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National Economic Education Delegation




- **Vision**

 - One day, the public discussion of policy issues will be grounded in an accurate perception of the underlying economic principles and data.
- **Mission**

 - NEED unites the skills and knowledge of a vast network of professional economists to promote understanding of the economics of policy issues in the United States.
- **NEED Presentations**

 - Are **nonpartisan** and intended to reflect the consensus of the economics profession.



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Who Are We?

• Honorary Board: 44 members

- 2 Fed Chairs: Janet Yellen, Ben Bernanke
- 6 Chairs Council of Economic Advisers
 - o Furman (D), Rosen (R), Bernanke (R), Yellen (D), Tyson (D), Goolsbee (D)
- 3 Nobel Prize Winners
 - o Akerlof, Smith, Maskin

• Delegates: 361 members

- At all levels of academia and some in government service
- All have a Ph.D. in economics
- Crowdsource slide decks
- Give presentations

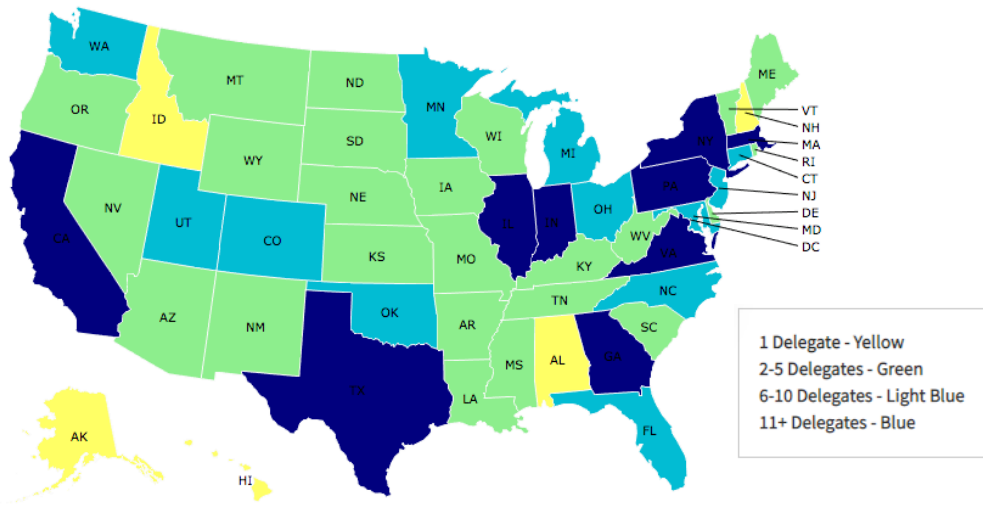
• Global Partners: 42 Ph.D. Economists

- Aid in slide deck development



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Where Are We?



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Credits and Disclaimer

- **This slide deck was authored by:**
 - Jon Haveman, Executive Director of NEED
- **This slide deck was reviewed by:**
 - Timothy Smeeding, University of Wisconsin
 - Robert Wright, Augustana University
- **Disclaimer**
 - NEED presentations are designed to be nonpartisan
 - It is, however, inevitable that the presenter will be asked for and will provide their own views
 - Such views are those of the presenter and not necessarily those of the National Economic Education Delegation (NEED)



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Outline

- **Definition**
- **Measurement**
- **How does it happen?**
- **Does it matter?**
- **Is it a problem?**
- **What to do about it**



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Economic Inequality: Income

- **Definition:**

- The extent to which the distribution of income deviates from complete equality
- The dispersion of income throughout the economy



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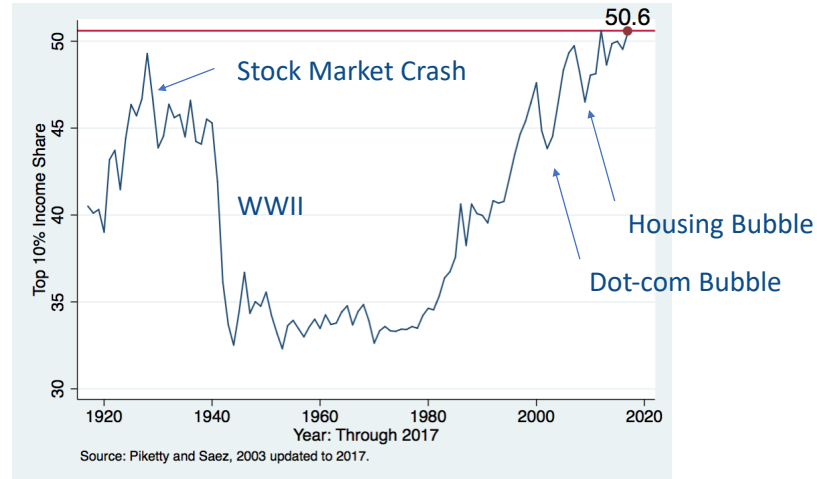
Different Ways of Thinking About Inequality

- **Income Inequality**
 - Before taxes and transfers
 - After taxes and transfers
- **Wealth Inequality**
- **Consumption Inequality**



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National Income Inequality: Share of Top 10%



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Recent Facts on Income Inequality

- **Beginning in the 1970s, the income gap widened.**
 - Income in the middle and lower parts of the distribution slowed
 - Incomes at the top continued to grow strongly
 - Income shares at the very top of the distribution rose to levels last seen more than 80 years ago



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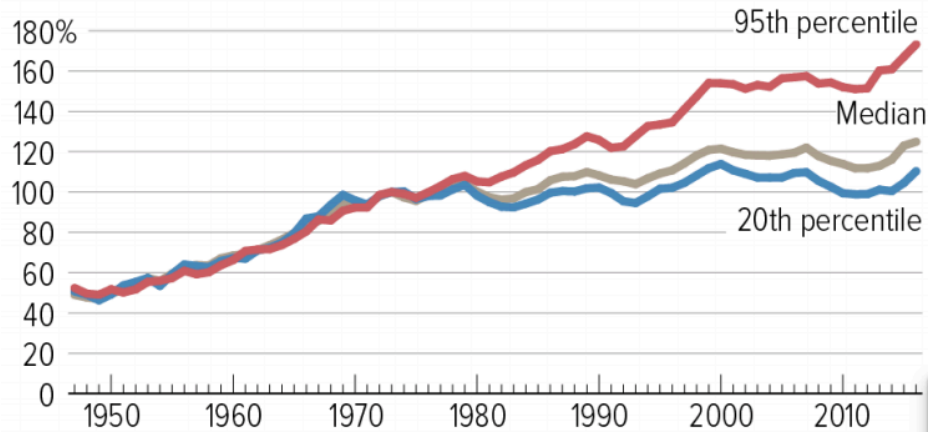
Source: Chad Stone, Danilo Trisi, Arloc Sherman, and Roderick Taylor, "A Guide to Statistics on Historical Trends in Income Inequality," Center on Budget and Policy Priorities, Policy Futures, May 15, 2018.

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The Abrupt Increase in Inequality

Real family income between 1947 and 2016, as a percentage of 1973 level



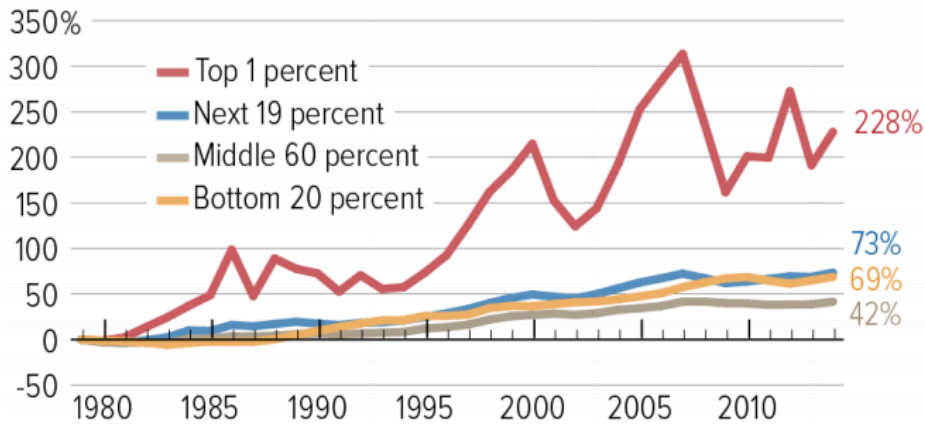
Source: Chad Stone, Danilo Trisi, Arloc Sherman, and Roderick Taylor, "A Guide to Statistics on Historical Trends in Income Inequality," Center on Budget and Policy Priorities, Policy Futures, May 15, 2018, page 10.

