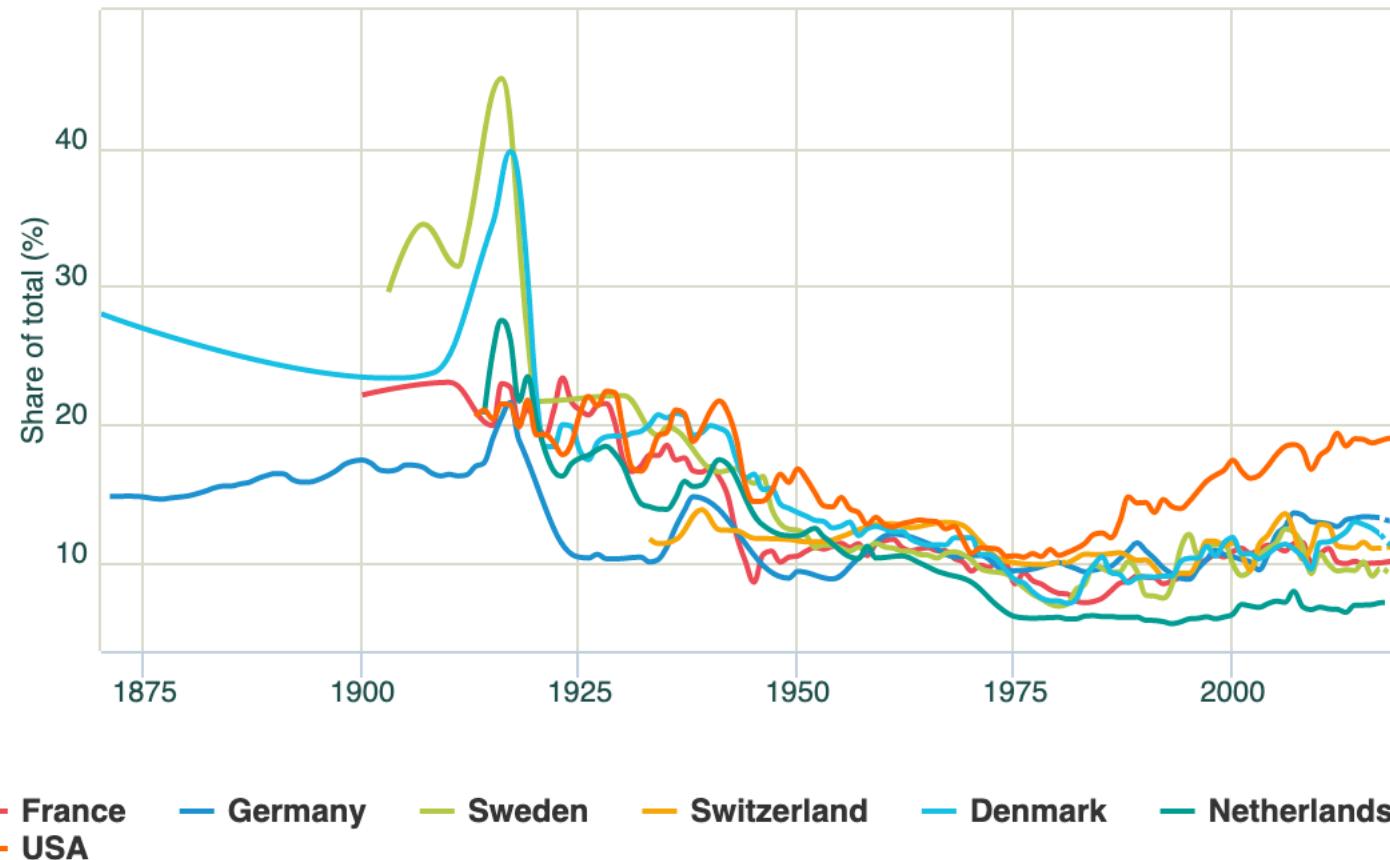
— Pre-tax national income | Top 1% | share | adults | equal split

Graph provided by www.wid.world

Top 1% Net Personal Wealth Share, United Kingdom, 1970-2012



Top 1% National Income Share



Graph provided by www.wid.world

The billion dollar question

What happened??

A fundamental political change



Photo: mark reinstein | Shutterstock.com

Tax rates

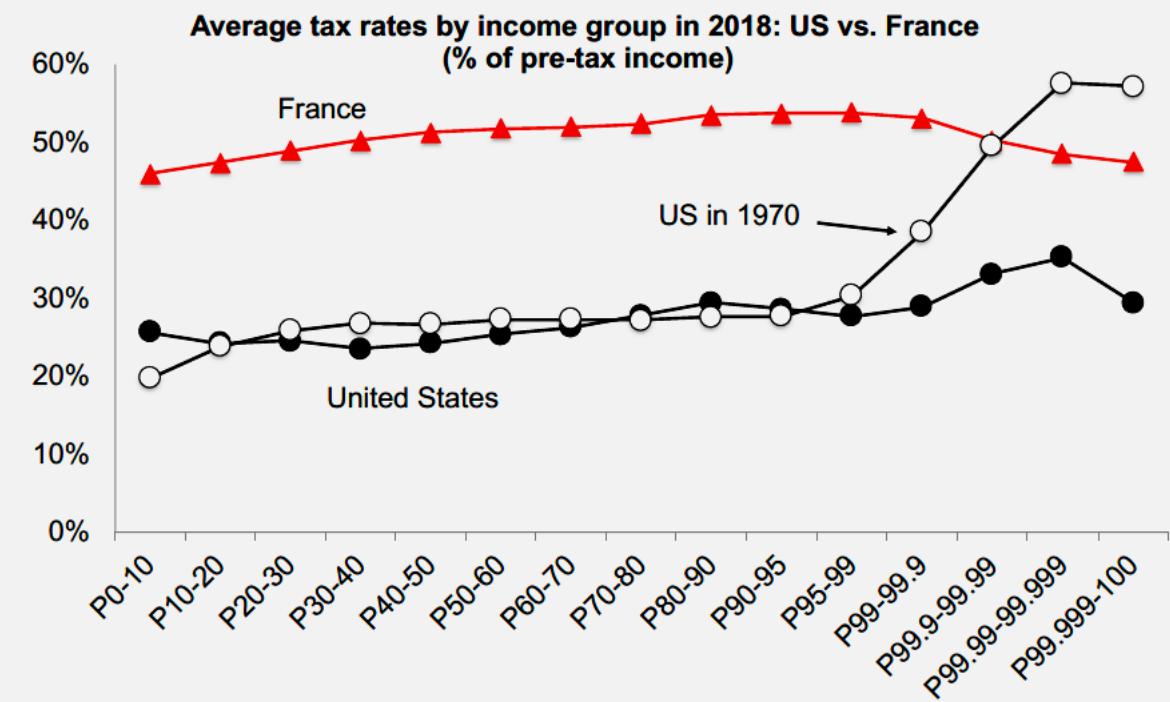
Federal Tax Rates by Income Group from 1960 to 2004

Income Groups	<i>Average federal tax rates (percent)</i>					
	1960	1970	1980	1990	2000	2004
Full population	21.4	23.3	26.6	25.8	27.4	23.4
P20–40	13.9	18.5	16.3	16.2	13.1	9.4
P40–60	15.9	20.2	21.4	21.0	20.0	16.1
P60–80	16.7	20.7	24.5	24.3	23.9	20.5
P80–90	17.4	20.5	26.7	26.2	26.4	22.7
P90–95	18.7	21.4	27.9	27.9	28.7	24.9
P95–99	23.5	25.6	31.0	28.6	31.1	27.2
P99–99.5	34.0	36.1	37.6	31.5	35.7	31.3
P99.5–99.9	41.4	44.6	43.0	33.0	38.4	33.0
P99.9–99.99	55.3	59.1	51.0	34.3	40.2	34.1
P99.99–100	71.4	74.6	59.3	35.4	40.8	34.7

Notes: The table displays the average federal tax rate (including individual, corporate, payroll, and estate) for various groups of the income distribution, for various years. 2004 figures are based on 2004 tax law applied to 2000 incomes adjusted for economic growth.

