

U.S. INCOME INEQUALITY: WHAT DO WE KNOW?

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WHAT *won't* WE TALK ABOUT?

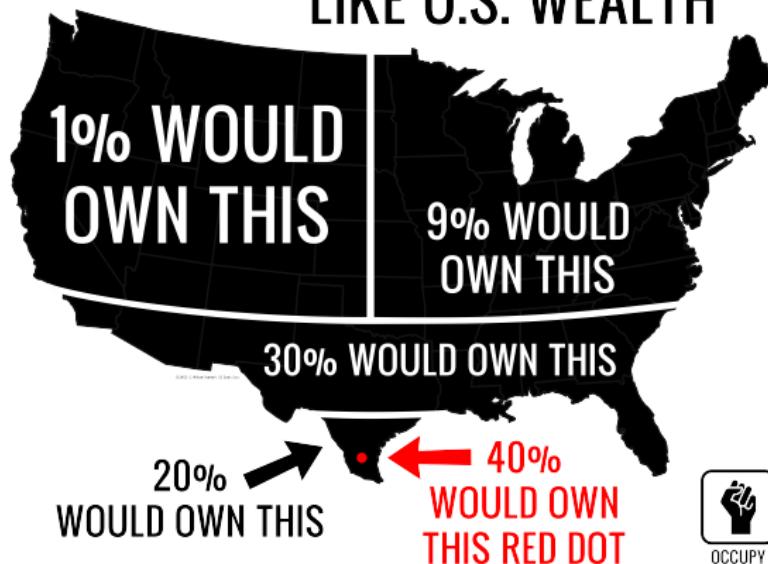
- ▶ We won't have time for:
 1. Gender inequality
 2. Racial inequality
 3. Early childhood development
 4. Specific changes in tax code, pass-through entities
 5. Non-monetary forms of inequality: suicide, prestige, prison, sex, marriage
- ▶ These are (potentially) important!

FOUR QUESTIONS

1. **What's happened to income inequality?**
2. Why has it happened?
3. What can (and can't) be done about it?
4. Should we care?

WEALTH INEQUALITY? OCCUPY!

IF U.S. LAND MASS WERE DIVIDED
LIKE U.S. WEALTH



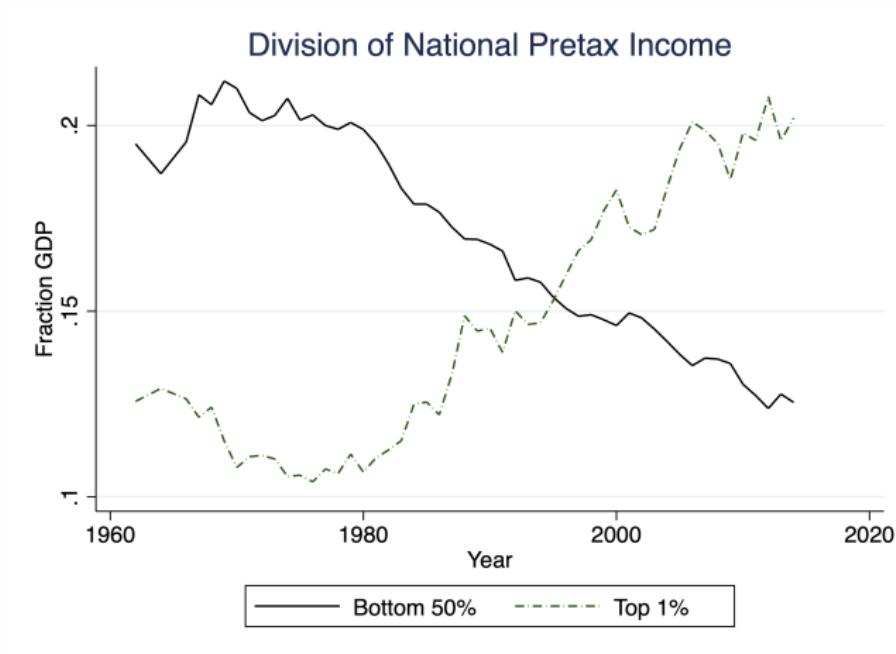
ASIDE: WHY INCOME INEQUALITY?

- ▶ Many focus on wealth inequality
- ▶ If what we care about is long-run purchasing power, we should care about income
- ▶ Income reflects permanent influence of wealth

INCOME INEQUALITY: WHAT'S HAPPENED?

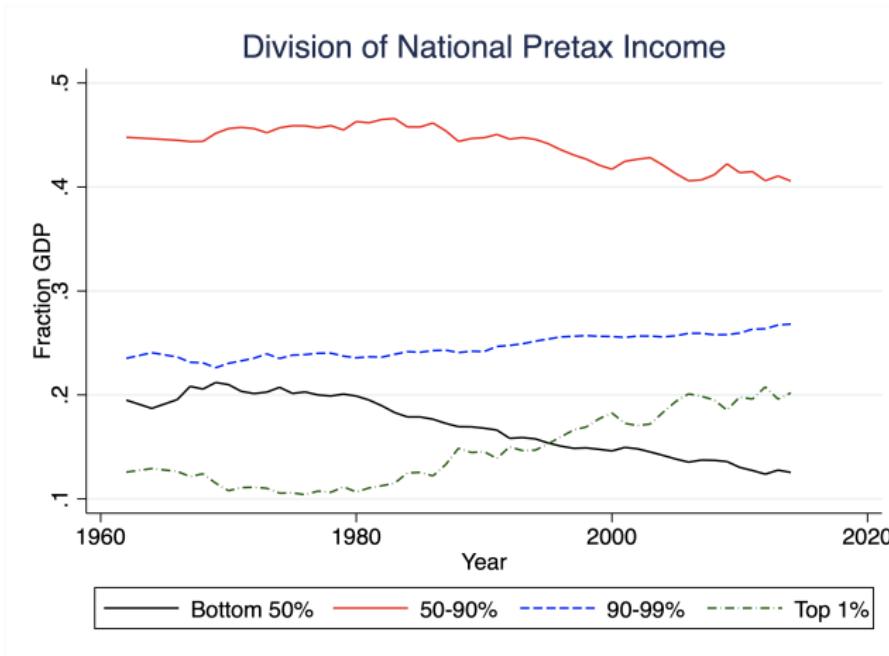
- ▶ **Proportionately, for pretax income:**
 - ▶ The bottom 50% have lost a lot (mostly bottom 25%)
 - ▶ The next 40% (50%-90%) have lost a little
 - ▶ The next 9% (90%-99%) have gained a little
 - ▶ The top 1% have gained a lot
- ▶ The income distribution is becoming more right-skewed
- ▶ Most has happened since 1980

INCOME SHARES: TOP 1% VS. BOTTOM 50%



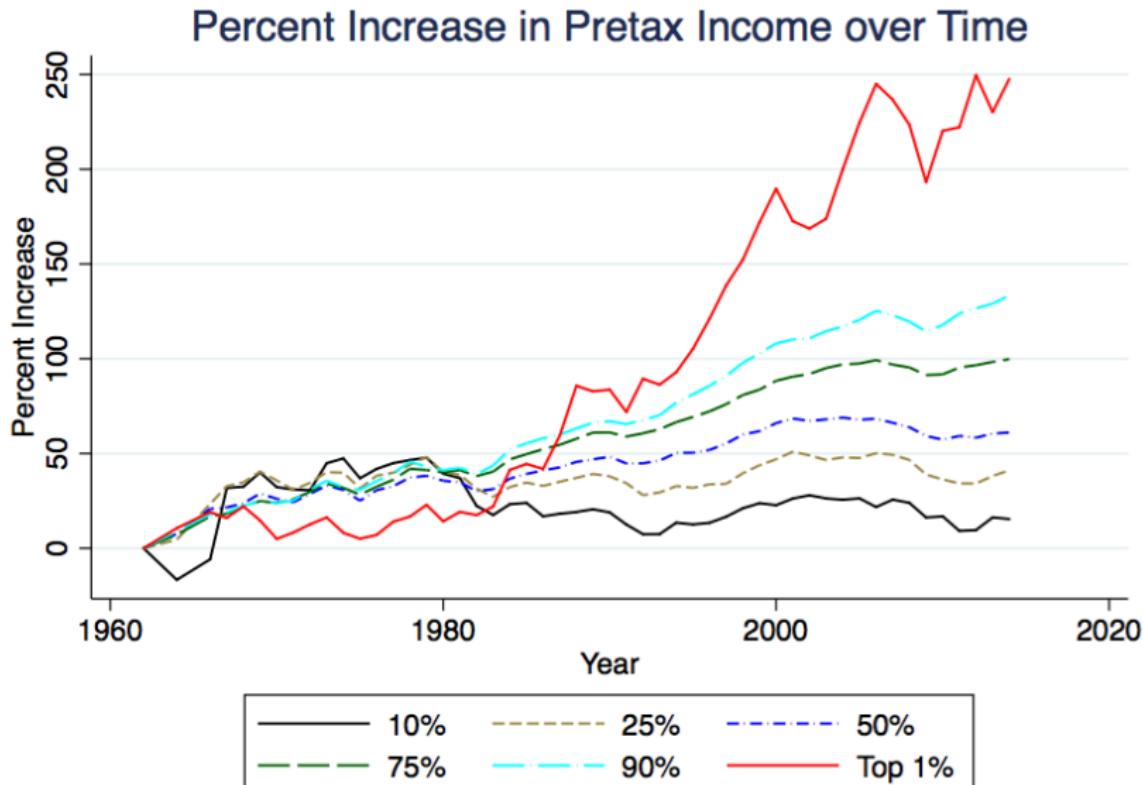
Source: World Inequality Database, Author's Calculations