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Most of the Action Is at the Very Top

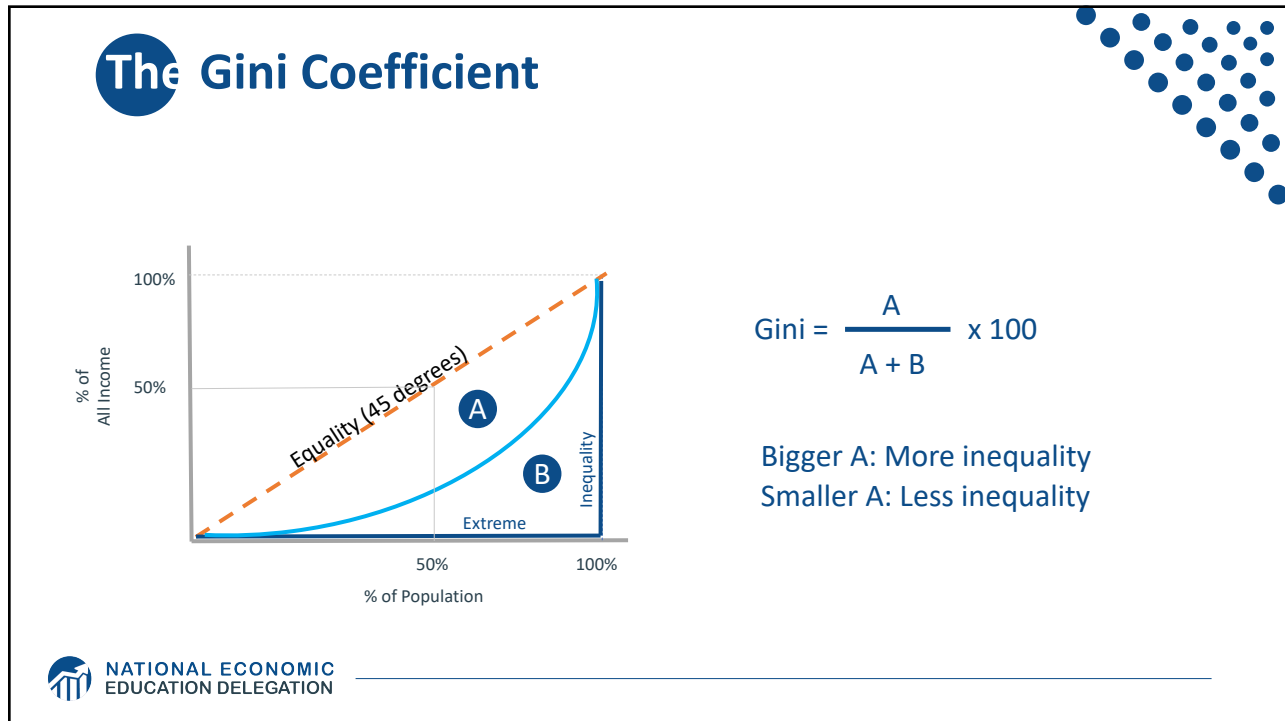
Percent change in income after transfers and taxes since 1979



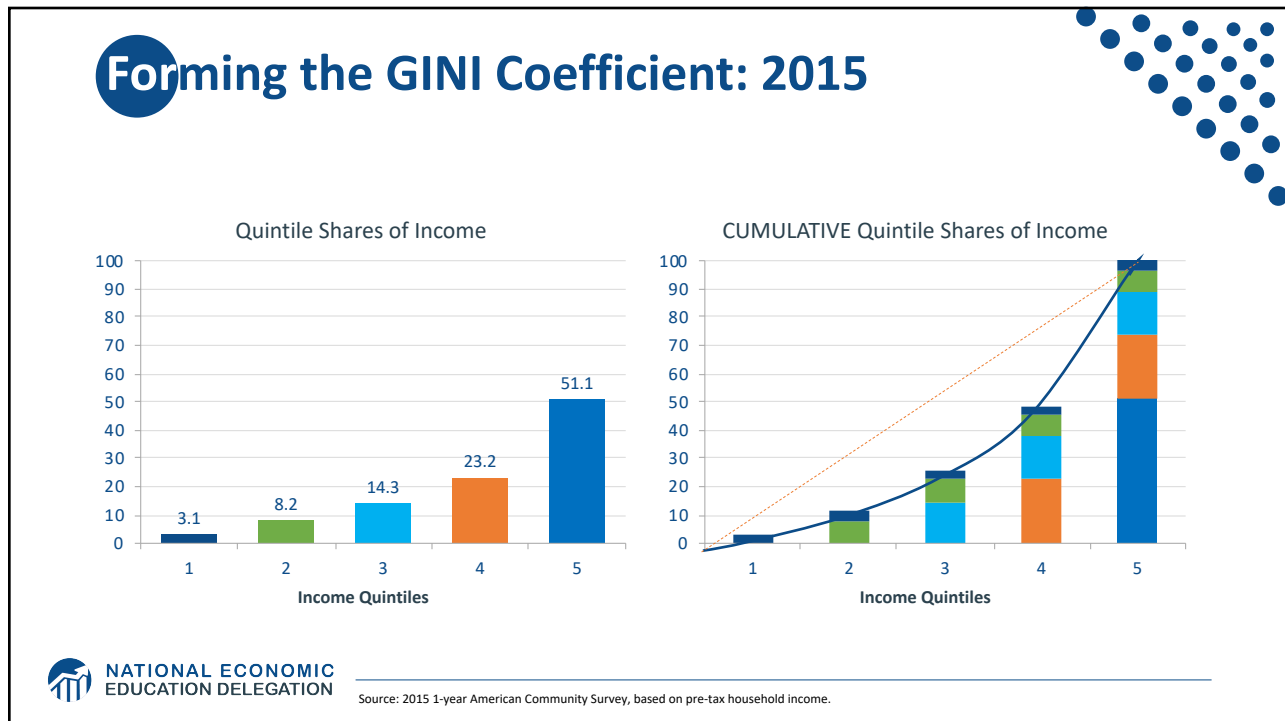
Source: Chad Stone, Danilo Trisi, Arloc Sherman, and Roderick Taylor, "A Guide to Statistics on Historical Trends in Income Inequality," Center on Budget and Policy Priorities, Policy Futures, May 15, 2018, page 11.

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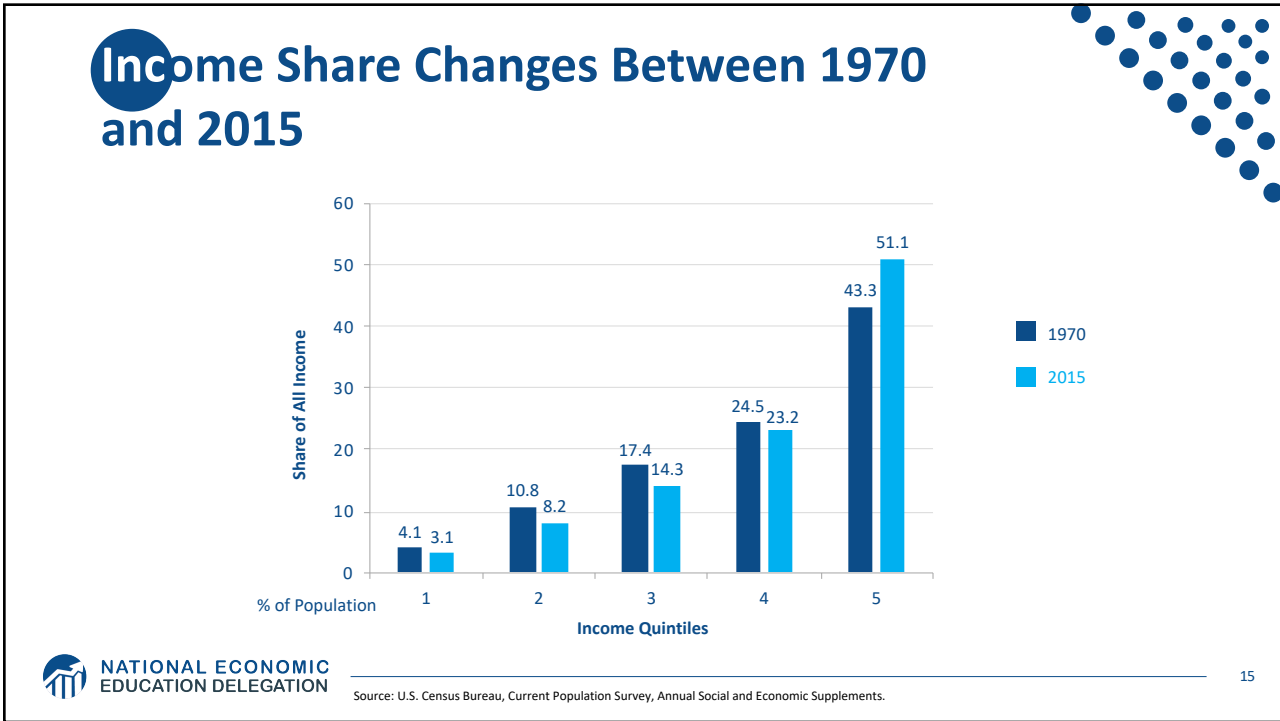
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Income Changes from Growing Inequality