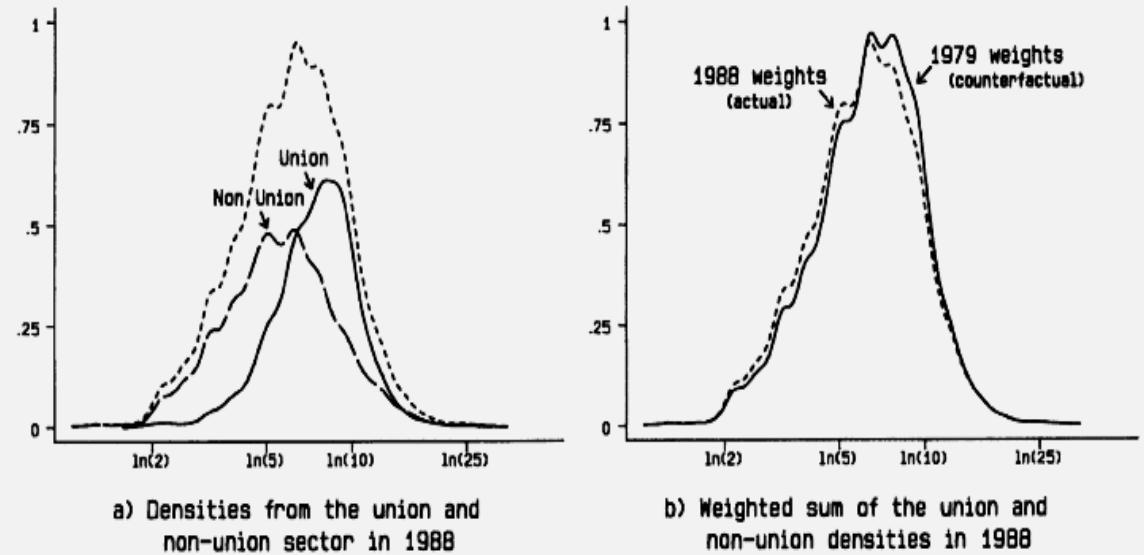
Progressivity: 1970 vs 2018

Average Tax Rates by Income Group in 2018: US vs. France (% of pre-tax income)



The decline of Unions

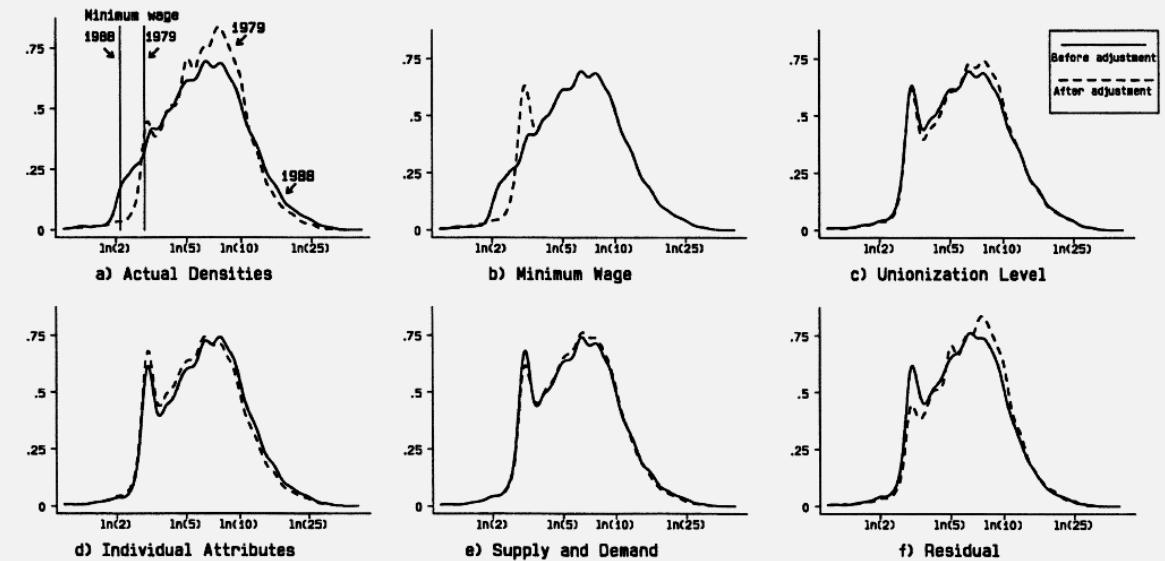
An Illustration of the Estimation of the Effect of Unions for Male High School Graduates with 10 to 30 Years of Experience



Source: Dinardo, Fortin, Lemieux

Union and the minimum wage

1998 Density of Men's Real Log Wages (\$1979) adjusted for the indicated factors



Source: Dinardo, Fortin, Lemieux

Wait, but other things were happening at the same time...