INCOME SHARES: SOME PERSPECTIVE



Source: World Inequality Database, Author's Calculations

DISTRIBUTION BECOMING MORE RIGHT-SKEWED



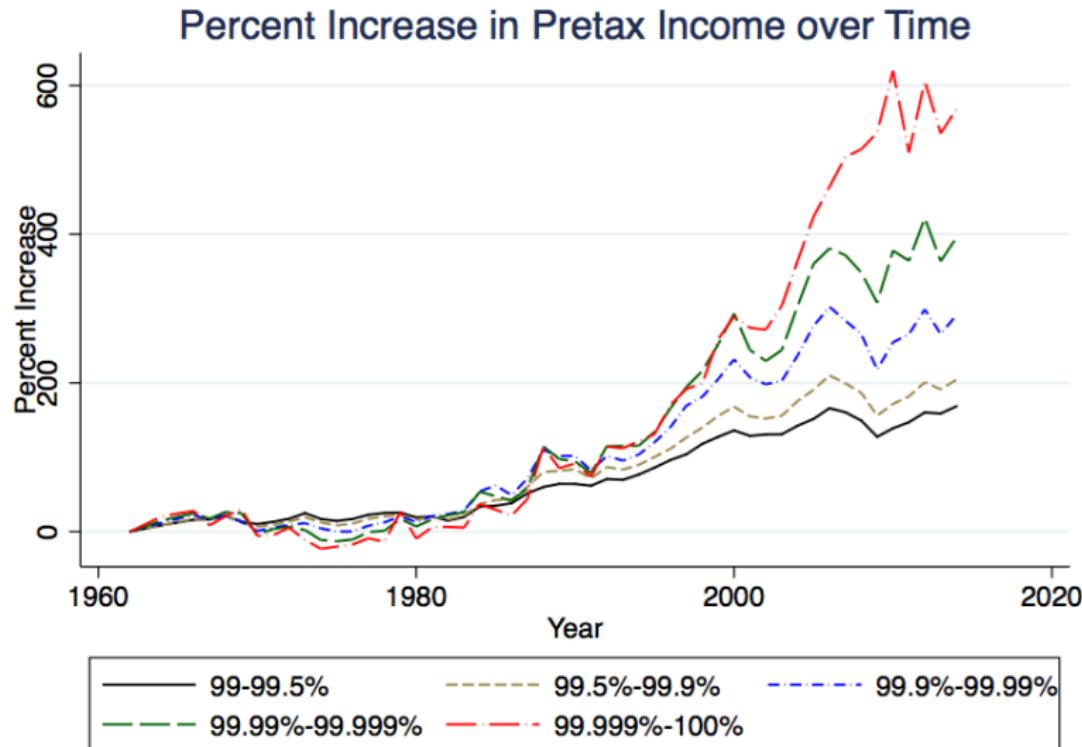
DISTRIBUTION BECOMING MORE RIGHT-SKEWED

Percentile	Avg Income 1980	Avg Income 2014
10th percentile	\$7,918	\$6,131
25th percentile	\$16,297	\$16,372
50th percentile	\$31,421	\$36,990
75th percentile	\$50,106	\$70,948
90th percentile	\$74,070	\$121,212
99th percentile	\$447,061	\$1,361,030

Income equally split among adults in household (so a two-person \$280,000 household would be \$140,000)

Source: World Inequality Database, Author's Calculations

ASIDE: WITHIN UPPER-ECHELONS, PHENOMENON IS SIMILAR



Source: World Inequality Database, Author's Calculations

TAKEAWAYS

1. Dramatic rise in income inequality
2. Strong increase in the right tail
3. Wealth has followed suit

FOUR QUESTIONS

1. What's happened to income inequality?
2. **Why has it happened?**
3. What can (and can't) be done about it?
4. Should we care?

WHY HAS IT HAPPENED?

1. Minimum wage (Lee 1999, Card and DiNardo 2002, Lemieux 2006)
2. Skill-Biased Technological Change and Superstars (Katz and Murphy 1992, Goldin and Katz 2010, Autor, Katz, Kearney 2008, Kaplan and Rauh 2013)
3. Tax Rates (Facundo, Atkinson, Piketty, Saez 2013, Piketty, Saez, Stanccheva 2014)
4. Ill-gotten profiteering/“rent-seeking” (finance) (Bivens and Michel 2013, Bakija, Cole and Heim 2010)
5. The degree has been overstated. (Burkhauser, Larrimore, Simon 2012, Armour, Burkhauser, Larrimore 2014, Burkhauser, Feng, Jenkins, and Larrimore 2012)

E1: MINIMUM WAGE?

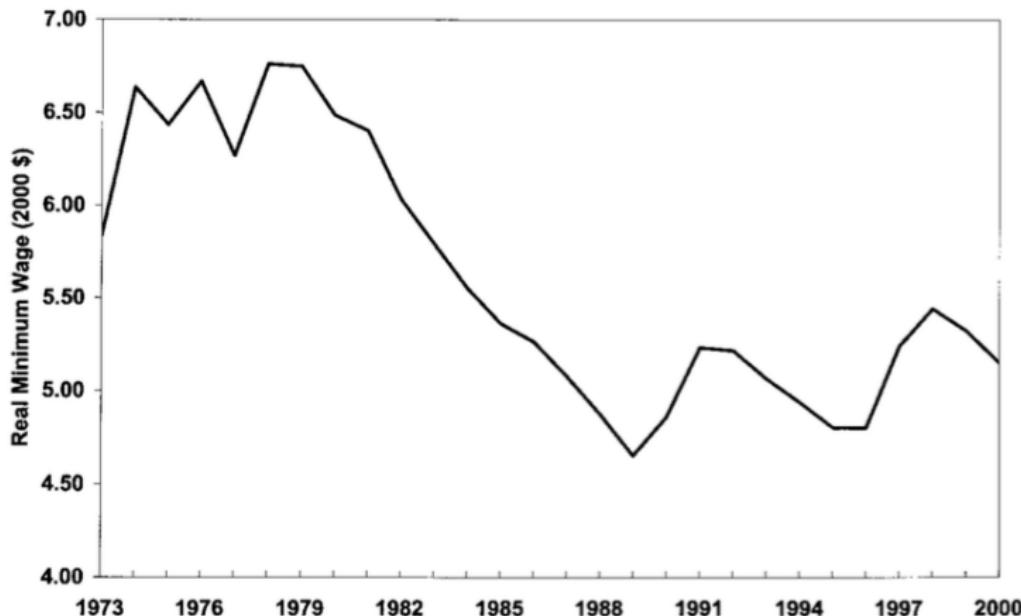


FIG. 22.—Real minimum wage, 1973–2000

Card and DiNardo 2002

E1: MINIMUM WAGE?

