



# Global Income and Wealth Inequality

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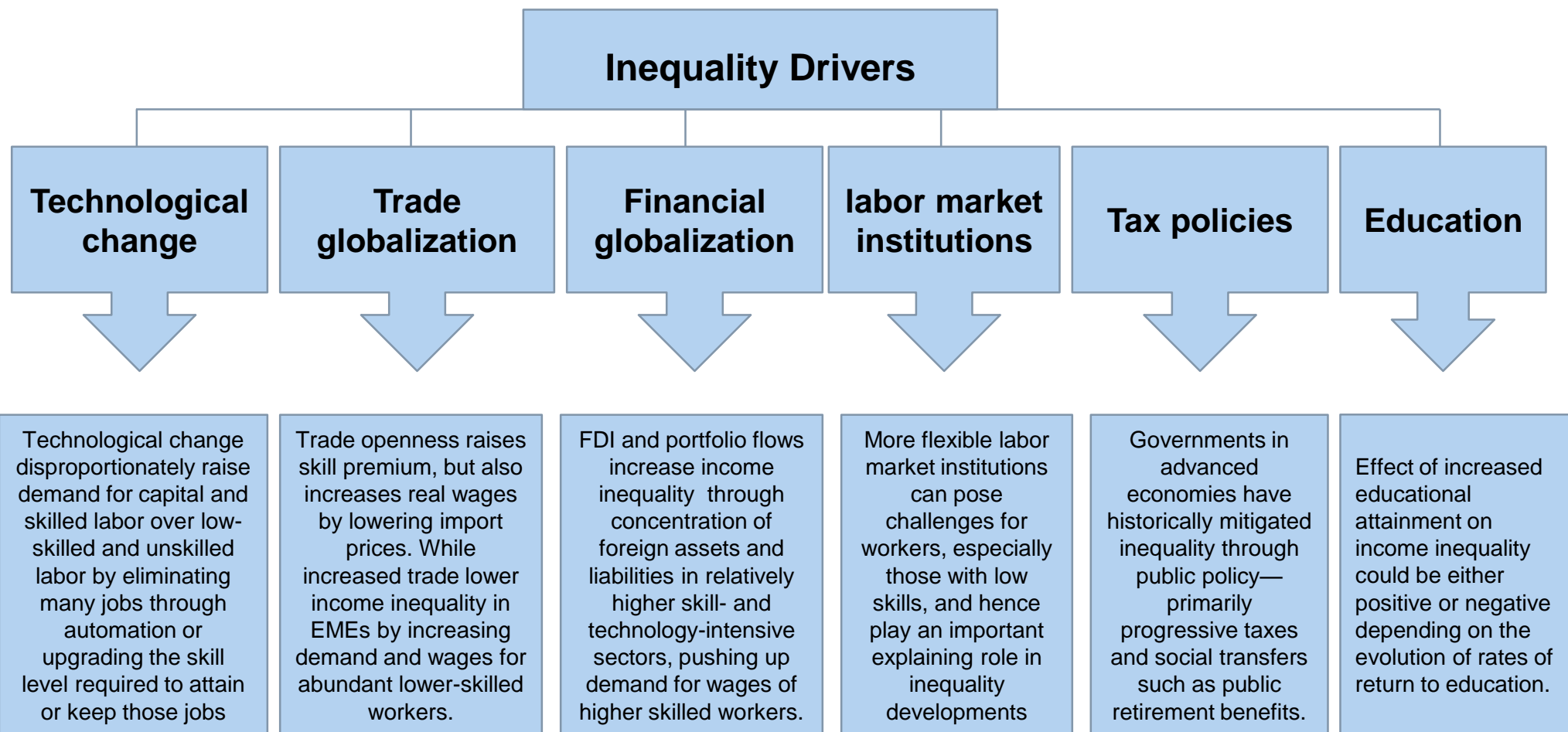


Distributed on: 14/01/2020 19:15:09 GMT

DISCLOSURES AND ANALYST CERTIFICATIONS ARE LOCATED IN APPENDIX 1. MCI (P) 066/04/2019.



# Sources of inequality



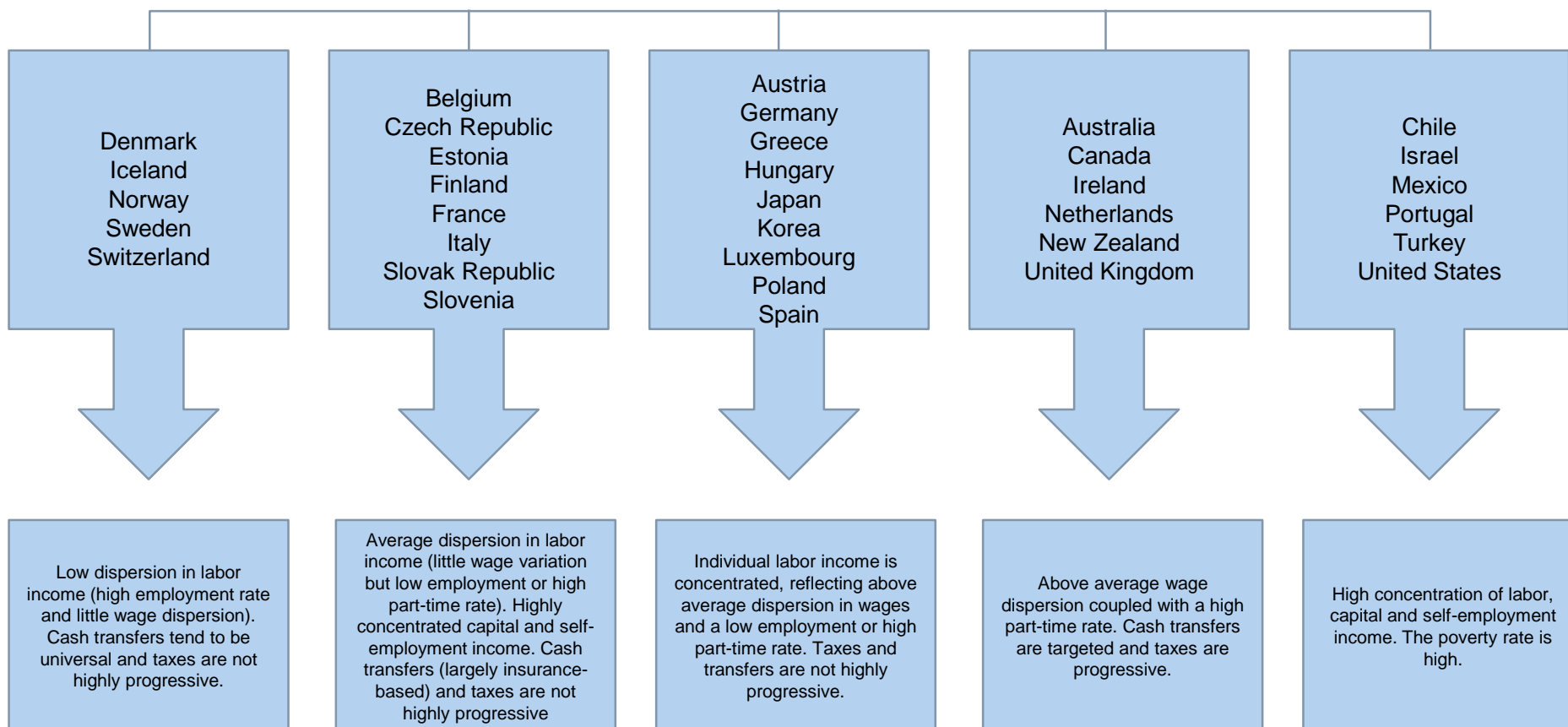
Source: OECD, DB Global Research



# Country groups with similar patterns of inequality

**Low inequality in household disposable income**

**Higher inequality in household disposable income**



Source: OECD, DB Global Research

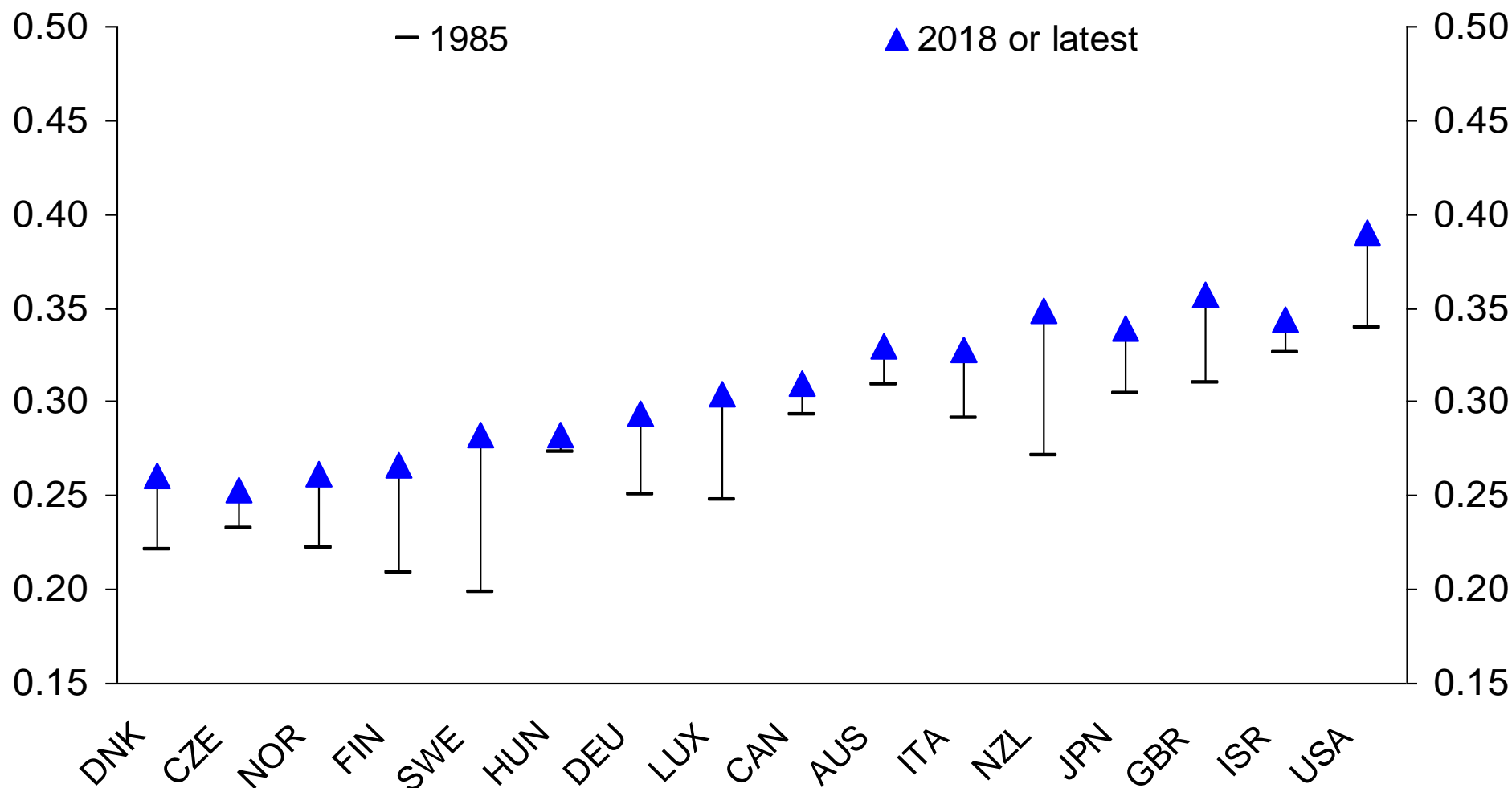


# Overview



# Income inequality increasing everywhere

## Gini coefficients of income inequality, mid-1980s and 2014 or latest available year



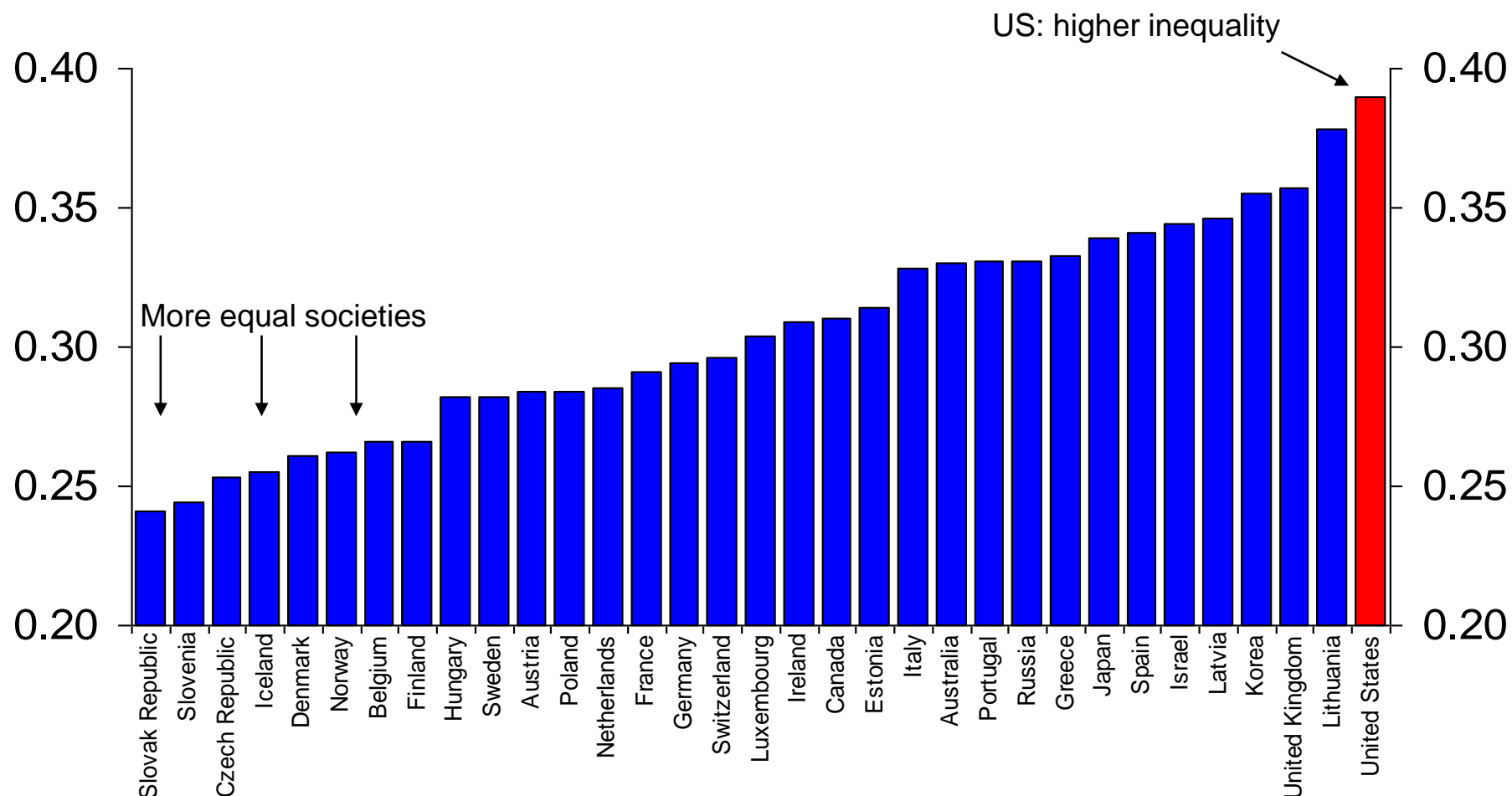
Note: Note: Income refers to disposable household income, corrected for household size.

Source: OECD, DB Global Research



# Income inequality higher in the United States

## Gini coefficient, 2018



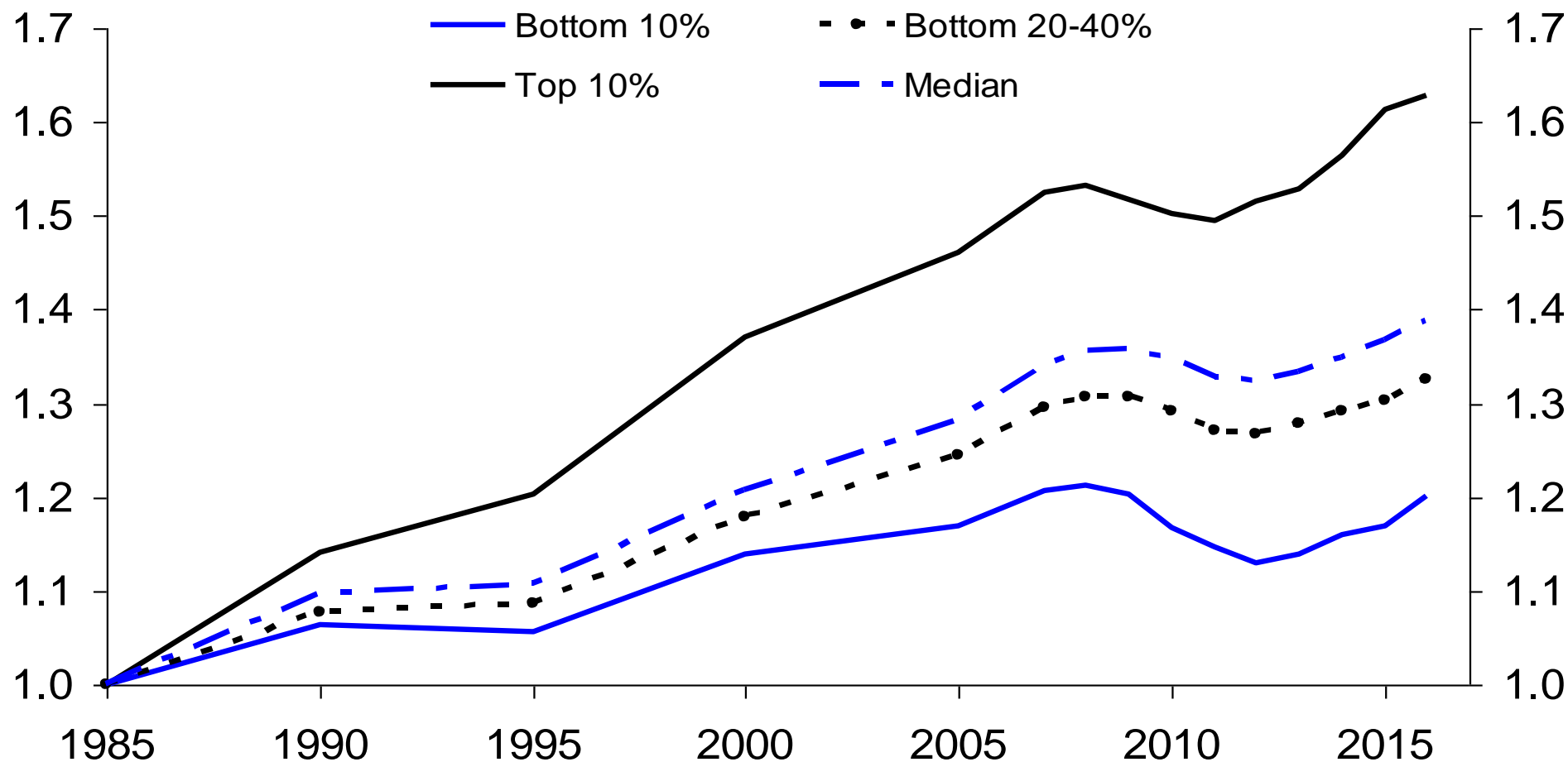
Note: Gini coefficients (disposable income, post taxes and transfers) are based on equivalised incomes for OECD countries. Data for 2018 or latest available.

Source: OECD, DB Global Research

# Across OECD countries, incomes have increased more for high-income households



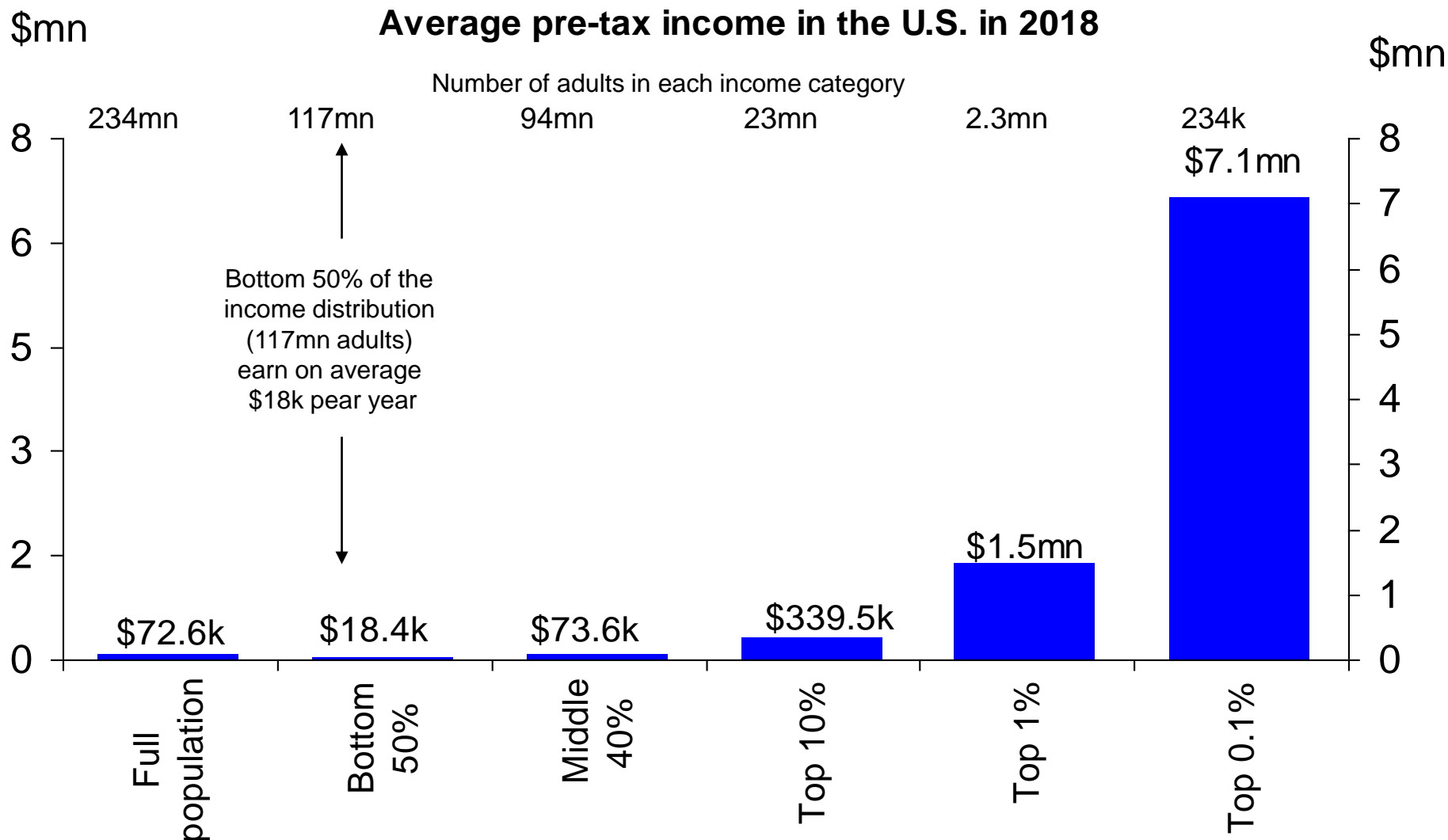
## Real disposable income growth by income position, average for 17 OECD countries, 1985-2016 (1985=1)



Note: Note: Income refers to disposable household income, corrected for household size. OECD is the unweighted average of 17 countries (Canada, Germany, Denmark, Finland, France, United Kingdom, Greece, Israel, Italy, Japan, Luxembourg, Mexico, Netherlands, Norway, New Zealand, Sweden and United States).

Source: OECD, DB Global Research

# US: The 2.3 million people in the top 1% of the income distribution earn on average \$1.5mn per year



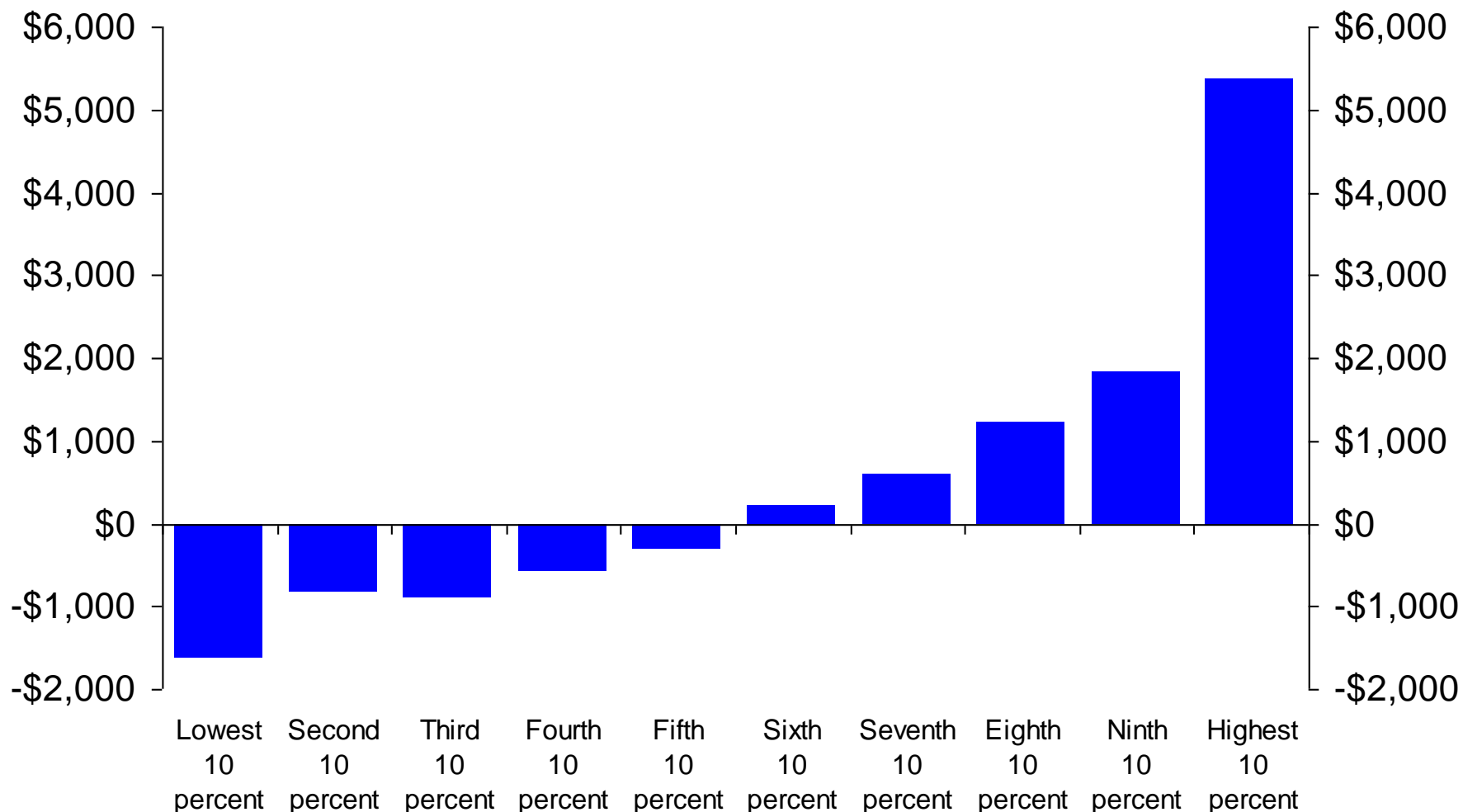
Source: <https://taxjusticenow.org>, DB Global Research