| INCOME GROUP | TOTAL LOSS/GAIN IN ANNUAL INCOME* | AVERAGE LOSS/GAIN PER HOUSEHOLD PER YEAR* |
|-------------------|-----------------------------------|-------------------------------------------|
| TOP 1% | \$673 billion more | \$597,241 more |
| 96-99 | \$140 billion more | \$29,895 more |
| 91-95 | \$29 billion more | \$4,912 more |
| 81-90 | \$43 billion less | \$3,733 less |
| 61-80 | \$194 billion less | \$8,598 less |
| 41-60 | \$224 billion less | \$10,100 less |
| 21-40 | \$189 billion less | \$8,582 less |
| BOTTOM 20% | \$136 billion less | \$5,623 less |

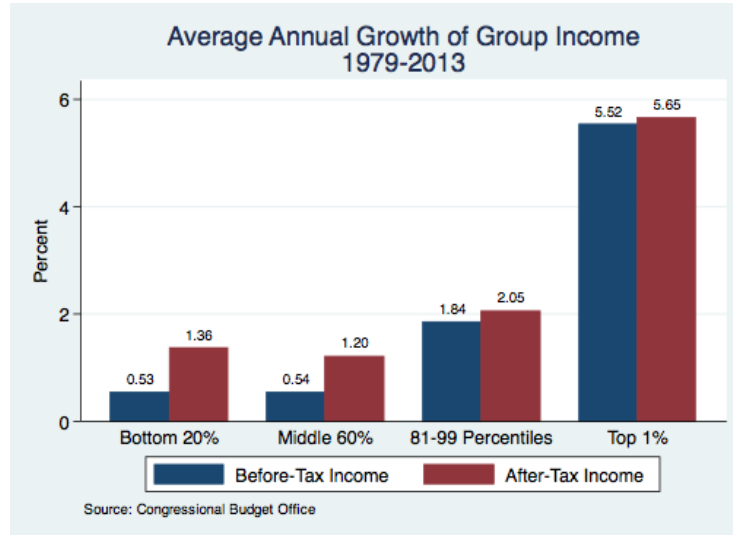
Bottom 90% of Households →

* Compared to what incomes would have been had all income groups seen the same growth rate in 1979-2005 as they did during previous decades.
 Source: Jacob Hacker, Yale University; Paul Pierson, UC-Berkeley

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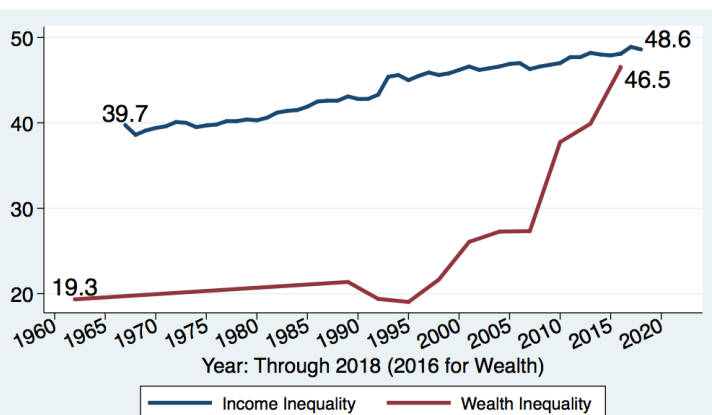
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Growth Has Been Primarily at the Very Top



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Income and Wealth Inequality



Income Inequality (Gini)

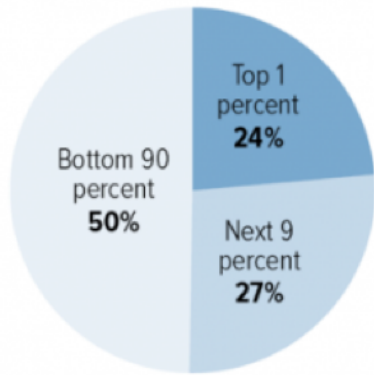
- US: 48.2%
- GA: 48.2%
- Cobb: 47.9%

Source: U.S. Census Bureau and Board of Governors.
 INCOME INEQUALITY is measured by the Gini coefficient.
 WEALTH INEQUALITY is the ratio of the mean wealth of the top decile to median overall wealth.
 Wealth data are only available for 1962, and at three year intervals beginning in 1989.

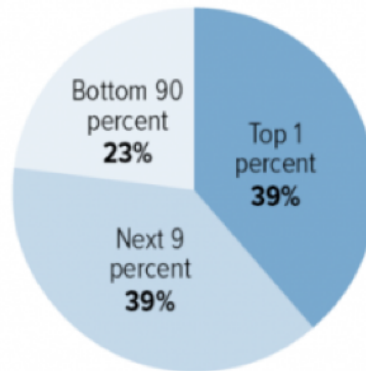
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Wealth Inequality Exceeds Income Inequality

Distribution of before-tax income, 2016

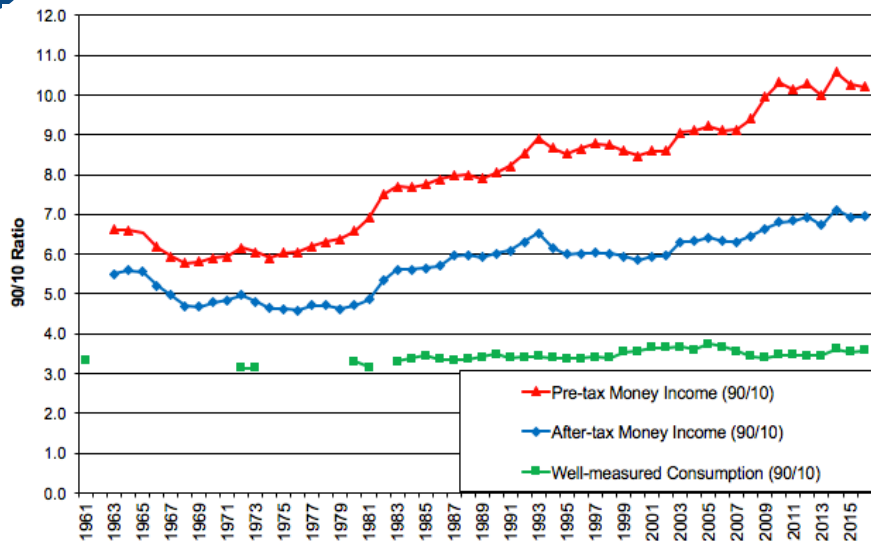


Distribution of wealth, 2016



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A Third Measure of Inequality: Consumption



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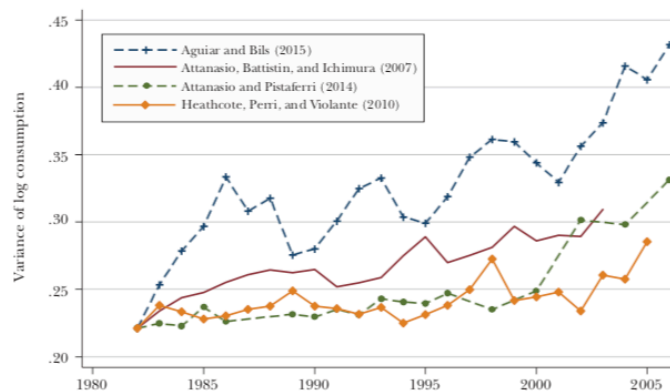
Consumption Inequality

- Consumption is another important metric for judging inequality
- Arguably a better indicator of “well-being”
- Extremely difficult to measure
- Growing evidence that consumption inequality has also increased

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Growing Evidence: Consumption Inequality

The Evolution of Consumption Inequality over Time as Measured by Different Papers



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Case Study: Economic Research

- **Early, controversial result is published**
- **Flurry of effort to understand the result**
- **Growing body of evidence**
- **Consensus reached**
 - Not always
 - Sometimes data continue to conflict
 - Often merely a preponderance of evidence drives understanding
- **Why has this happened with consumption inequality?**
 - Inadequacy of data and methods

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Summary: Consumption Inequality

- **Early research indicated that although income inequality may be increasing, consumption inequality may not be.**
 - How is this possible? Borrowing, or otherwise smoothing consumption.
- **Mounting evidence that it is increasing along with income and wealth inequality.**
- **Consensus reached? No.**

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Where Does Inequality Come From?