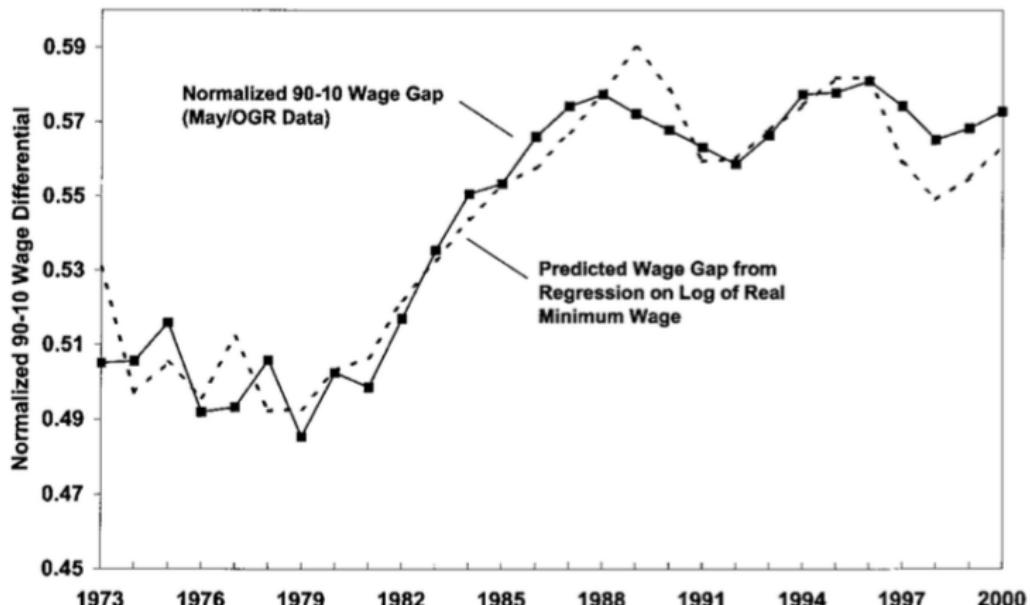


FIG. 23.—Wage inequality and the minimum wage

Card and DiNardo 2002

Note: not as good a fit post 2000!

SKILL-BIASED TECHNOLOGICAL CHANGE?

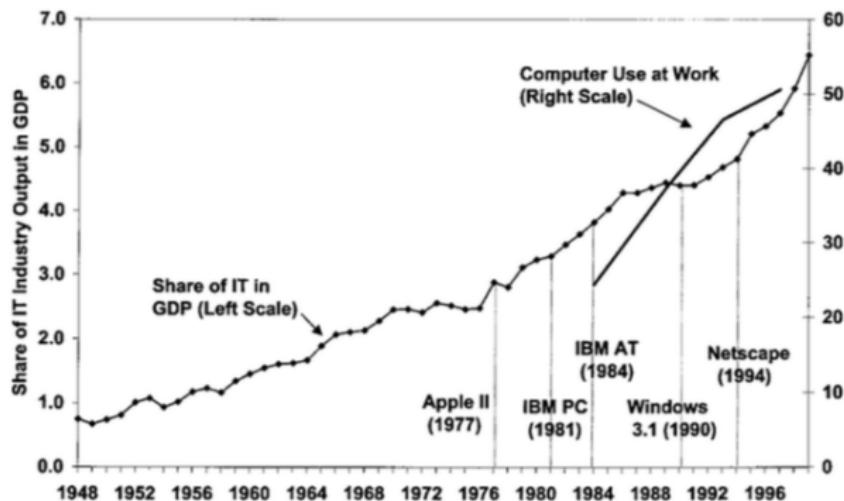
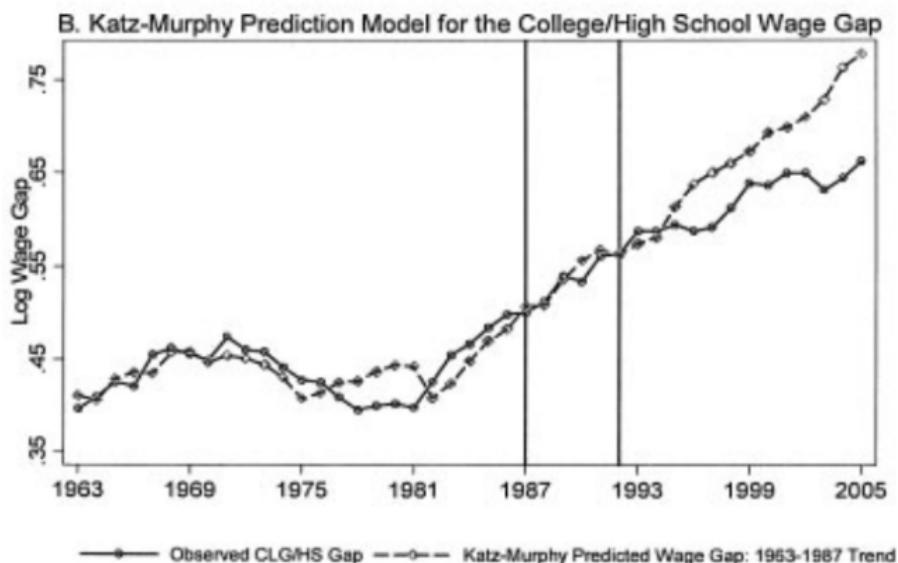


FIG. 1.—Measures of technological change

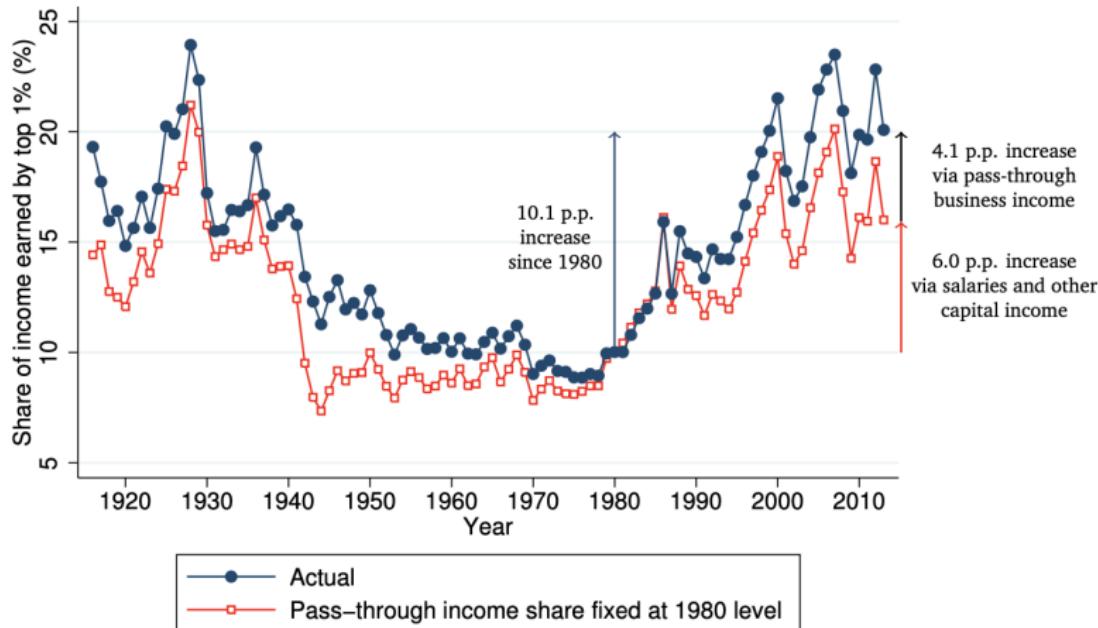
Card and DiNardo 2002

SBTC: HOW WELL DOES SUPPLY & DEMAND Do?