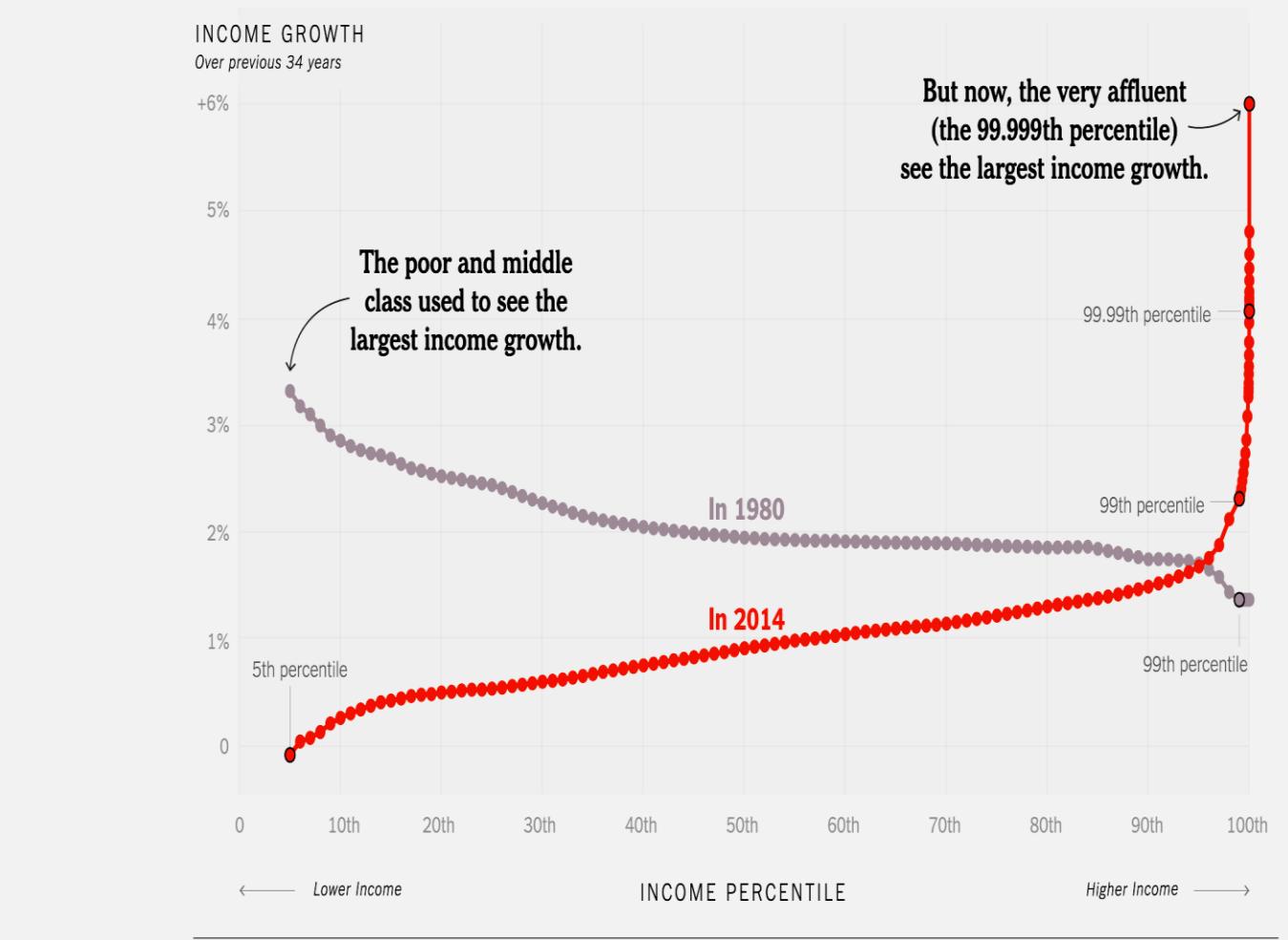
China and India enter world trade

Computerization & technological change

- Skill biased technological change
- As we have seen, hollowing out of the middle class due to occupation

But it is only the very top income which grew so fast

Can it still be explained by technological progress?



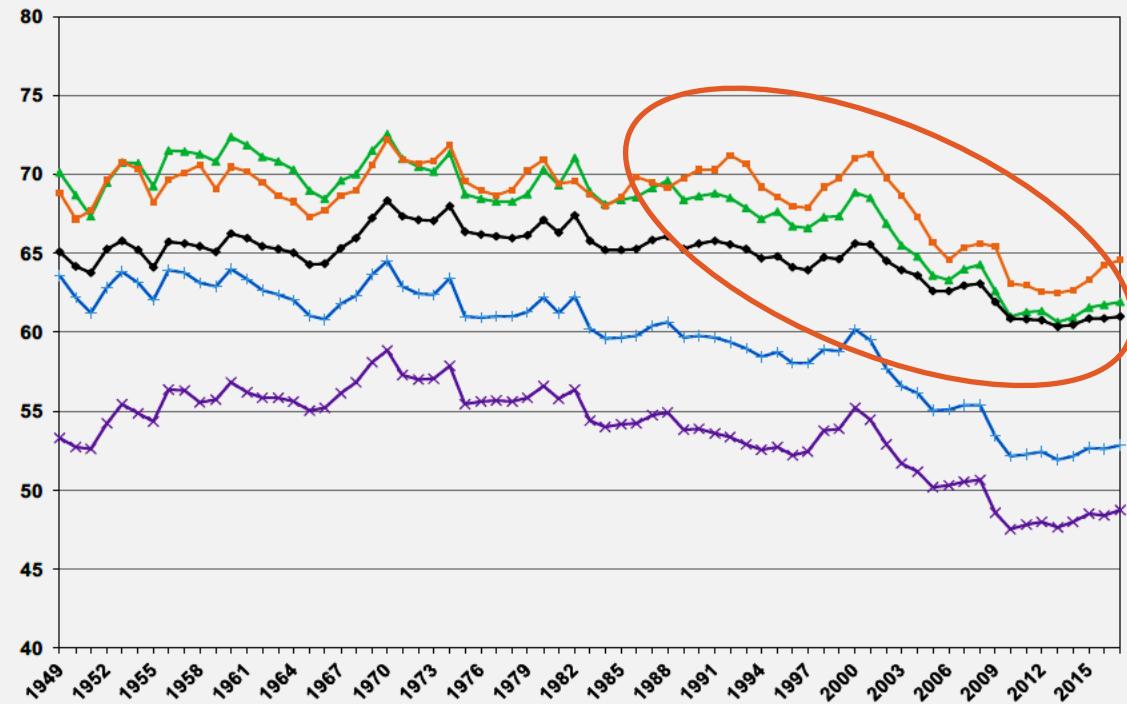
Source: Graphic design by David Leonhard, from data by Piketty, Saez, Zucman

Drop in the labor share

Fast drop in labor share especially since 2000

Business sector excluding real estate services
Total economy
Business sector without self-employment correction

Non financial companies
Business sector



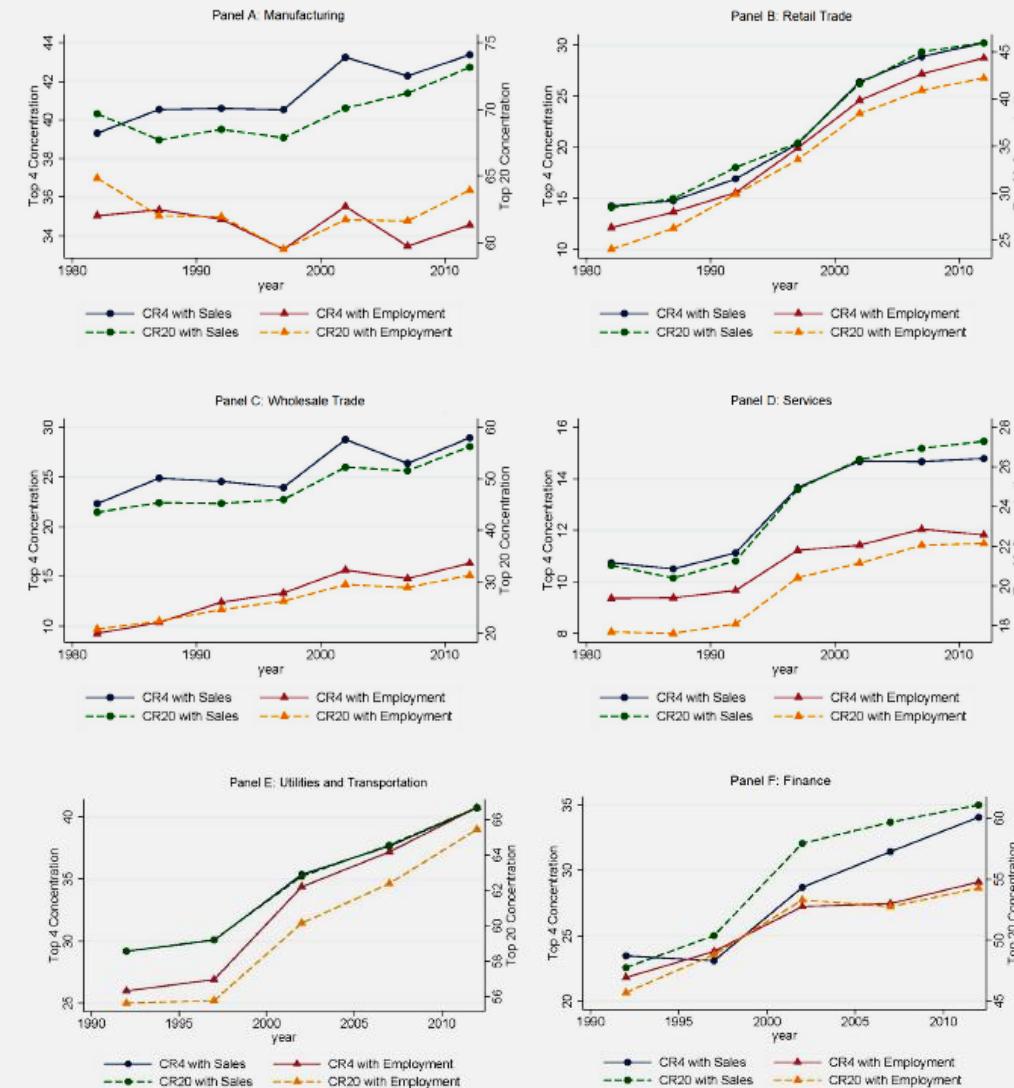
The labor share in the United states

Source: Philippon et al.