- **Labor Characteristics**

- Demographics
 - o Age distribution
- Personal Choices
 - o Educational attainment
 - o Effort
 - o Priorities
 - o Household composition
- Immigration

- **Market Forces**

- Technology
- Changing demand patterns
- Competition for labor

- **Government Policy**

- Market influence
- Redistribution



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Government Policy and Inequality

- **Market Influence: PRE-distribution**

- Characteristics of labor
 - o Access to education
- Effects on labor demand
 - o Market regulation
 - Competition policy
 - o Labor regulations
 - Minimum wage, overtime, health insurance, etc.

- **RE-distribution**

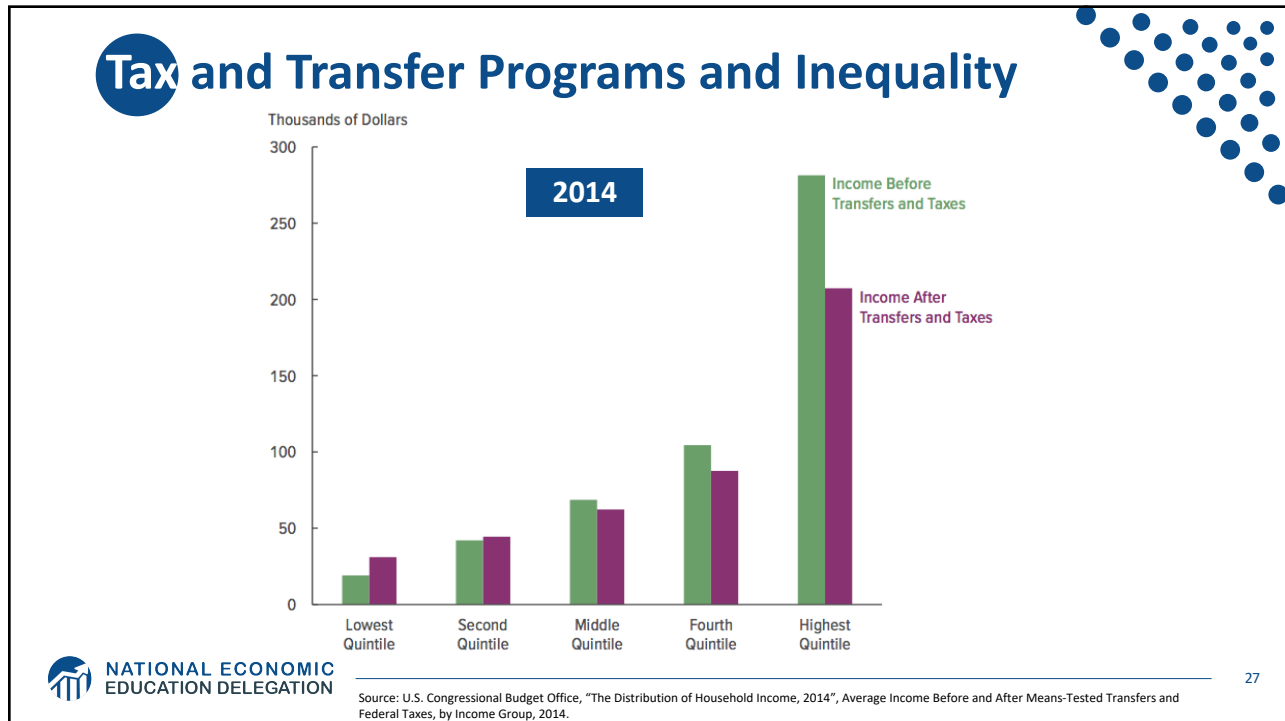
- Tax Rates
- Income support
 - o Direct aid
 - o Food stamps



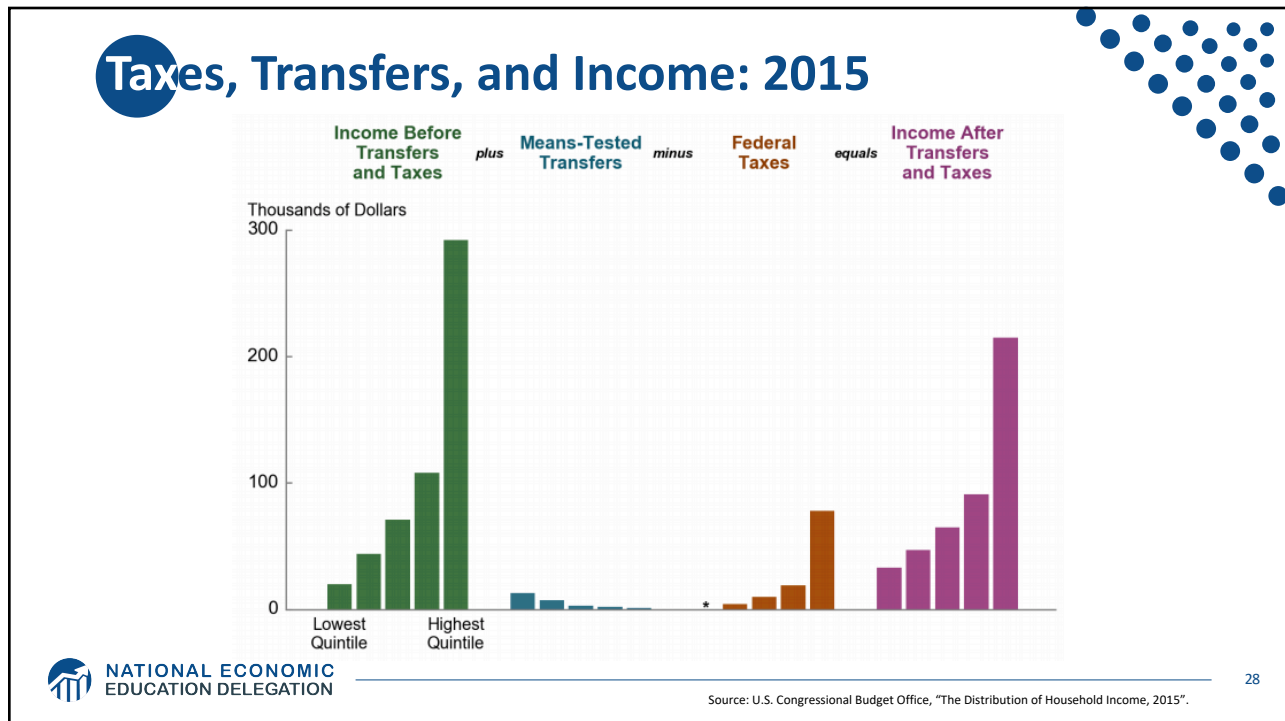
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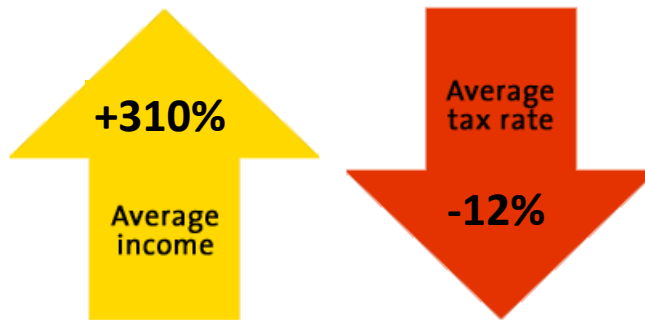


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What About Tax Rates?