# US: Half of the population spend more than their income

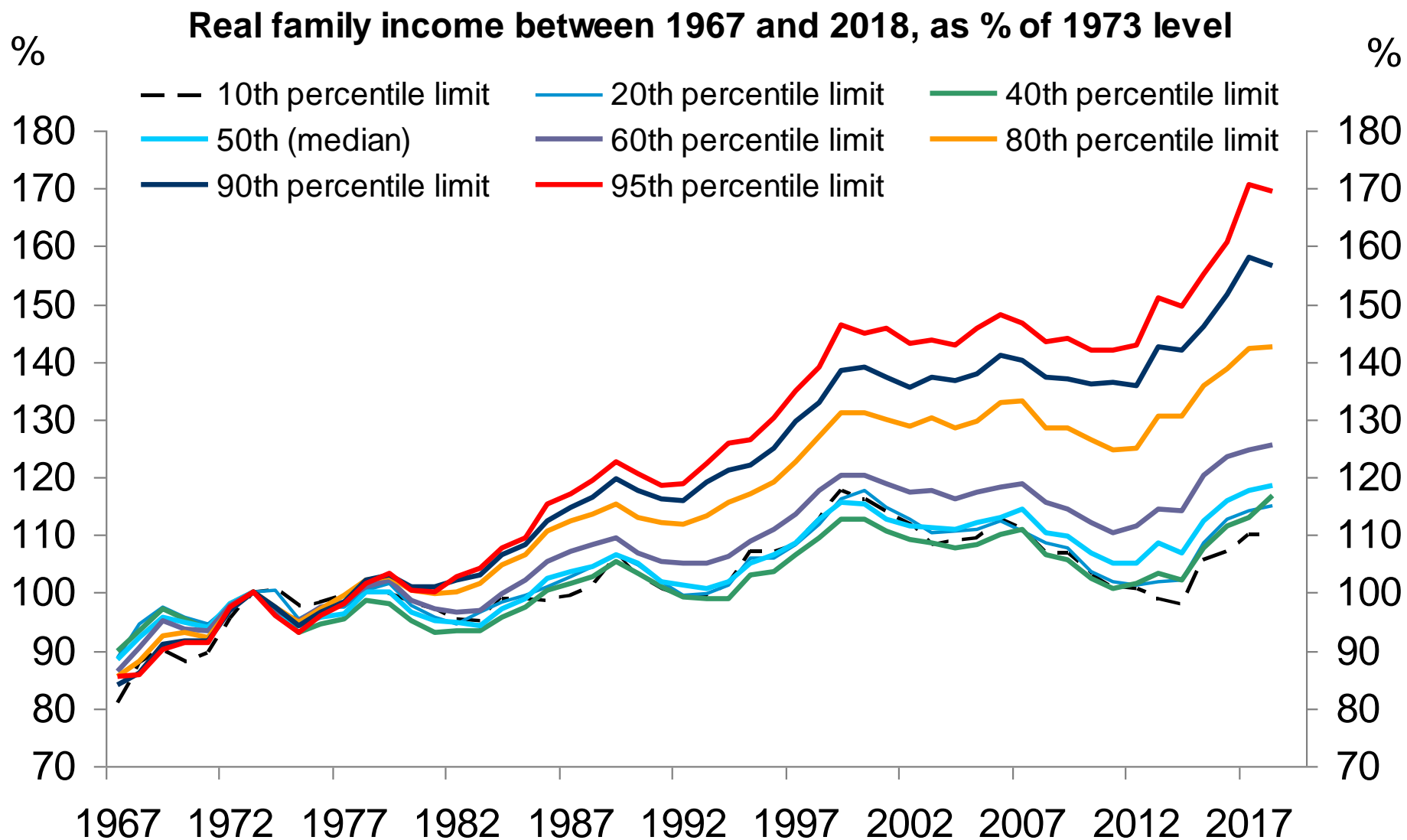


**(Monthly income after tax MINUS average monthly expenditures)**



Source: BLS Consumer Expenditure Survey 2018, DB Global Research

# US: Incomes have stagnated for lower income groups, increased for higher income groups

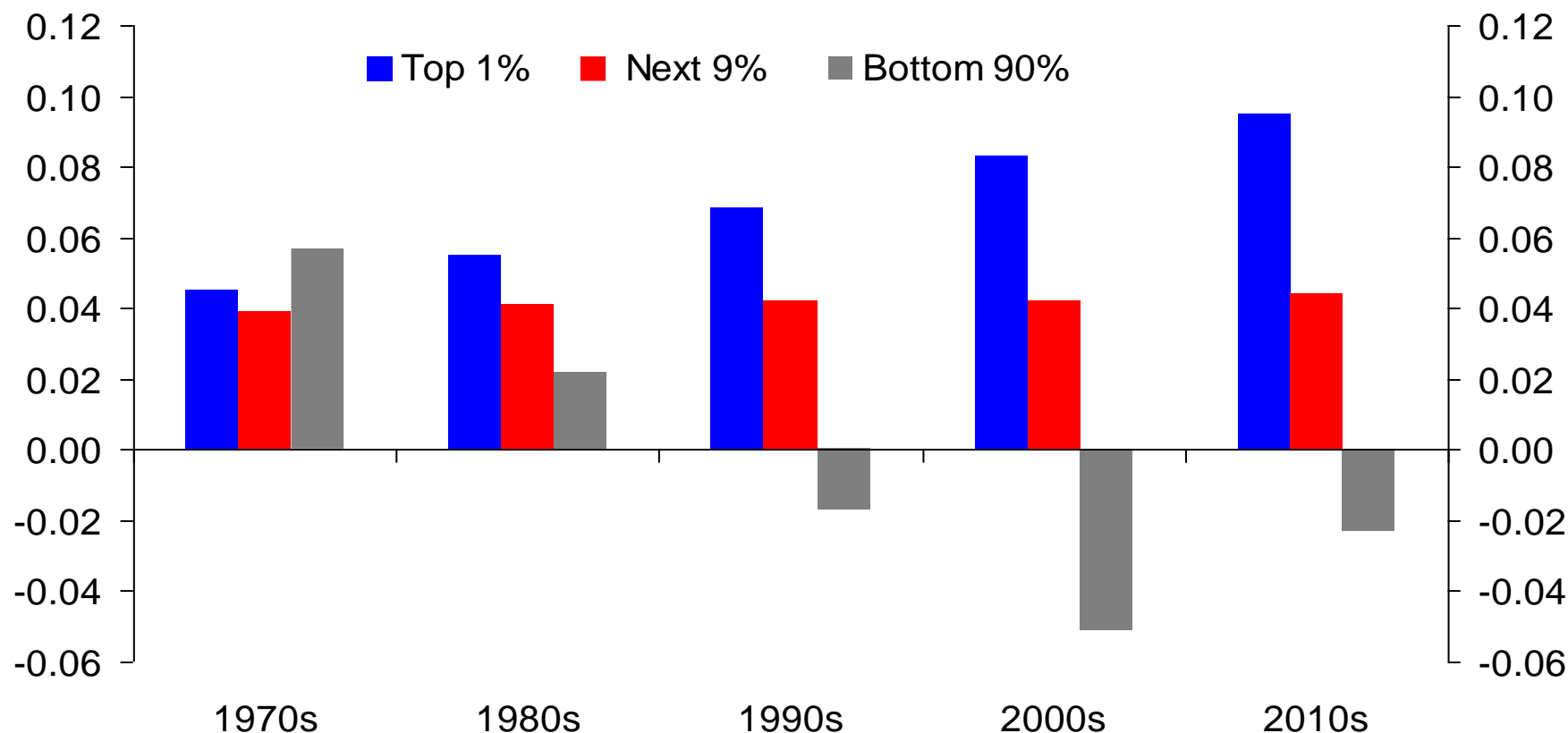


Source: US Census, DB Global Research



# US: In recent decades we have seen a negative savings rate for the bottom 90% of the population

**Net saving by wealth class  
(scaled by national income)**

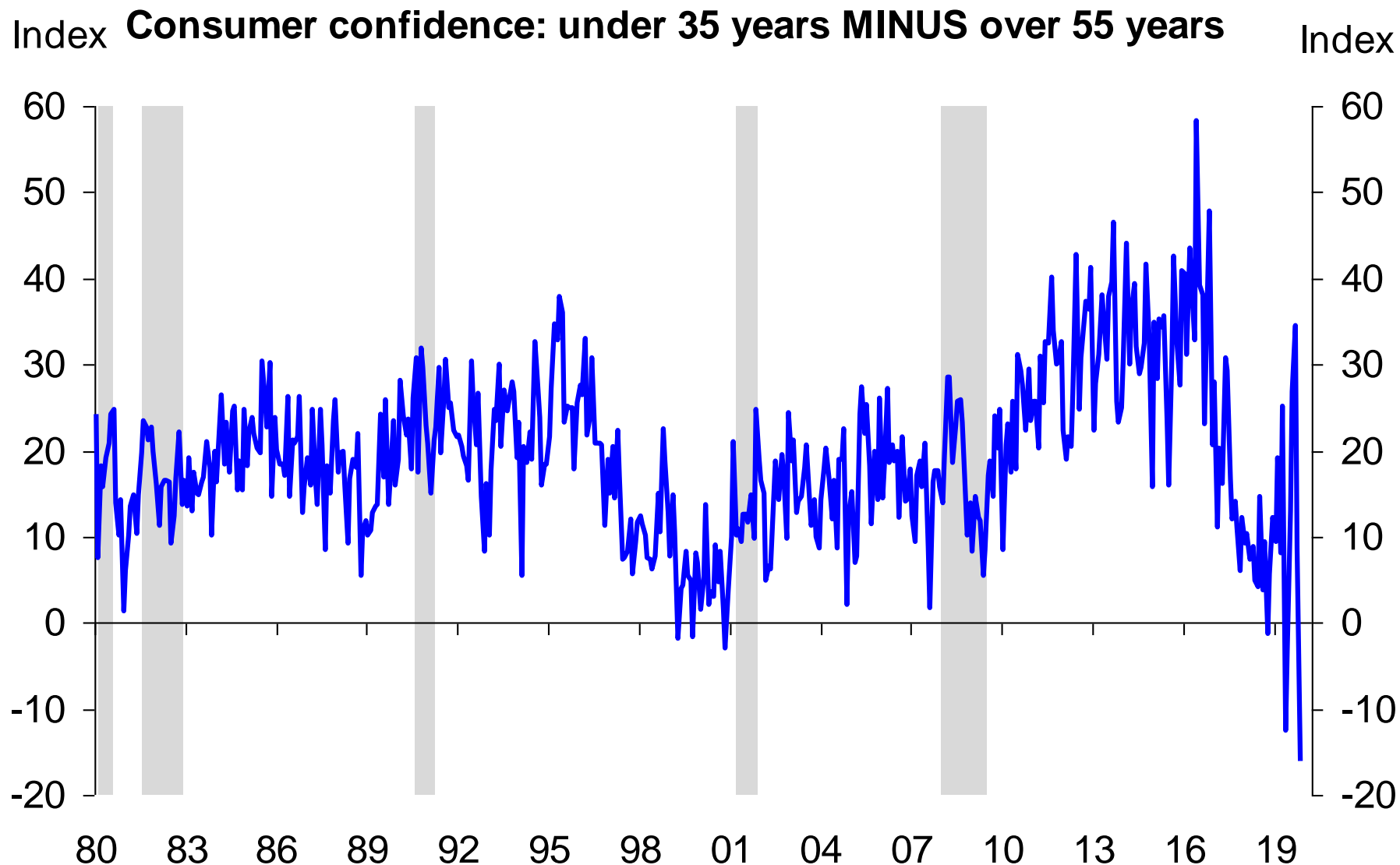


Note: The saving of the top 1% is defined to be the after-tax income of the top 1% of the income distribution minus personal consumption of the top 1% of the income distribution, scaled by national income. Net saving of the other two groups is similarly defined. Averages for the decades are shown.

Source: Mian, Straub & Sufi "The Saving Glut of the Rich and the Rise in Household Debt", (Nov 2019), DB Global Research

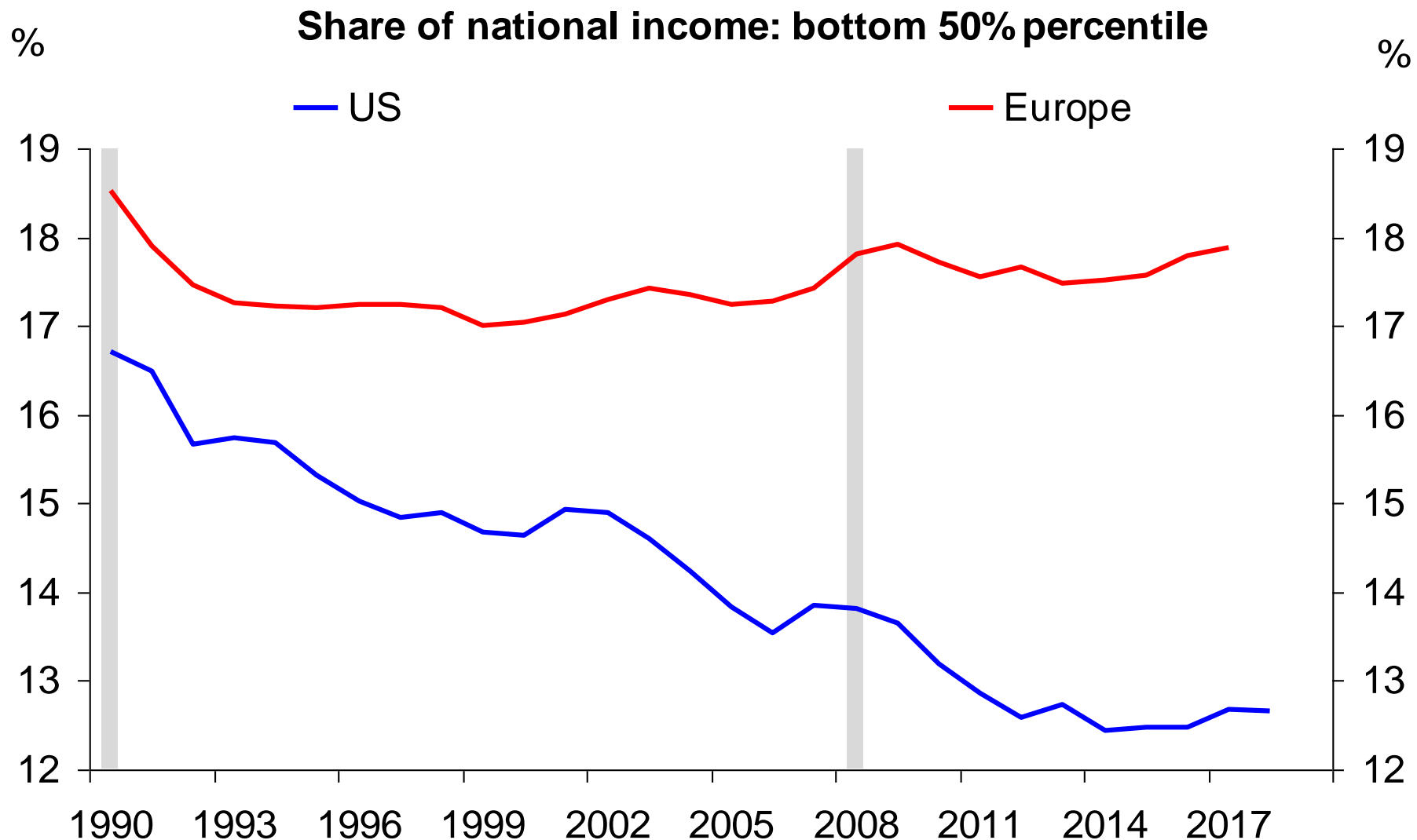


# US: Record difference in consumer confidence: Old generation optimistic, young generation pessimistic



Source: The Conference Board, Haver Analytics, DB Global Research

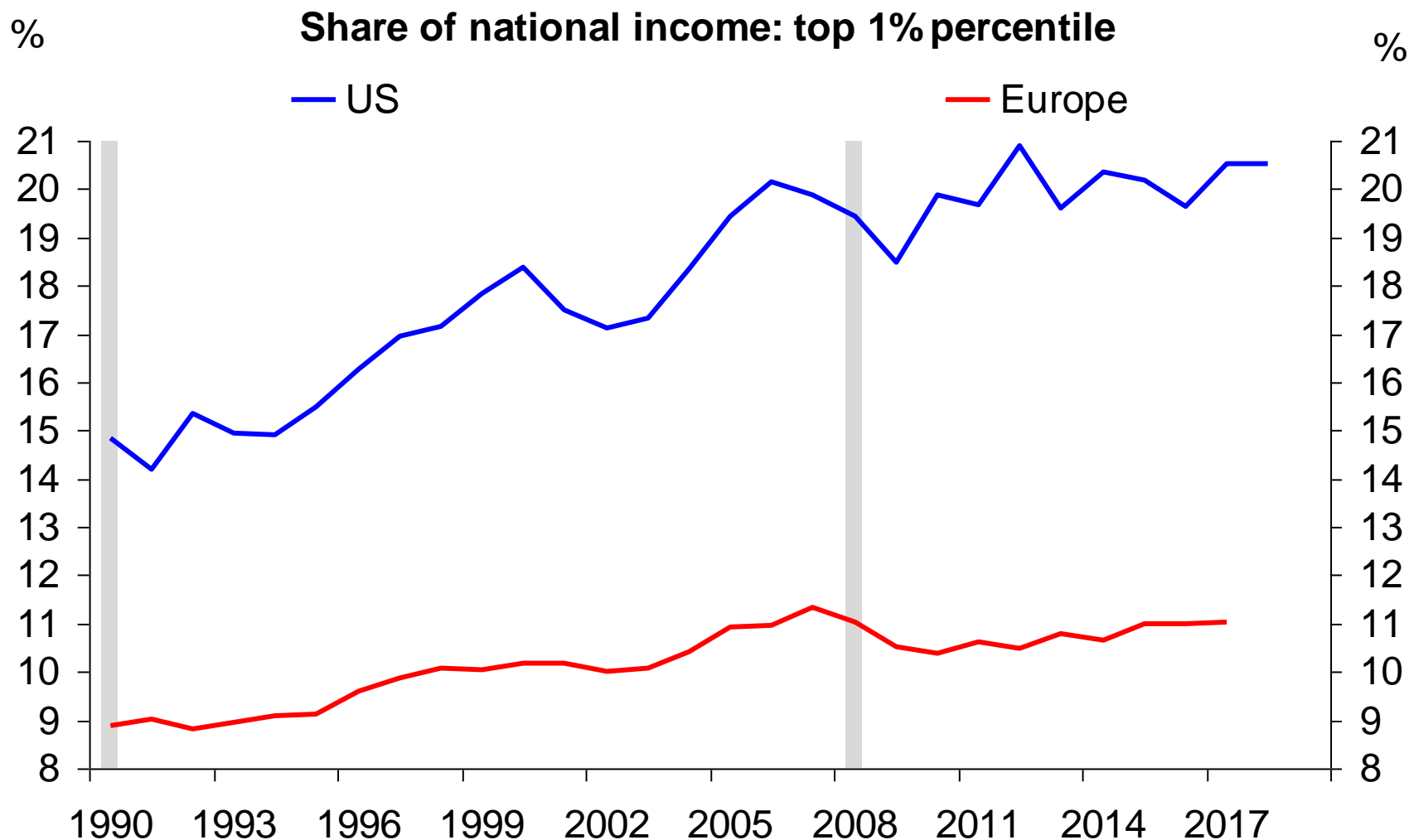
# The share of income going to the Bottom 50% of the population is down in the US and unchanged in Europe



Source: Saez (2019), Blanchet, Chancel & Gethin (April 2019), WID, DB Global Research

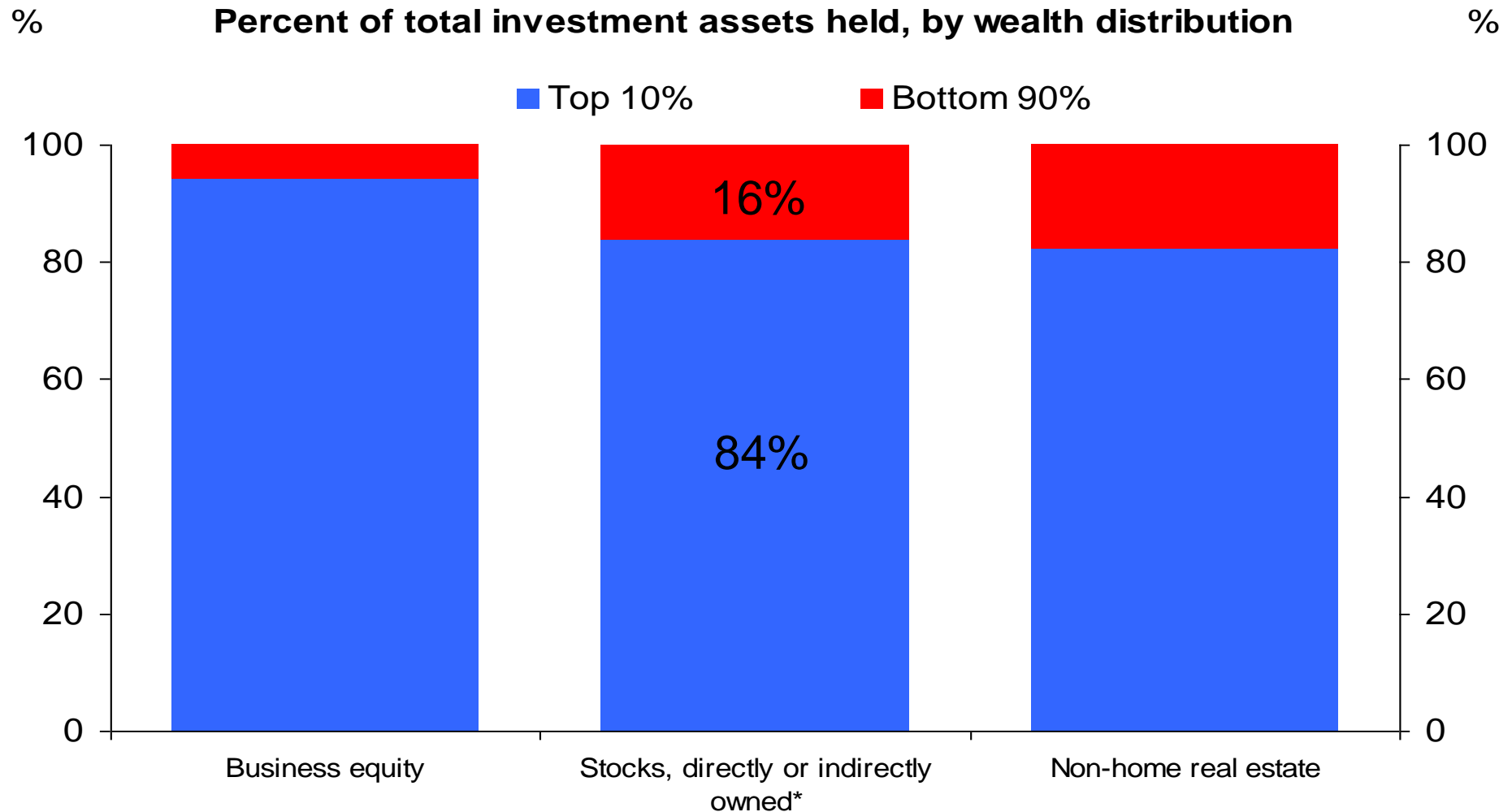


# The share of income going to the Top 1% is up 6%-points in the US and 2%-points in Europe



Source: Saez (2019), Blanchet, Chancel & Gethin (April 2019), WID, DB Global Research

# 10% of the US population own 84% of all stocks held by households

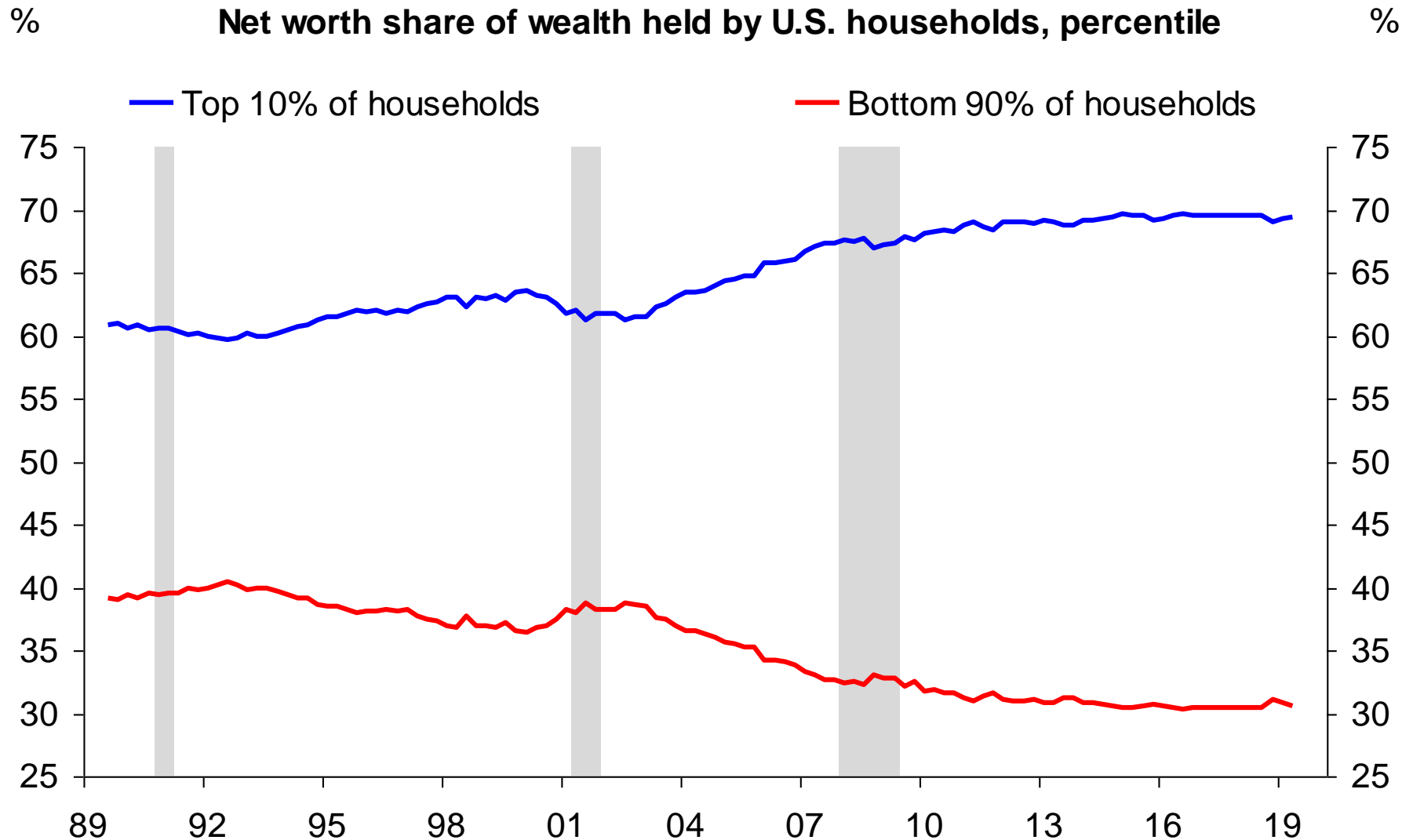


\* Includes direct ownership of stocks and indirect ownership through mutual funds, trusts, and IRAs, Keogh plans, 401(k) plans, and other retirement accounts