Winner take all? The rise of the superstar firm

Concentration has increased,
especially in sectors with fast
gains in productivity

The result of automation,
globalization, network
effects, etc.



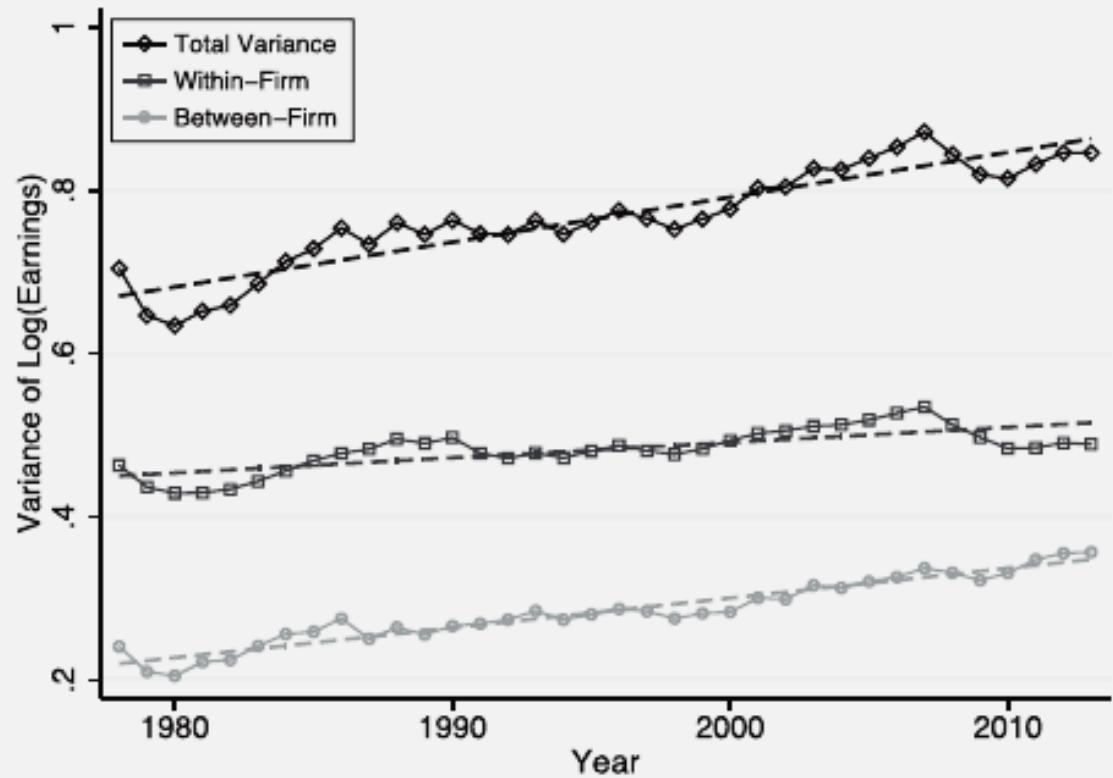
Source: Autor et al.

Why it matters

Two thirds of the overall increase in wage inequality can be explained by inequality in salary between firms

The highest paid workers increasingly work with other higher paid workers

Overall Decomposition



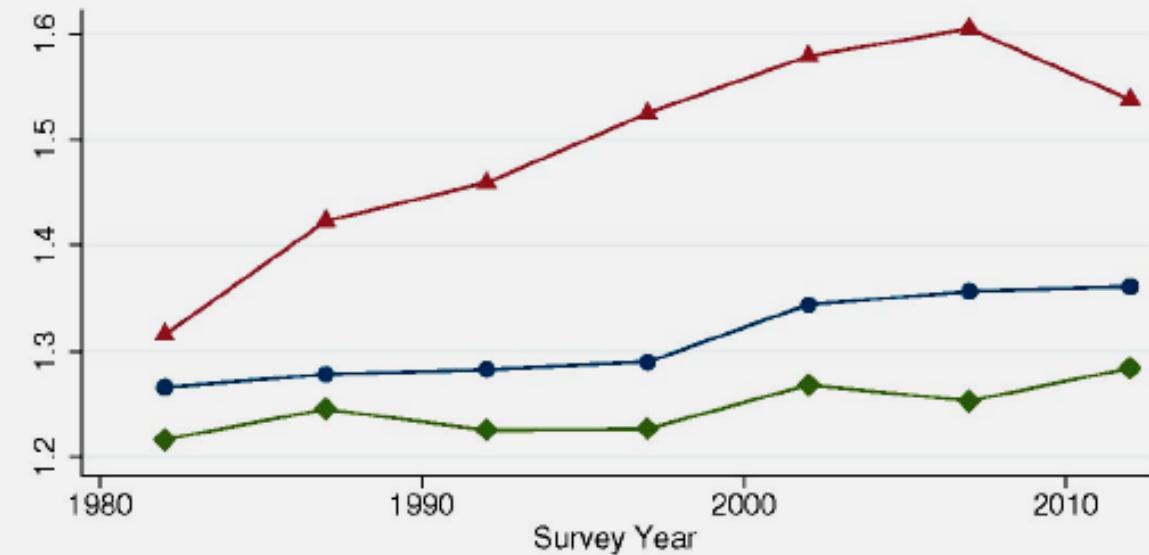
Source: Song et al.

More concentration, more mark up

And more mark up, more profits
distributed to shareholders
(as opposed to salaries)

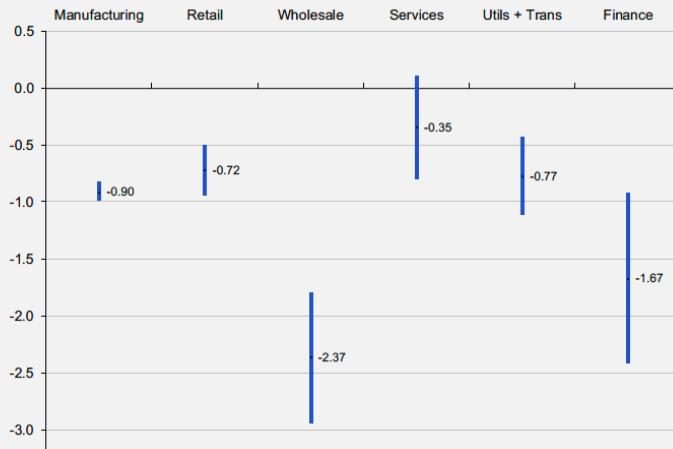
Accounting Measure of Markup

Unweighted Weighted
Median



Large firms and firms in more concentrated industries have lower labor share

The Relationship Between Firm Size and Labor Share



The Relationship Between Change in Labor Share and the Change in Concentration Across Six Sectors