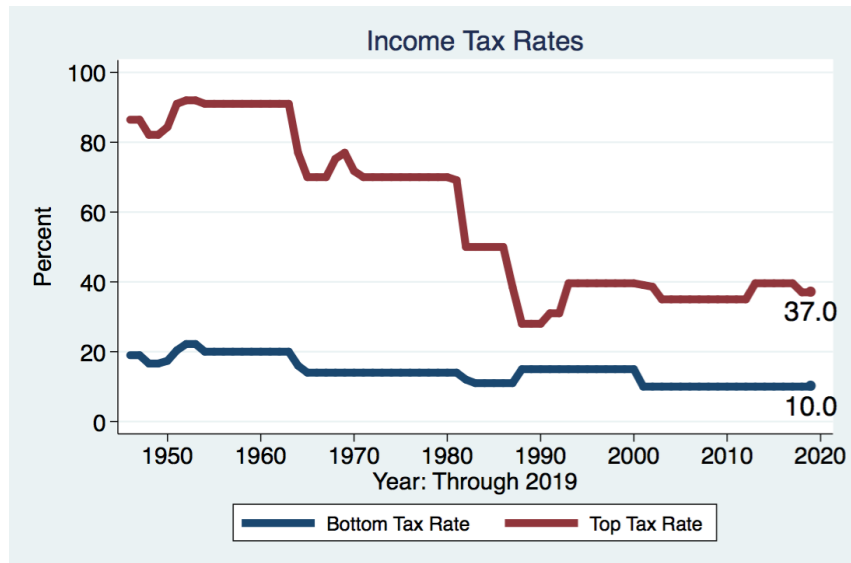
400 TAXPAYERS WITH HIGHEST INCOMES

1992-2014

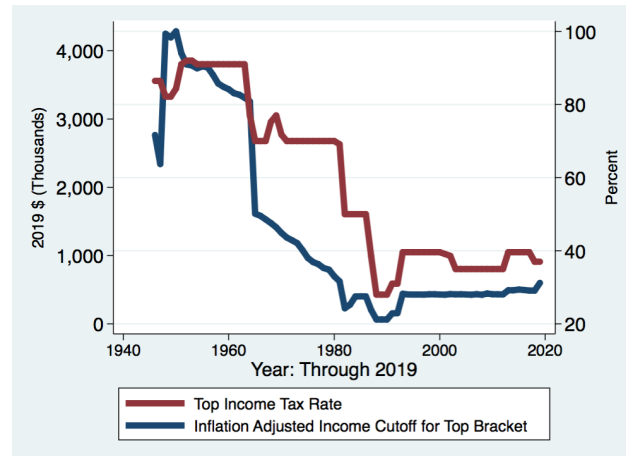


Source: IRS, Statistics of Income Division, December 2016.

Tax Rates Over Time



The Top Tax Rate and Income Cutoff



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Market Forces and Inequality

- **Changing demand patterns**
 - Technology
 - Globalization
 - Industry composition
 - PCs instead of typewriters
 - Services instead of goods
 - Professional services instead of personal services
- **Competition in labor markets**
 - Unionization
 - Market concentration

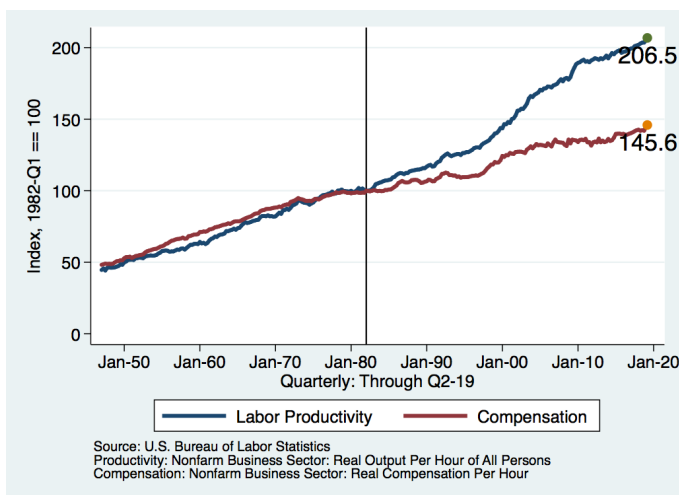
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Where Does Inequality Come From? Summary

- **Labor characteristics**
 - What do workers bring to the market?
- **Market forces**
 - How does the market value the labor characteristics?
- **Government policies**
 - PRE-distribution – affecting markets
 - Redistribution – affecting incomes

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Labor Income is Unhinged from Productivity

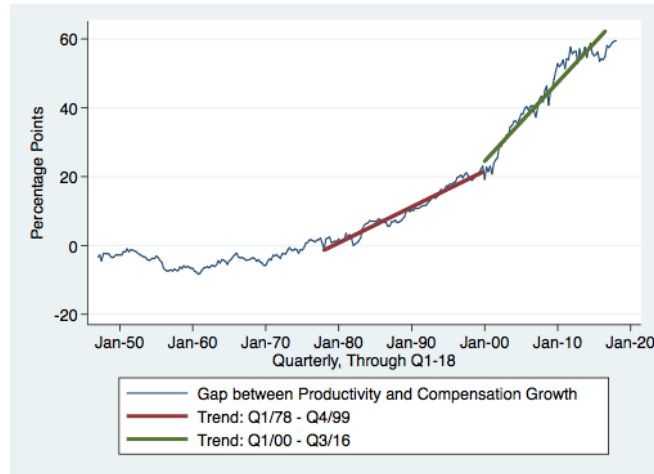


Why?

- Declining unionization
- Globalization
- Immigration
- Competition policy
- Cheap technology

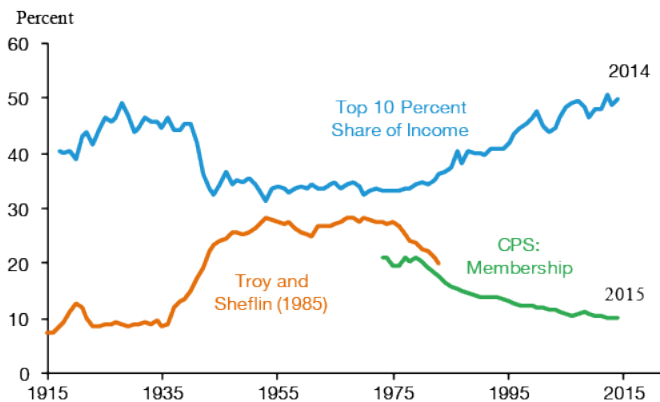
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Labor Share Gap Acceleration