Source: Edward N. Wolff, (2018), Survey of Consumer Finances, DB Global Research



# US: Top 10% own 70% of all wealth

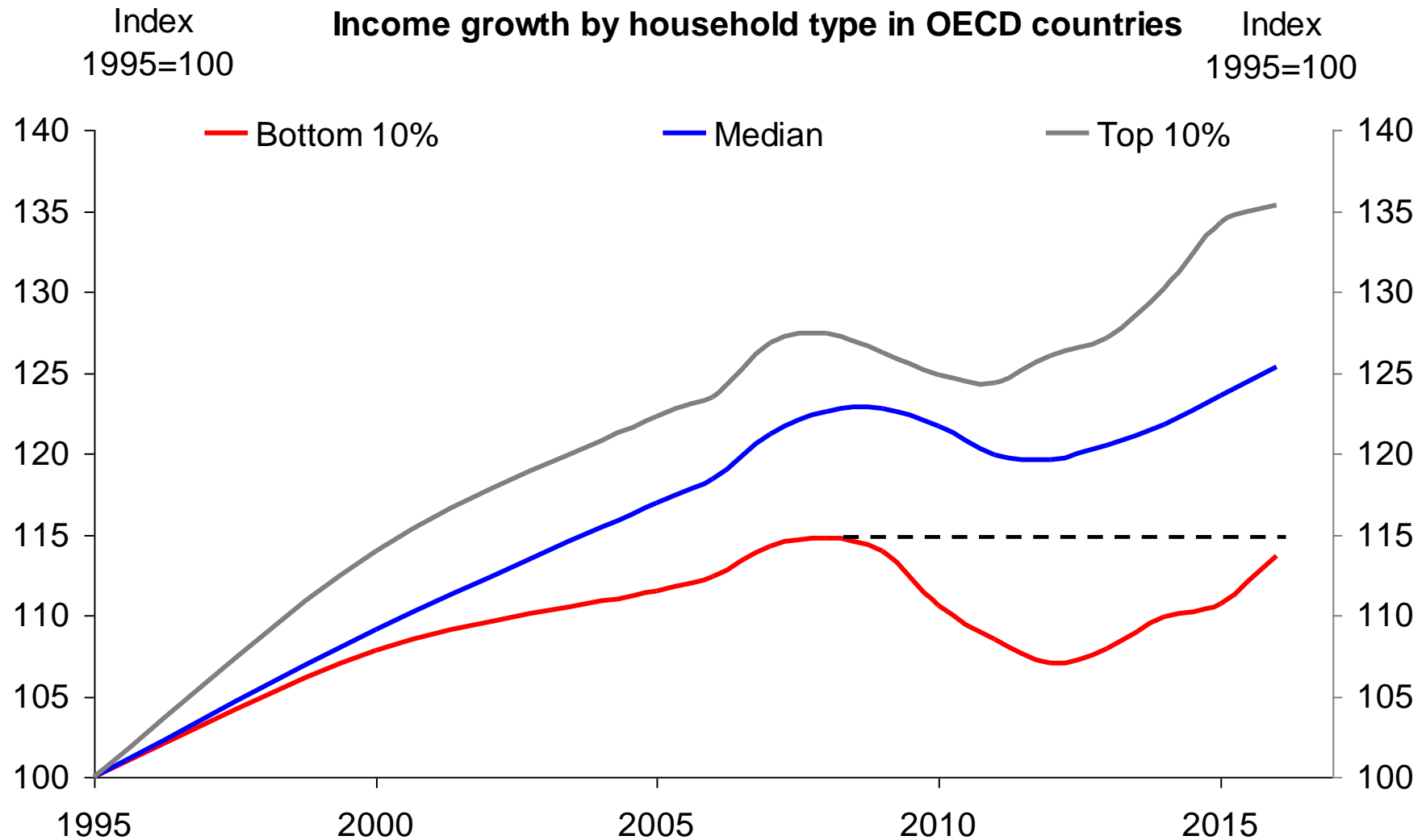


Source: FRB, Haver Analytics, DB Global Research



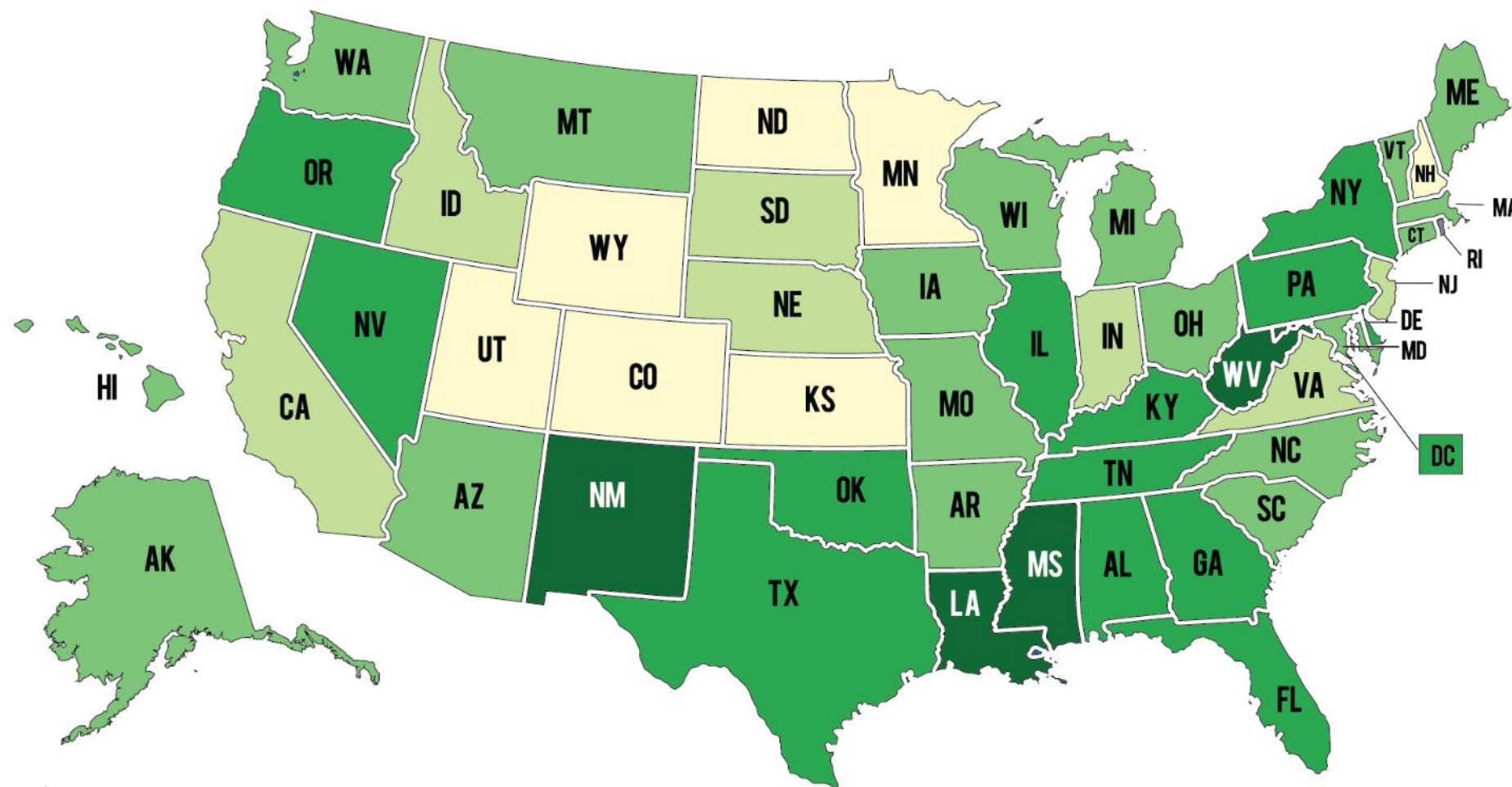


# OECD: Lower incomes have recovered more slowly from the financial crisis

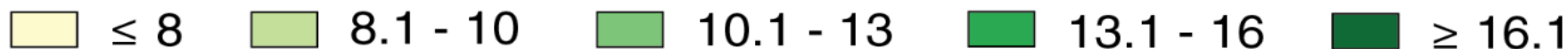


Source: OECD, DB Global Research

# US: Percent of population receiving SNAP benefits, 2018



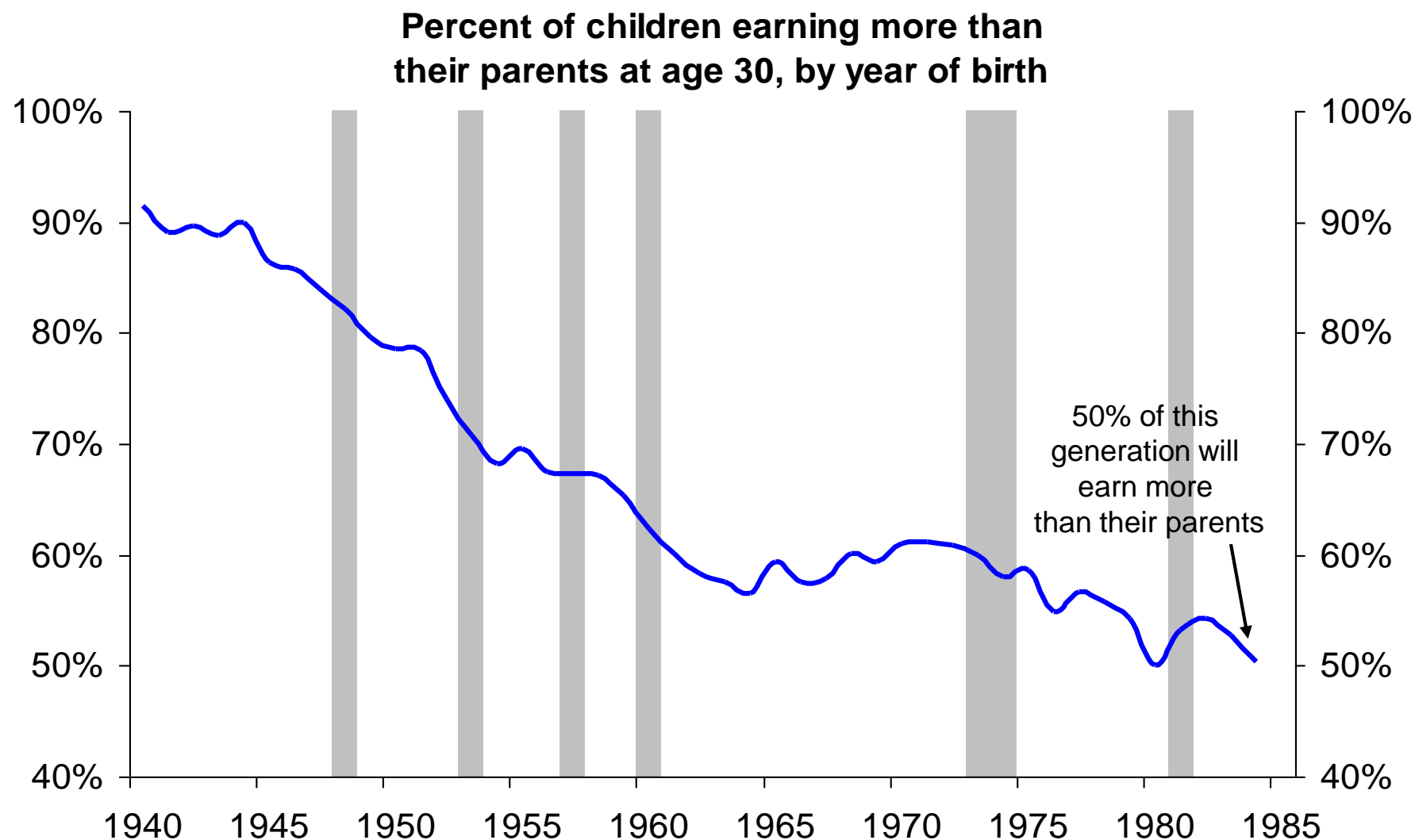
US Average 12%



Source: USDA, Economic Research Service using data from USDA, Food and Nutrition Service and the U.S. Census Bureau, DB Global Research

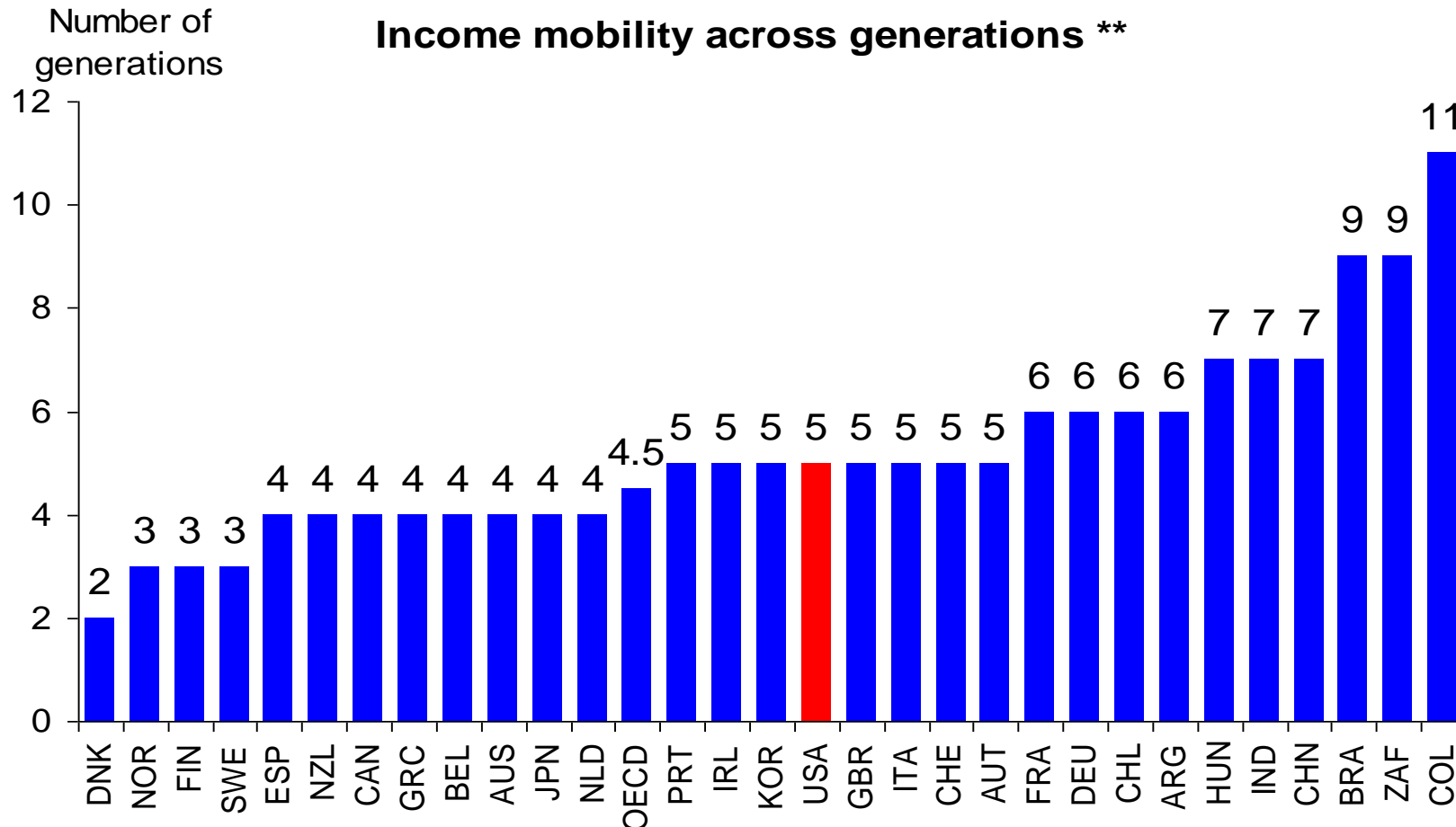


# US: Percent of children earning more than their parents has been falling



Note: Source: Chetty, Grusky, Hell, Hendren, Manduca, Narang (2017), DB Global Research

# In the US it takes five generations for individuals born in low-income families to reach the mean income in society



\*\* Number of generations it would take for those born in low-income families to approach the mean income in their society.

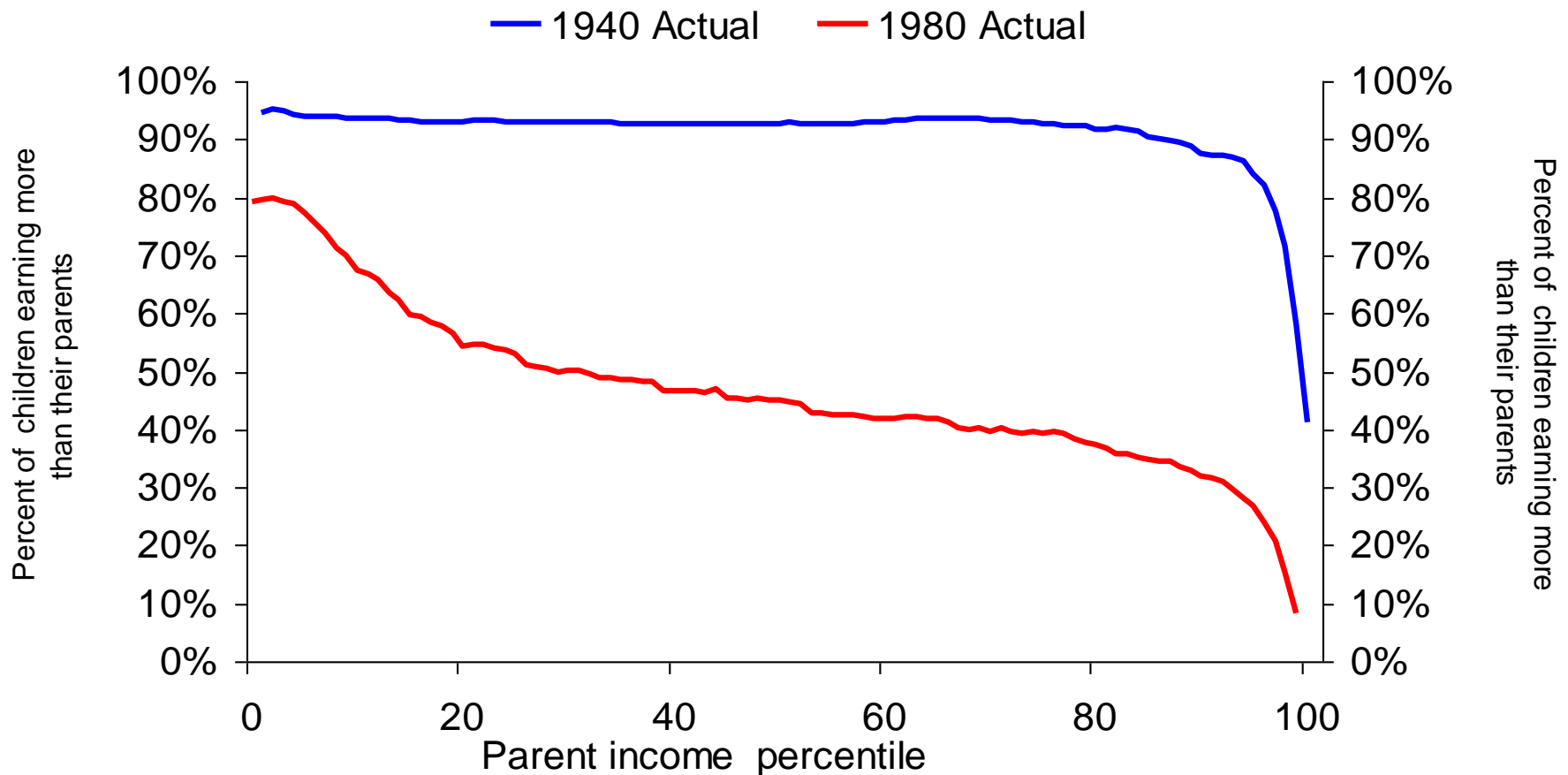
**Note:** These estimates are based on earnings persistence (elasticities) between fathers and sons and the current level of household incomes of the bottom decile and the mean, assuming constant elasticities, following Bowles and Gintis (2002). Low-income family is defined as the first income decile, i.e. the bottom 10% of the population. Also, these estimates are simulation-based and intended to be illustrative. They should not be interpreted as giving the precise time that a person from a low-income household will need to reach the average income.

Source: OECD, DB Global Research



# The fading American dream

## Percent of children earning more than their parents 1940 vs. 1980 birth years, by parent income level

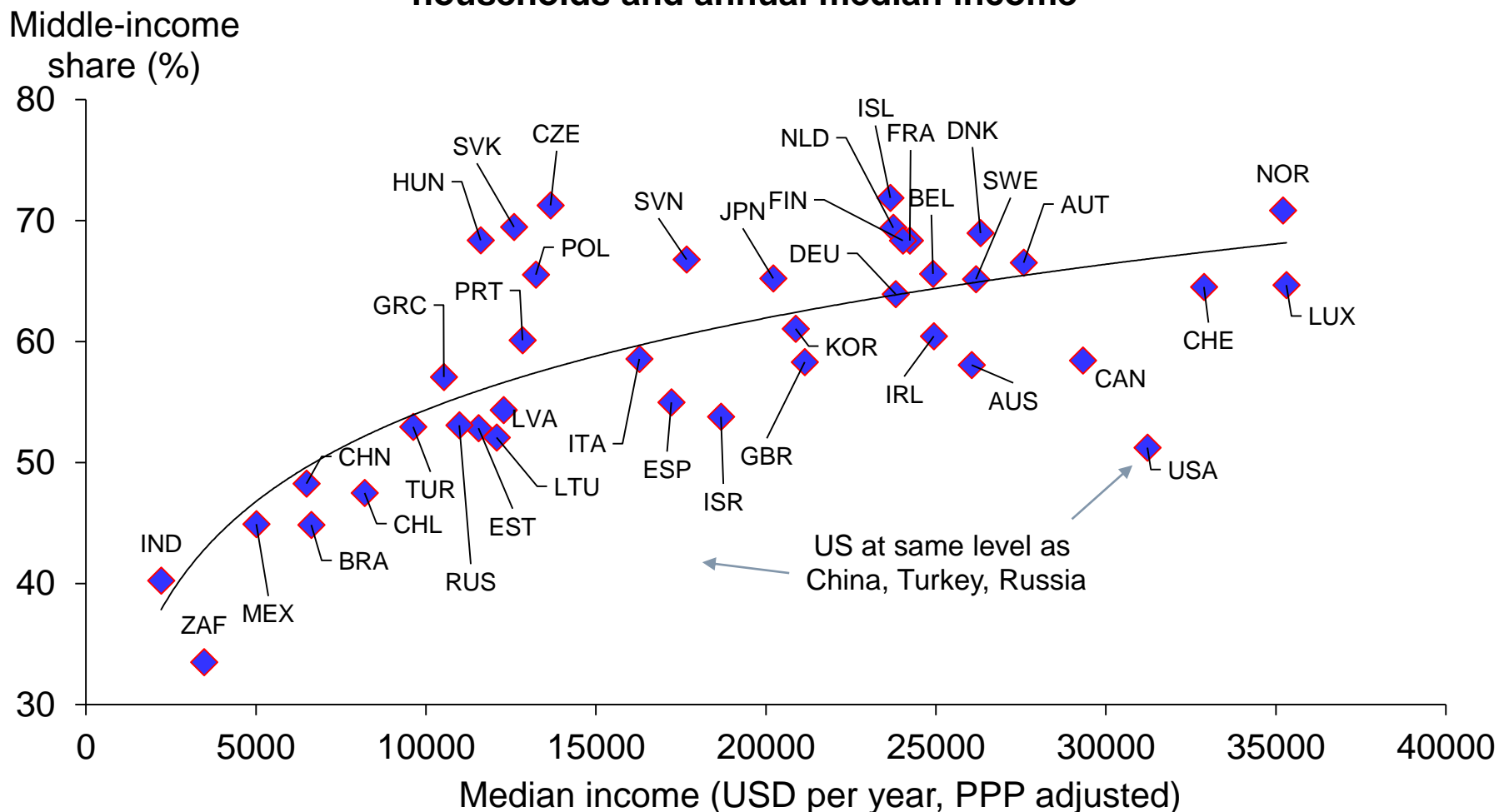


Source: Chetty, Grusky, Hell, Hendren, Manduca, Narang (Science 2017), DB Global Research



# Rich countries tend to have a bigger middle class, except the United States

## Share of population in middle-income households and annual median income

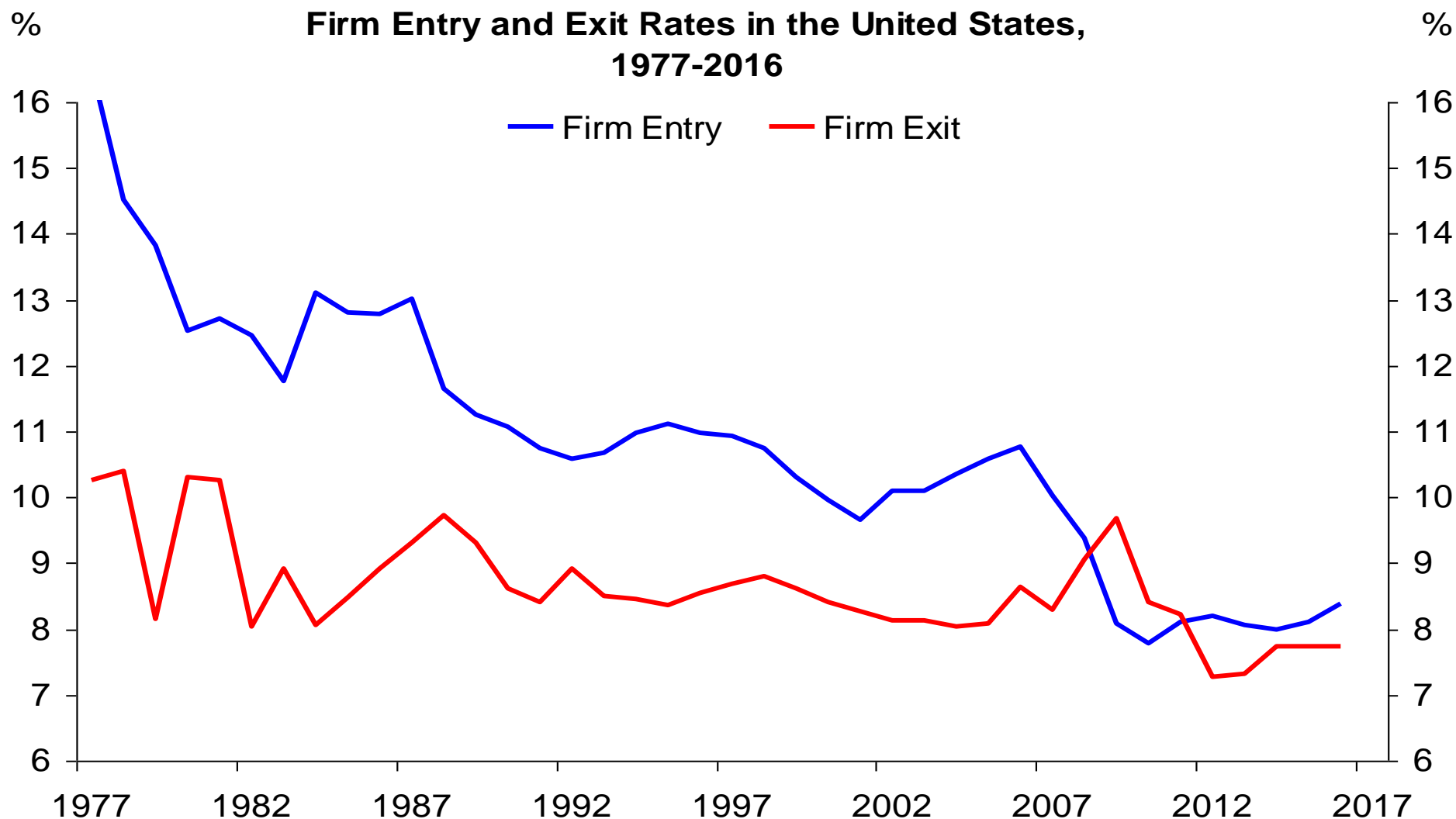


Note: Middle-income classes and median incomes are defined relative to equivalised household disposable income. The middle-income class comprises individuals in households with incomes that are between 75% and 200% of the median.

Source: OECD report "Under Pressure: The Squeezed Middle Class" (2019), DB Global Research



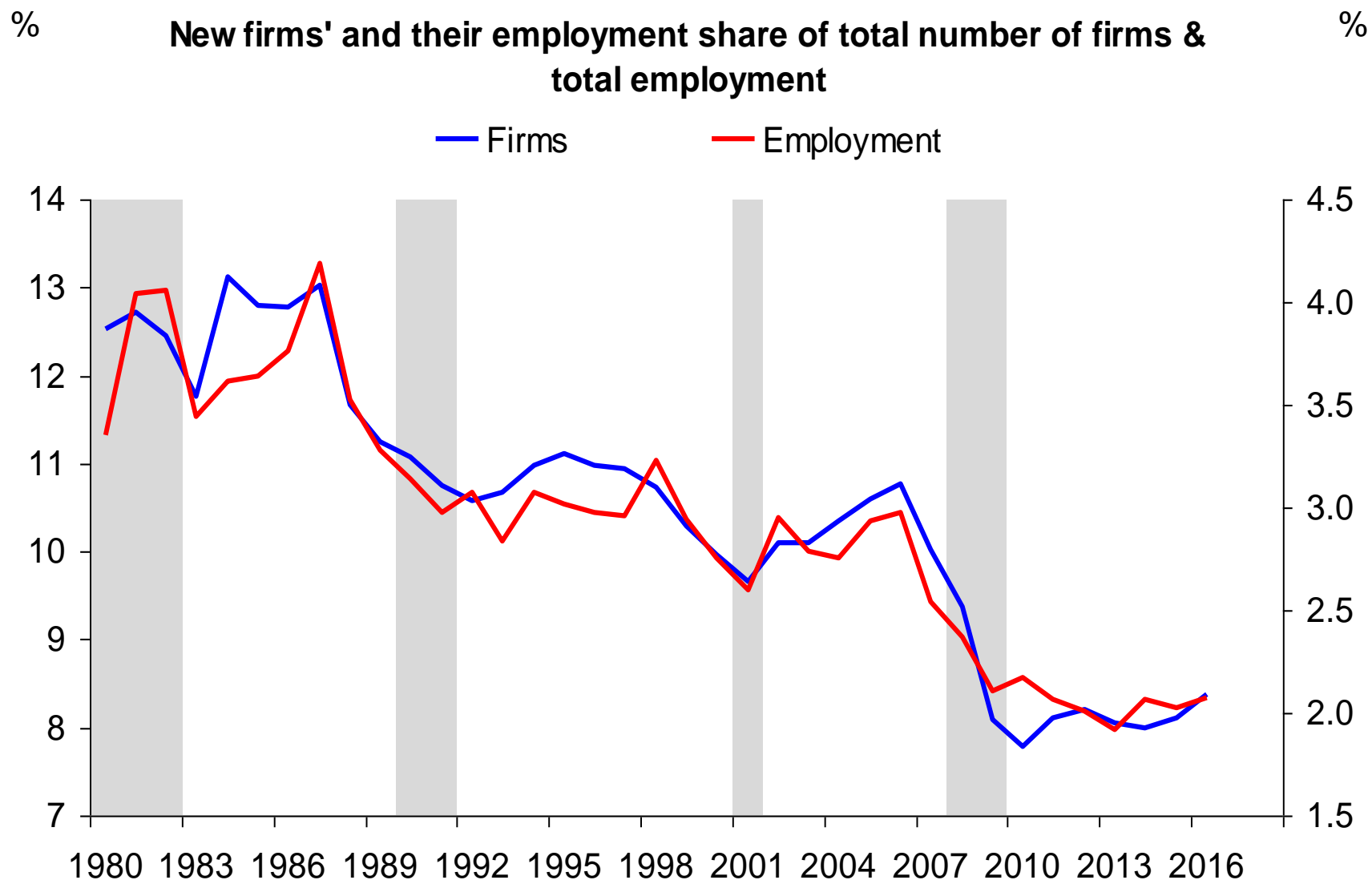
# US economy less dynamic



Source: US Census , DB Global Research



# US economy less dynamic



Source: Census, DB Global Research



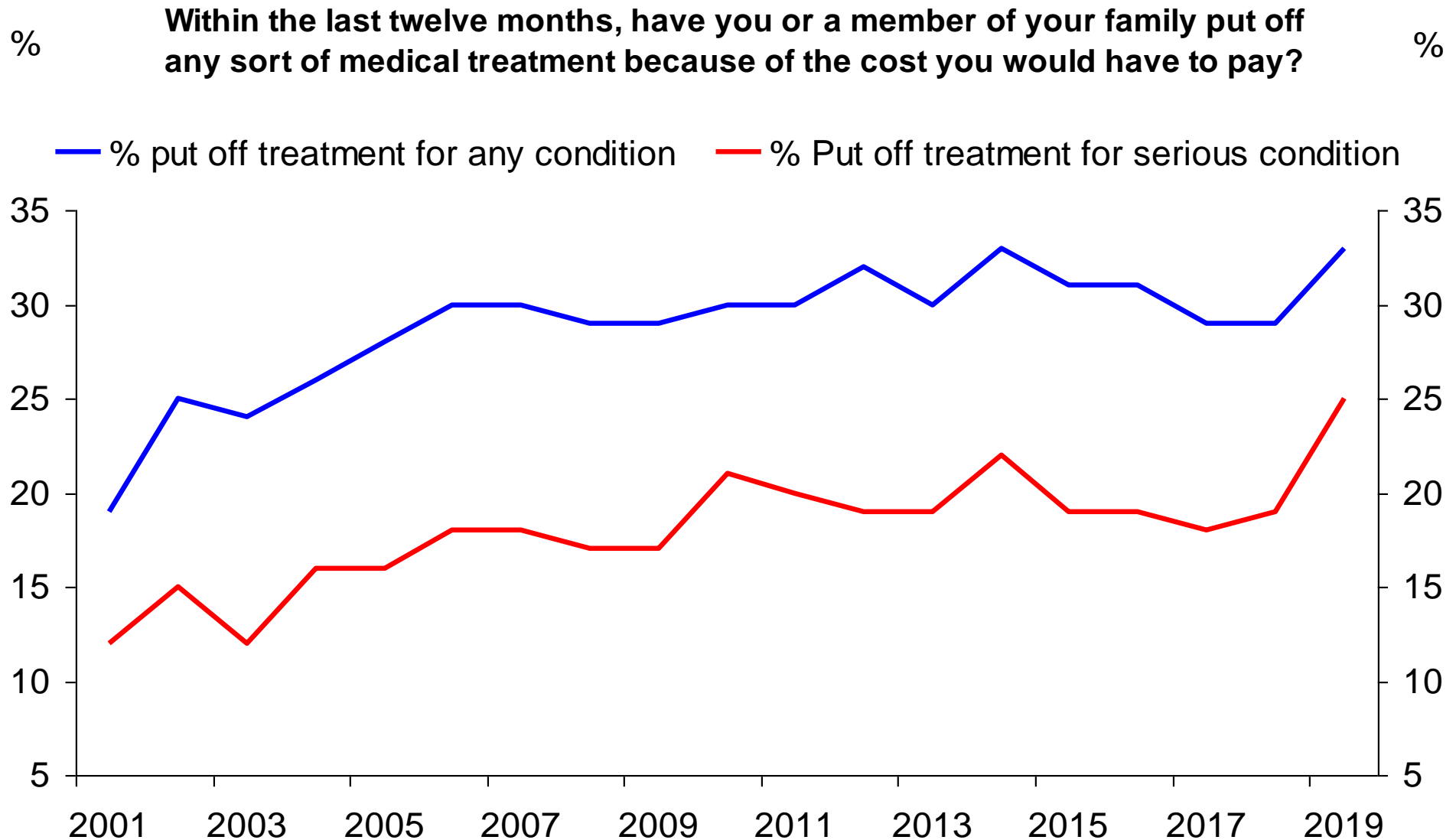


# US industry concentration

NAICS code	Industry	Sales of 4 largest firms as percent of total sales (%)	Revenue (\$ bln)
452910	Warehouse clubs and supercenters	93.6	406
4242101	General-line drugs merchant wholesalers	72.1	319
33611	Automobile and light duty motor vehicle manufacturing	68.6	231
446110	Pharmacies and drug stores	69.5	230
5172102	Cellular and other wireless telecommunications	89.4	225
481111	Scheduled passenger air transportation	65.3	157
524292	Third party administration of insurance and pension funds	76.3	145
5171101	Wired telecommunications carriers	73.4	142
5171102	Cable and other program distribution	71.1	138
336411	Aircraft manufacturing	80.1	113