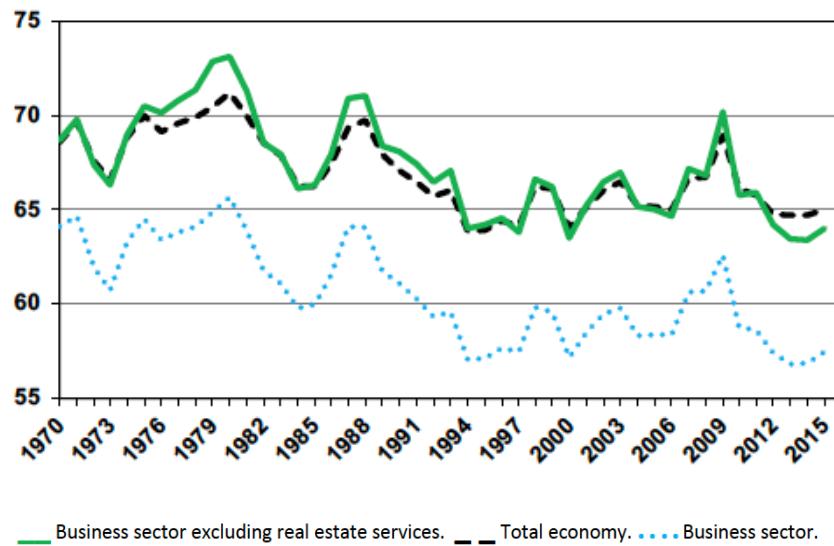
Large firms pay their CEOs more

Panel Evidence: CEO Pay, Own Firm Size, and Reference Firm Size

	ln(Total compensation)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Top 1000				Top 500			
ln(Market cap)	0.37 (0.022) (0.016)	0.37 (0.020) (0.015)	0.37 (0.026) (0.015)	0.26 (0.056) (0.043)	0.38 (0.039) (0.020)	0.32 (0.039) (0.019)	0.33 (0.043) (0.026)	0.23 (0.074) (0.057)
ln(Market cap of firm #250)	0.72 (0.053) (0.066)	0.66 (0.054) (0.064)	0.68 (0.060) (0.061)	0.78 (0.052) (0.083)	0.73 (0.084) (0.089)	0.73 (0.085) (0.089)	0.74 (0.094) (0.088)	0.84 (0.080) (0.081) (0.11)
GIM governance index				0.022 (0.010) (0.003)			0.023 (0.016) (0.007)	
Industry fixed effects	No	Yes	Yes	No	No	Yes	Yes	No
Firm fixed effects	No	No	No	Yes	No	No	No	Yes
Observations	7,936	7,936	6,393	7,936	4,156	4,156	3,474	4,156
R ²	0.23	0.29	0.32	0.60	0.20	0.29	0.32	0.63

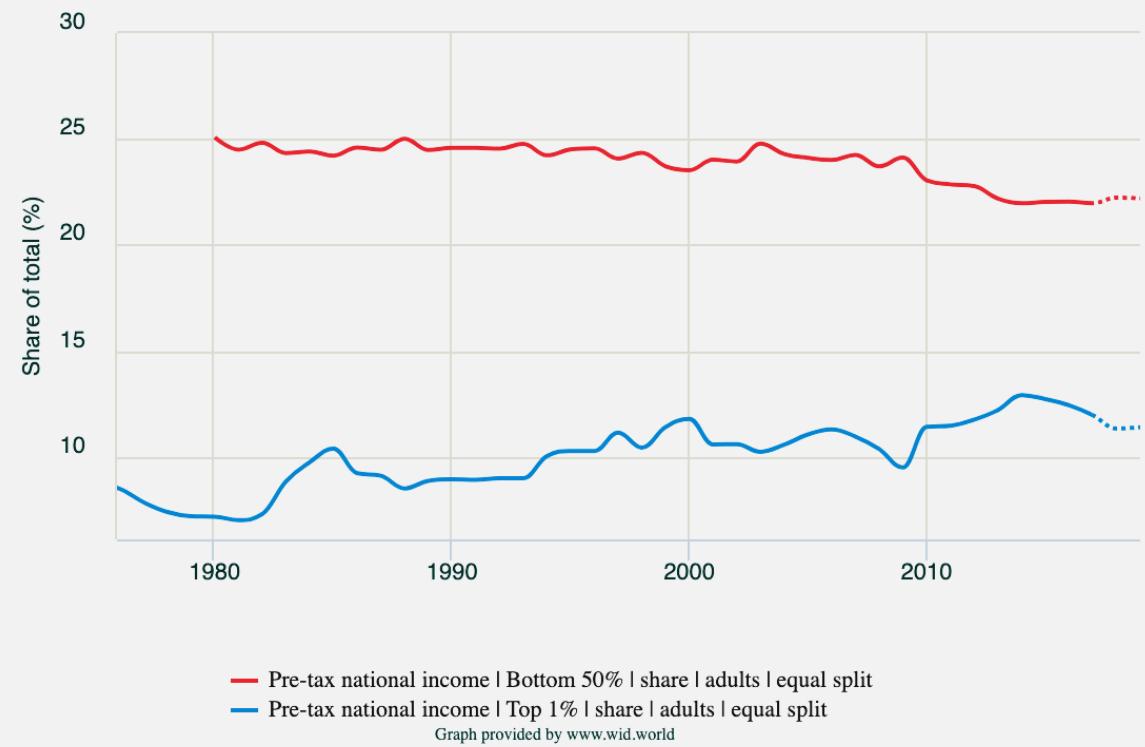
Source: Gabaix and Landier

But what about Denmark?



Overall, the labor share did not fall since the 2000s in Denmark

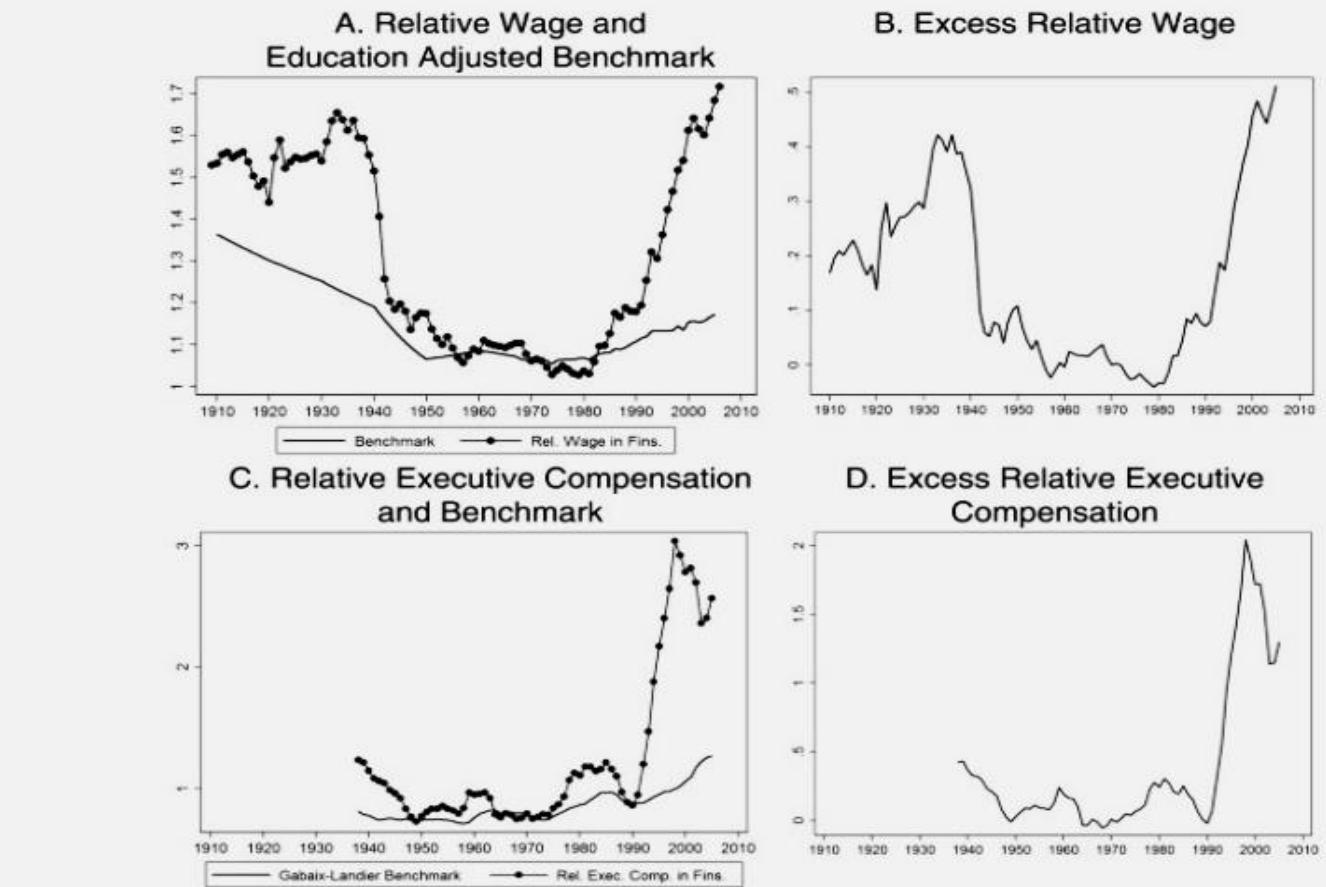
Income Inequality, Denmark, 1976-2019



And inequality did not go up nearly as much...