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Declining Unionization



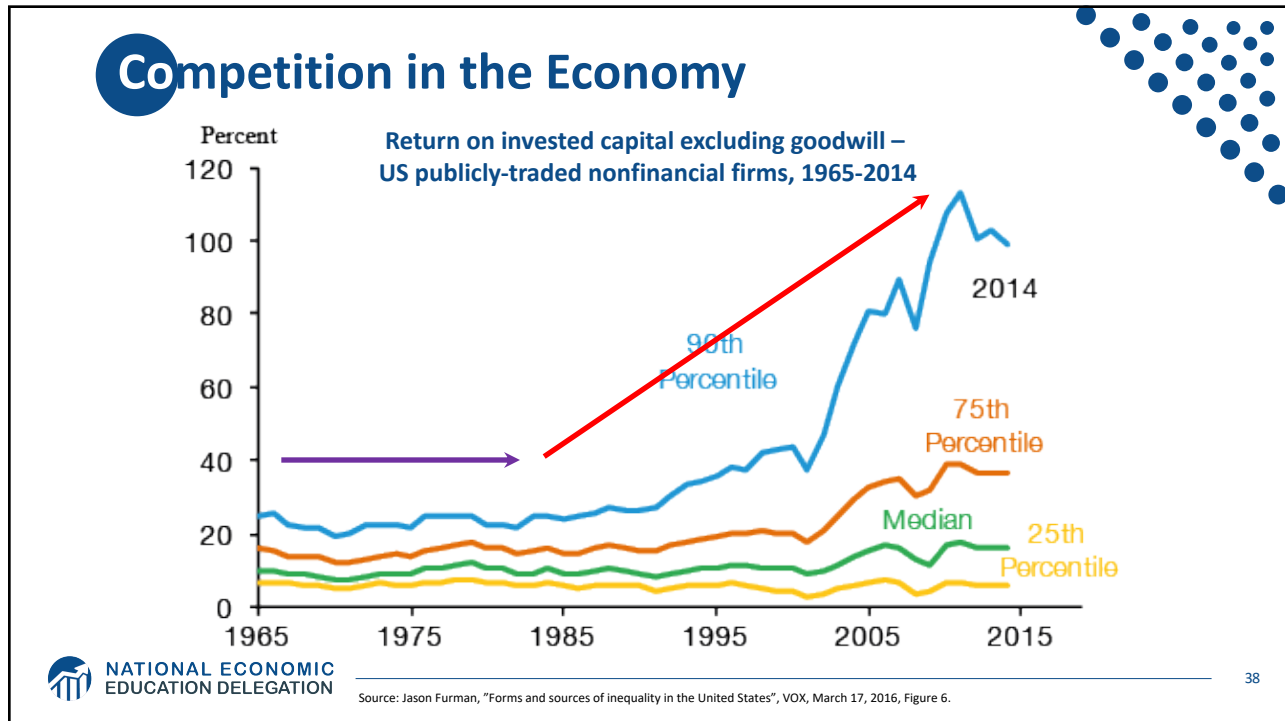
Unionization Rates

- **1983:** 20.1%
- **2018:** 10.5%

Unionization Rates

- **Public:** 33.9%
- **Private:** 6.4%

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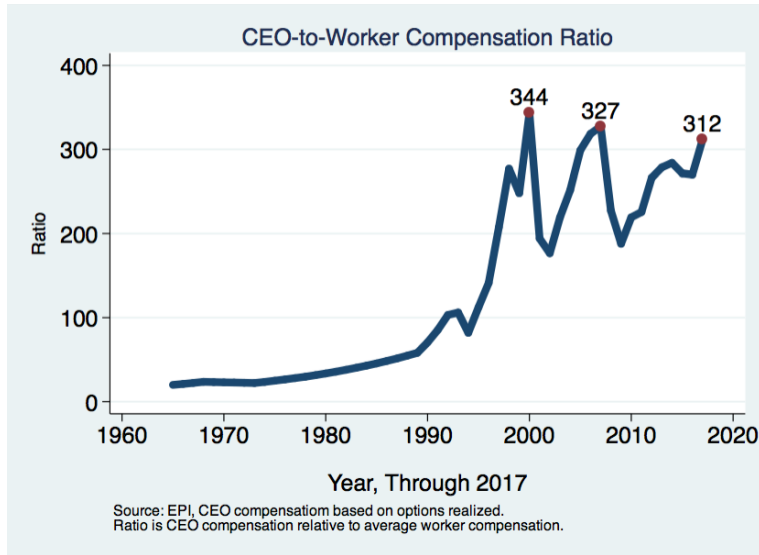
Growing Revenue Concentration

| Industry | Percentage Point Change in Revenue Share Earned by 50 Largest Firms, 1997-2007 |
|-------------------------------------------------|--------------------------------------------------------------------------------|
| Transportation and Warehousing | 12.0 |
| Retail Trade | 7.6 |
| Finance and Insurance | 7.4 |
| Real Estate Rental and Leasing | 6.6 |
| Utilities | 5.6 |
| Wholesale Trade | 4.6 |
| Educational Services | 2.7 |
| Accommodation and Food Services | 2.6 |
| Professional, Scientific and Technical Services | 2.1 |
| Administrative/Support | 0.9 |
| Other Services, Non-Public Admin | -1.5 |
| Arts, Entertainment and Recreation | -2.3 |
| Health Care and Social Assistance | -3.7 |

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Source: Furman and Orszag, "A Firm-Level Perspective on the Role of Rents in the Rise in Inequality", 2015.

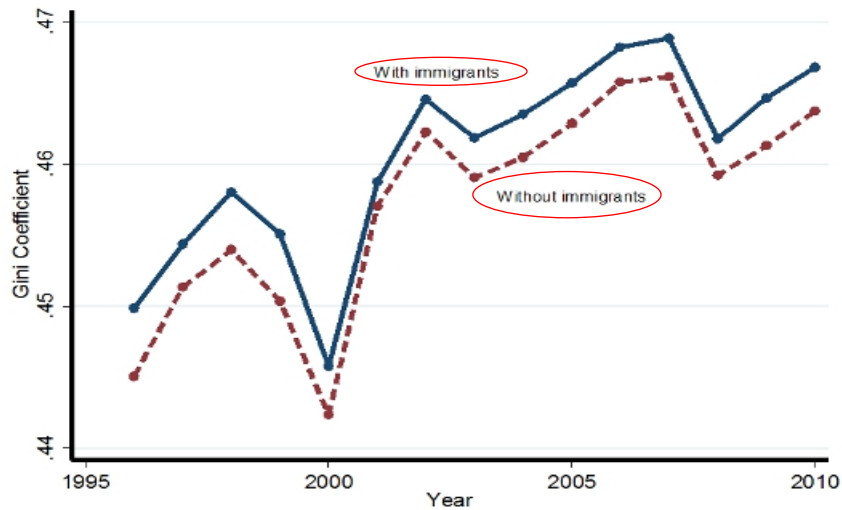
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CEO Pay Has Been Growing Rapidly



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Immigration and Inequality



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Immigration and Inequality- Summary

- **Beginning in about 1970, the immigrant share of the U.S. Population increased dramatically.**
 - 5% in 1970 and 14% in 2016
- **Immigration tends to happen most often among:**
 - Low-skilled low-wage workers
 - High-skilled high-wage workers
- **Immigration has likely increased income inequality.**
- **Its effect has likely been small.**
 - ~5% between 1980 and 2000
 - No reason to think it has been bigger since

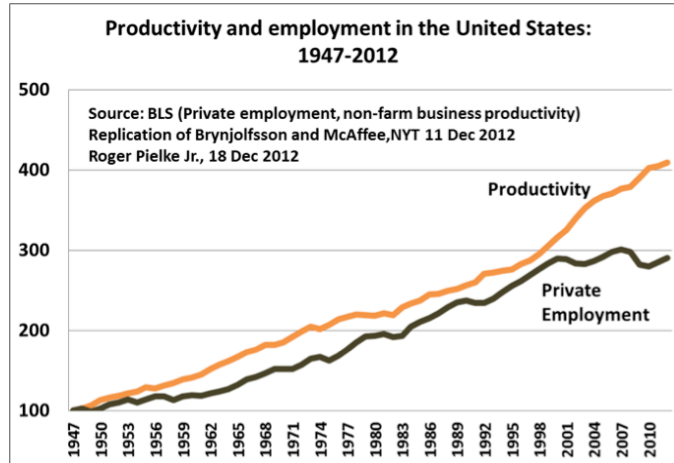


Technological Change and Inequality

- **Much of the technology adopted in the last 30 years has eliminated low-skill or low-wage jobs.**
 - Computers, advanced manufacturing equipment, steel mini-mills, automation
- **There is a “winner take all” aspect of the technology-driven economy.**
 - This likely favors a small group of individuals.
- **Both aspects increase inequality by increasing the rewards to:**
 - Those with significant labor market skills.
 - Owners over workers



Technology Benefits Ownership over Labor



Technology can Hurt Low Income Workers



Early on, technology was good to low income workers



Until it was bad for them....

A Modern Example: Uber & Lyft

- **Technology:**

- Facilitates market power for owners.
- Reduces bargaining power for labor.
- Shifts costs of doing business onto labor.

- **Modern day Robber Barons?**

- Ruthlessly absorbing as much income as they can.
- Lack of regard for labor.



Globalization

- **What is globalization?**

- Flow of goods, services, capital, and labor across international borders

- **How does it affect inequality?**

- Through a differential impact on low-skilled workers and hence their wages
- For the United States, globalization is thought to lower the wages of low skilled and hence low-wage workers relative to those of high-skilled workers



Mechanisms for the Effects of Globalization

- **Merchandise trade**

- Importing goods that are made with low-skilled workers and exporting goods that are made with high-skilled workers
 - o Lowers the wages of unskilled relative to skilled
 - making the distribution of income **less equal**

- **Outsourcing**

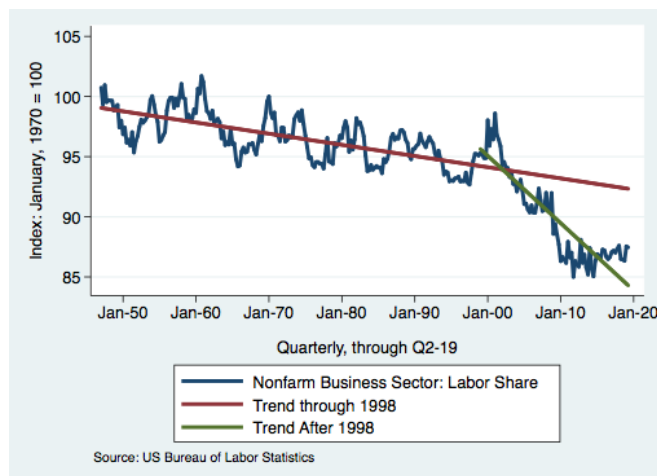
- Similar channel as with merchandise trade

- **Trade in services**

- US imports of middle-skill services: business and some professional services

- **Intuitively: The same as if we were to move the actual workers.**

Effects of the Unhinging?