Source: Census, DB Global Research

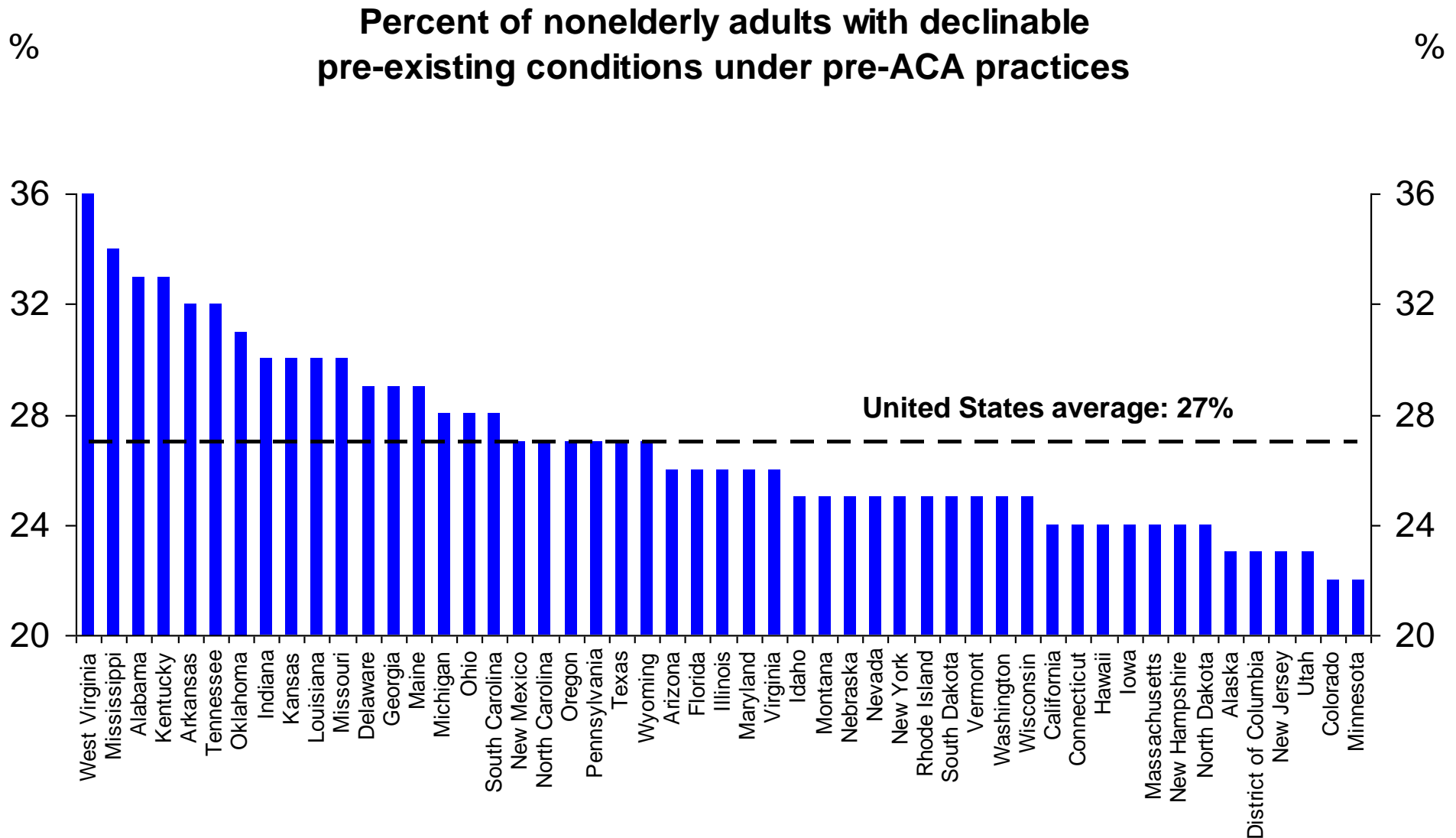
# More people delaying medical treatment for financial reasons



Source: Gallup Survey, DB Global Research

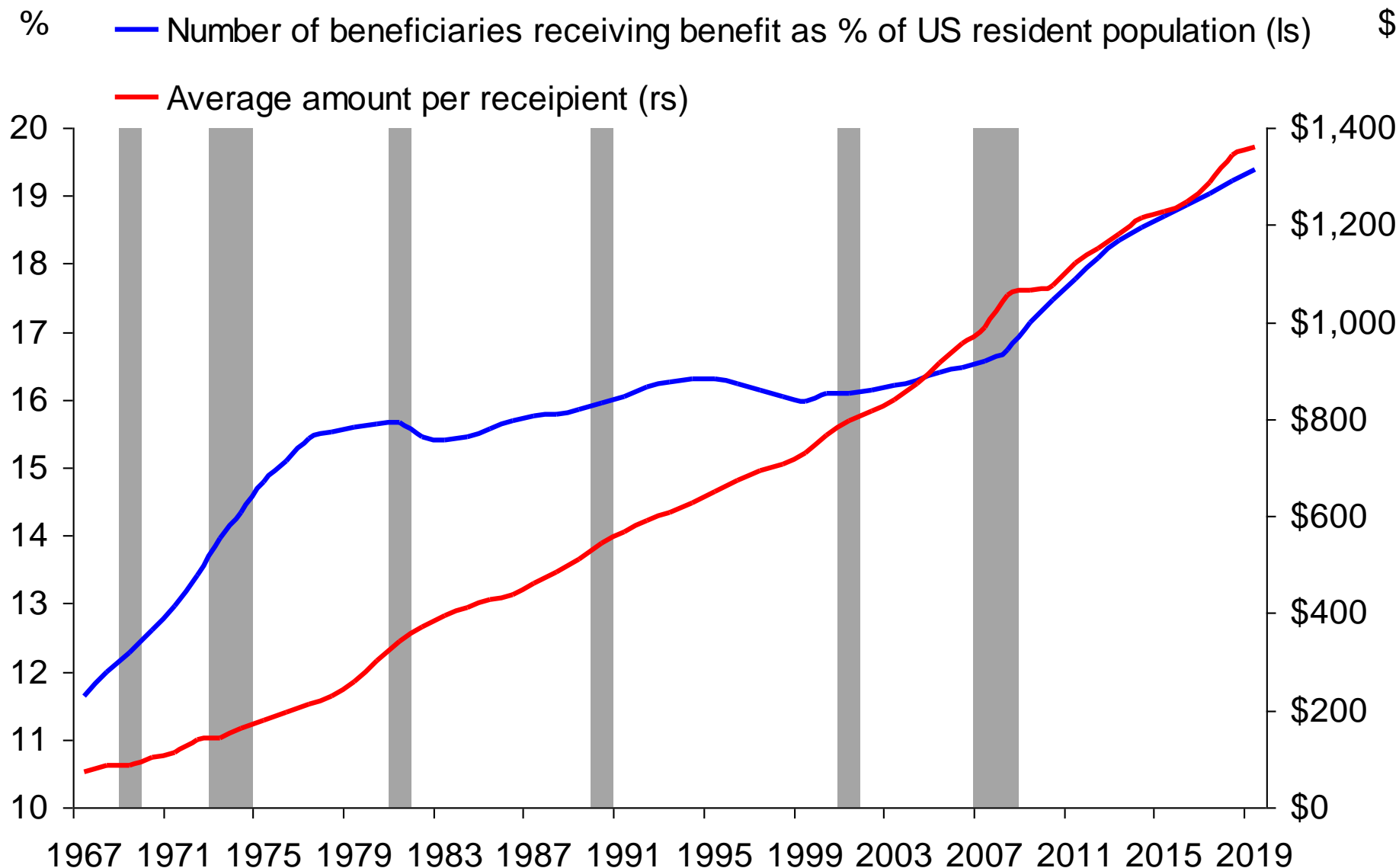


# US: 27% of population have pre-existing conditions



Source: Kaiser Family Foundation, DB Global Research

# 20% of the US population receive social security benefits



Source: Social Security Administration (SSA), Census, Haver Analytics, DB Global Research

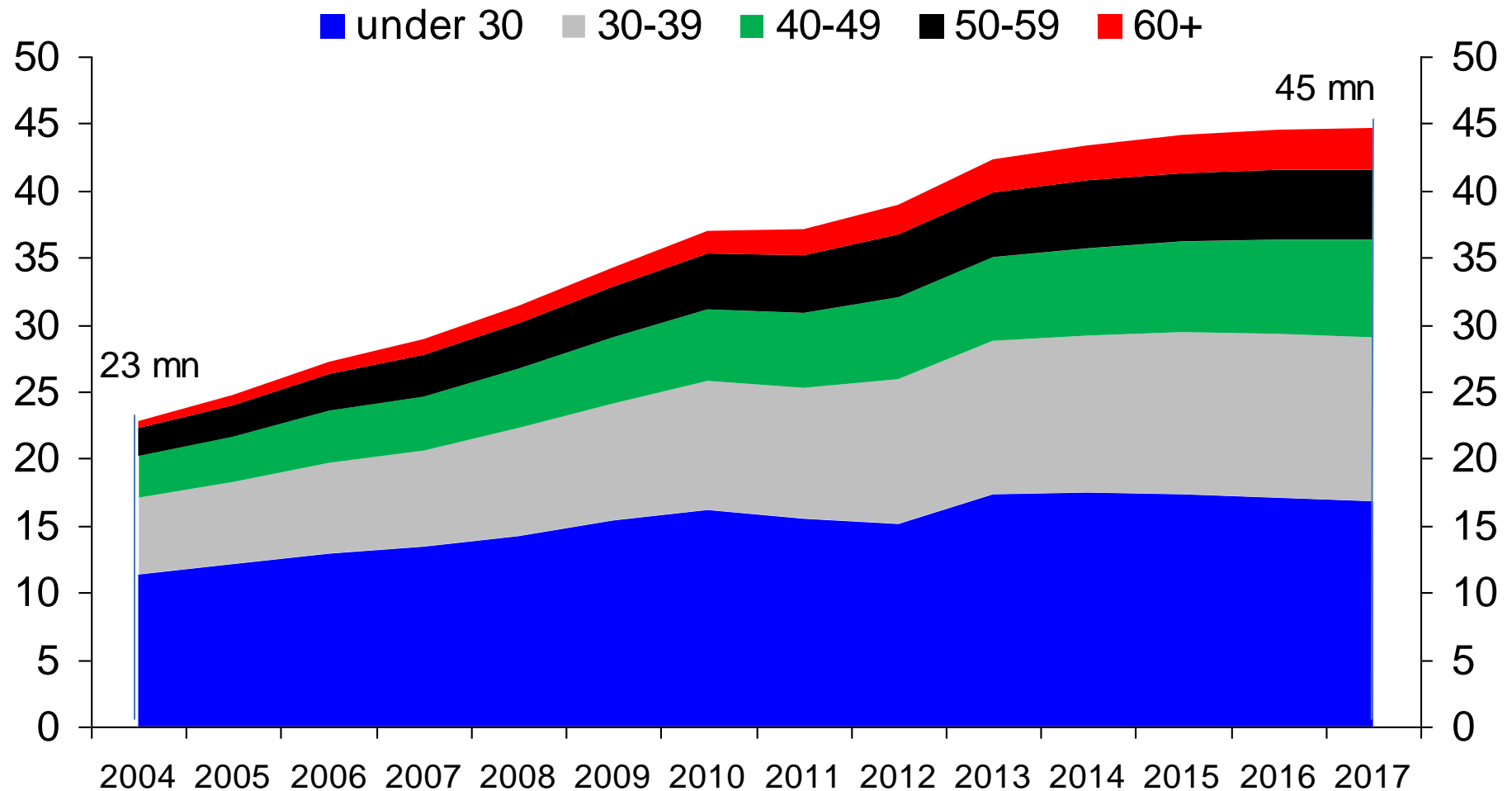
# US: There are around 45mn student loan borrowers, and 2/3 of them are under 40 years old



million

## Number of student loan borrowers by age group

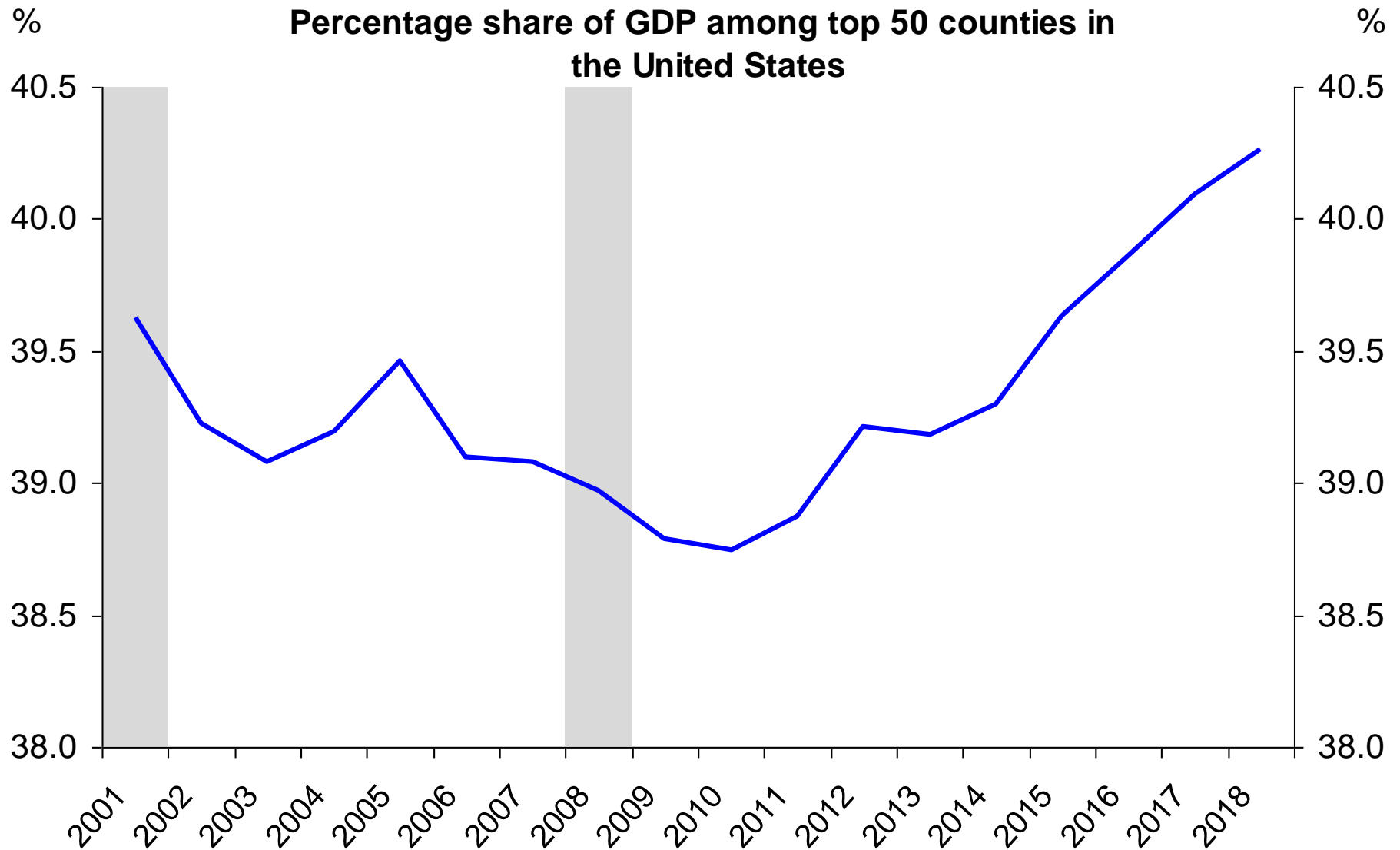
million



Source: FRBNY Equifax database, DB Global Research

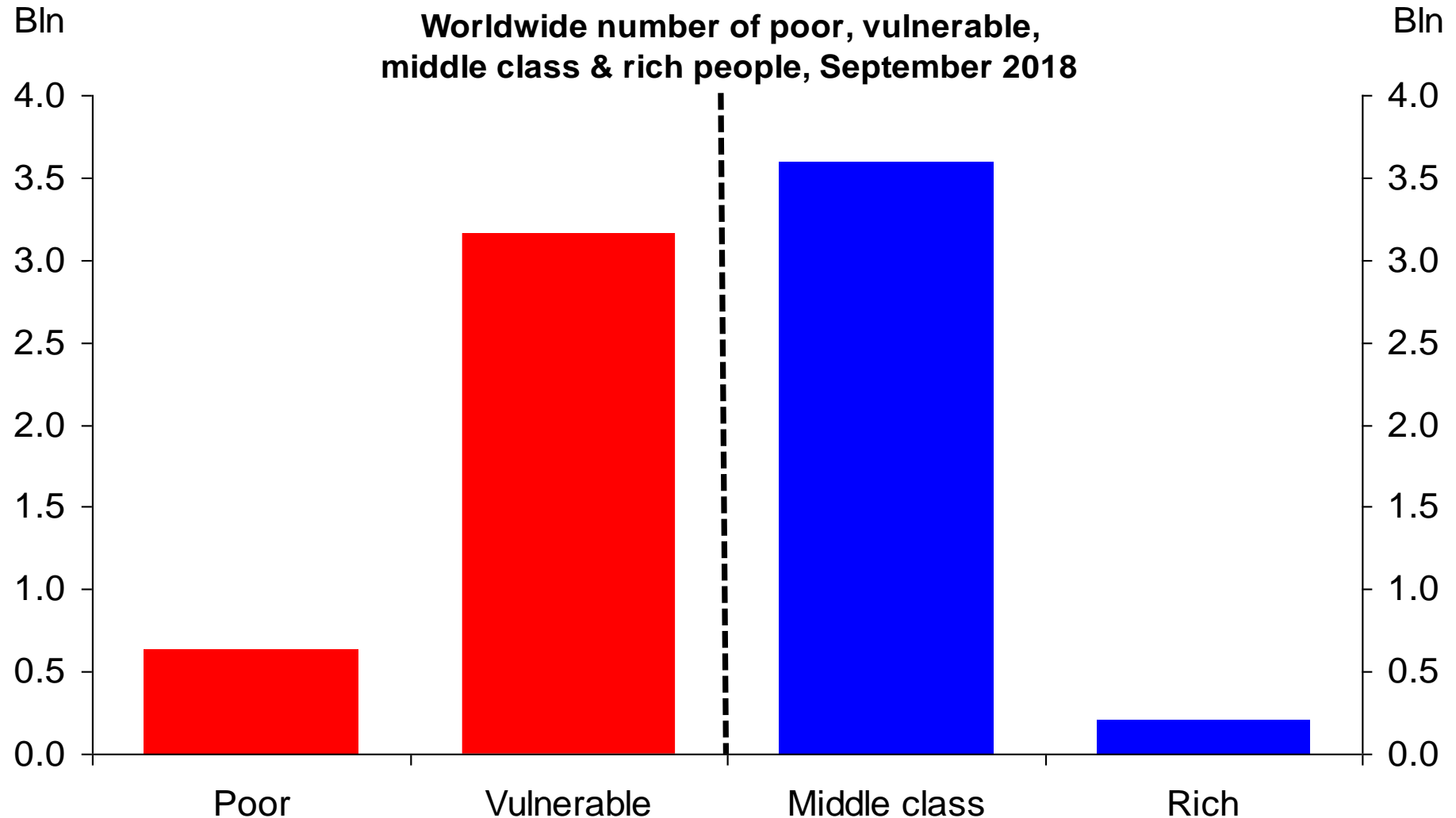


# US: More regional inequality



Source: BEA, Haver Analytics, DB Global Research

# Worldwide number of people in different parts on the income spectrum



Source: Brookings 2018: <https://www.brookings.edu/blog/future-development/2018/09/27/a-global-tipping-point-half-the-world-is-now-middle-class-or-wealthier>, DB Global Research



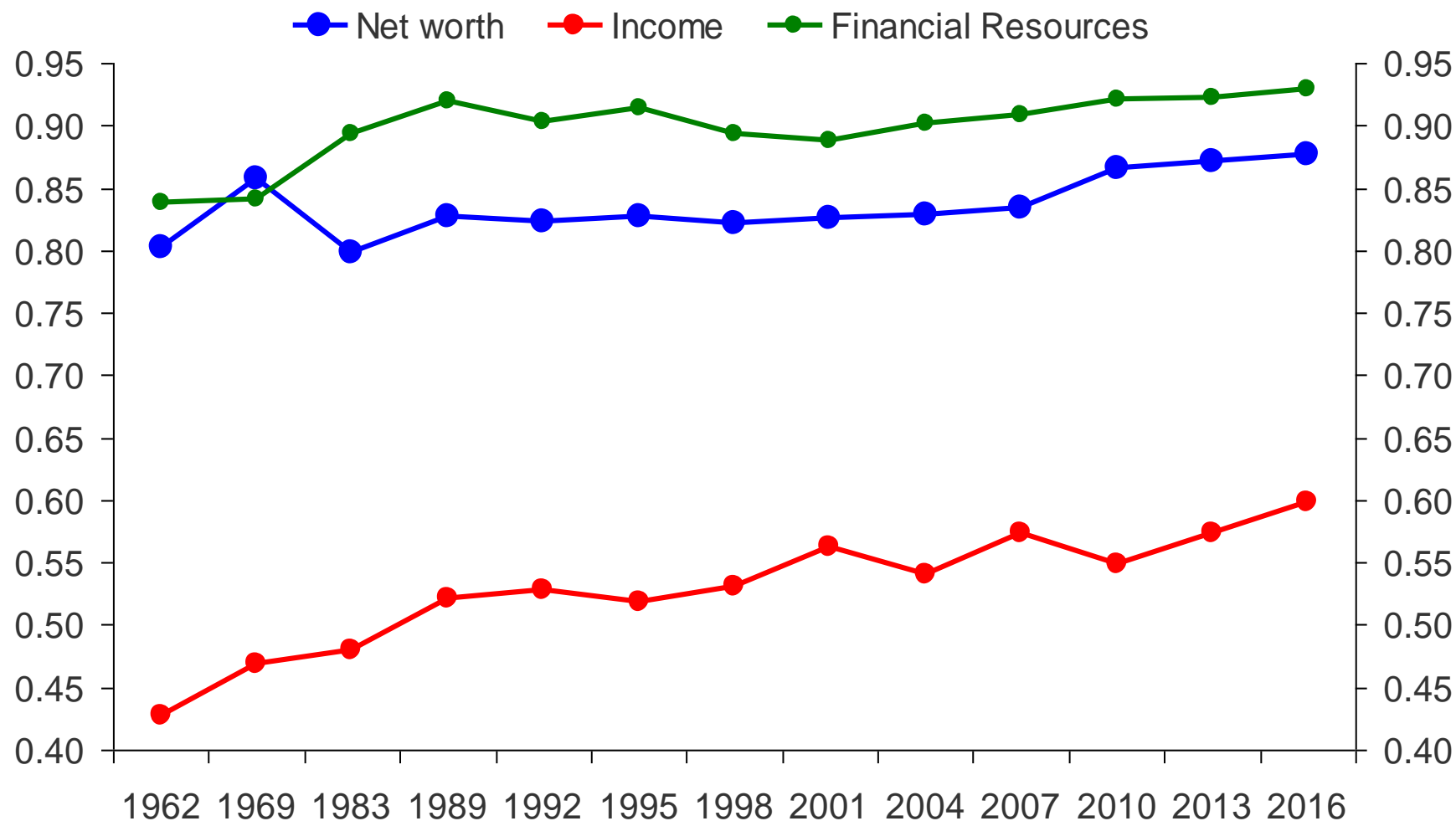
# US income inequality over time



# US: Gini coefficients have increased for both income and net worth



## Wealth and Income Inequality (Gini coefficients)

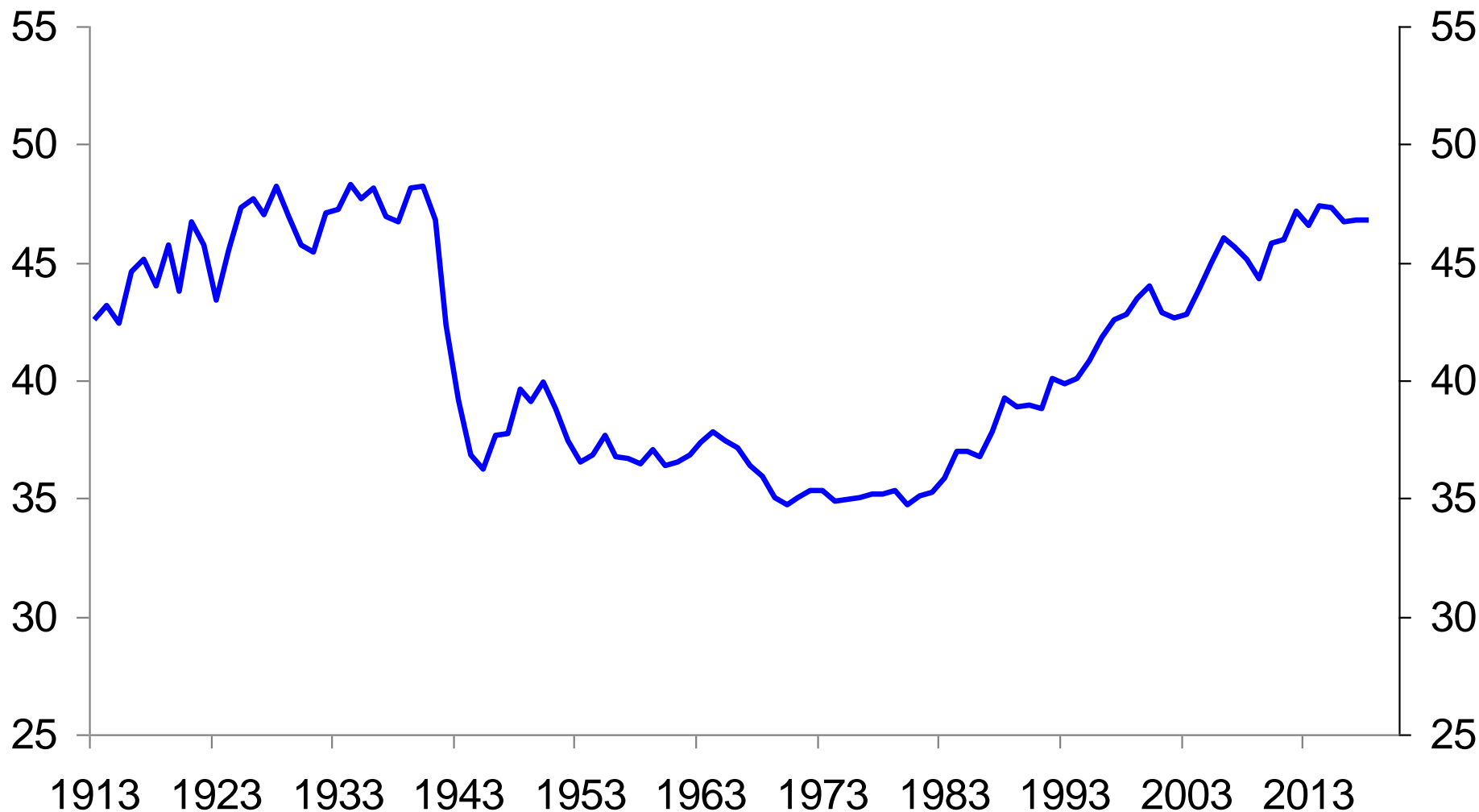


Source: Edward N. Wolff (2017). Survey of Consumer Finances, DB Global Research

# Income share up significantly for highest incomes



## Top 10% Pre-tax Income Share in the United States, 1917–2018

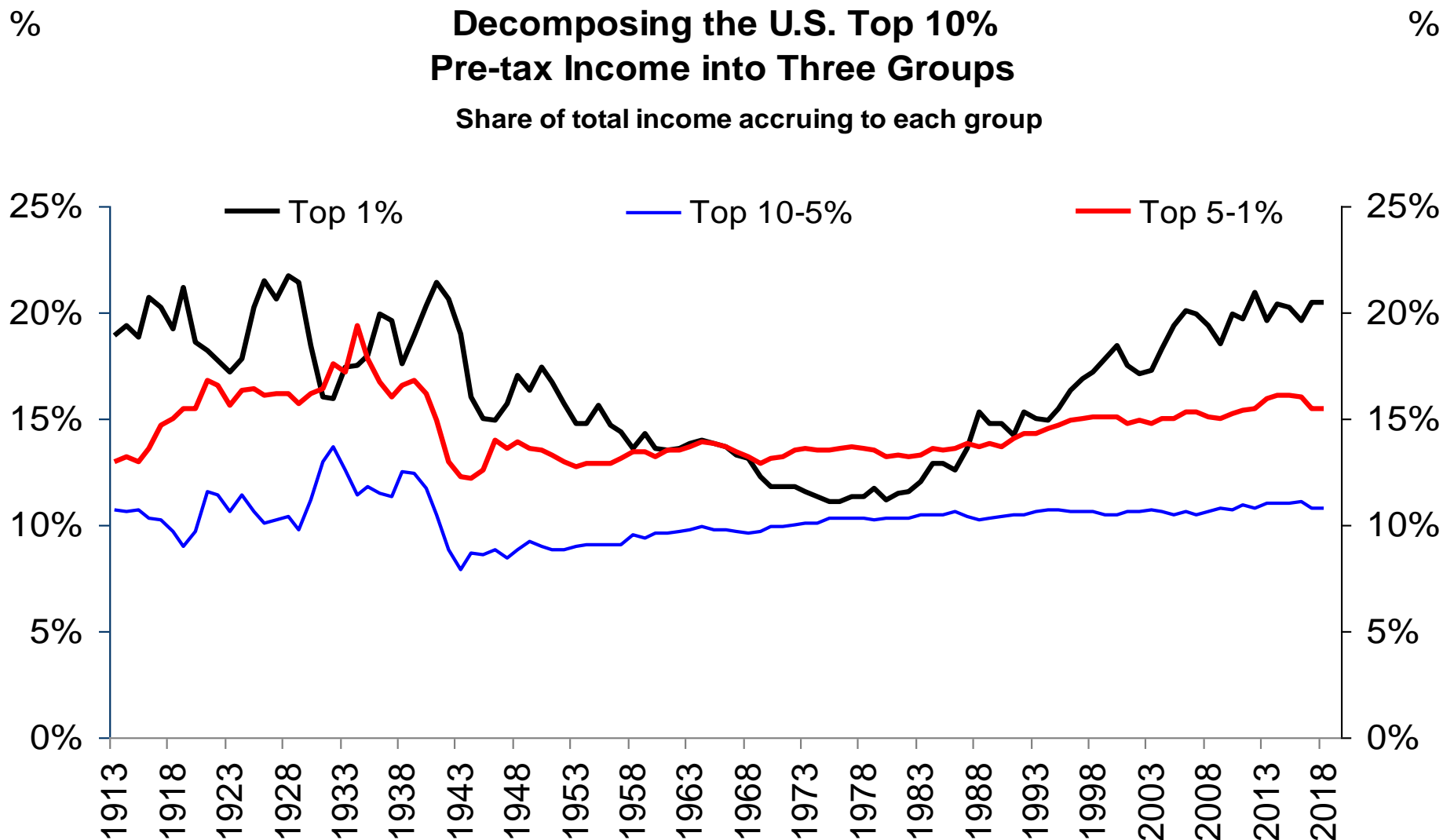


*Note: Series based on pre-tax cash market income including realized capital gains and excluding government transfers.*

Source: The Triumph of Injustice: How the Rich Dodge Taxes and How to Make Them Pay (with Emmanuel Saez), WW Norton, October 2019.DB Global Research



# Top 1% earn 21% of total income, up from 11% in the 1970s

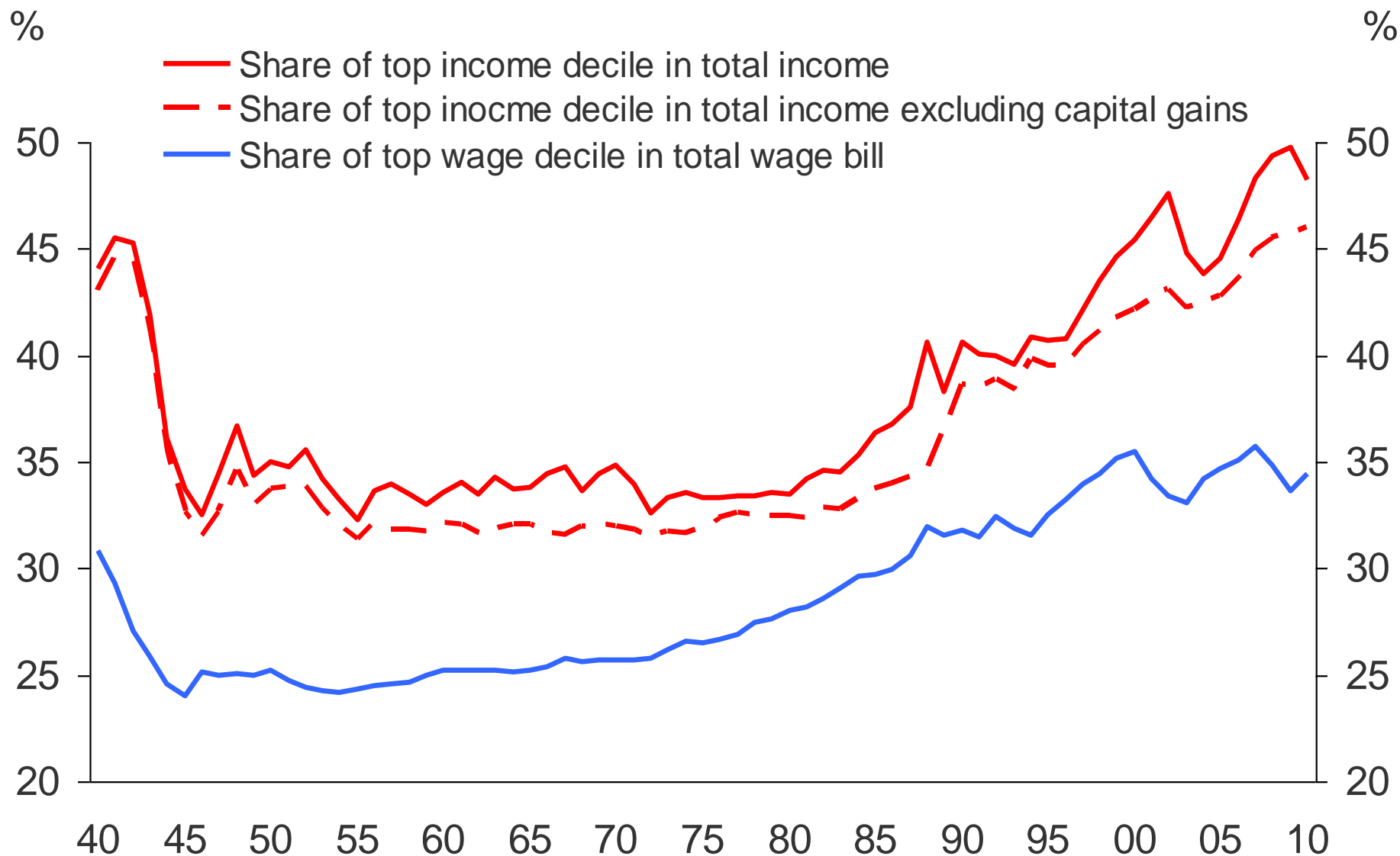


Note: Series based on pre-tax cash market income including realized capital gains and excluding government transfers.