The role of finance

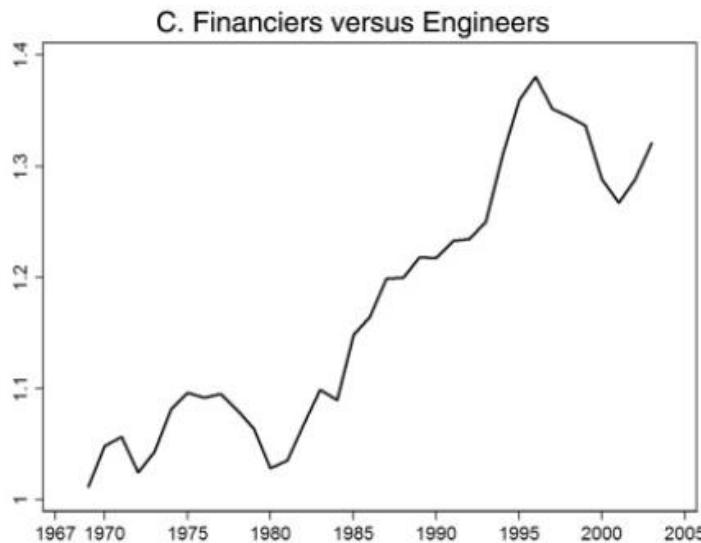
No matter how you look at it, people in finance are overpaid



Source: Philippon and Resheff

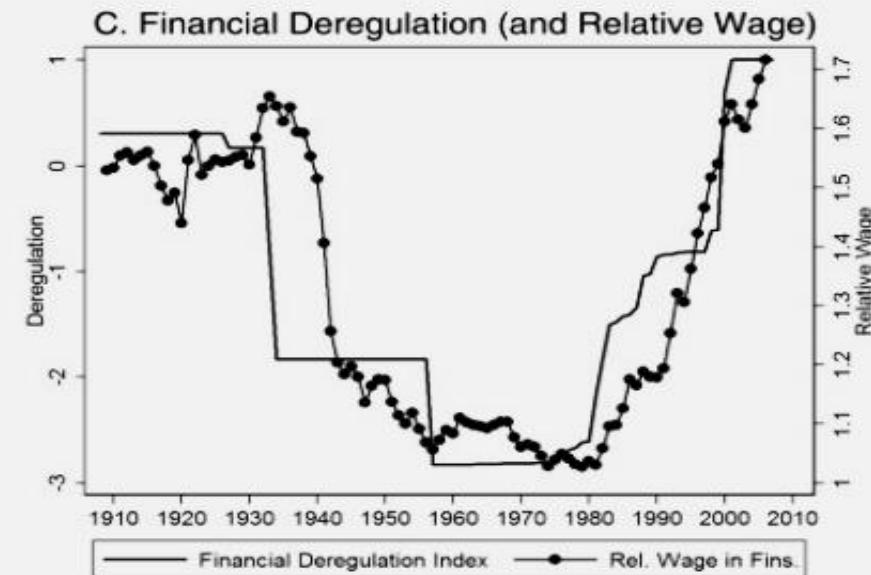
Rentiers or superstars?

Financiers make more than engineers....



Fama and French: The average mutual fund underperforms the market by the cost in expense ratio

Explanatory Variables



Financial deregulation is suspiciously concomitant

Source: Philippon & Resheff

Financiers are increasing their share of the top 1%

Table 6 -- Percentage of national income (excluding capital gains) received by top 1 percent, and each primary taxpayer occupation in top 1 percent

	1979	1993	1997	1999	2001	2002	2003	2004	2005
Share of national income going to top 1 percent	9.18	12.70	14.43	15.41	15.17	14.64	14.99	16.17	16.97
Executives, managers, and supervisors (non-finance)	3.65	4.98	5.93	6.19	5.55	5.26	5.35	5.86	6.35
Financial professions, including management	0.82	1.55	1.96	2.32	2.53	2.34	2.35	2.67	2.77
Lawyers	0.61	1.00	0.96	0.98	1.13	1.13	1.22	1.25	1.22
Medical	1.29	2.19	1.88	1.58	1.77	1.90	1.96	1.91	1.85
Real estate	0.17	0.17	0.25	0.34	0.38	0.41	0.40	0.51	0.57
Skilled sales (except finance or real estate)	0.34	0.44	0.51	0.51	0.48	0.46	0.47	0.50	0.53
Arts, media, sports	0.17	0.34	0.38	0.44	0.43	0.42	0.45	0.44	0.42
Entrepreneur not elsewhere classified	0.31	0.33	0.36	0.38	0.38	0.34	0.38	0.40	0.47
Computer, math, engineering, technical (nonfinance)	0.31	0.35	0.51	0.78	0.67	0.56	0.62	0.57	0.60
Business operations (nonfinance)	0.18	0.25	0.35	0.39	0.45	0.40	0.37	0.47	0.48
Professors and scientists	0.10	0.18	0.17	0.17	0.21	0.19	0.21	0.22	0.23
Farmers & ranchers	0.16	0.02	0.08	0.07	0.07	0.05	0.06	0.07	0.08
Pilots	0.04	0.05	0.02	0.02	0.03	0.03	0.03	0.02	0.02
Government, teachers, social services	0.07	0.08	0.06	0.09	0.07	0.09	0.08	0.08	0.09
Blue collar or low-skill service	0.33	0.32	0.36	0.40	0.38	0.39	0.38	0.45	0.49
Not working or deceased	0.48	0.37	0.53	0.61	0.57	0.56	0.52	0.61	0.67
Unknown	0.15	0.10	0.11	0.13	0.11	0.11	0.14	0.14	0.12

The share of finance in the top 1% increased from 9% to 17% since 1979

Same story in the UK

But there is also an indirect effect:
Every CEO pay is indirectly influenced by how much others make in finance:

- Salary benchmarking
- Peer effects
- Board cross-seating

TABLE 2—SECTORAL DECOMPOSITION OF EARNED INCOME CHANGES FOR THE TOP PERCENTILE, 1998–1999 AND 2007–2008

	Level in base year (1)	Δ Total earned income (2)	Δ Wage income (3)	Δ Self-employed income (4)
Total	9.0	2.5	1.7	1.0
Financial intermediation	2.1	1.5	1.1	0.4
Business services	2.9	0.8	0.5	0.3
Manufacturing	0.9	-0.2	-0.2	0.0
Wholesale and retail trade	0.9	-0.1	0.0	-0.1
Health services	0.4	0.3	0.1	0.2
Public services and education	0.1	0.1	0.0	0.0
Construction	0.3	0.0	0.1	0.0
Transport and communication	0.3	0.0	-0.1	0.0
Other industries	1.0	0.1	0.1	0.2

Notes: The first column reports the share of total earned income accruing to the top percentile in 1998–1999. The final three columns report the change in that share between 1998–1999 and 2007–2008.

Source: Authors' calculations from public-use tapes of the *Survey of Personal Incomes*, HMRC.