Autor, Katz, and Kearney 2008

CAPITALISTS IN THE TWENTY-FIRST CENTURY



Nearly half of the rise in the top 1%'s share is due to pass-through income

WHO ARE THE TOP 1%

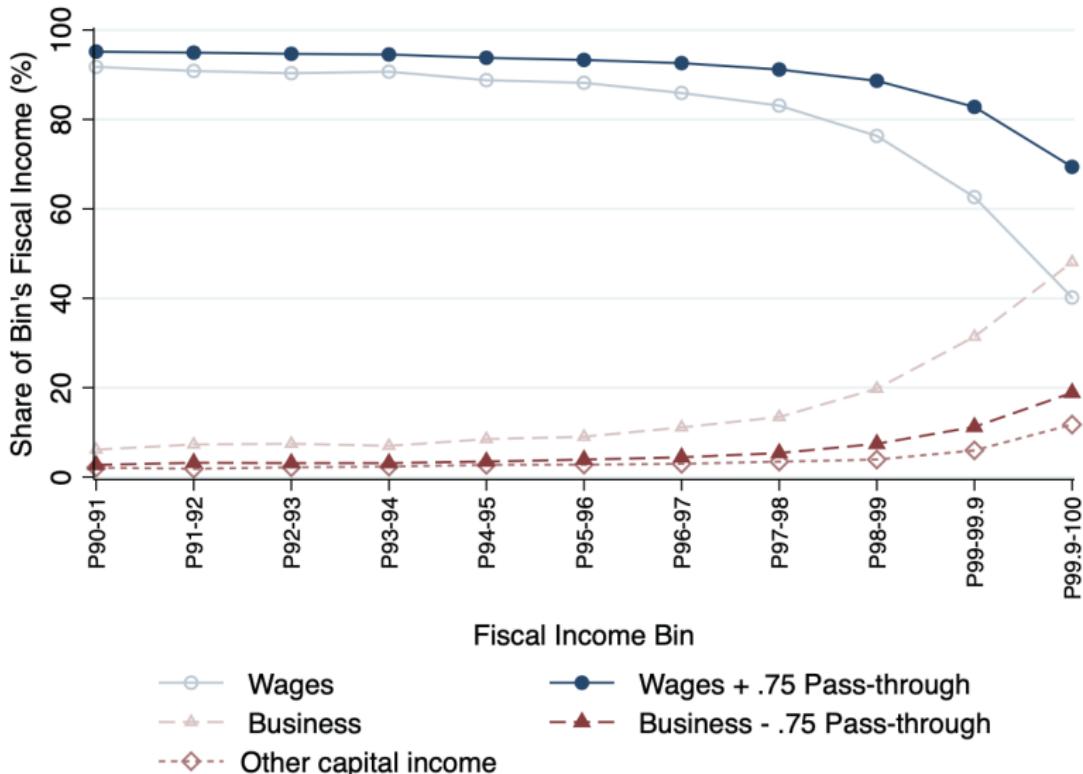
- ▶ We caricature the top 1% as fat cats/rentiers
- ▶ Yagan, Zidar, and Zwick (2019): where are they earning their money?
- ▶ Look at IRS data between 2001-2014
- ▶ Approximately 6 million businesses with employees in U.S. in 2017
- ▶ 69% of top 1%, 84% of the top 0.1% earn pass-through income
- ▶ Top 1% professional statuses w/pass-through income: consultants, lawyers, specialty tradespeople in single-establishment service firms, physicians, and dentists
- ▶ Top 0.1% w/pass-through income: regional businesses with \$20 million in sales and 100 employees (think auto-dealer, beverage distributor, large law firm)

WHO ARE THE TOP 1%-II

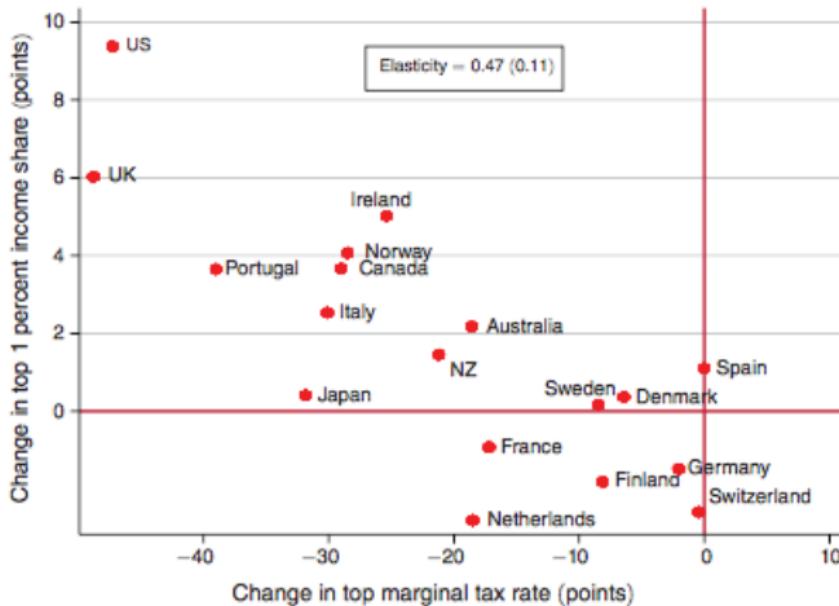
- ▶ Significant number of the top 1% and 0.1% are earning via labor
- ▶ How much are due to Human Capital rather than rents?
- ▶ Look at non-elderly owners who die and had earned \$1 million before death
- ▶ Firm profits fall by 75%
- ▶ Let's add 75% of pass-through income to wages and see where people get their money

CAPITALISTS IN THE TWENTY-FIRST CENTURY

Fiscal Income (FI)



TAX RATES?



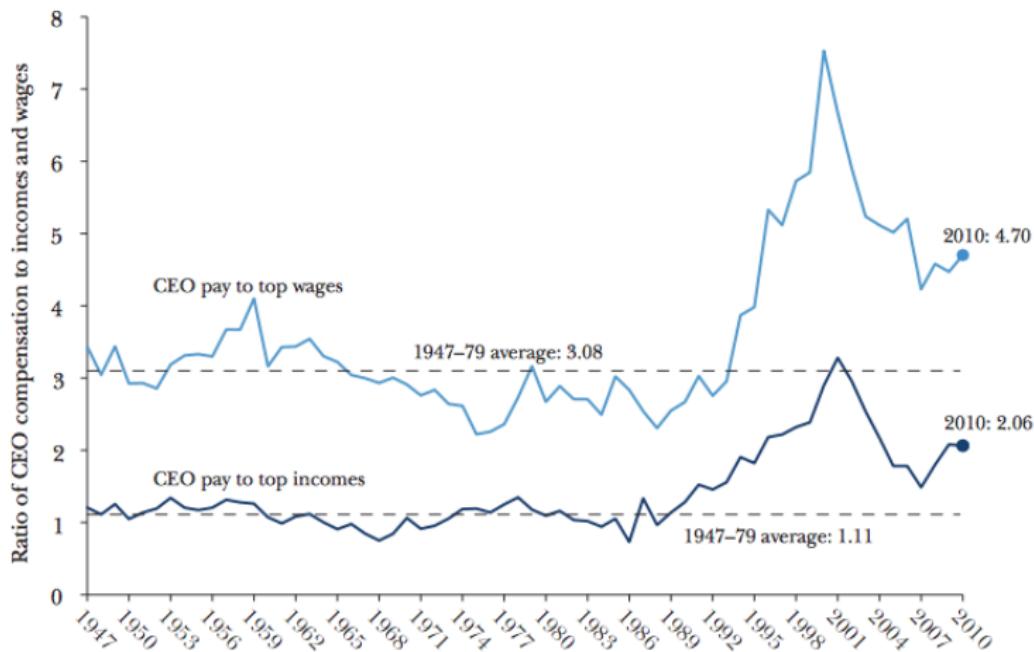
Piketty, Saez, Stancheva 2014

FINANCE & CEO PAY?

- ▶ Finance has grown from 2.8% of GDP in 1950 to 4.9% in 1980 and 8.3% at peak in 2006
- ▶ From 1978-2000, CEO pay increased by 1279% (from 2000-2012, decreased by 29%)
- ▶ Increases at the top 1% and 0.1% are driven by people with “executive” in their title, or in the financial sector (Bakija, Cole, and Heim 2010)
- ▶ Active mutual funds underperform compared to passive benchmarks (even before fees!) (Fama and French 2010)
- ▶ Dot-Com Bust, Financial Crisis: is finance's contribution even positive?

FINANCE & CEO PAY?

Comparison of CEO Compensation to Top Incomes and Wages, 1947–2010



Kaplan 2012, Bivens Michel 2013

IS INEQUALITY'S RISE OVERSTATED?