Labor's Share of Income

1960: 66%

2011: 56%

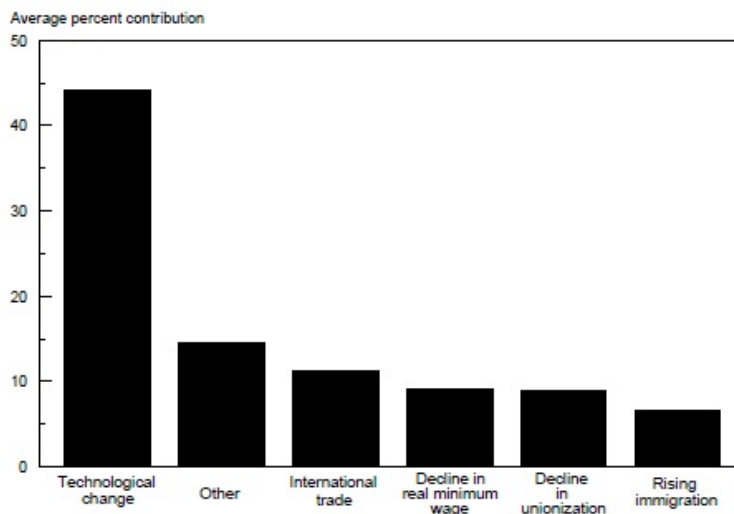
2016: 58%

What is driving increasing inequality?

- **Primary drivers:**
 - Technology
 - Globalization
 - Institutions
- **These drivers can also influence personal choices in ways that affect measured income inequality.**
 - For example, educational choices or labor force participation

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Sources of Inequality Through Late 1990s



Source: Federal Reserve Bank of New York.

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Why Does Inequality Matter?

- **Too little inequality can:**

- Reduce individual motivation
- Slow economic growth

- **Too much inequality can:**

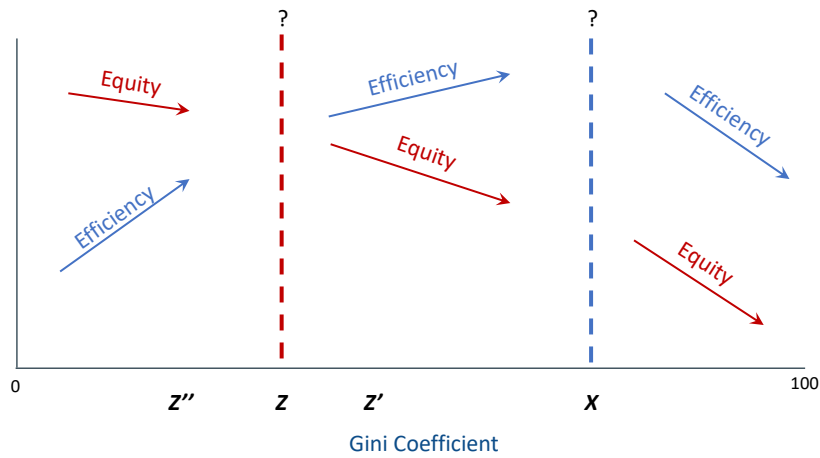
- Reduce individual motivation
- Slow economic growth

- **Too much inequality may also:**

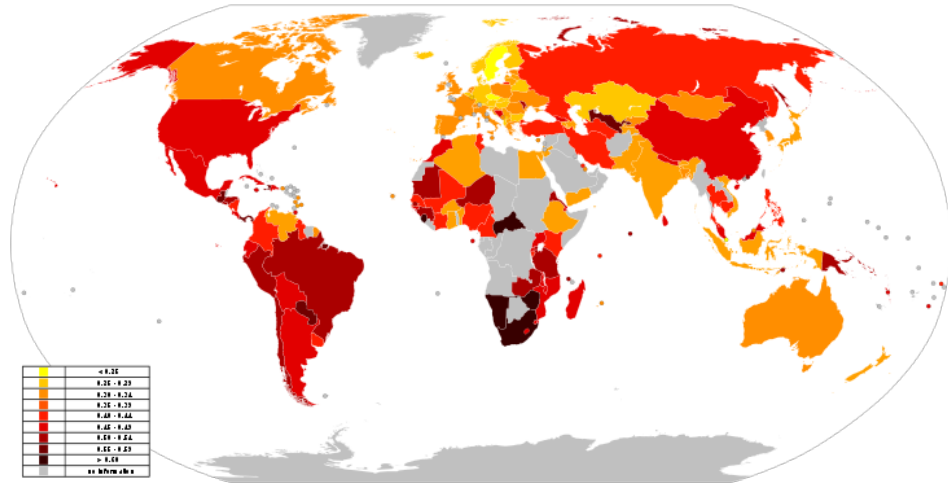
- Divide society
- Distort political environment
- Reduce political participation
- Reduce investments in public goods
 - o Education
 - o Environmental protections



How Much Inequality Is too Much?



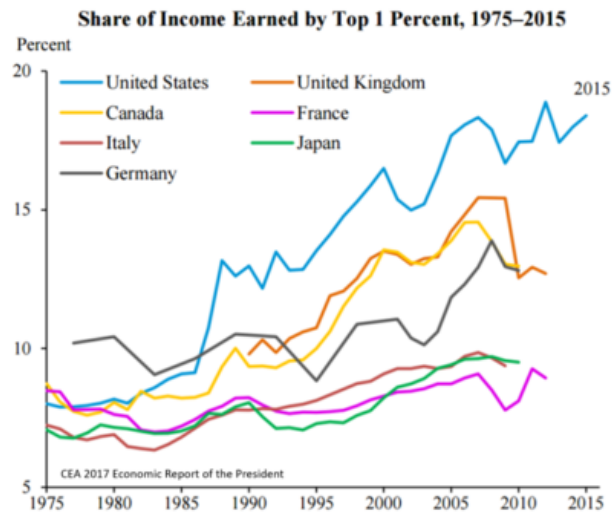
An International Perspective



Source: Data taken from the 2014 CIA World Factbook.

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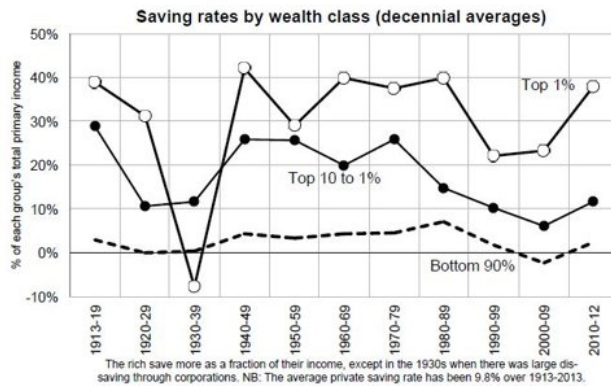
An International Perspective: Comparables



Source: World Wealth and Income Database.

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But the High-Income Households Save More



Source: Emmanuel Saez and Gabriel Zucman, *The Distribution of U.S. Wealth, Capital*

- Facilitates the Consumption of: **Wealth**
- Which facilitates the consumption of: **Leisure**



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Addressing Inequality: Is It A Problem?

• Why it might be a problem.

- Economic issues (*Efficiency*)
 - There is evidence that at some level, increased inequality slows economic growth.
 - Or, inequality concentrates resources among investors.
- Noneconomic issues (*Equity*)
 - Values, ethics and morals will drive individual evaluations of the level of inequality.
 - E.g., inequality is primarily a function of market outcomes, so should be left alone.
 - Or, a solid middle class is important for maintaining a civil society, which runs contrary to a high degree of inequality.

• Suppose you think it's a problem. How might it be addressed?



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Addressing Inequality: Long Term

- **It's all about access to resources:**

- Education, in particular
 - Improve public education
 - Reduce disparities in quality of public education
 - Improve counseling in low-income schools
 - With respect to college – paths to success and funding
- Investments are needed in early education, not later
 - Universal pre-K
 - Upgrade quality of elementary schools in low-income areas



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What to do About Inequality?

- **Nothing?**
- **Redistribution?**
- **PRE-distribution?**
- **Access to resources?**



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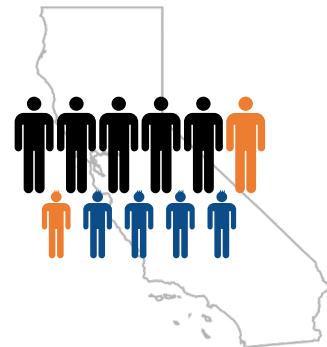
Tension in Policy Solutions

- **Is it possible to increase growth at the same time that you reduce income inequality?**
 - Common refrain among some that government intervention in the economy is always and everywhere bad for growth.
- **Possibly: expanding equality of access promotes the full utilization of resources.**
 - Expanding equality of access requires resources likely from the well-to-do.