Bankers, who represent 20% of those in the top 1%, swallowed 60% of the increase in the income of the top 1% in the period

Source: Bell and Van Reenen

Trickle down... on CEO pay

The
Economist

LAST YEAR was a terrible one for travel of any sort. You would not know it from the way some American chief executives trousered pay. Annual filings show that Larry Culp, boss of GE, whose jet-engine business stalled as aviation nosedived, earned \$73m, almost triple his total pay in 2019. Christopher Nassetta, CEO of Hilton, a hotel chain, enjoyed a 161% pay boost, receiving \$55.9m. Norwegian Cruise Line, which described 2020 as the hardest year in its history, more than doubled the compensation of its CEO, Frank Del Rio, to \$36.4m. All three were among the corporate titans who grandly took cuts in their basic pay and/or bonuses during the pandemic. They pocketed far more than they gave up.

Trickle down... on CEO pay

Child: I have an idea to improve my grades. For my next 3 essays, you could pay me 3 dollars for an A, 2 dollars for a B, and 1 dollar for a C or a D

Father: No son, you have to apply yourself for your own good

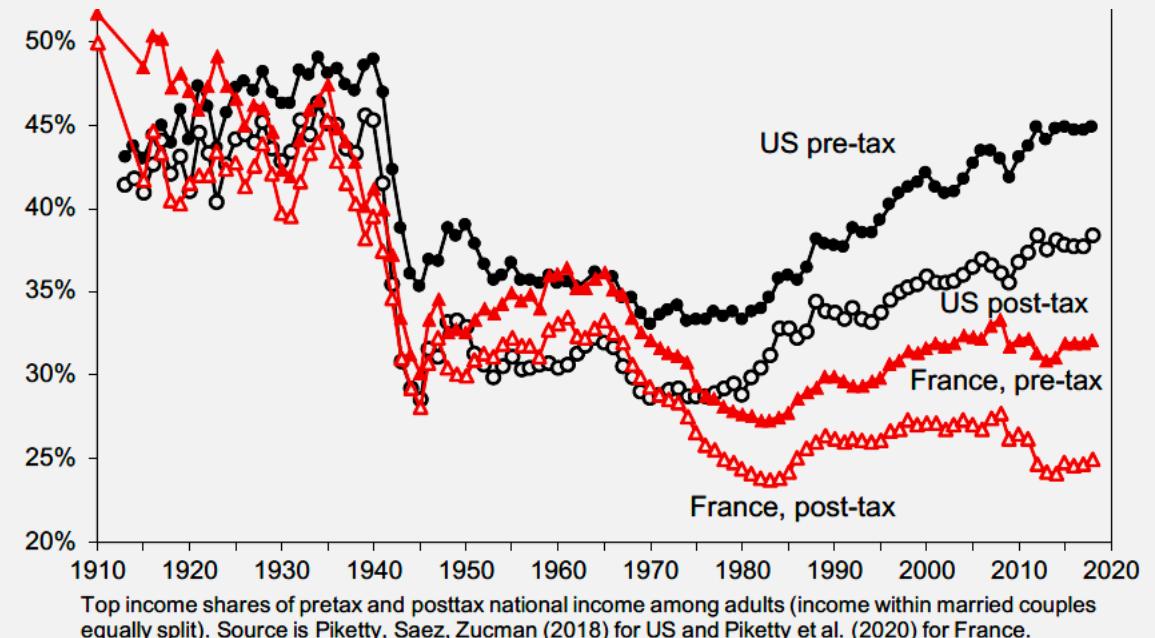
Child: Darn, I could have made an easy three bucks

The
Economist

They did so thanks to a nifty conjuring trick performed in boardrooms across America last year. In effect, many boards airbrushed away the impact of covid-19 on performance-based pay either by removing a quarter or two of bad numbers in order to meet bonus targets, changing the metrics mid-course, or—as with Messrs Culp, Nassetta and Del Rio—by issuing new share grants after the pandemic gutted the previous ones. (Mr Culp and Mr Del Rio also got contract extensions.)

Top tax rates and pre-tax inequality

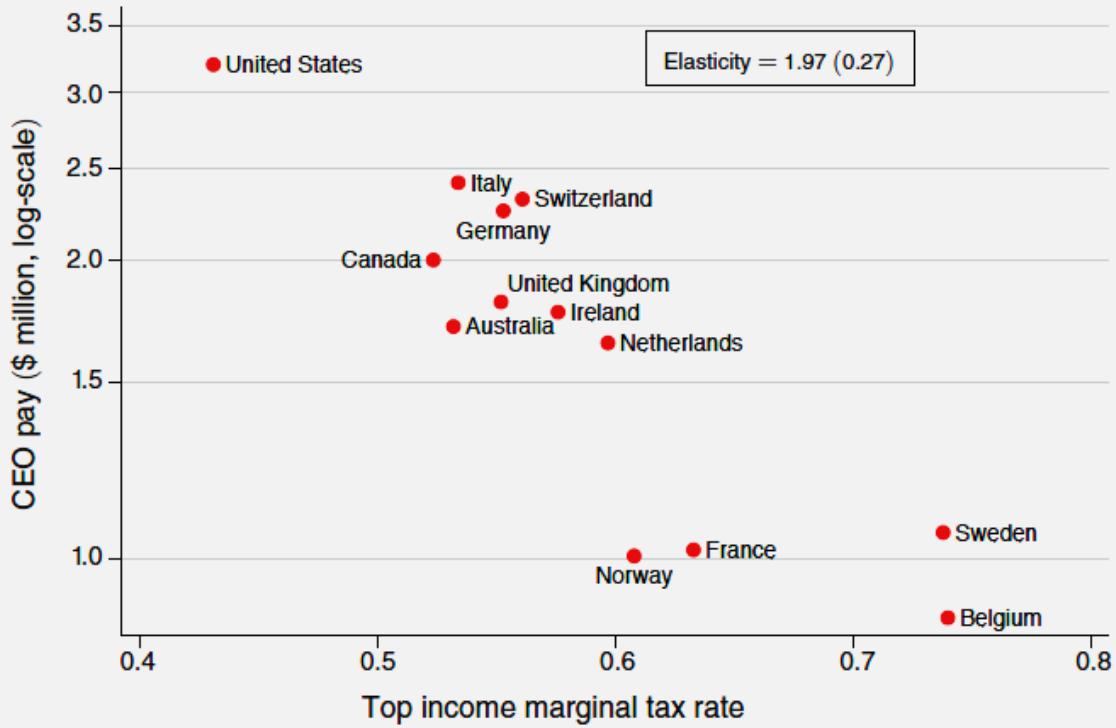
Top 10% Income Shares in the US and France, 1910-2018



Top tax and pre-tax inequality

In countries where top tax rates are high, CEO pay is low

Panel A. Average CEO compensation



Piketty, Saez, Stantcheva

Top tax and pre-tax inequality

In countries where top tax rates are high, CEO pay is low

And in countries where the tax rates declined more, the top income share increased more