- ▶ Wealth vs. income
- ▶ Composition of households, transfers, and value of health insurance has changed over time

Growth of Bottom 50% Income: 1979-2007

Pre-tax, pre-transfer	3.2	12.5	14.5	20.6
Pre-tax, post-transfer	6.0	15.2	17.0	23.6
Post-tax, post-transfer	19.6	20.2	25.0	29.3
Post-tax, post-transfer + HI	18.2	27.3	33.0	36.7

Burkhauser, Larrimore, Simon 2012

TAKEAWAYS

- ▶ Multiple competing explanations
- ▶ Minimum wage, unions *may* have held up bottom end among earners
- ▶ No doubt technological change helps explain the 75-25 or the 90-10 split
- ▶ Potentially harder to explain top 0.001%
- ▶ Tax rates play a role in inequality
- ▶ But accounting for taxes and transfers mitigates a good bit of the absolute increase in inequality
- ▶ Finance & CEO pay has increased, but it isn't clear if this is superstars & scale or corruption

FOUR QUESTIONS

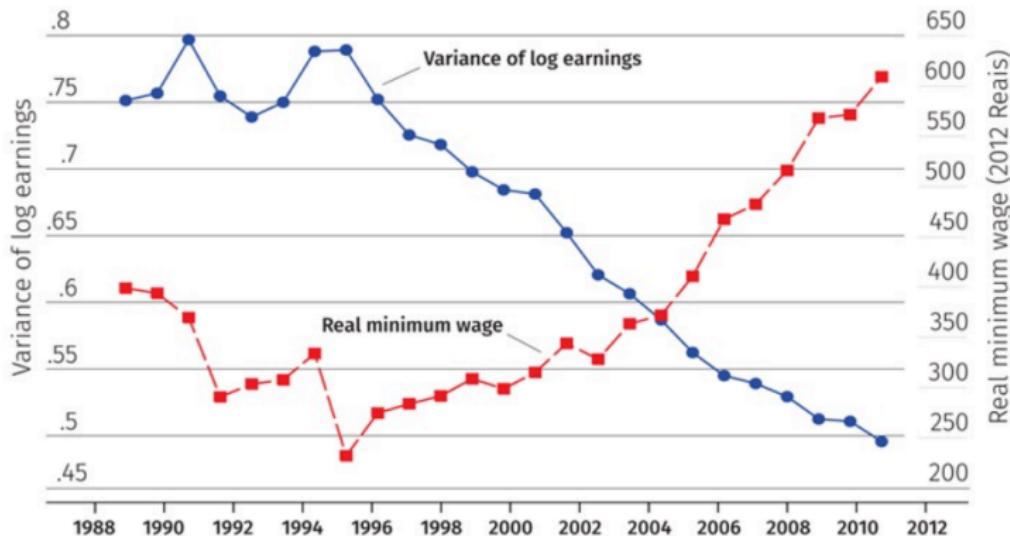
1. What's happened to income inequality?
2. Why has it happened?
3. **What can (and can't) be done about it?**
4. Should anything be done about it?

WHAT CAN (AND CAN'T) BE DONE ABOUT IT?

- ▶ Inequality has risen, what *can* we do about it?
 1. Higher minimum wages?
 2. Increase unionization rates?
 3. More transfers? (I'll hold until end)
 4. Tax income, wealth?
 5. Corporate governance?

MINIMUM WAGE AND INEQUALITY

Earnings inequality and real minimum wage
in Brazil, 1988-2012



Source: RAIS, IPEA

Notes: Statistics are for males age 18-49. Real minimum wage is annual average of monthly time series.



FEDERAL RESERVE BANK of MINNEAPOLIS

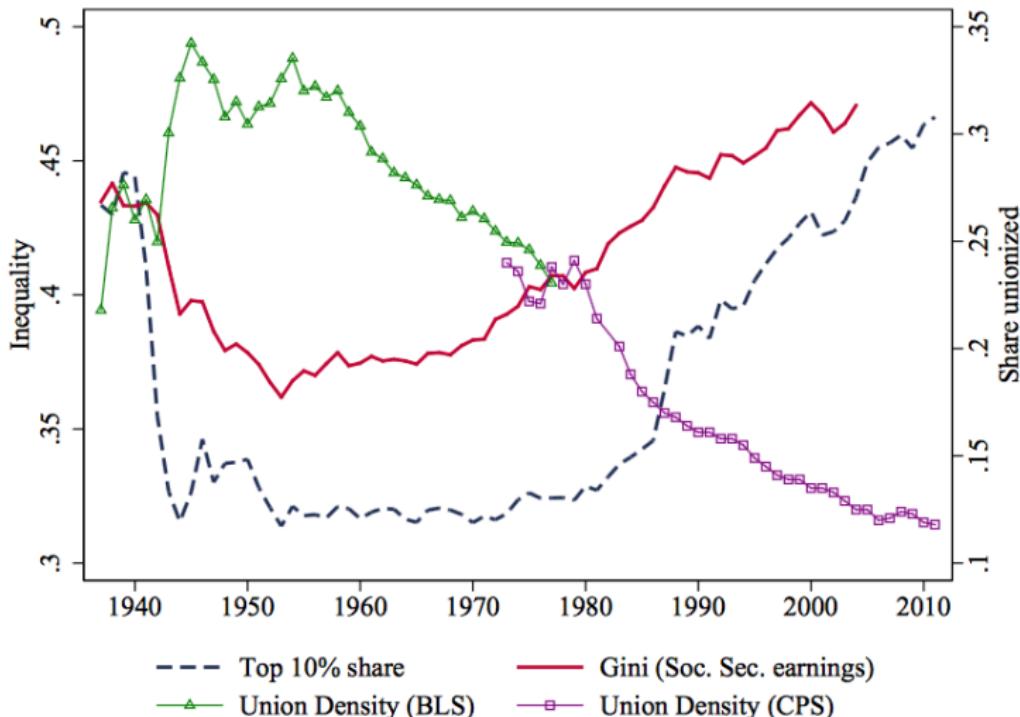
For more: Engbom and Moser 2016

MINIMUM WAGE AND INEQUALITY

- ▶ My read: minimum wage has only moderately destructive effects
- ▶ Correlated with decline in inequality
- ▶ Question is not if it's costless, but if it's the least costly way: compare to taxes, transfers

UNIONS AND INEQUALITY

Figure 1: Union density and inequality measures, 1917-2011

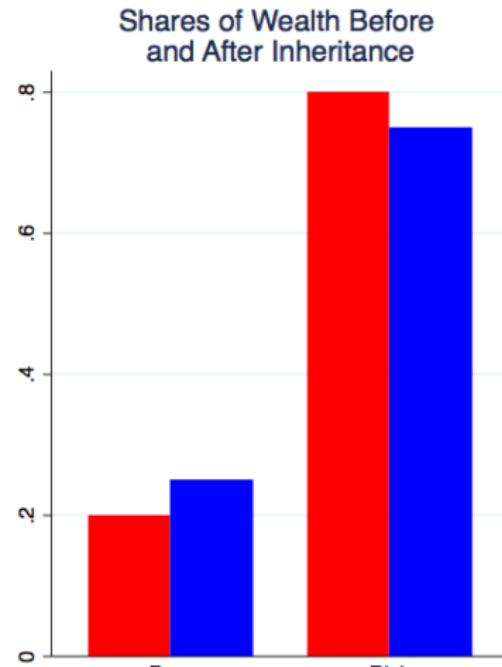
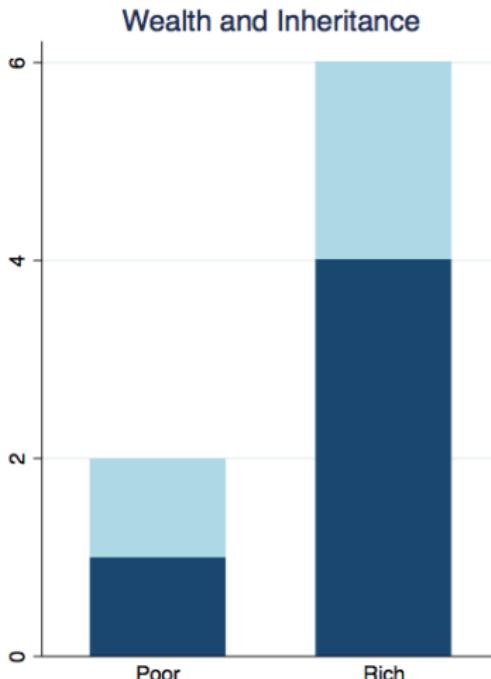


UNIONS AND INEQUALITY

- ▶ Not clear if viable in U.S.
- ▶ Unions have massive negative affects on R&D and investment
Betts, Odgers, Wilson (2001), Bronars, Deere, Tracy (1994),
Connolly, Hirsch, Hirchey (1986)
- ▶ Slow growth job growth Dunne and MacPherson 1994,
Leonard (1992)
- ▶ Lower profits (Hirsch 1991)
- ▶ Slows macroeconomic recovery Krol and Svorny (2007)

INHERITANCES **reduce** INEQUALITY!