Source: The Triumph of Injustice: How the Rich Dodge Taxes and How to Make Them Pay (with Emmanuel Saez), WW Norton, October 2019.DB Global Research



# Wage inequality a key driver of income inequality

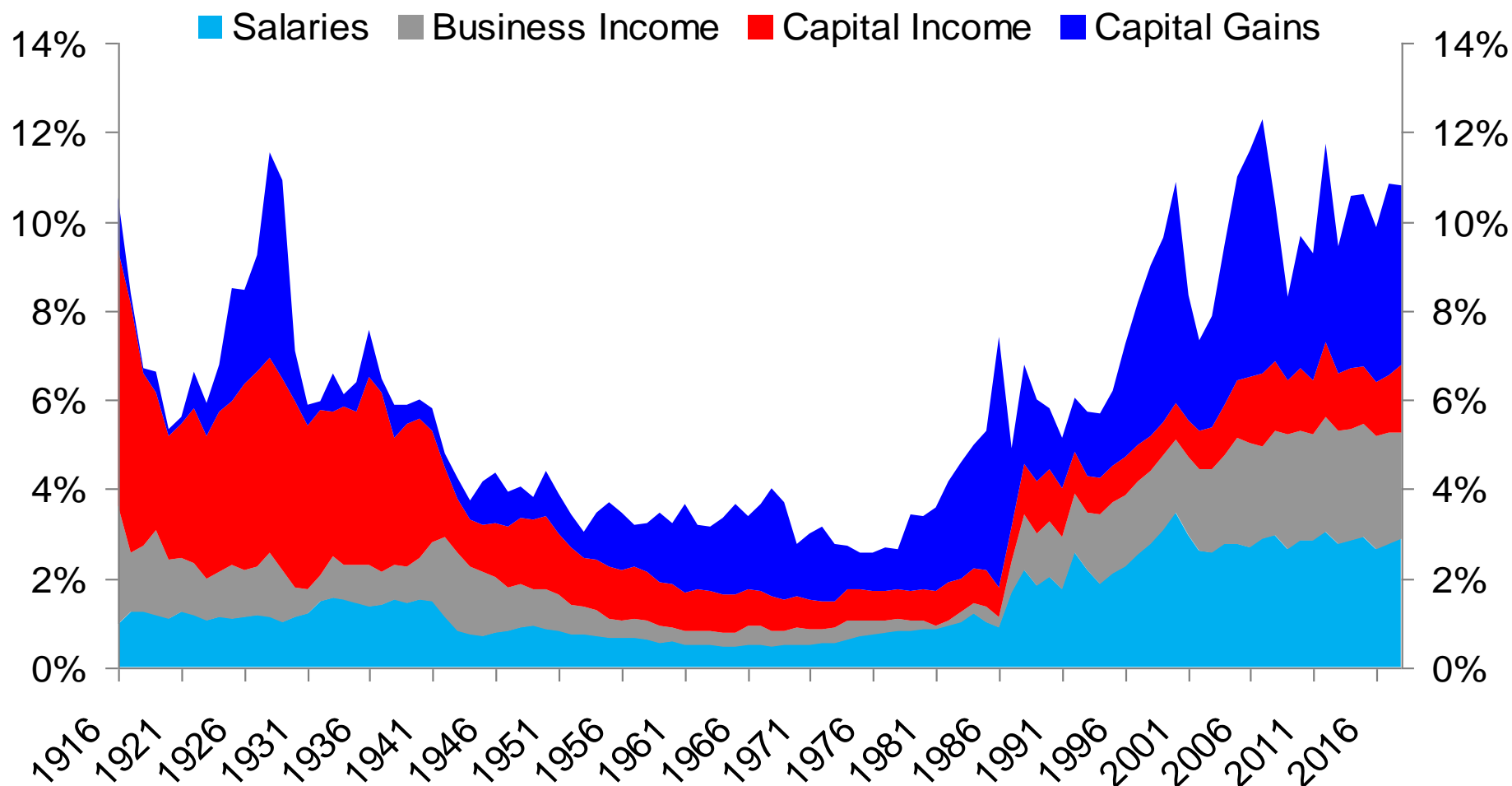


Source: Piketty (2014)., DB Global Research



# Business income and capital gains make up bigger share of income for the Top 0.1%

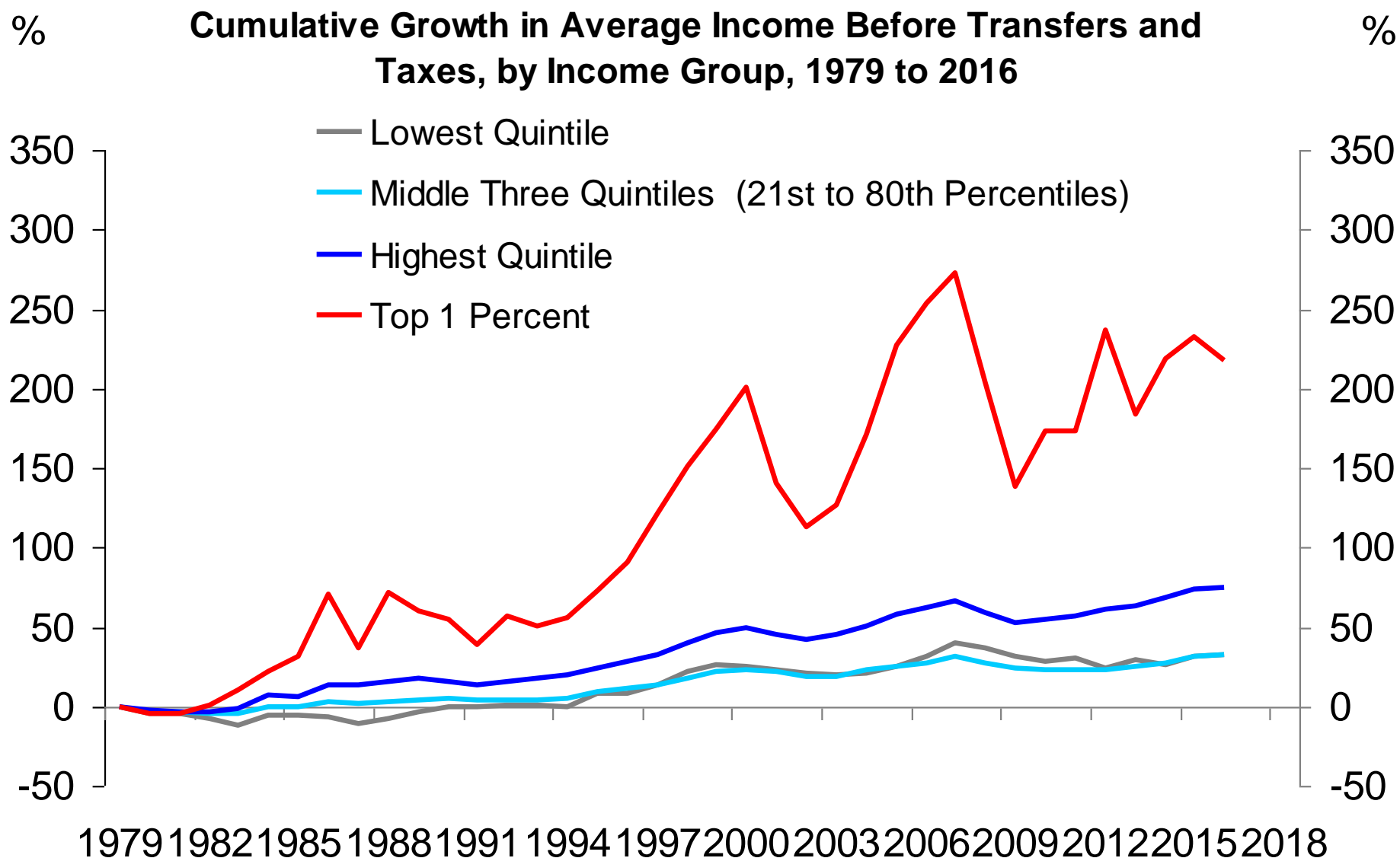
## U.S. Top 0.1% Pre-Tax Income Share and Composition, 1916-2018



*Note: Series based on pre-tax cash market income including or excluding realized capital gains, and always excluding government transfers.*

Source: Atkinson, Piketty and Saez. (October 2019)., DB Global Research

# Higher income growth at the top of the income distribution

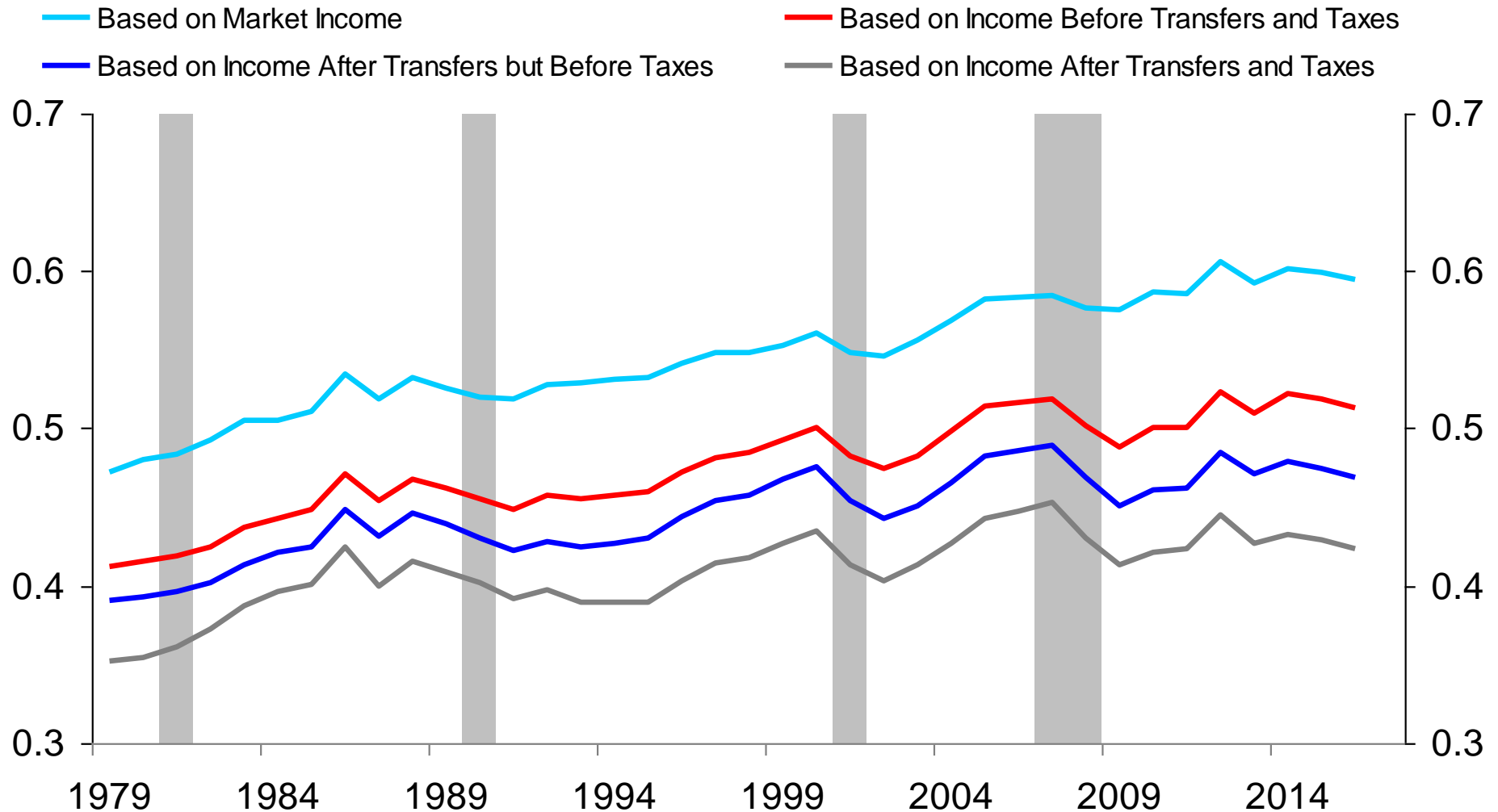


Source: CBO, DB Global Research



# Income inequality up no matter how you define the Gini coefficient

## Gini Indexes Based on Market, Before-Tax, and After-Tax Income, 1979 to 2016

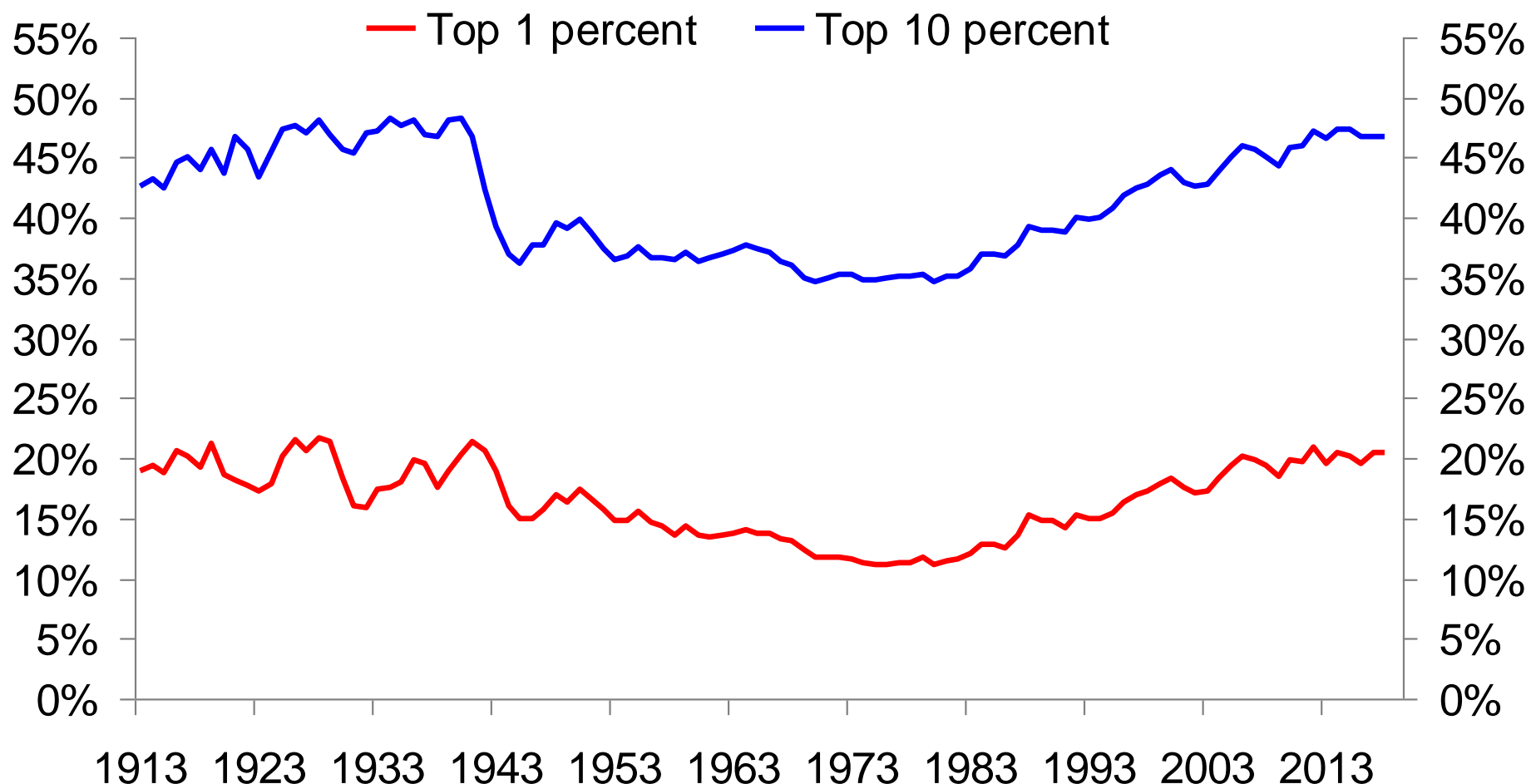


Source: CBO, DB Global Research



# US: Income concentration at the top has increased since the 1970s

## Share of total before tax income flowing to the highest income households in United States, 1913-2018



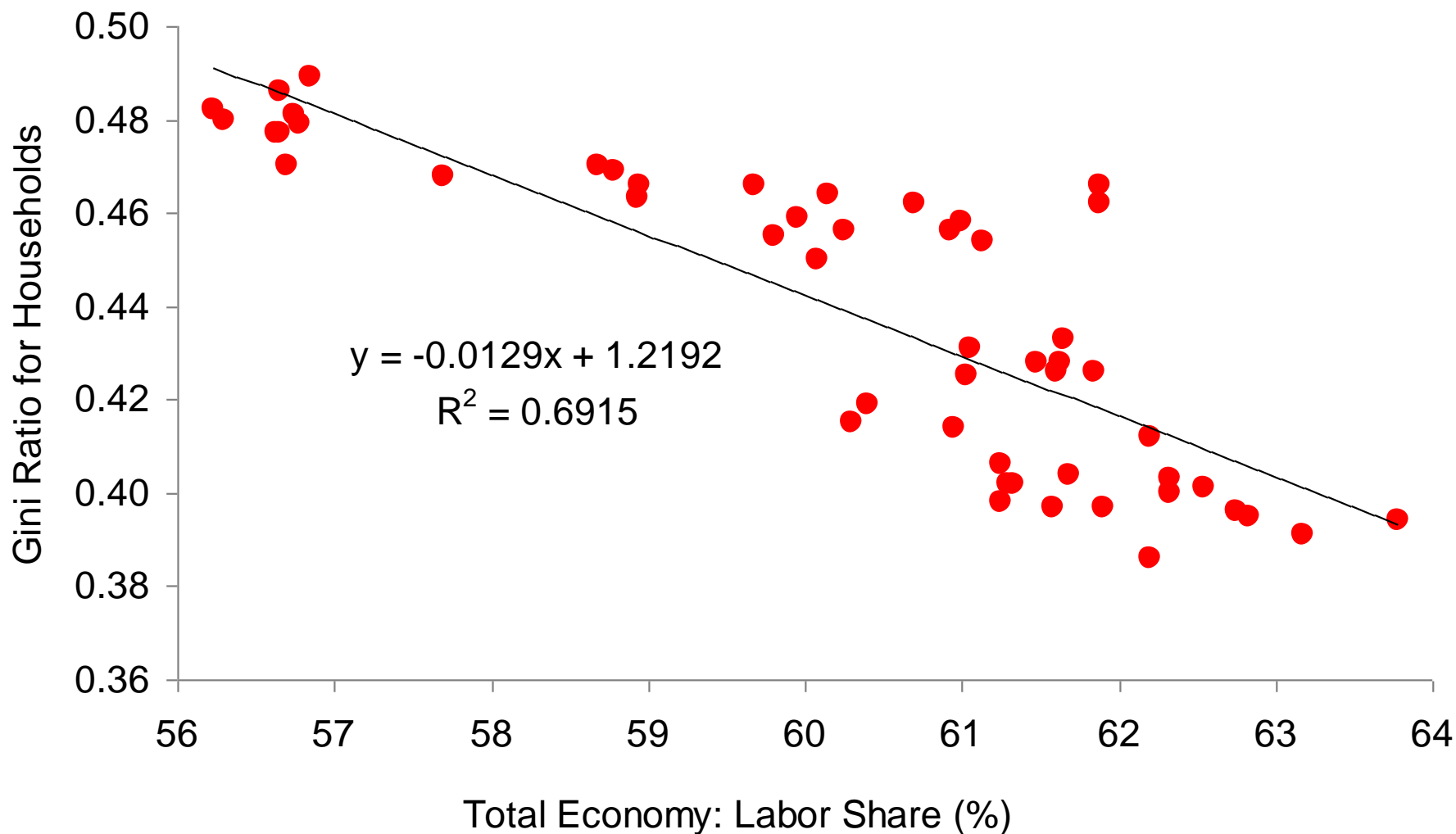
Source: The Triumph of Injustice: How the Rich Dodge Taxes and How to Make Them Pay (with Emmanuel Saez), WW Norton, October 2019.DB Global Research





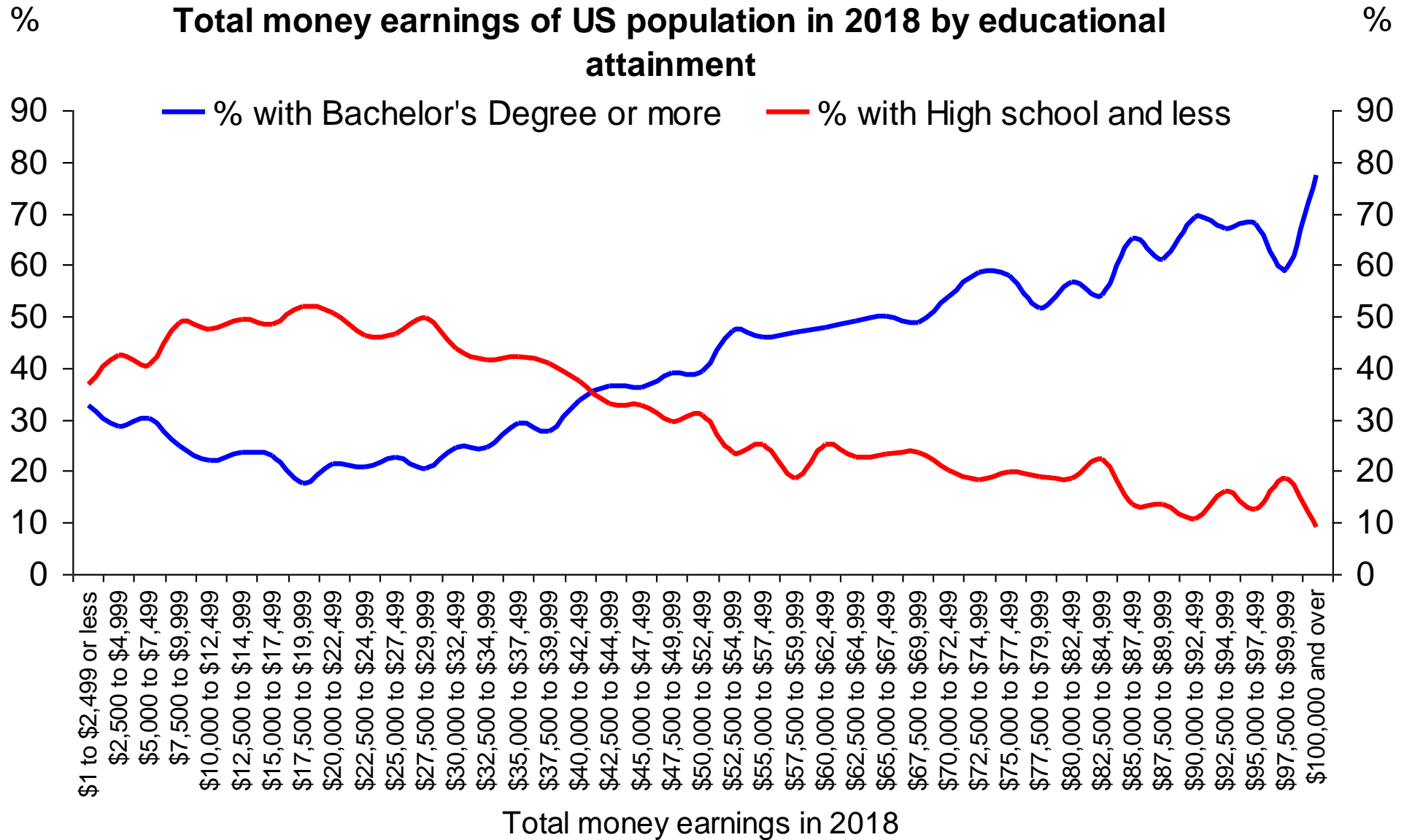
# Declining labor share is negatively related to higher income inequality

## United States: labor share vs Gini ratio, 1967-2018



Source: Census, BLS, Haver Analytics, DB Global Research

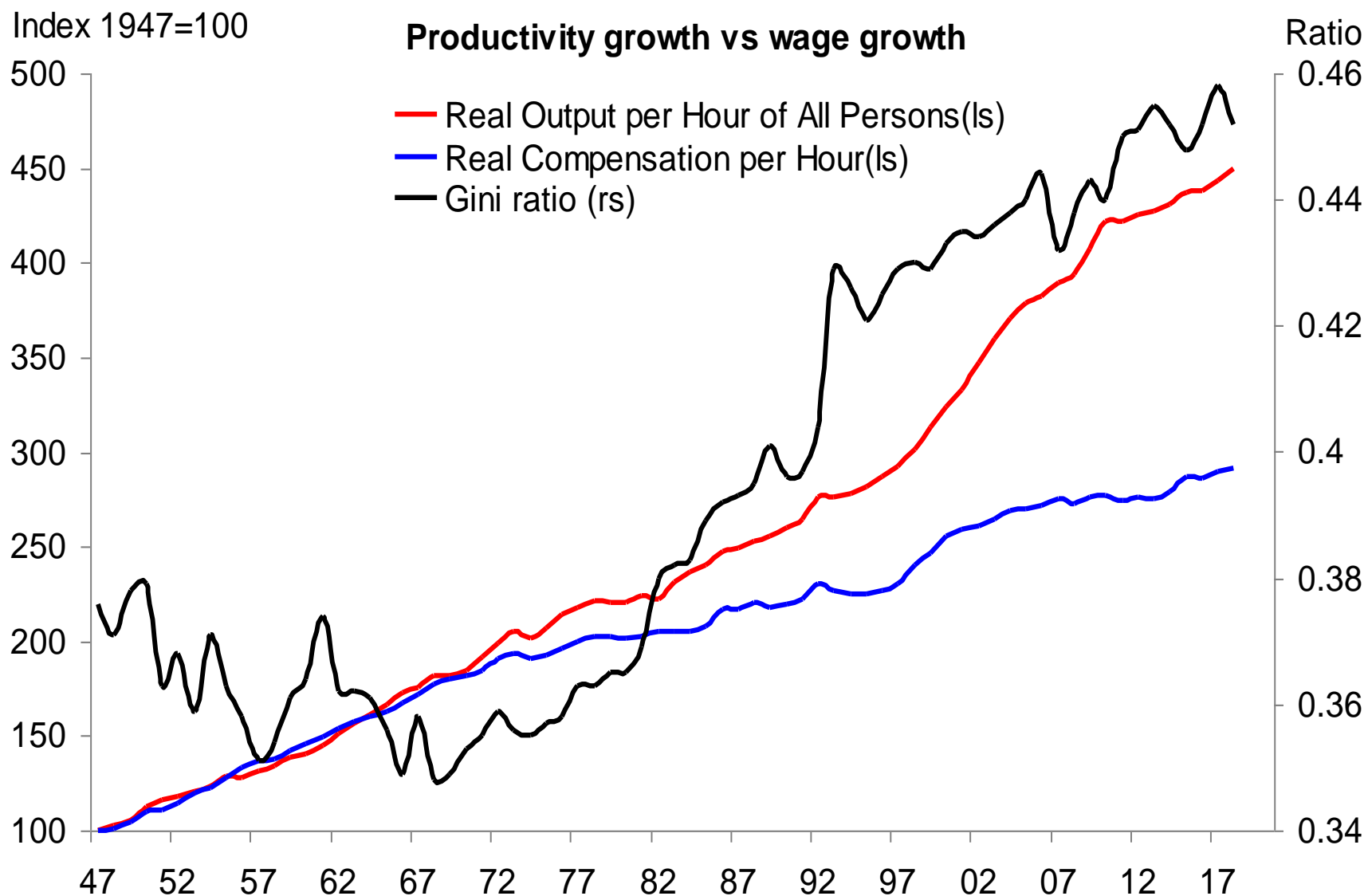
# The more education you have the higher are your earnings