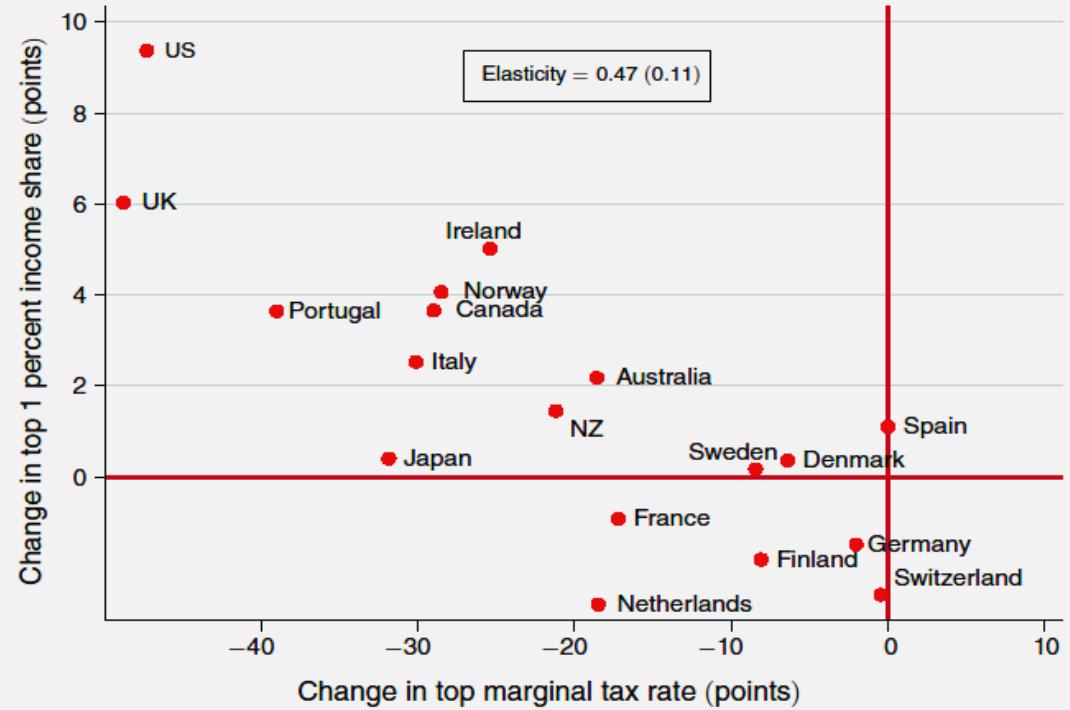
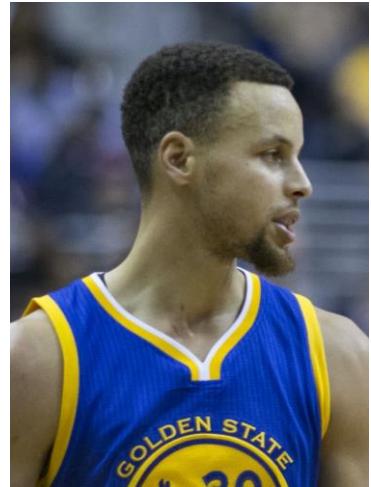


FIGURE 3. CHANGES IN TOP INCOME SHARES AND TOP MARGINAL TAX RATES

Piketty, Saez, Stantcheva

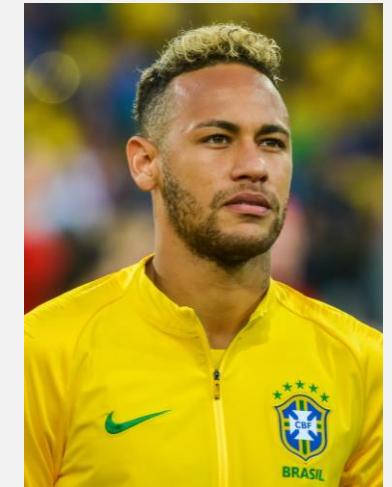
Is Steph Curry lazy?



1. Steph Curry - \$40.23m

In 2020-21, the maximum a NBA team could pay (all) its players was \$117 million.

Top 3 Soccer Players



1. Cristiano Ronaldo - \$105m (2nd overall)

2. Lionel Messi - \$104m (3rd overall)

3. Neymar - \$95.5m (4th overall)

Would higher tax discourage CEO effort?

Probably not: they would care primarily about their position in the wage distribution, which they can still preserve with a tax rate

The undue financial pressure to go to finance might abate ...

Saez-Slemrod: the Reagan tax cuts did not lead to an increase in real effort, just some short run re-allocation...

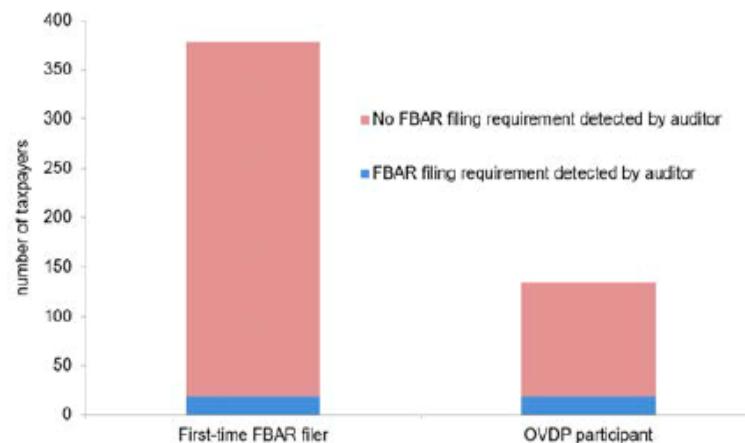
Students who graduated from 2009 onwards were 45% less likely to choose finance than those who graduated between 2006 and 2009 (Pian Shu)

Tax evasion

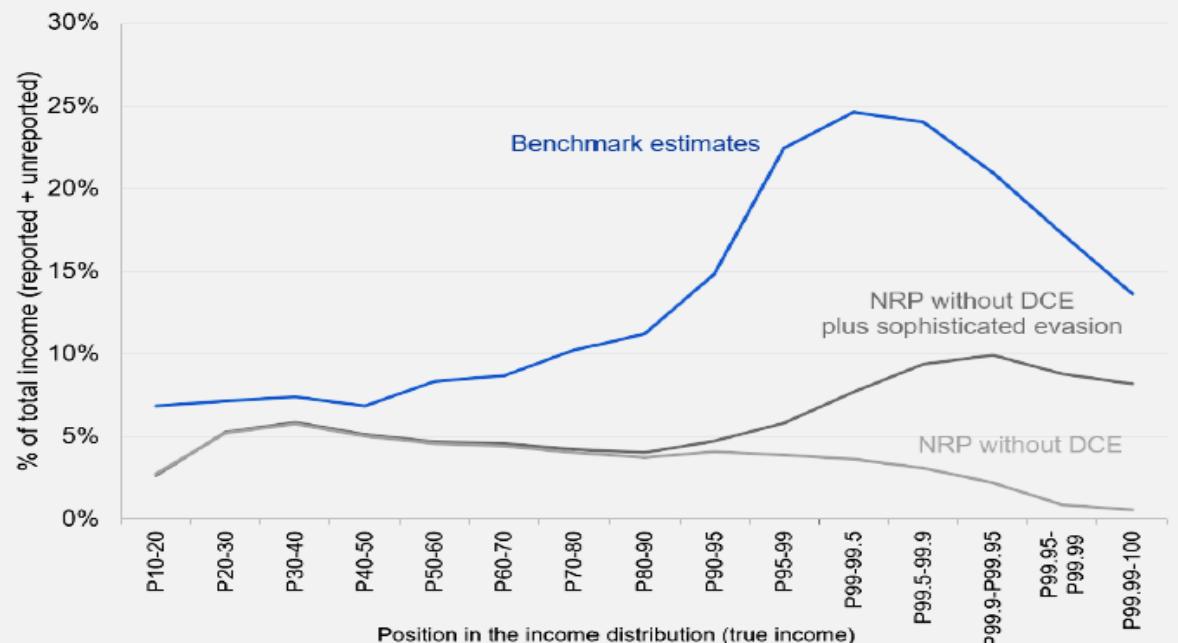
The rich have access to much sophisticated ways to hide their income that escapes random audits

- Off shore accounts
- Pass through business

(a) Do NRP audits detect offshore evasion?



Unreported Income (% True Income)



Collecting all unpaid taxes from the top 1% would raise 175 billion annually

International collaboration would be key...

Source: Guyton et al.

Conclusion

Conclusion

Restoring confidence in the ability of the society to protect the poor or those victims of shocks is essential

- Rage against the system
- The migrants.. Etc.

It is easier (politically) to prevent inequality and poverty ex-ante than correcting them ex-post

- Key to design, fund, and implement an effective social policy
- The topic of the next four lectures...