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Summary

- **Income inequality is clearly increasing.**
 - The economy is clearly favoring owners of productive resources over labor.
- **The causes appear to be largely driven by:**
 - The market – technology, competition, and trade
 - Changing institutions.
- **Open questions are:**
 - To act or not to act?
 - If so, how?



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Additional Slides



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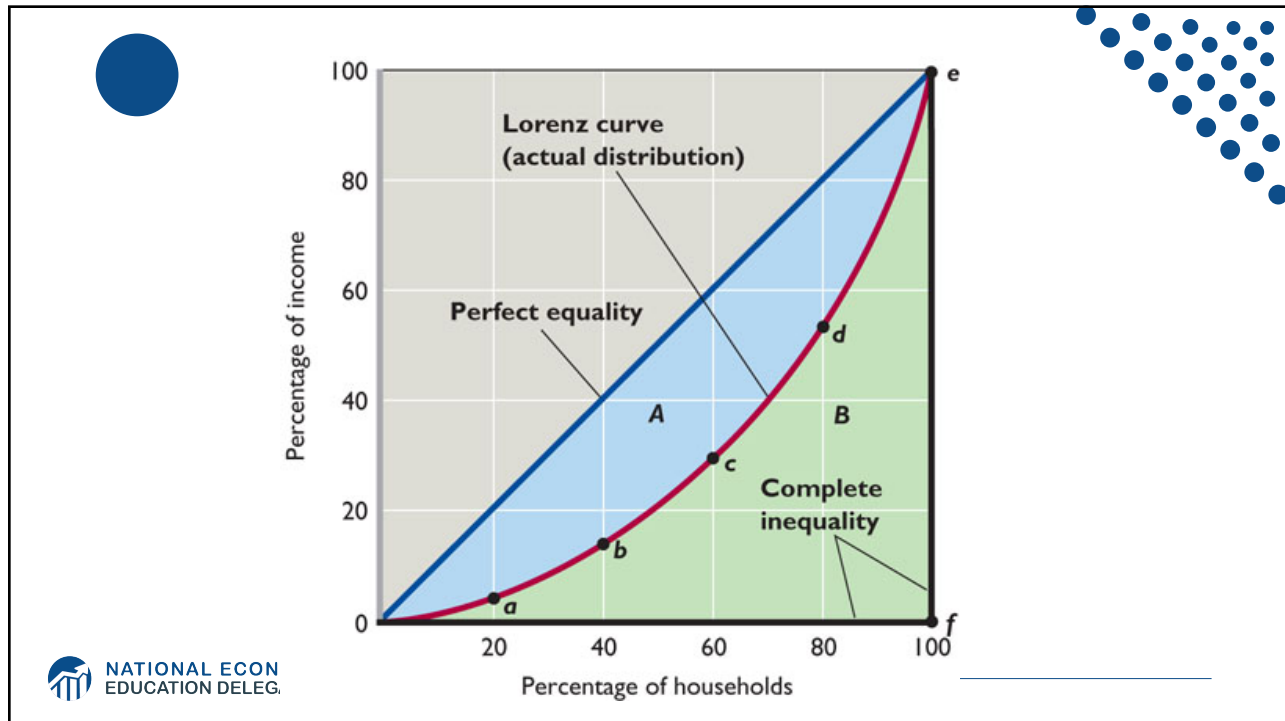
Measuring inequality: The Lorenz Curve

Shows the distribution of income in a region
Ex: U.S. Income Distribution - 2008

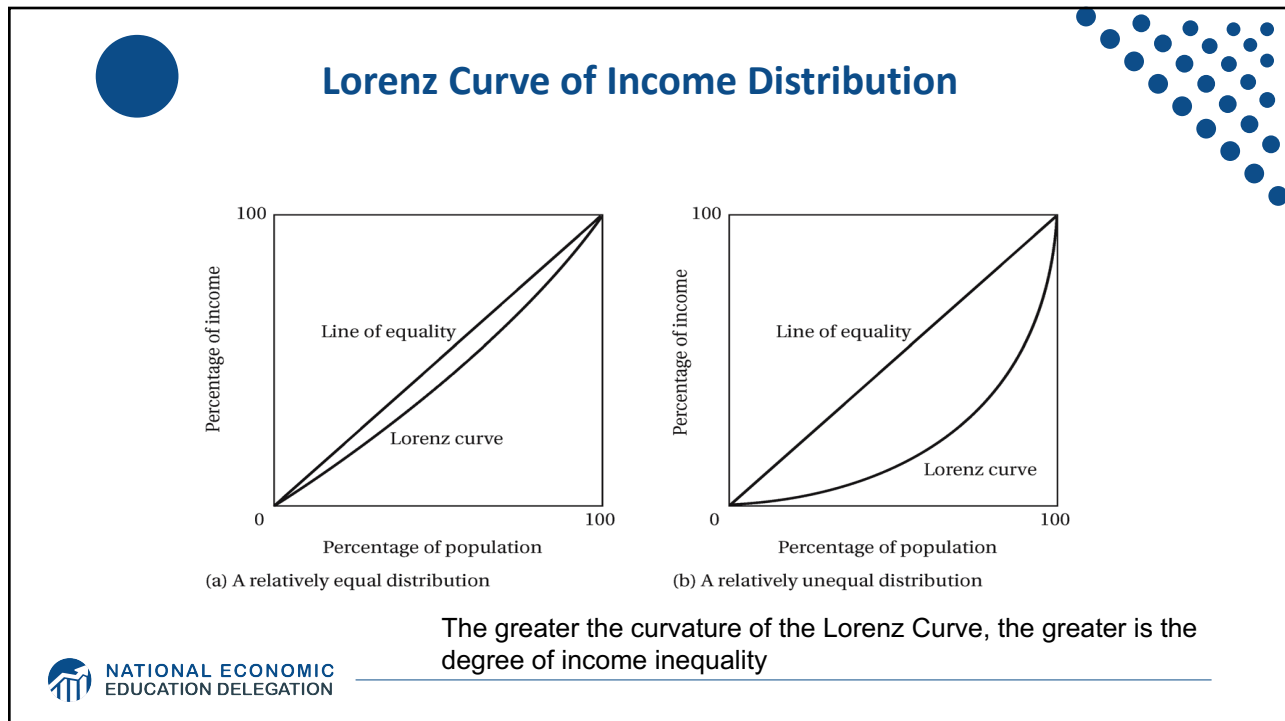
| | Quintile (2008) | % of total income | Cumulative % of total income |
|---|-----------------|-------------------|------------------------------|
| A | Lowest 20% | 3.4 | 3.4 |
| B | Second 20% | 8.6 | 12 |
| C | Middle 20% | 14.7 | 26.7 |
| D | Fourth 20% | 23.3 | 50 |
| E | Highest 20% | 50 | 100 |



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Gini Coefficient

- Another way to describe income inequality is by using a Gini coefficient.
- Gini coefficient – a numerical measure of the overall dispersion of income
 - Ranges from 0 – 1
 - 0= perfect equality – everyone has same income
 - 1=perfect inequality – one person makes all income
 - In practice:
 - 0.5 – 0.7 – highly unequal
 - 0.2 – 0.35 – relatively equal



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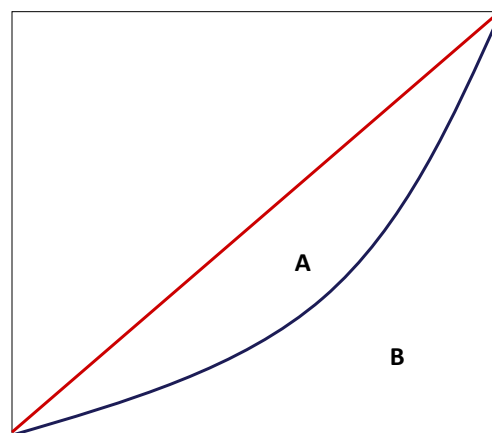
Using the Lorenz curve to calculate a Gini Coefficient

$$\text{Gini coefficient} = \frac{A}{A + B}$$

A higher Gini coefficient means greater inequality

Perfect equality:
A=0, Gini=0

Perfect inequality:
B=0, Gini = 1



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