Source: Census, DB Global Research



# Disconnect between productivity and wage growth since 1970s contributed to higher inequality in the U.S



Source: BLS, Census, Haver Analytics, DB Global Research

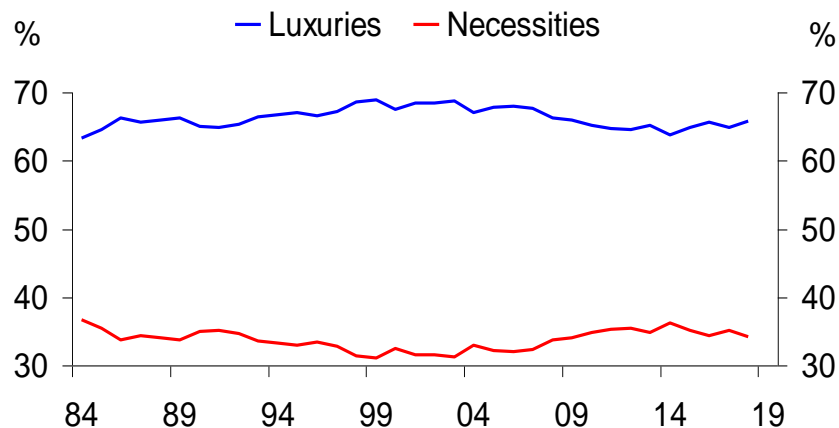
# Consumption inequality:

## Spending on luxuries and necessities by income

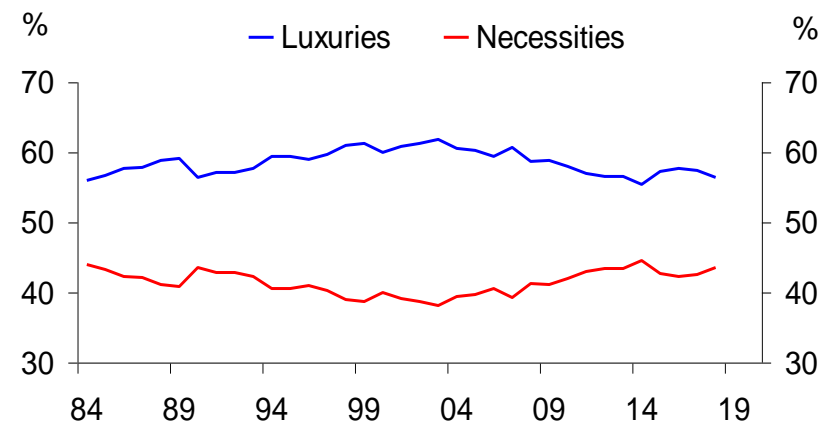
### Nominal consumption shares in total expenditure by income quintile



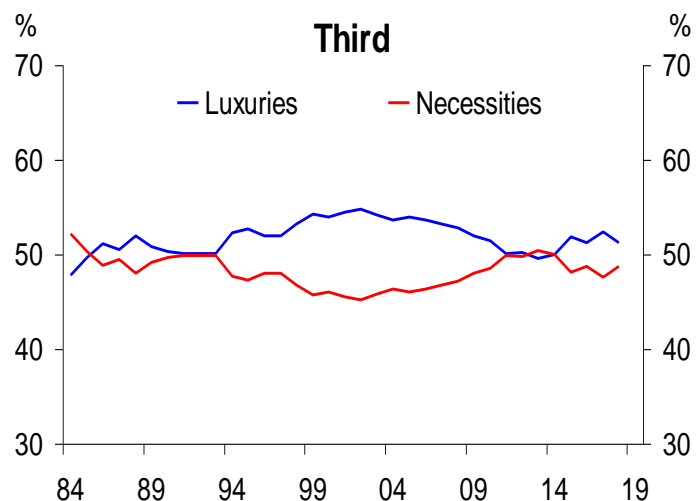
Highest



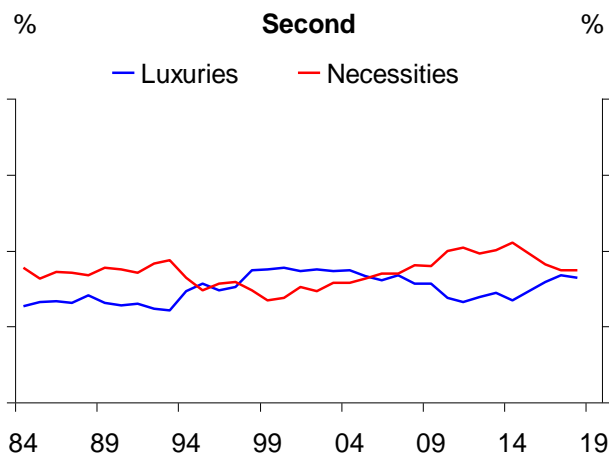
Fourth



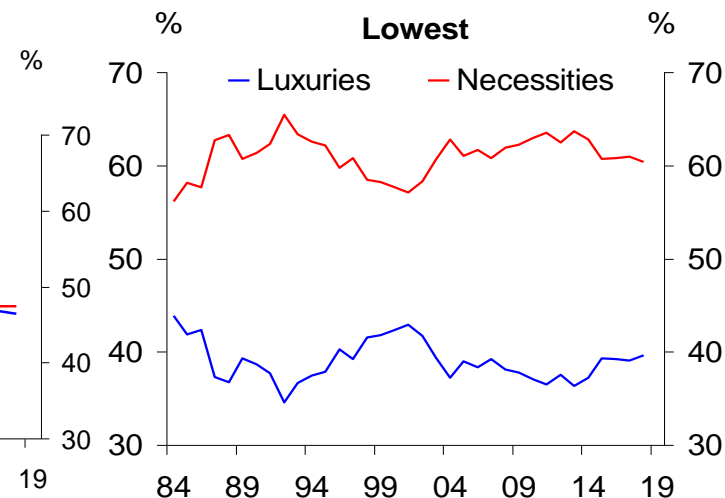
Third



Second



Lowest



Luxuries are defined as goods or services consumed in greater proportions as a person's income increases. Specifically luxuries are: Food away from home, Owned dwellings, Household furnishings, equipment, Vehicles, Cash contributions, Entertainment, Personal insurance, pensions, Other vehicle expenses, Public transportation, and Other lodging.

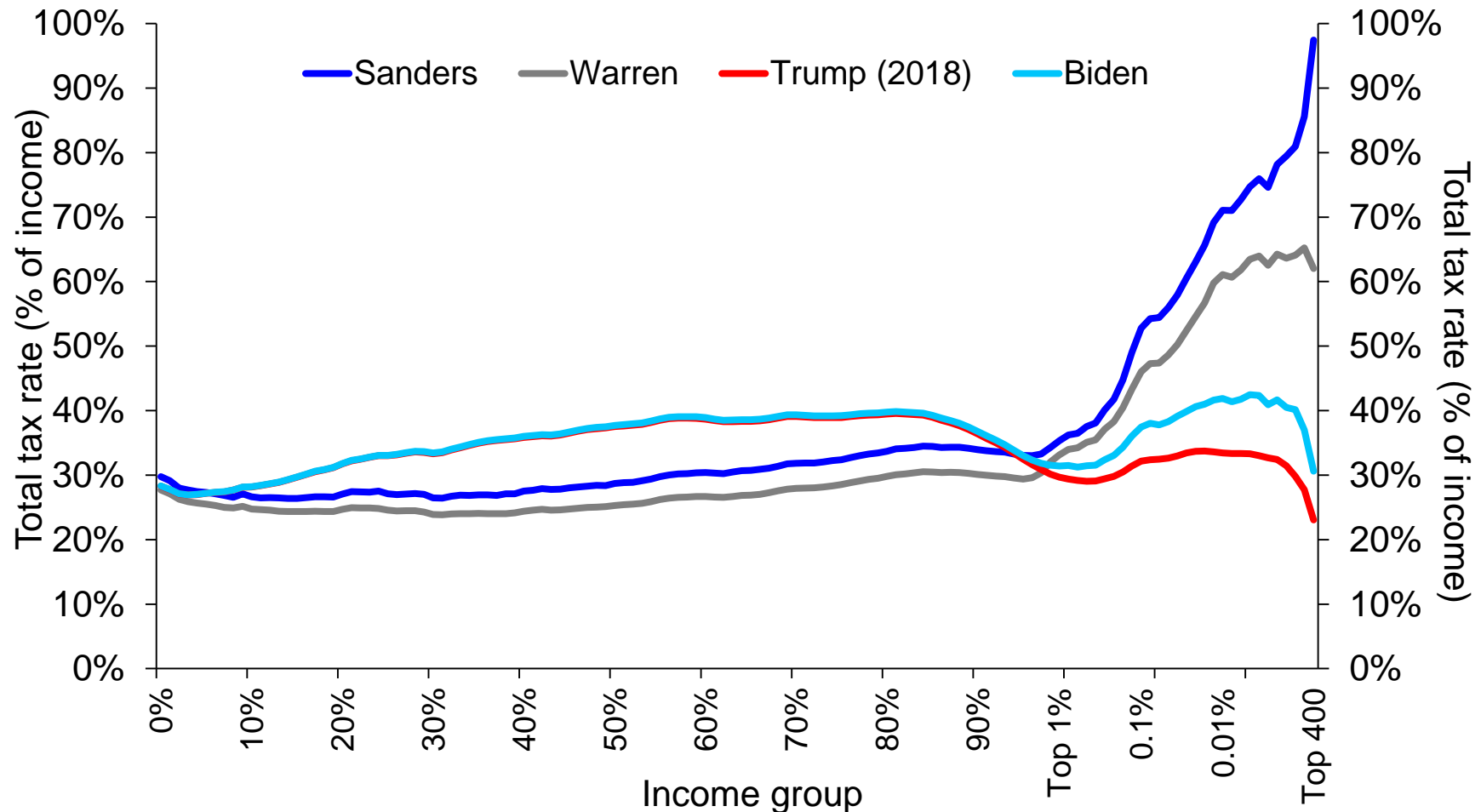
Necessities are defined as goods or services whose consumption is proportionately less as a person's income increases. Specifically, necessities are: Food at home, Rented dwellings, Utilities, fuels, public services, Healthcare, Education, Personal care, Tobacco, smoking products, Gas and motor oil, Housekeeping supplies, Alcoholic beverages, Reading, and Apparel and services.

Source: Consumer Expenditure Survey BLS, Haver Analytics, DB Global Research



# Comparing income tax plans for presidential candidates

## United States: Proposed tax plans

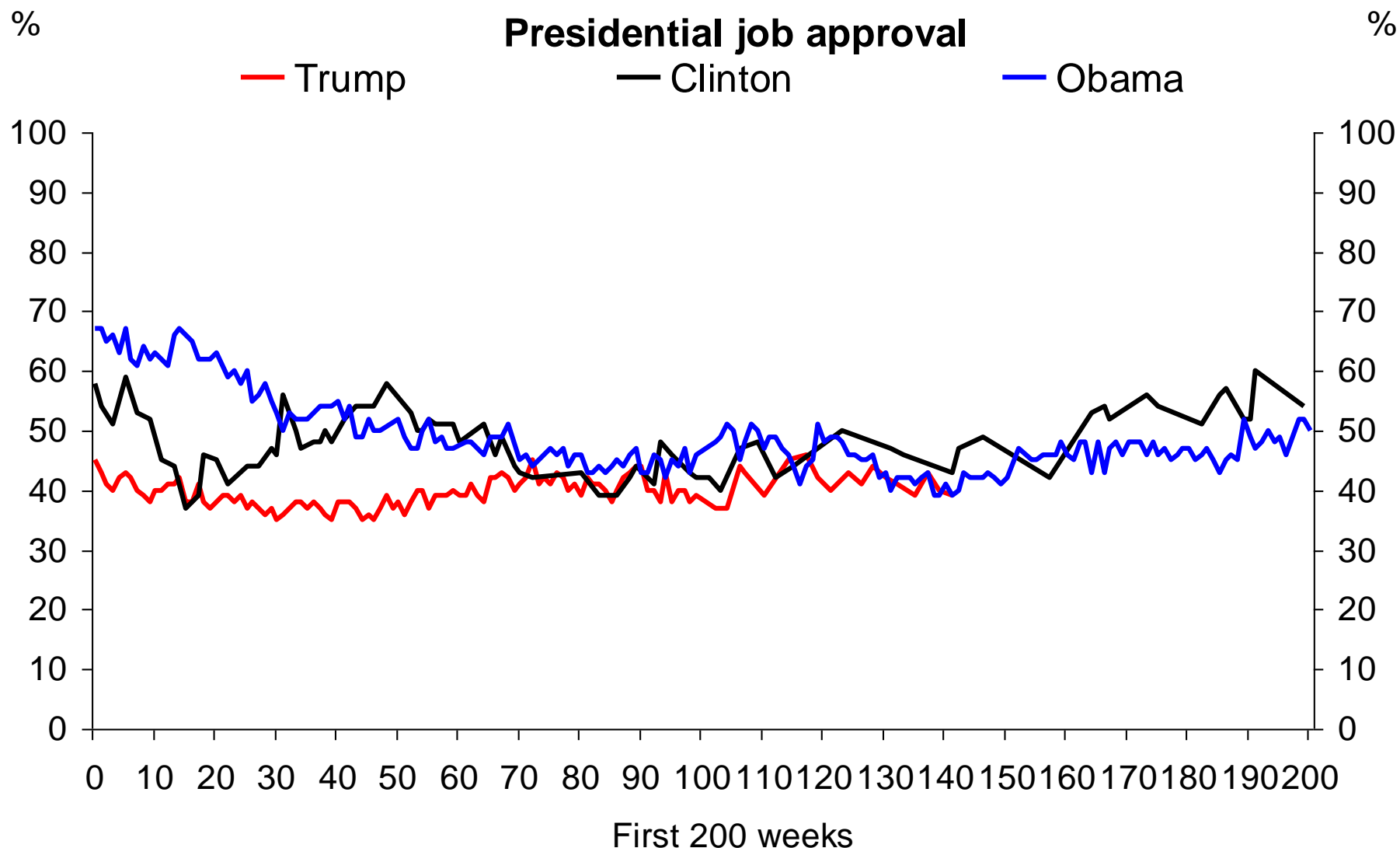


Note: Average tax rate by income groups in 2018 (after the Trump tax cut) and under the three leading candidates for the democratic presidential primary. All federal, state, and local taxes are included. Private health insurance contributions (7% of national income) as an extra tax paid by insured workers are also included as Warren and Sanders plan to replace these private contributions by public funding. Taxes are expressed as a fraction of pre-tax income. Pre-tax income is comprehensive (it includes all labor and capital income including fringe benefits, retained earnings of corporations, etc.) and sums up to national income as described in Piketty, Saez, and Zucman (2018).

Source: Saez and Zucman (2019), <https://taxjusticenow.org>, DB Global Research



# Trump job approval rating not too different from Obama or Clinton at this point in presidency



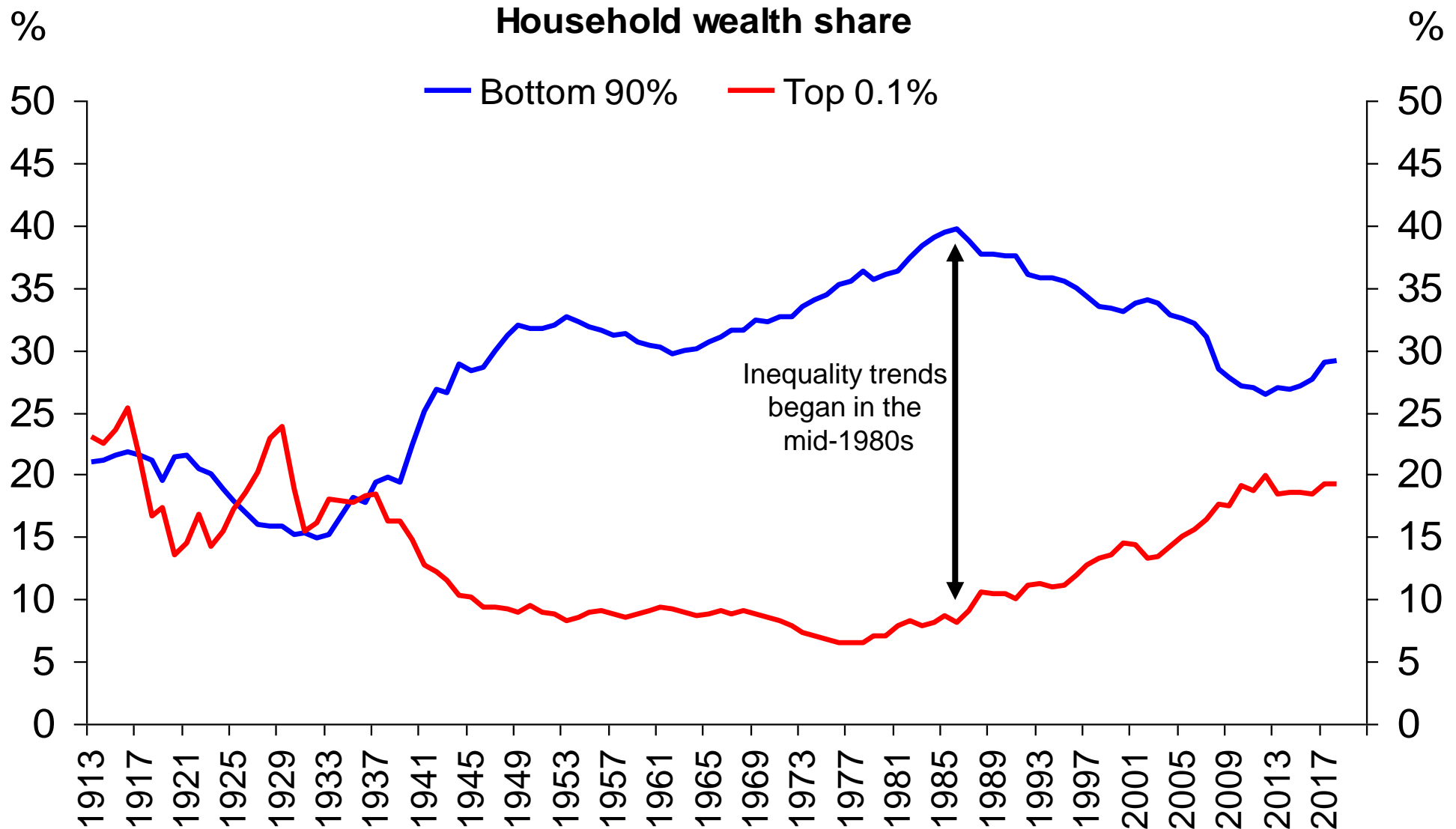
Source: American Presidency Project, Gallup, DB Global Research



# US wealth inequality over time



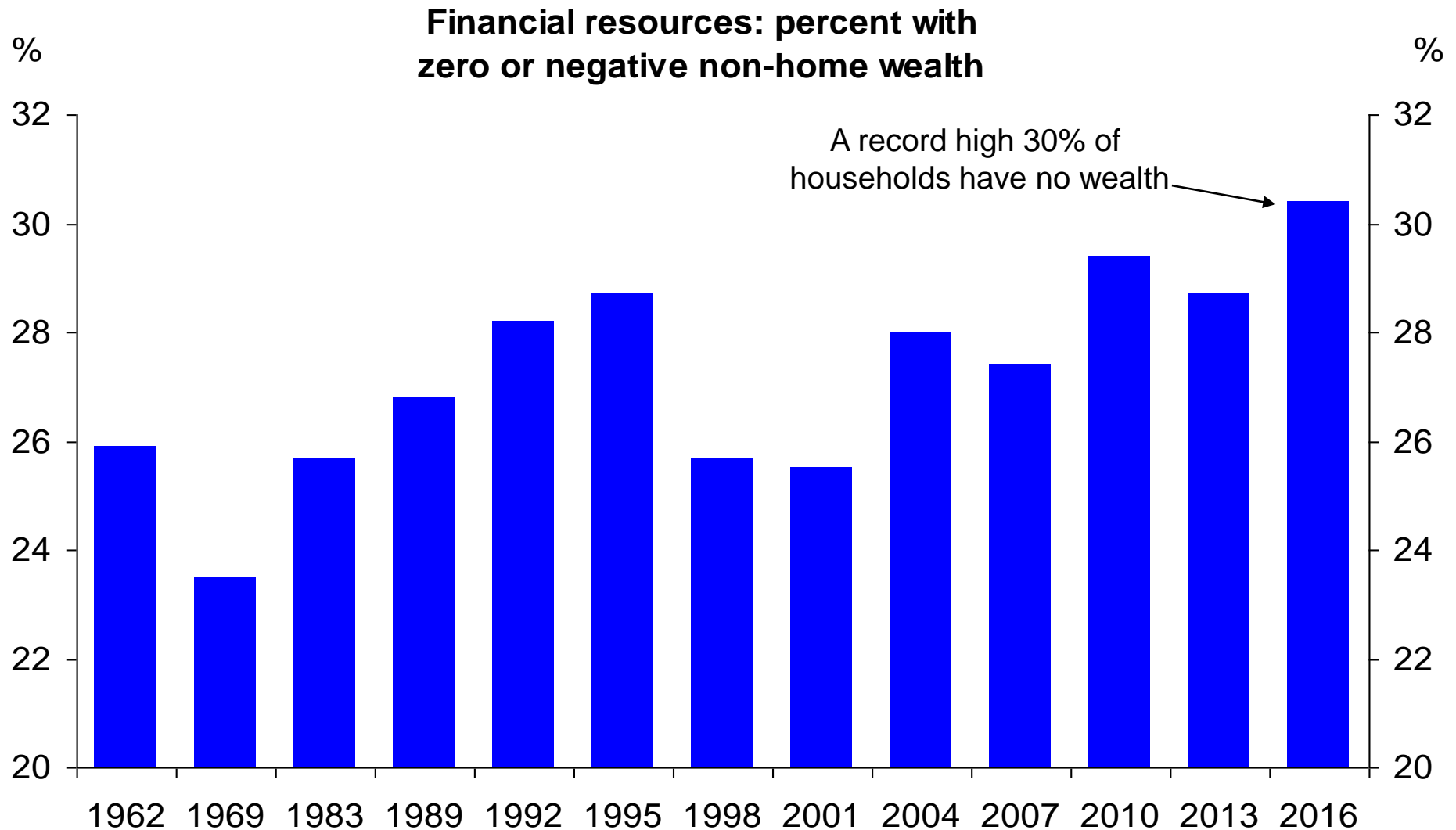
# Share of assets held by Top 0.1% and Bottom 90%



Source: The Triumph of Injustice: How the Rich Dodge Taxes and How to Make Them Pay (with Emmanuel Saez), WW Norton, October 2019.DB Global Research

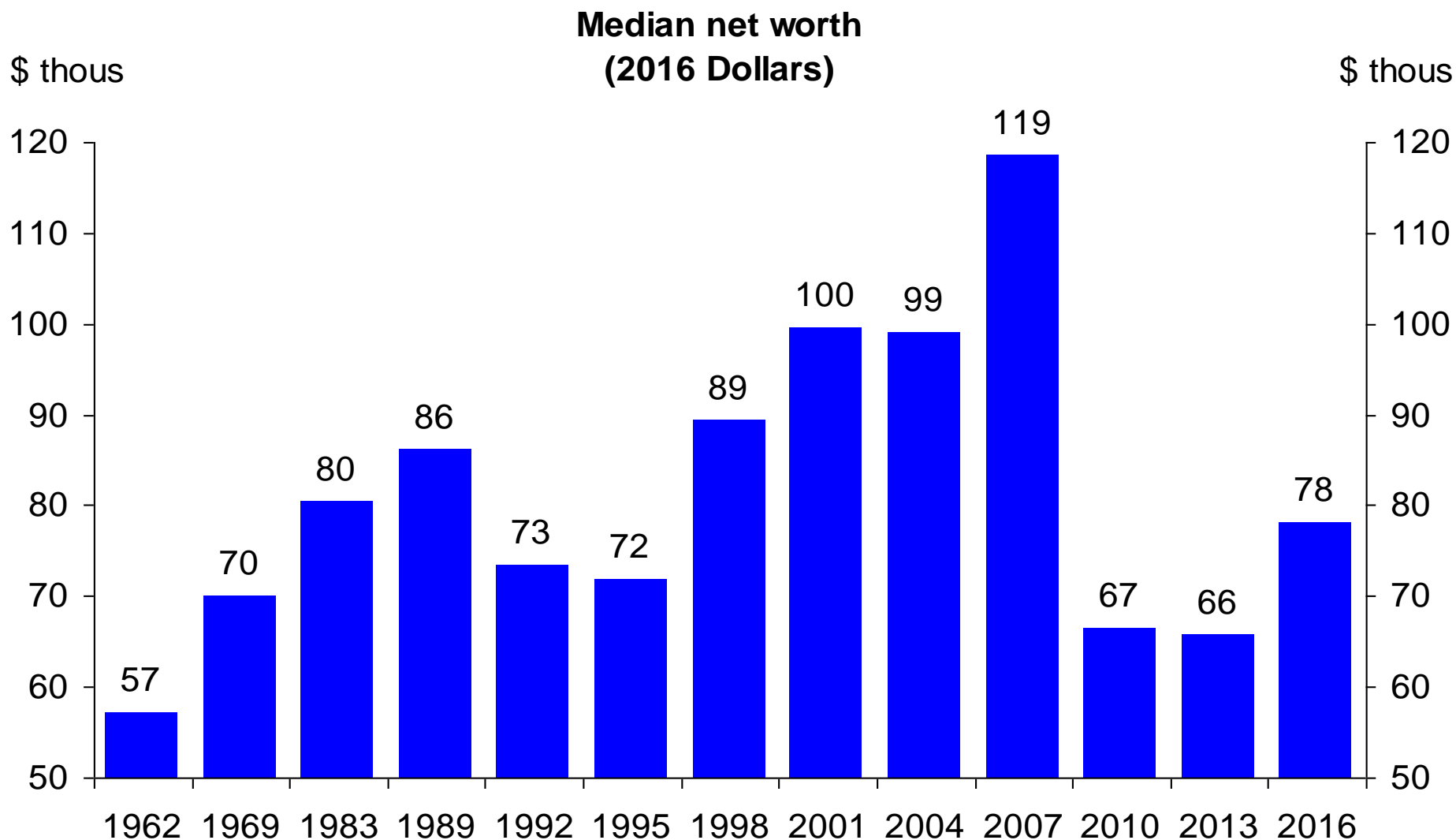


# More families than ever before have zero or negative non-home wealth



Source: Edward N. Wolff (2017). Survey of Consumer Finances, , DB Global Research

# S&P500 and home prices may be at all-time highs but the median family still has low net worth



Source: Edward N. Wolff (2017). Survey of Consumer Finances, DB Global Research



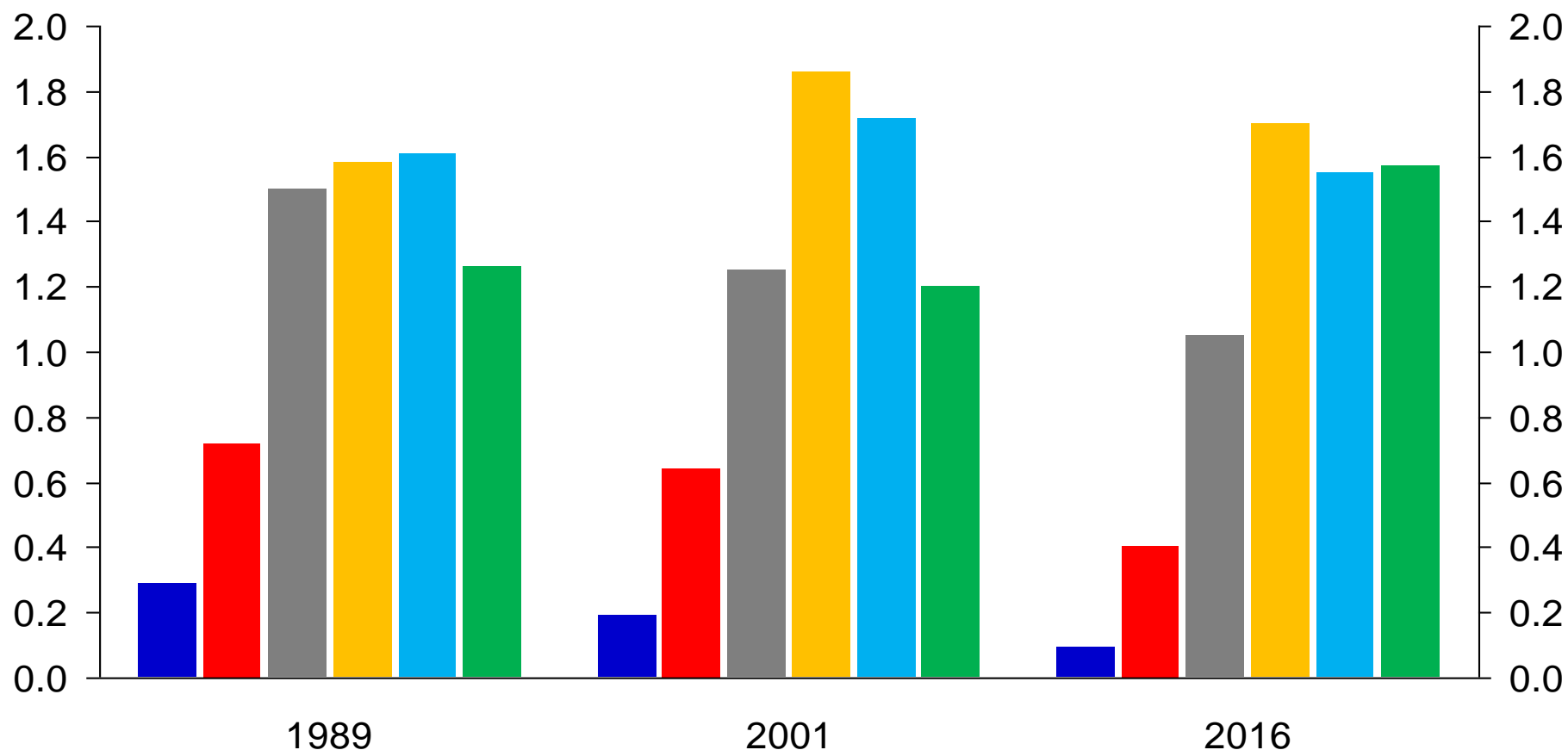
# Younger generations have smaller and smaller net worth