Rich and Poor



ELASTICITY OF TAXABLE INCOME

- ▶ How much does taxable income fall when tax rates rise?
- ▶ When the tax rate increases by 1 percentage point, from 25 to 26%, we think taxable income falls by around 0.75% (ETI of 0.57, Gruber and Saez 2000).
- ▶ Might be closer to 0.5% in long run (Saez 2012, using ETI of 0.4)
- ▶ This isn't a small cost to the economy either way.

HIGH EARNERS VOTE WITH THEIR FEET?

- ▶ For star scientists, long-run elasticity of mobility relative to state income taxes is 1.8 (Moretti and Wilson 2017)
 - ▶ If Indiana lowers its net-of-tax rate by 1% relative to all other states, stock of scientists rises by $\approx 0.4\%$ per year (continuously)
- ▶ Elasticity to net-of-tax rate for domestic superstar inventors is around 0.03, foreign superstar inventors is 1. (Akcigit, Baslandze, Stancheva 2016)
 - ▶ If U.S. lowers its net-of-tax rate by 1% relative to all other countries, stock of top inventors increases by 0.1%.
 - ▶ If U.S. lowers its net-of-tax rate by 1% relative to all other countries, stock of foreign superstar inventors increases by 2.6%
- ▶ In Spain, a 1% increase net-of-tax rate for a region relative to others increases probability of moving their by 1.7 percentage points. (Agrawal Foremny 2019)

IS THERE ANOTHER EFFICIENT WAY TO DO THIS?

- ▶ Reform of intellectual property law
- ▶ Tax deductibility of performance-based executive pay
- ▶ Corporate governance reform seems possible, less destructive than taxation, market oriented

FOUR QUESTIONS

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WITHIN-LIFETIME MOBILITY

- We can look at probability you get into a given income quintile conditional on the one you start in:

Income Mobility from age (35-40) to (55-60)

		Quintile in 2007				
Quintile in 1987		Lowest	Second	Middle	Fourth	Highest
Lowest		51.4	23.3	14.5	6.2	4.8
Second		24.8	28.6	23.2	15.6	7.7
Middle		14.9	19.9	26.0	25.2	14.1
Fourth		10.5	15.2	20.8	29.2	24.4
Highest		6.3	7.6	13.6	23.5	48.5

- Prob get into top 1%: 5.2%, 3.5%, 3.9%, 7.3%, and 80%.
- Source: Auten, Gee, and Turner (re-normalized to exclude negative incomes)

BETWEEN-LIFETIME MOBILITY

- We can look at probability your child is in a quintile conditional on you being in that quintile:

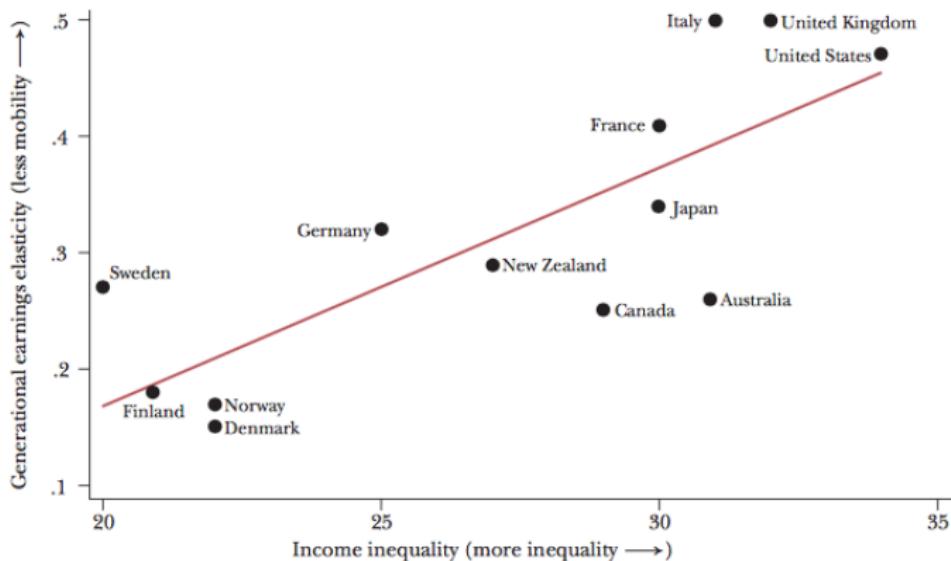
Parent to Child Income Inequality

Parent Quintile	Child Quintile in 2007				
	Lowest	Second	Middle	Fourth	Highest
Lowest	33.7	28.0	18.4	12.3	7.5
Second	24.2	24.2	21.7	17.6	12.3
Middle	17.8	19.8	22.1	22.0	18.3
Fourth	13.4	16.0	20.9	24.4	23.6
Highest	10.9	11.9	17.0	23.6	36.5

- Source: Chetty, Hendren, Kline, and Saez (2014)

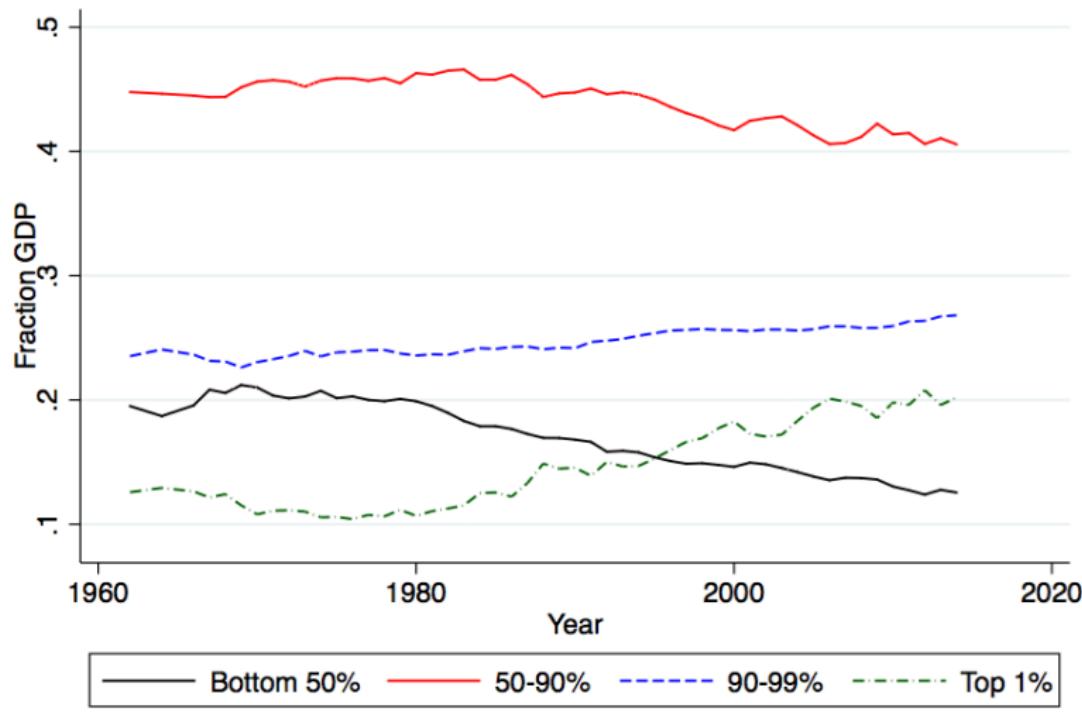
GREAT GATSBY CURVE

The Great Gatsby Curve: More Inequality is Associated with Less Mobility across the Generations