Ratio

**Mean Net Worth by age group  
(Ratio to Overall Mean)**

Ratio

■ Under 35 ■ 35-44 ■ 45-54 ■ 55-64 ■ 65-74 ■ 75 & over

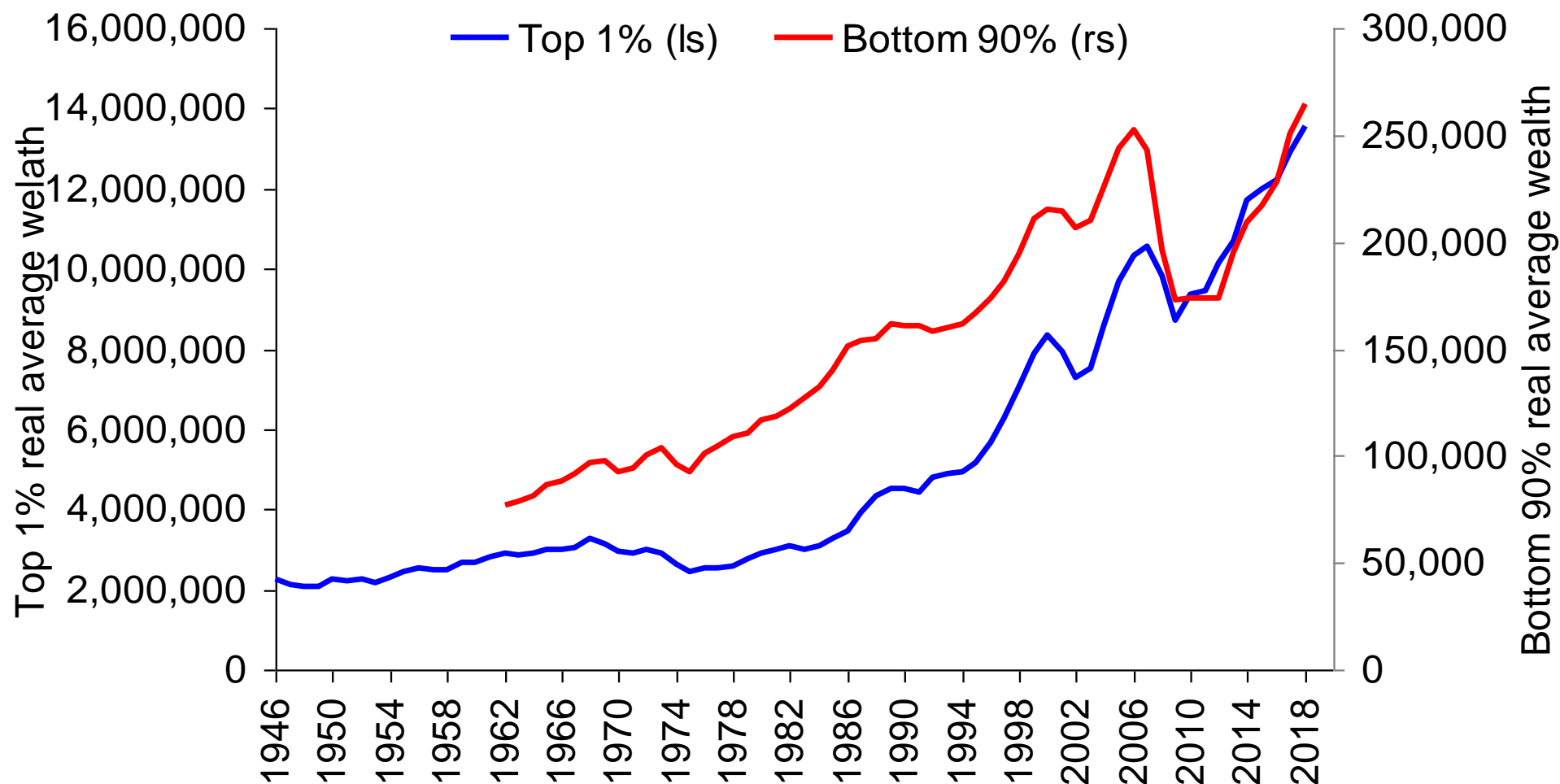


Source: Edward N. Wolff (2017) . Survey of Consumer Finances, DB Global Research

# Average wealth for the Top 1% and the Bottom 90%



## Average wealth of bottom 90% and top 1% families

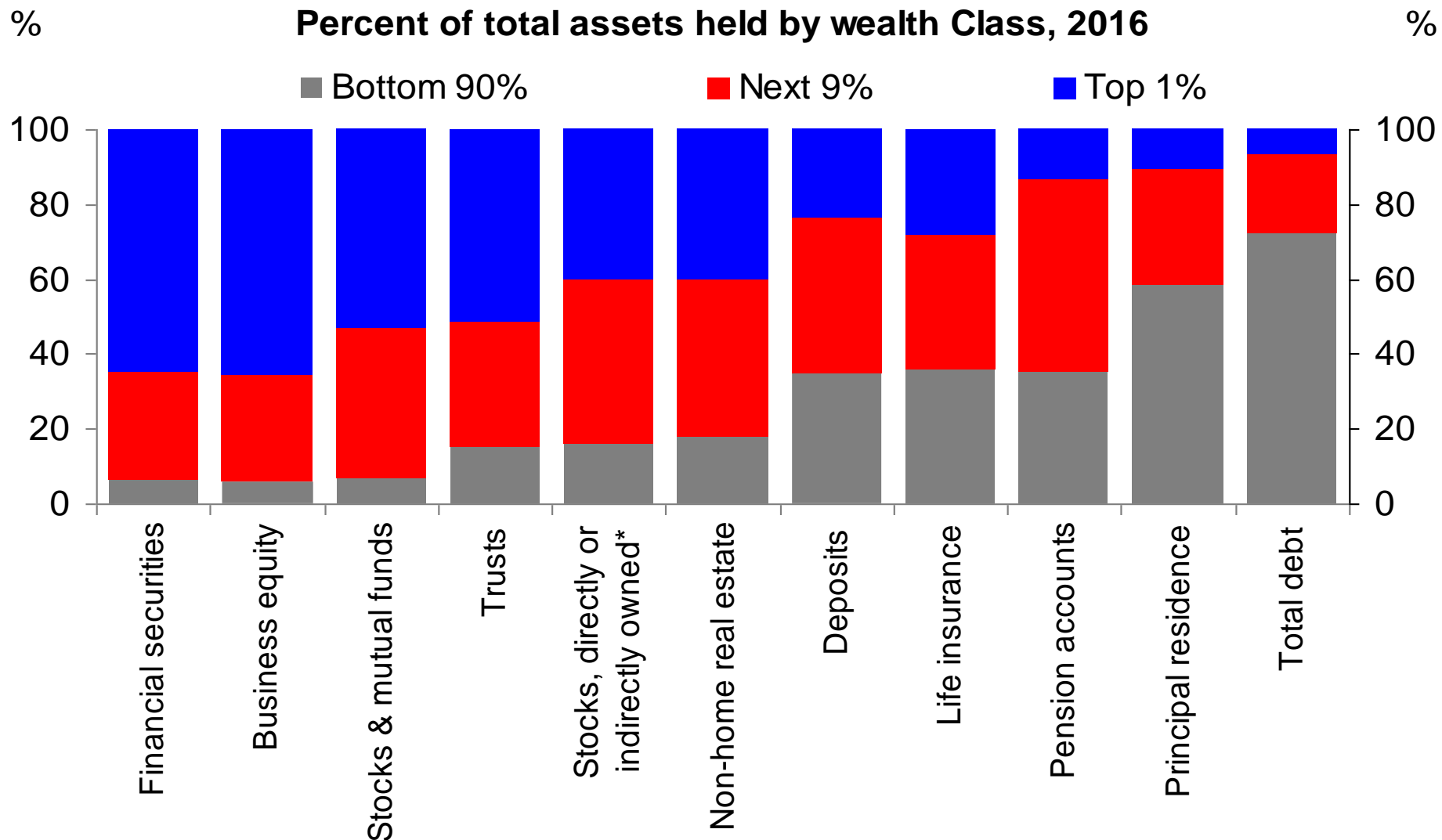


Note : \$2018

Source: The Triumph of Injustice: How the Rich Dodge Taxes and How to Make Them Pay (with Emmanuel Saez), WW Norton, October 2019.DB Global Research



# Types of assets held across wealth distribution

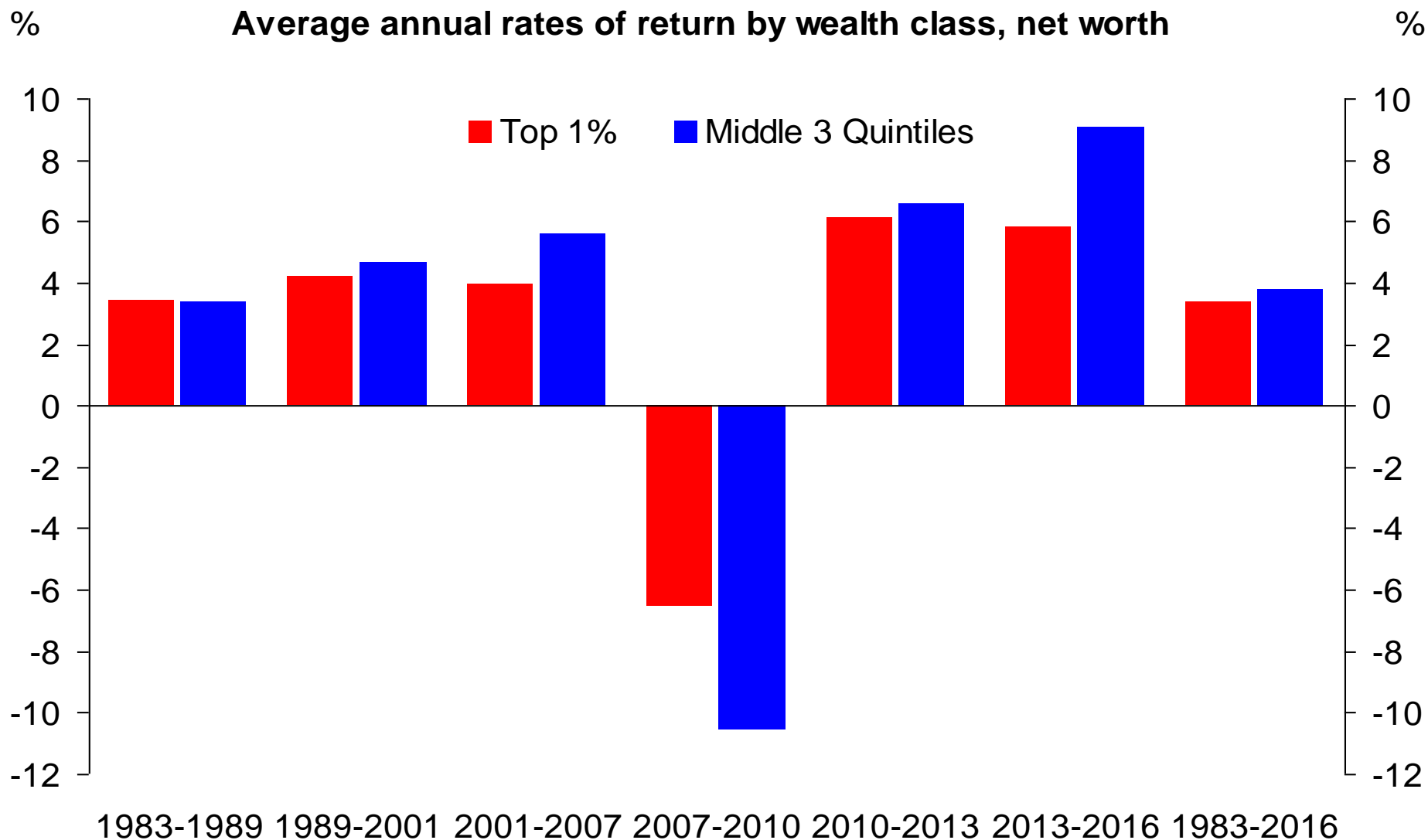


\*Includes direct ownership of stock shares and indirect ownership through mutual funds, trusts, and IRAs, Keogh plans, 401(k) plans, and other retirement accounts  
Households are classified into wealth class according to their net worth. Brackets for 2016 are:  
Top one percent: Net worth of \$10,257,000 or more, Next 9 percent: Net worth between \$1,143,200 and \$10,257,000. Bottom 90 Percent: Net worth less than \$1,143,200

Source: Edward N. Wolff, (2017), Survey of Consumer Finances, DB Global Research



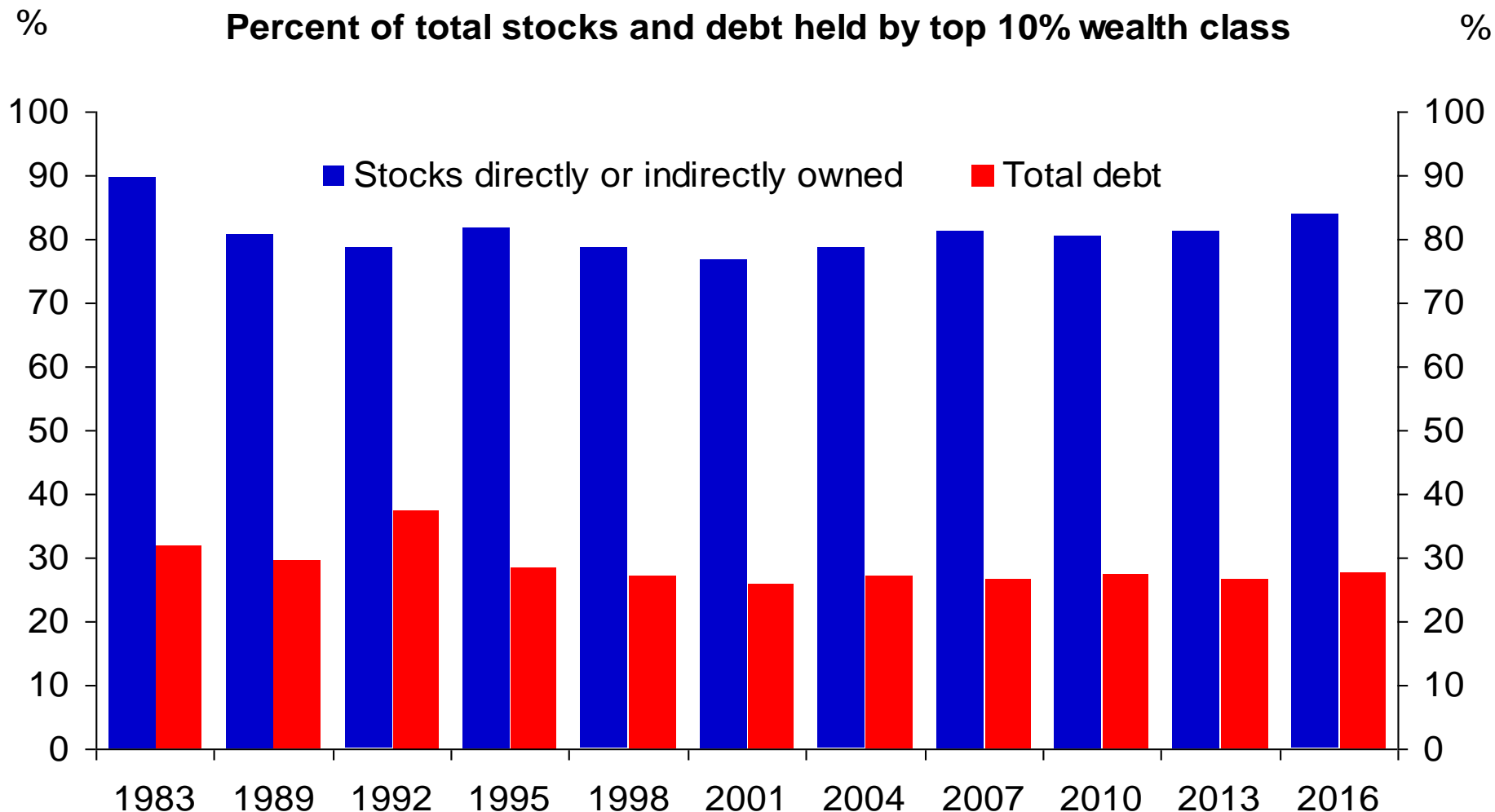
# Middle 3 quintiles have had higher returns than the Top1% since the crisis