POST-TAX SHARES

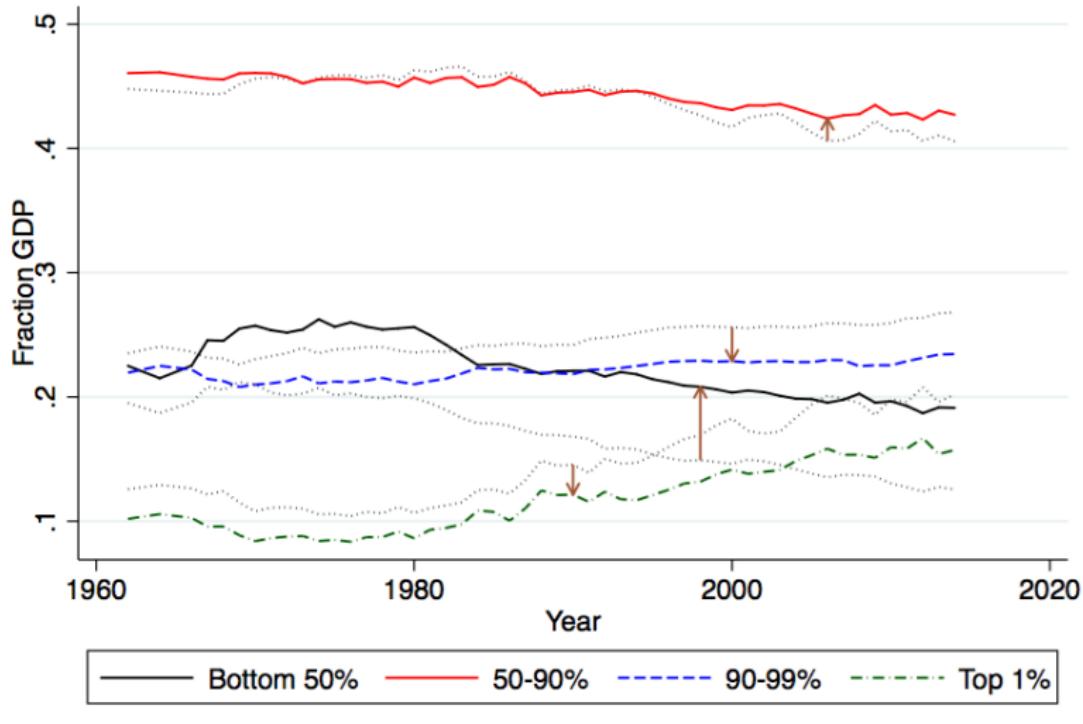
Division of National Posttax Income



Source: World Inequality Database, Author's Calculations

POST-TAX SHARES

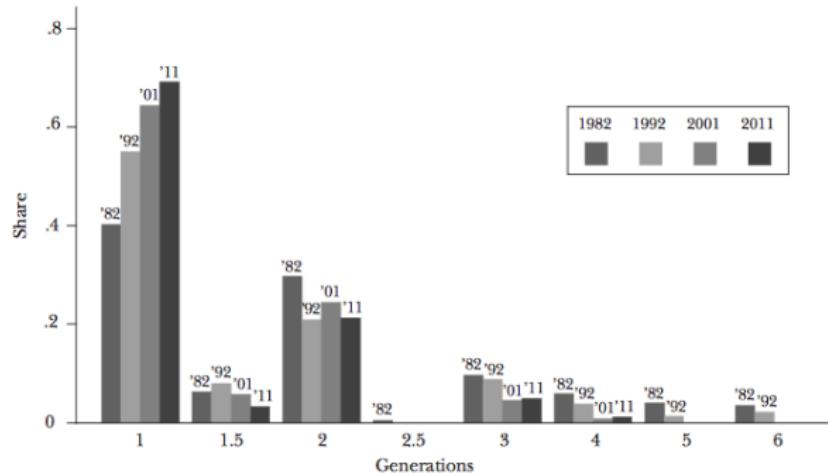
Division of National Posttax Income



Source: World Inequality Database, Author's Calculations

SBTC: WHO ARE THE FORBES 400?

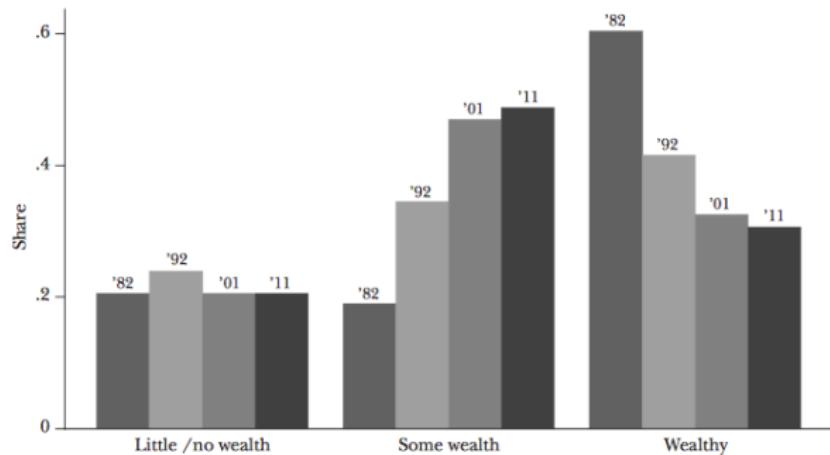
Generation of the Wealth-Creating Businesses of Forbes 400 Individuals in 1982, 1992, 2001, and 2011
(share among *Forbes 400 individuals*)



Kaplan and Rauh 2013

SKILL-BIASED TECHNOLOGICAL CHANGE?

Did the Forbes 400 Grow Up Wealthy?
(share of Forbes 400 individuals for 1982, 1992, 2001, and 2011 with each upbringing)

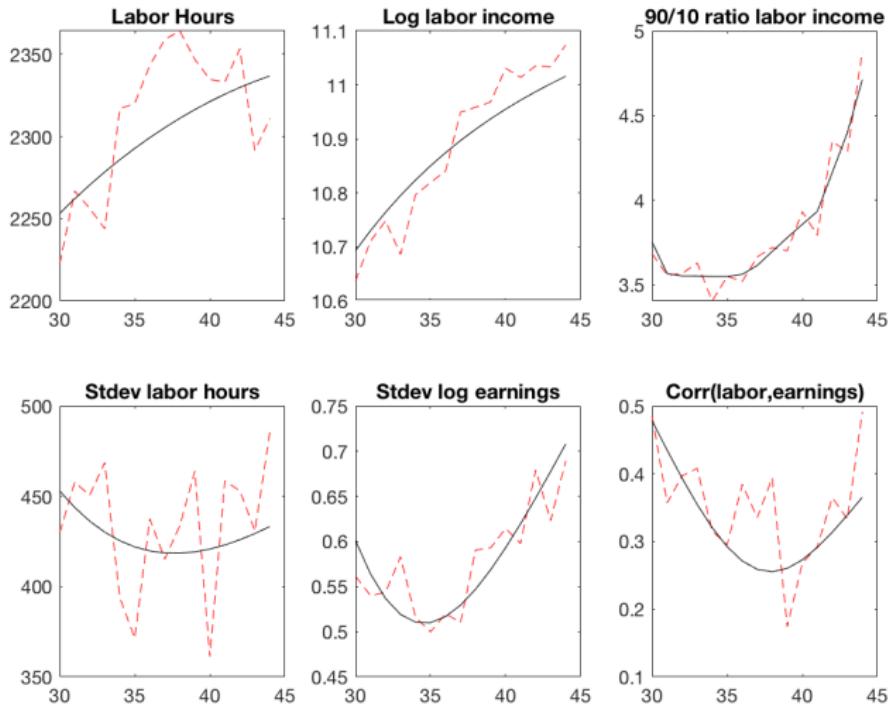


Kaplan and Rauh 2013

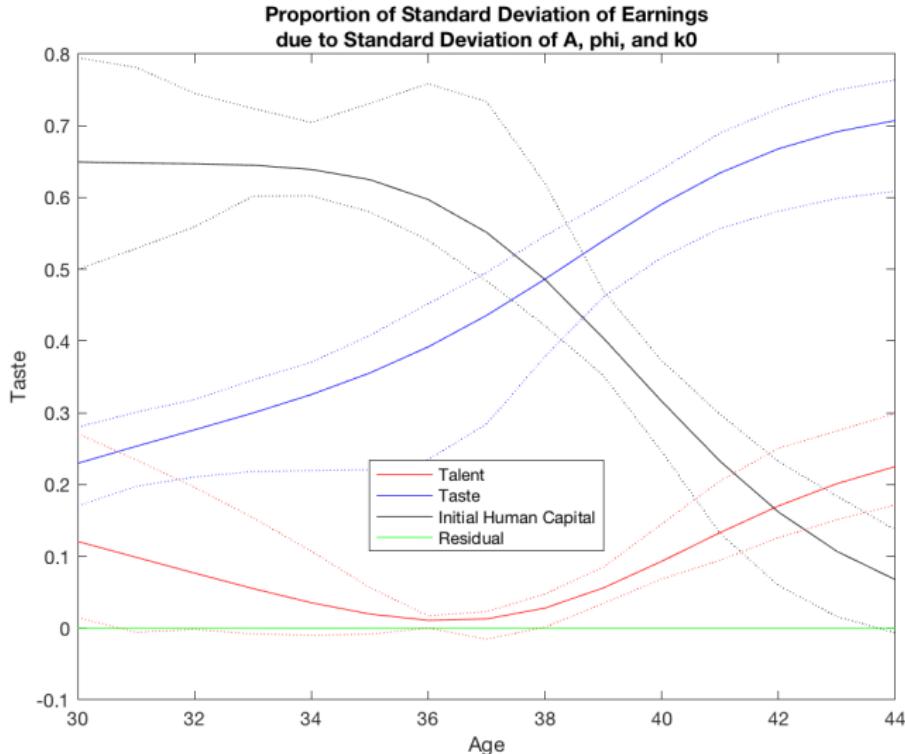
HOW MUCH OF INCOME HETEROGENEITY IS DUE TO TASTE VS. TALENT?

- ▶ Let's look at prime-age (30-44) males who work in every year
- ▶ Smooth their lifecycle hours, earnings paths to exclude one to two-year noise
- ▶ A model based solely on talent predicts:
 - ▶ People will have similar hours no matter their skill/talent
 - ▶ The correlation of hours and earnings will be low and will fall over this period
- ▶ Let's check it in the data

HOW MUCH OF INCOME HETEROGENEITY IS DUE TO TASTE VS. TALENT? DATA

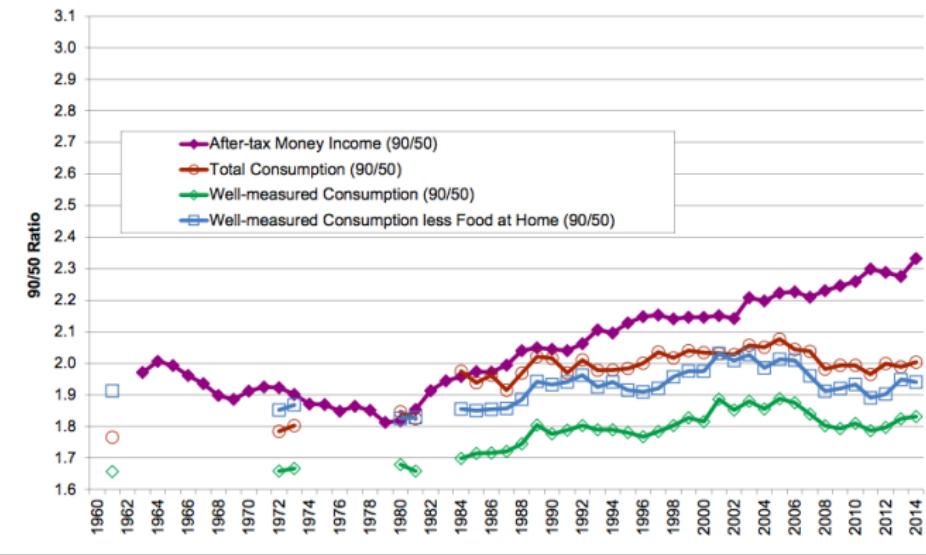


HOW MUCH OF INCOME HETEROGENEITY IS DUE TO TASTE VS. TALENT? RESULTS



HAS CONSUMPTION INEQUALITY RISEN?

Figure 7: Consumption Inequality 1961-2014



Source: Meyer and Sullivan 2014

IS FINANCE ALL WASTE?

- ▶ Note U.S. productive capital stock is $\approx \$57$ trillion
- ▶ Say we have two firms with a 11% and 6% cost of capital: under standard Cobb-Douglas framework, how much would total production increase if we reduced difference to zero?
- ▶ By about 9%, or \$1.5 trillion USD in 2019
 - ▶ By contrast, finance & insurance is 7.6% of GDP in 2019
- ▶ Capital is important: *even* if it's just re-arranging capital's allocation, finance can do something worth trillions!

HOY AND MAGER 2021: PERSPECTIVES ON REDISTRIBUTION

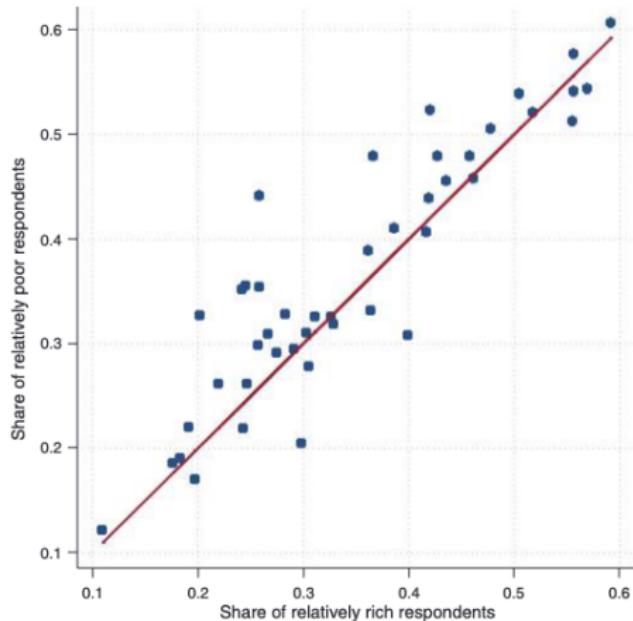


FIGURE 1. SUPPORT FOR HIGHER TAXES ON THE WEALTHY TO FUND PROGRAMS TO HELP THE POOR

Puzzle: the poor and the rich roughly support more redistribution at the same rates

ADDITIONAL: PERSPECTIVES ON REDISTRIBUTION

- ▶ Hoy & Mager (2021) have idea!
- ▶ Let's see how wealthy households *think* they are
- ▶ Then inform half of them how wealthy they *actually* are
- ▶ Then see what happens to redistribution preferences
- ▶ Result: people who find out they're poorer than they thought *increase* opposition to redistribution (!!)
- ▶ Reasoning: people compare their lives to others when considering redistribution. e.g. "I have a good life and I'm only 25th percentile?! No need for welfare."

TAKEAWAYS

- ▶ Everything seems to be working fine!
 - ▶ Welfare state is working: Consumption inequality hasn't been growing
 - ▶ Forbes 400 is now more "meritocratic" rather than less
 - ▶ Considering post-tax income, bottom 50% still more economically powerful than top 1%
 - ▶ 50-90% plus any other group is more than half of all income (bottom 90% control 65% of all income)
- ▶ Within-lifetime and intergenerational mobility still "high"
- ▶ Personal tastes play an important role in inequality
- ▶ But some warnings:
 - ▶ Wealth inequality has risen more
 - ▶ More inequality is associated with less mobility
 - ▶ Still a strong decline in bottom 50% share, increase in top 1% share
 - ▶ Consumption isn't the only thing that goes into utility: what about deaths of despair? Prestige? Sex?

CONCLUSION

- ▶ Income inequality has risen
- ▶ Deeply troubling!
- ▶ Minimum wage, decline of unions, lower top tax rates, skill-biased technological change all played a role
- ▶ How can we fix it?
 - ▶ Think about the least costly ways: policy levers like minimum wage, EITC, corporate governance likely better than taxes, unions
- ▶ How much of a problem is it?
 - ▶ In terms of consumption, doesn't seem like a huge problem: tax and transfer policies already seem to solve
 - ▶ Keep an eye on intergenerational mobility
 - ▶ But could be other ways: deaths of despair, oligarchy, marriage