Source: Edward N. Wolff (2017). Survey of Consumer Finances, DB Global Research



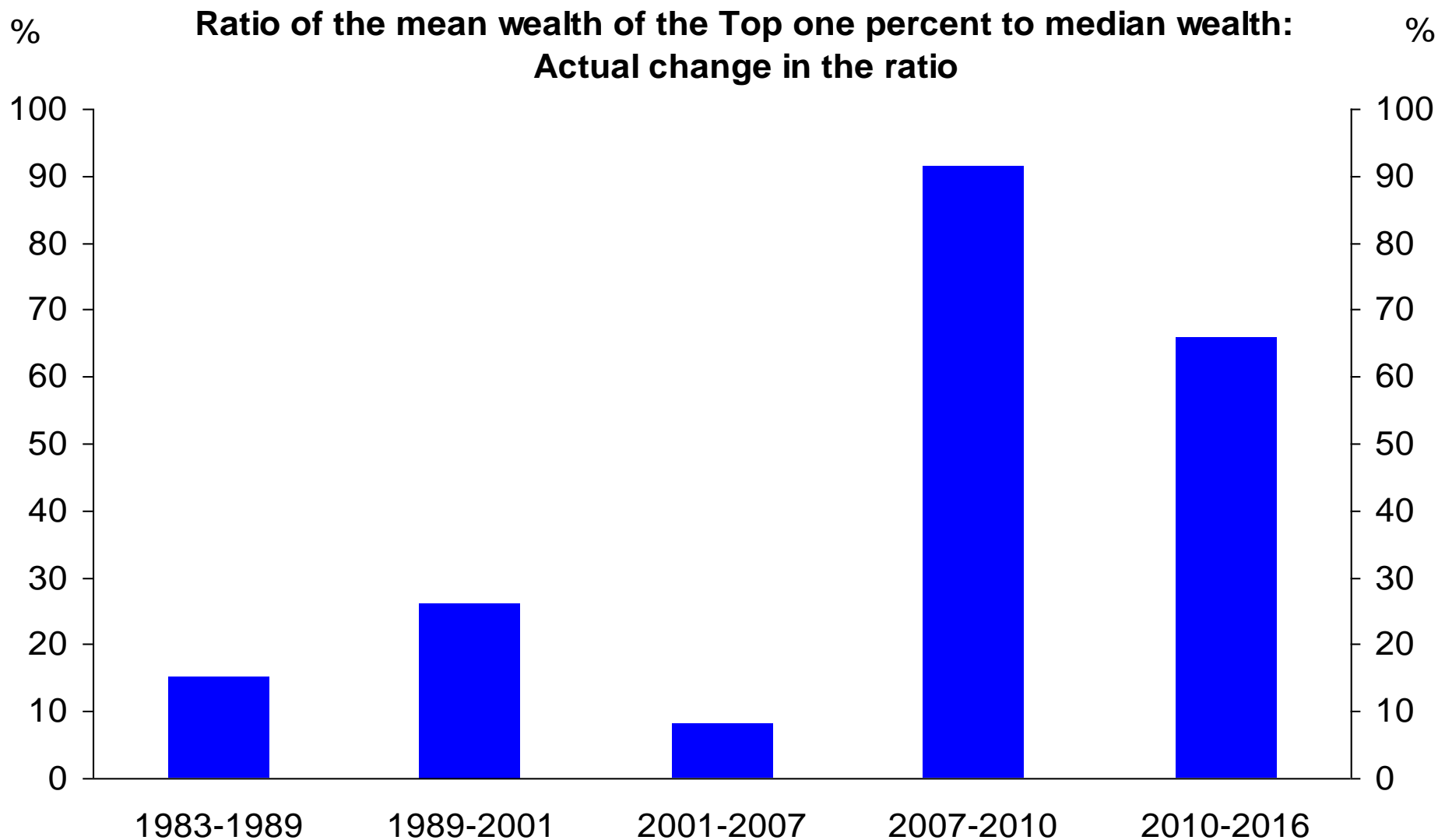
# The Top 10% own more stocks



Source: Edward N. Wolff (2017). Survey of Consumer Finances, DB Global Research



# Mean wealth of the Top 1% divided by median wealth



Source: Edward N. Wolff (2017). Survey of Consumer Finances, DB Global Research



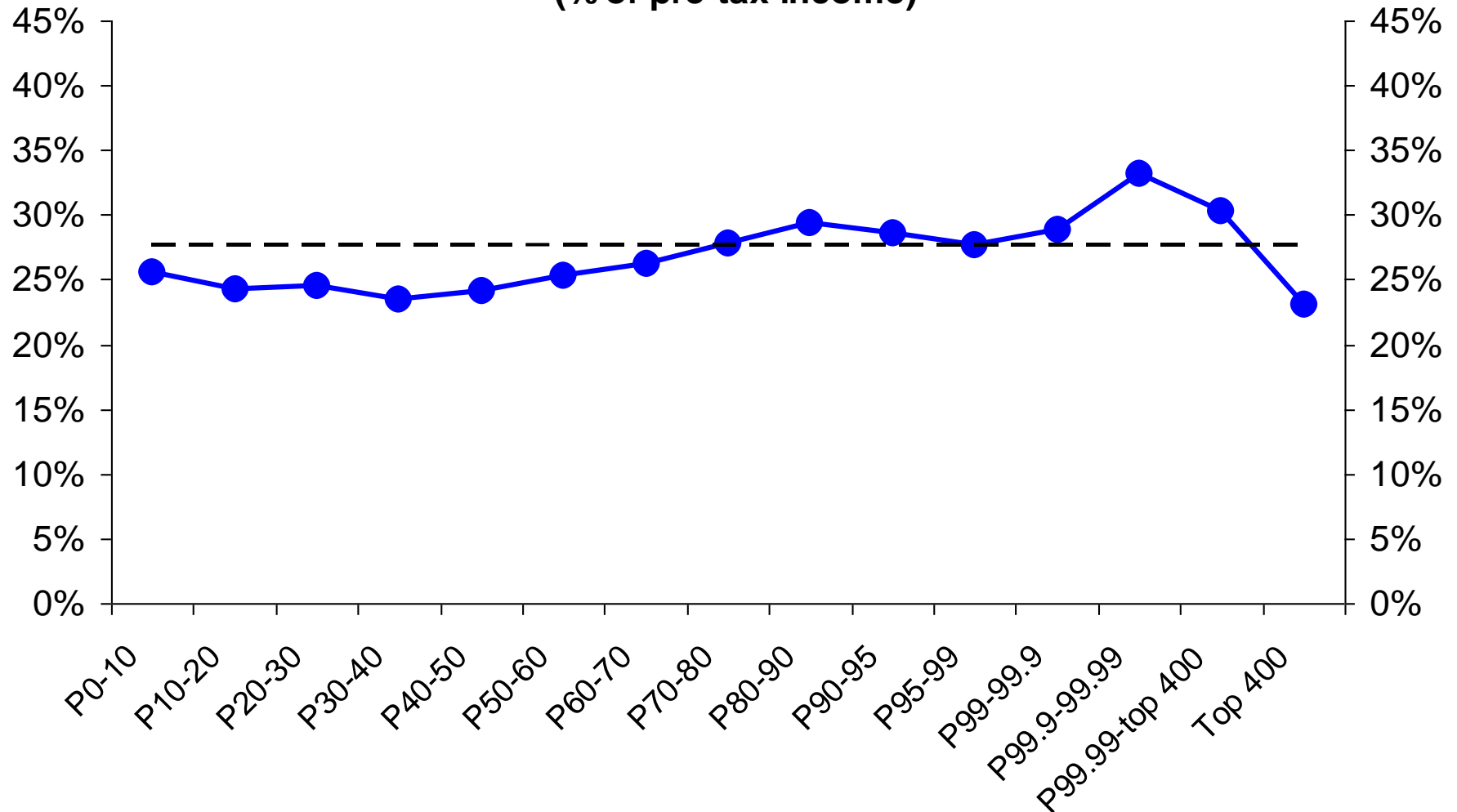


# US taxation



# Average tax rates across income distribution

**Average tax rates by pre-tax income group in 2018**  
(% of pre-tax income)

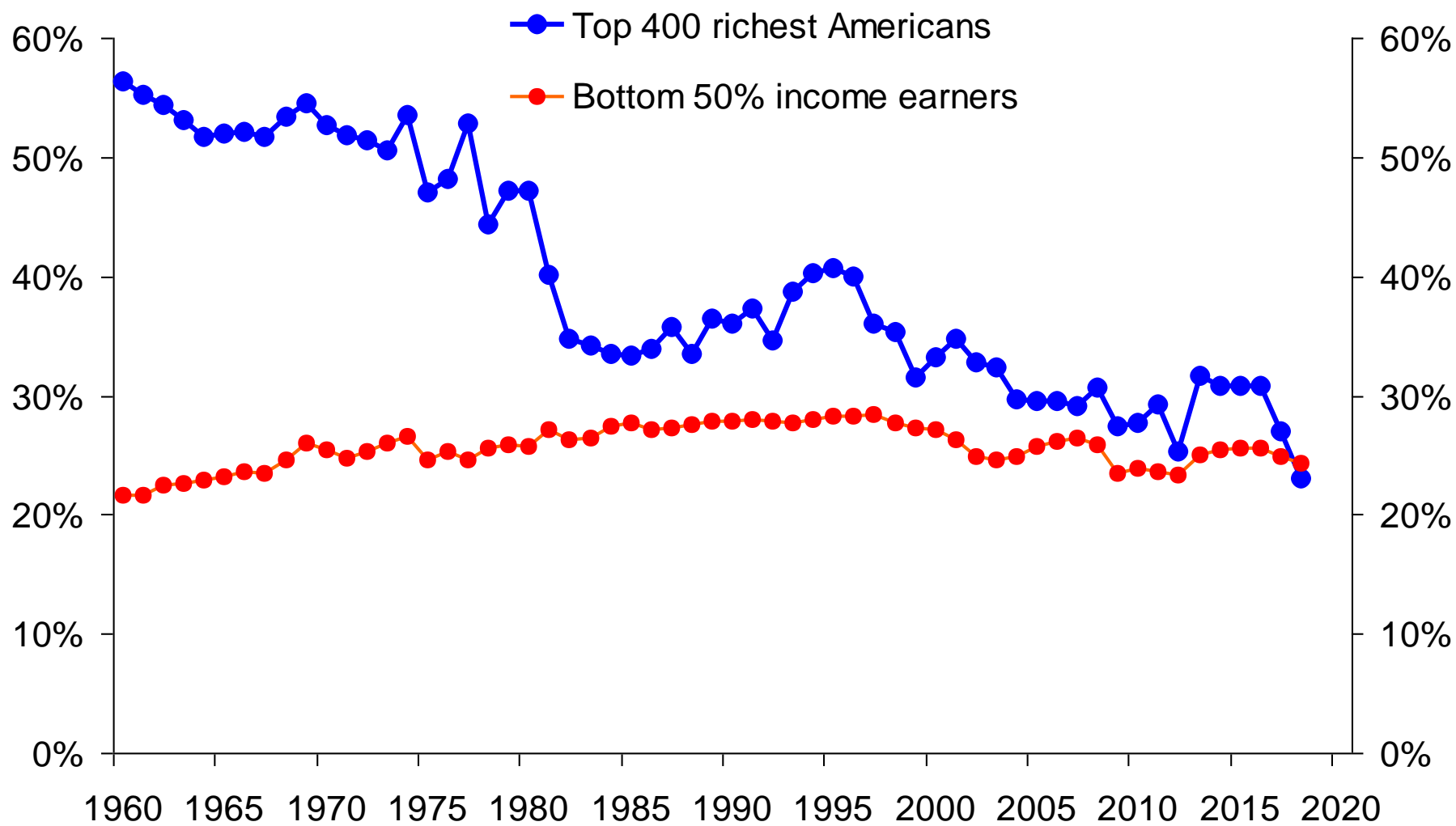


Source: Saez and Zucman (2019), <https://taxjusticenow.org>, DB Global Research



# Average tax rates

## United States : Average tax rate (% of pre-tax income)

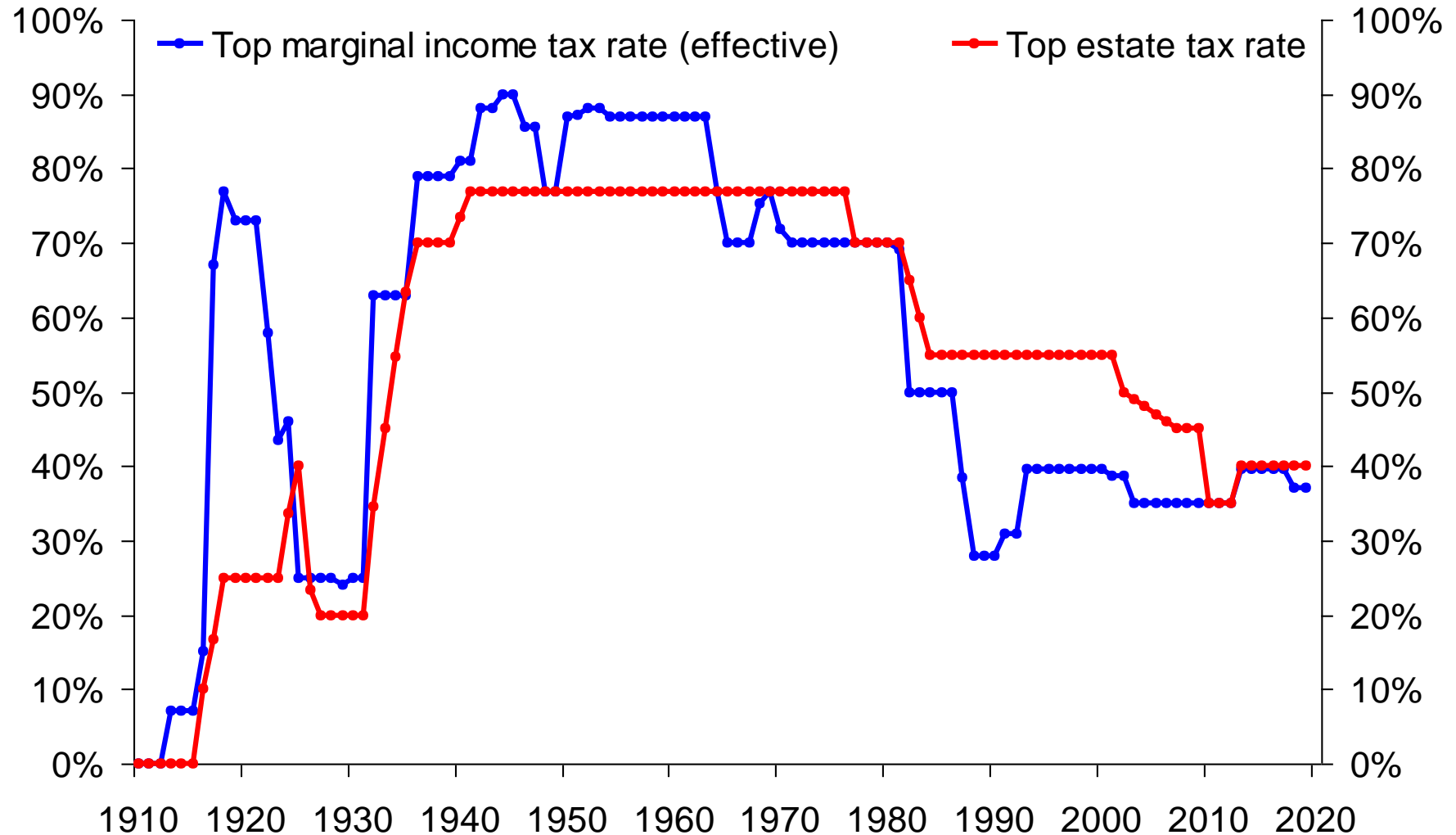


Source: Saez and Zucman (2019), <https://taxjusticenow.org> , DB Global Research



# US: Marginal tax rates

## United States: Top marginal tax rates

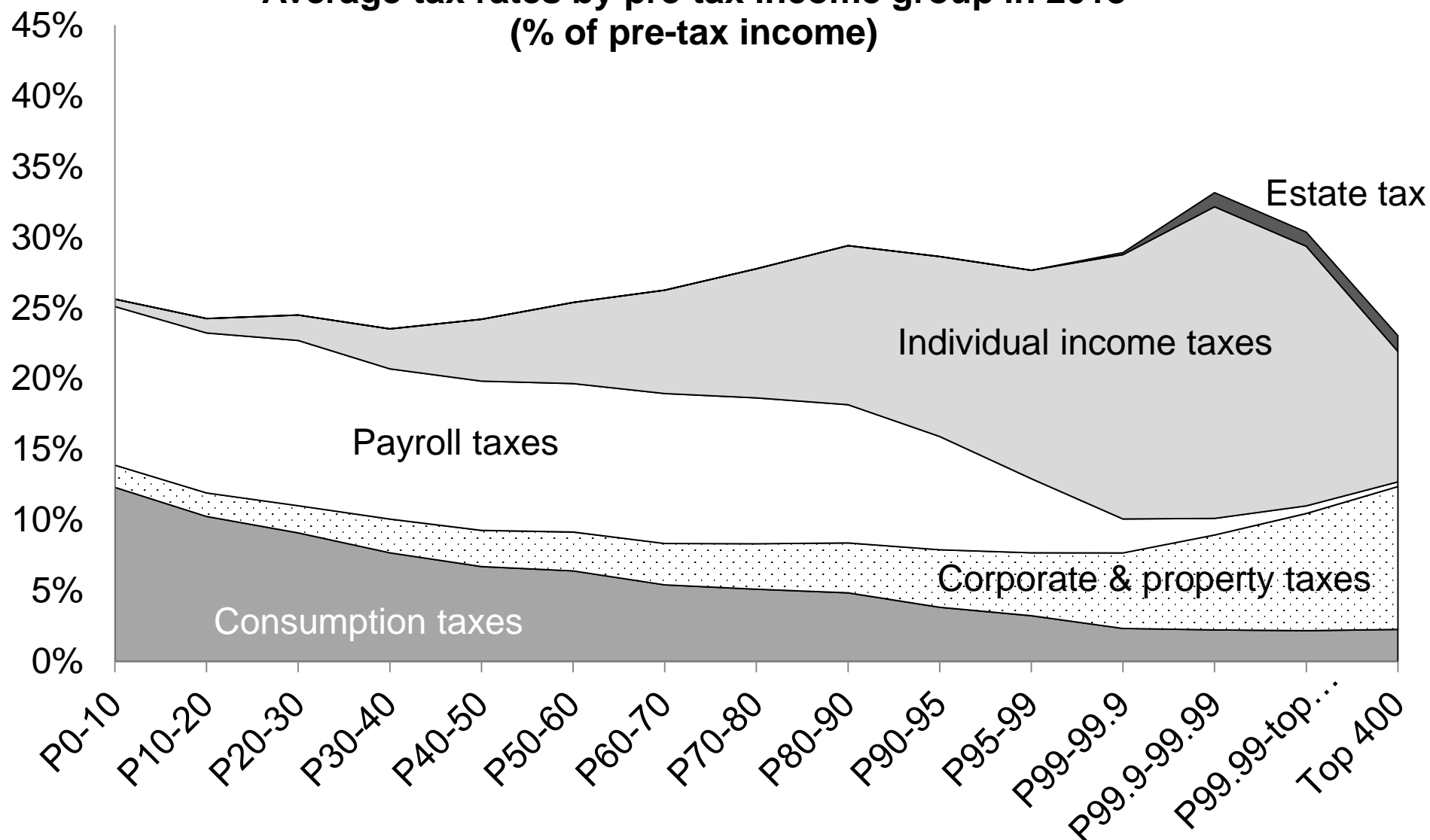


Source: Saez and Zucman (2019), <https://taxjusticenow.org>, DB Global Research

# Composition of average tax rates across income distribution



**Average tax rates by pre-tax income group in 2018**  
(% of pre-tax income)



Source: Saez and Zucman (2019), <https://taxjusticenow.org>, DB Global Research

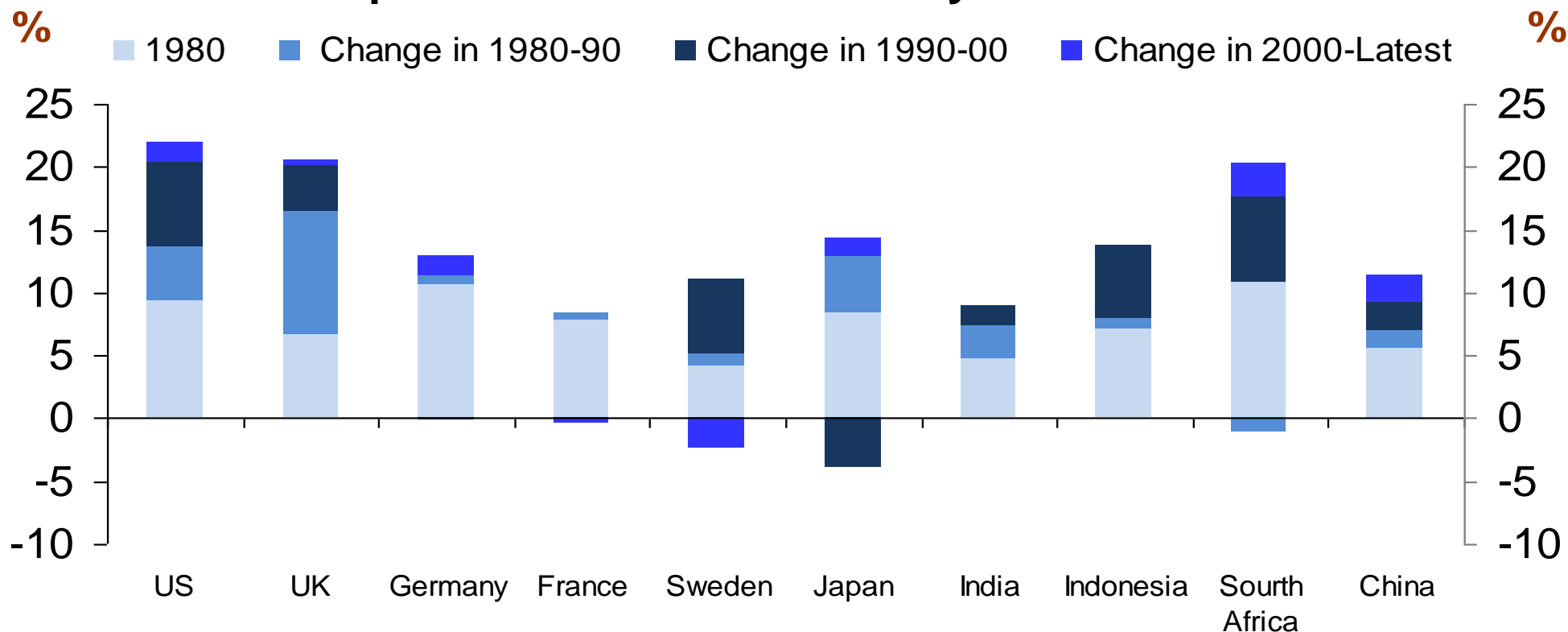


# Comparing US inequality with inequality in other countries



# Income inequality has widened in most countries

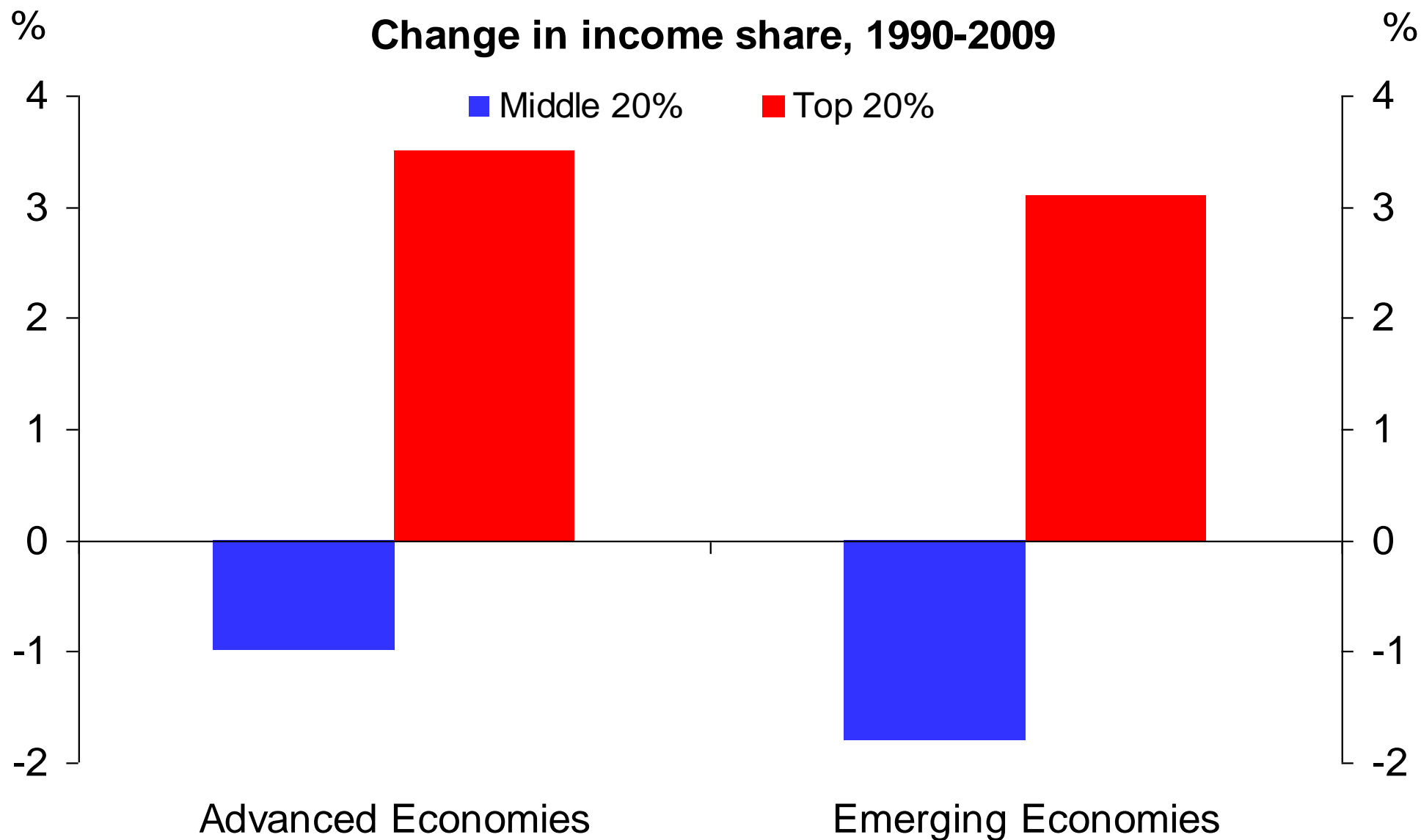
## Top 1% share of total economy-wide income



Note: Total income is defined as the sum of all income items reported on income tax returns, before any deduction.

Source: WID database, DB Global Research

# Income inequality widening more in the advanced economies



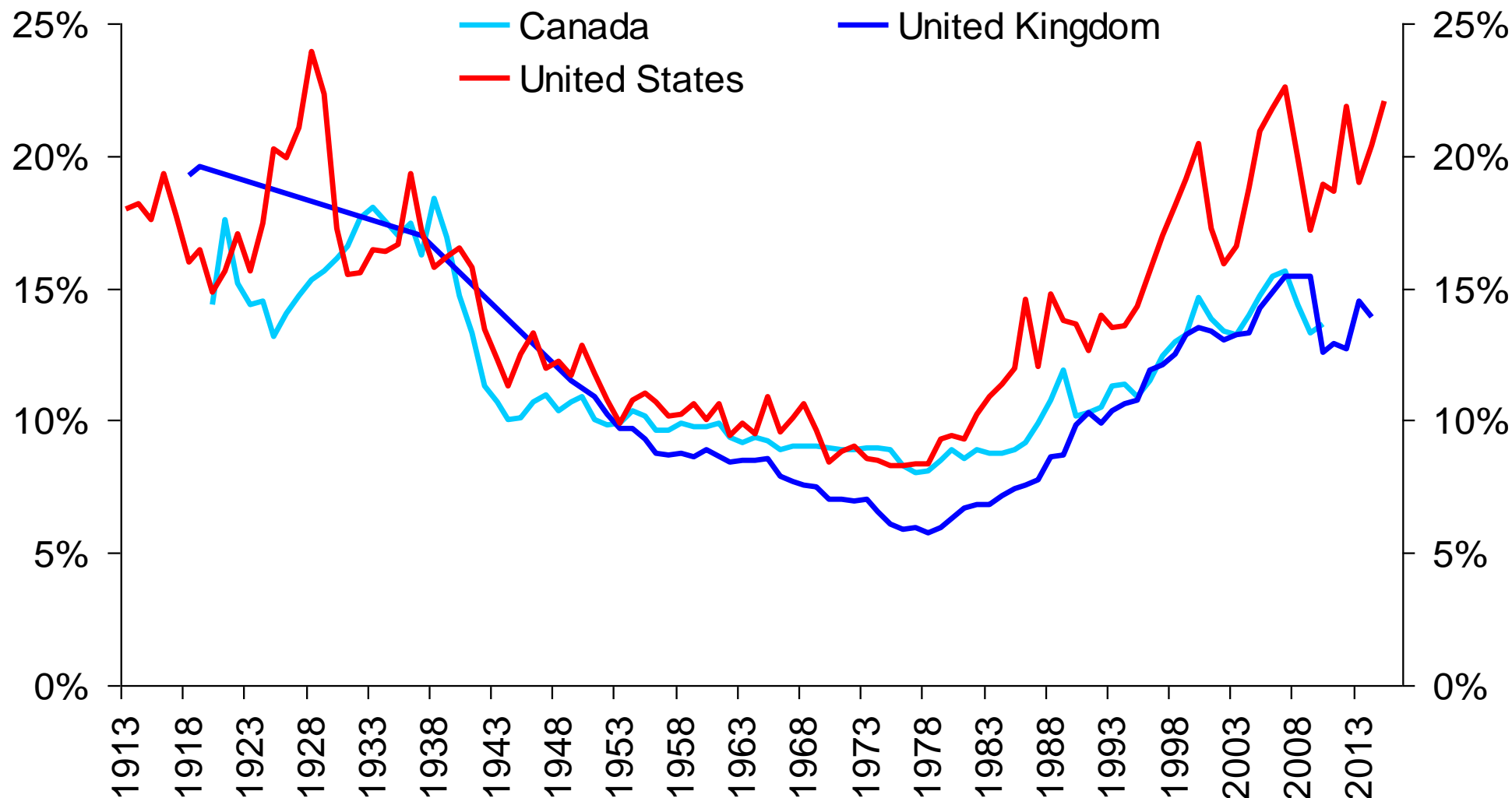
Source: WID database, DB Global Research



# U-shaped development in income inequality in English speaking countries



## Top 1% Income Share: English Speaking Countries (U-shaped)

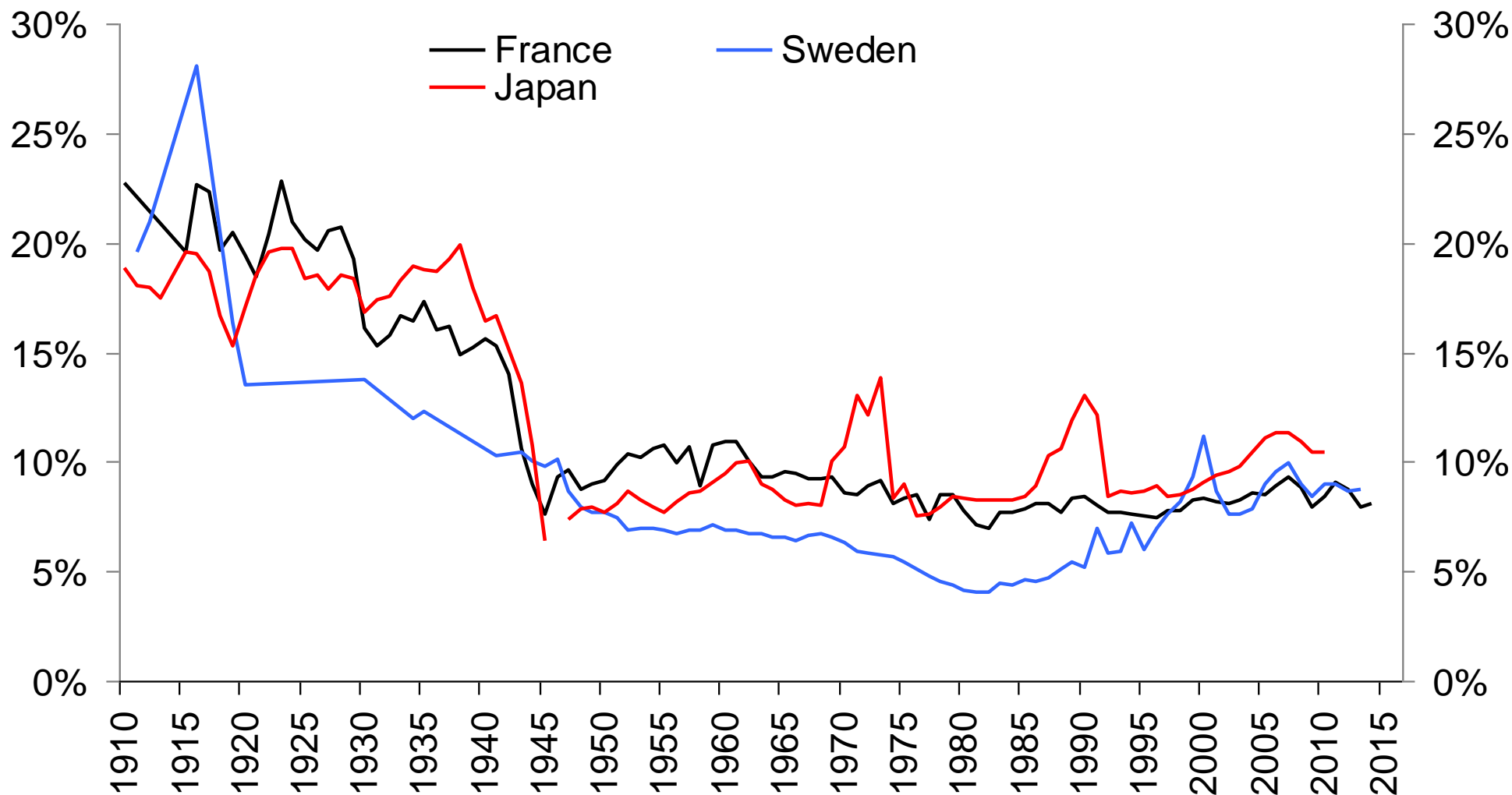


Source: WID database, DB Global Research

# L-shaped development in income inequality in Europe and Japan



## Top 1% Income Share: Continental Europe and Japan (L-shaped)

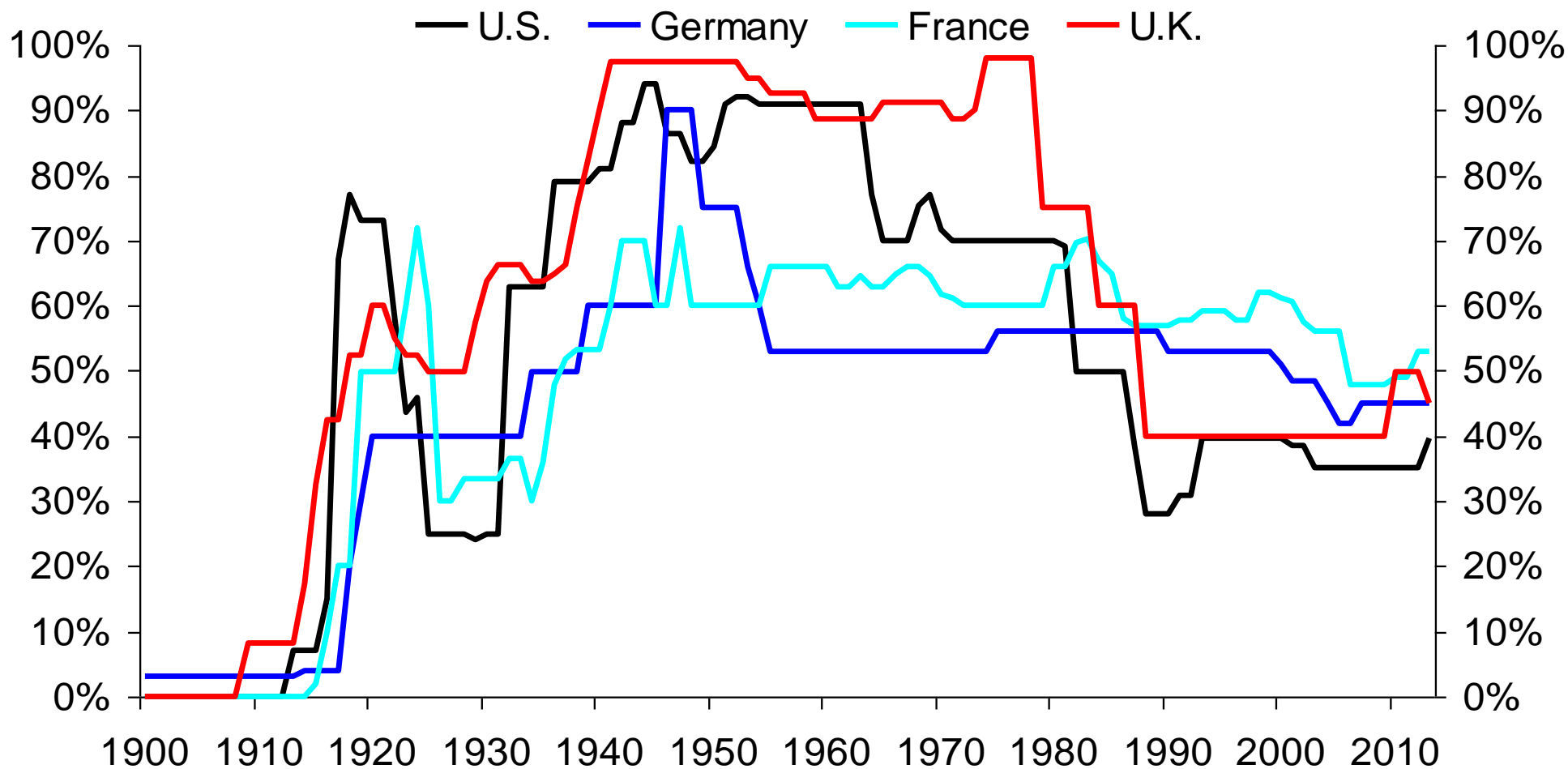


Source: WID database, DB Global Research



# Marginal tax rates down in recent decades

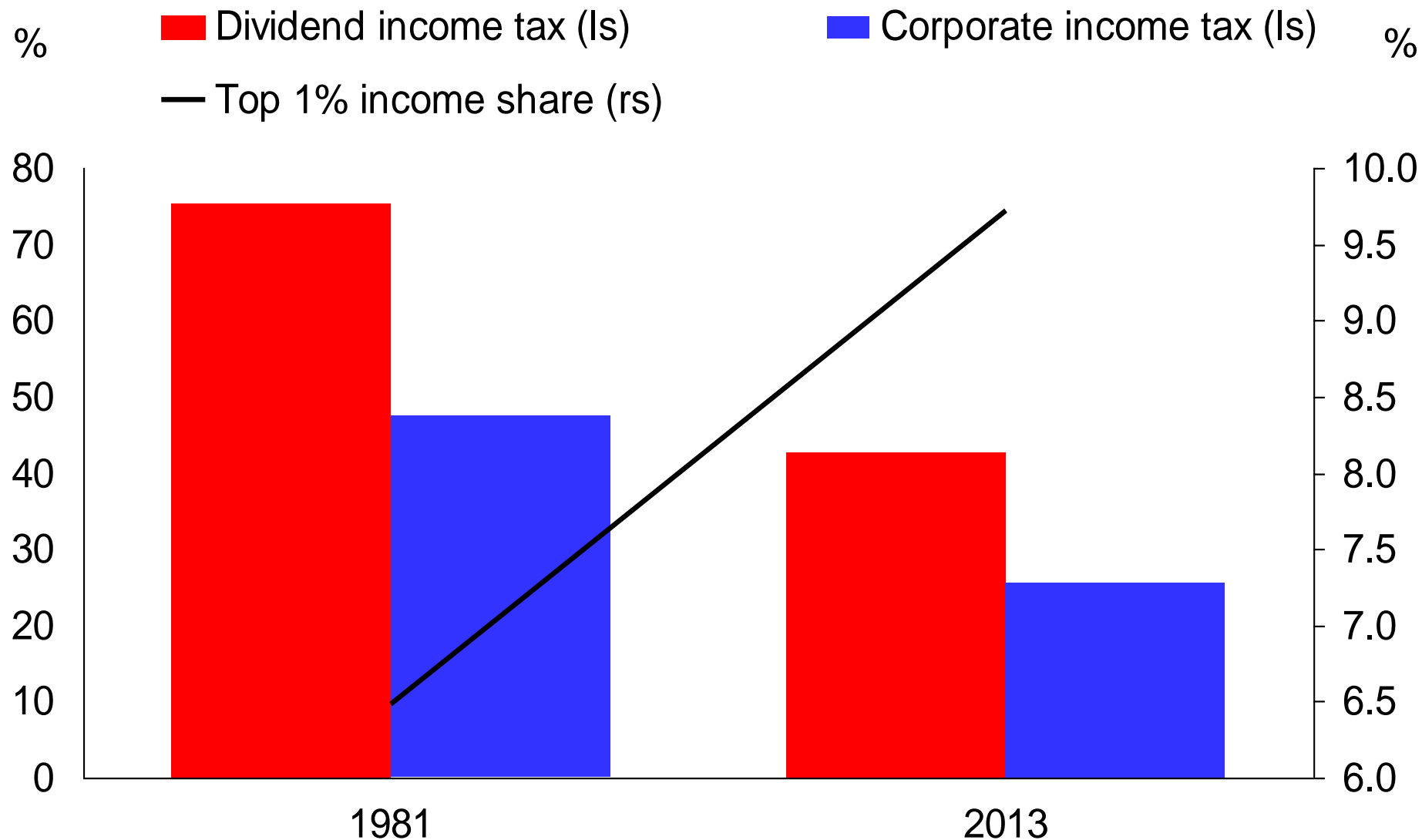
**Top income tax rates, 1900-2013**  
Marginal tax rate applying to the highest incomes



The top marginal tax rate of the income tax (applying to the highest incomes) in the U.S. dropped from 70% in 1980 to 28% in 1988.

Source: Piketty (2014). Figure also appears in Piketty and Saez (2014)., DB Global Research

# OECD: Other taxes affecting the top 1% have also fallen



Source: OECD Tax Database, OECD Income Database, DB Global Research



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  - Hooper produces weekly and quarterly publications for Deutsche Bank with a focus on US and global economic developments and Fed policy; he also comments on US and global economic and financial developments in the news media. His US Economics team has been ranked No. 1 in fixed income research by Institutional Investor in 2010 and 2011. Hooper currently serves as a member of the Economic Advisory Panel of the Federal Reserve Bank of New York, a member and former chairman of the Economic Advisory Committee of the American Bankers Association, a founding member of the US Monetary Policy Forum, a member of the Economic Leadership Council for the University of Michigan, and a member of the Forecasters' Club of New York.
  - Hooper earned a BA in Economics (cum laude) from Princeton University and an MA and Ph.D. in Economics from University of Michigan. He has published numerous books, journal articles, and reviews on economics and policy analysis.



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Matthew holds a Ph.D. in Economics from the University of California, Los Angeles. While at UCLA, Matthew worked at the U.S. Department of the Treasury in the Office of Financial Research. Prior to graduate school, he worked as a research analyst in the macroeconomics department at the Federal Reserve Bank of Philadelphia.



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# Appendix 1

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