Deutsche Bank
Markets Research

US Inequality

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Overview

Inequality is likely an important driver of populism.

It is important for markets to understand the drivers of inequality and how income and wealth inequality have developed in different countries.

The bottom line is that inequality is increasing in most countries around the world and there are no signs of this changing anytime soon.

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Drivers of income inequality

Inequality Drivers

Technological change

Technological change disproportionately raise demand for capital and skilled labor over low-skilled and unskilled labor by eliminating many jobs through automation or upgrading the skill level required to attain or keep those jobs

Trade globalization

Trade openness raises skill premium, but also increases real wages by lowering import prices. While increased trade lower income inequality in EMEs by increasing demand and wages for abundant lower-skilled workers.

Financial globalization

FDI and portfolio flows increase income inequality through concentration of foreign assets and liabilities in relatively higher skill- and technology-intensive sectors, pushing up demand for wages of higher skilled workers.

labor market institutions

More flexible labor market institutions can pose challenges for workers, especially those with low skills, and hence play an important explaining role in inequality developments

Tax policies

Governments in advanced economies have historically mitigated inequality through public policy—primarily progressive taxes and social transfers such as public retirement benefits.

Education

Effect of increased educational attainment on income inequality could be either positive or negative depending on the evolution of rates of return to education.

Source: OECD , DB Global Markets Research

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Country groups with similar patterns of inequality

Low inequality in household disposable income

Higher inequality in household disposable income

Denmark Iceland Norway Sweden Switzerland	Belgium Czech Republic Estonia Finland France Italy Slovak Republic Slovenia	Austria Germany Greece Hungary Japan Korea Luxembourg Poland Spain	Australia Canada Ireland Netherlands New Zealand United Kingdom	Chile Israel Mexico Portugal Turkey United States
Low dispersion in labor income (high employment rate and little wage dispersion). Cash transfers tend to be universal and taxes are not highly progressive.	Average dispersion in labor income (little wage variation but low employment or high part-time rate). Highly concentrated capital and self-employment income. Cash transfers (largely insurance-based) and taxes are not highly progressive	Individual labor income is concentrated, reflecting above average dispersion in wages and a low employment or high part-time rate. Taxes and transfers are not highly progressive.	Above average wage dispersion coupled with a high part-time rate. Cash transfers are targeted and taxes are progressive.	High concentration of labor, capital and self-employment income. The poverty rate is high.

Source: OECD , DB Global Markets Research

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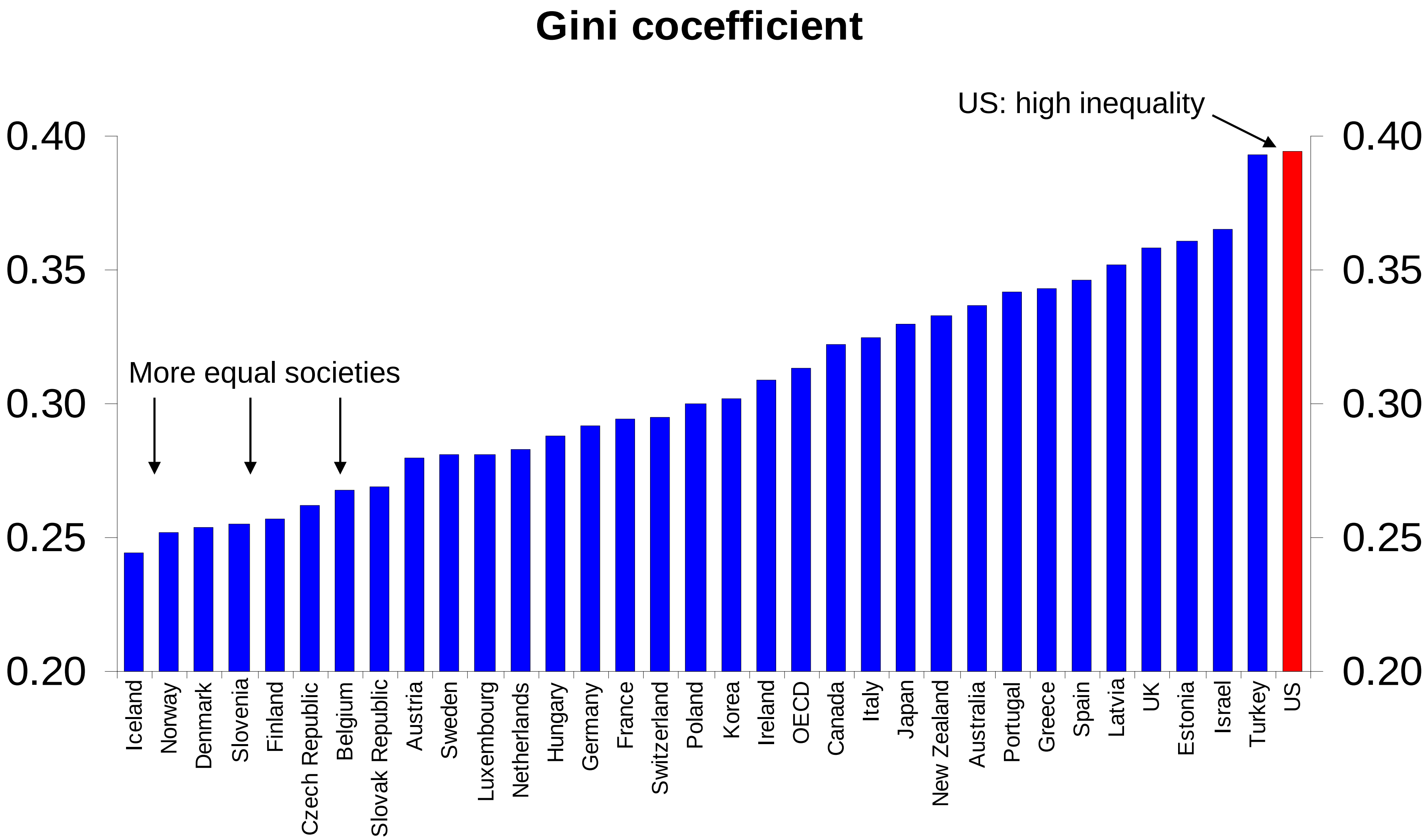
Income inequality very high in the United States



Note: Gini coefficients (disposable income, post taxes and transfers) are based on equivalised incomes for OECD countries, Colombia, Latvia and the Russian Federation; per-capita incomes for other countries; and per-capita consumption for India and Indonesia. Data from 2014 or latest year available.

Source: OECD , DB Global Markets Research

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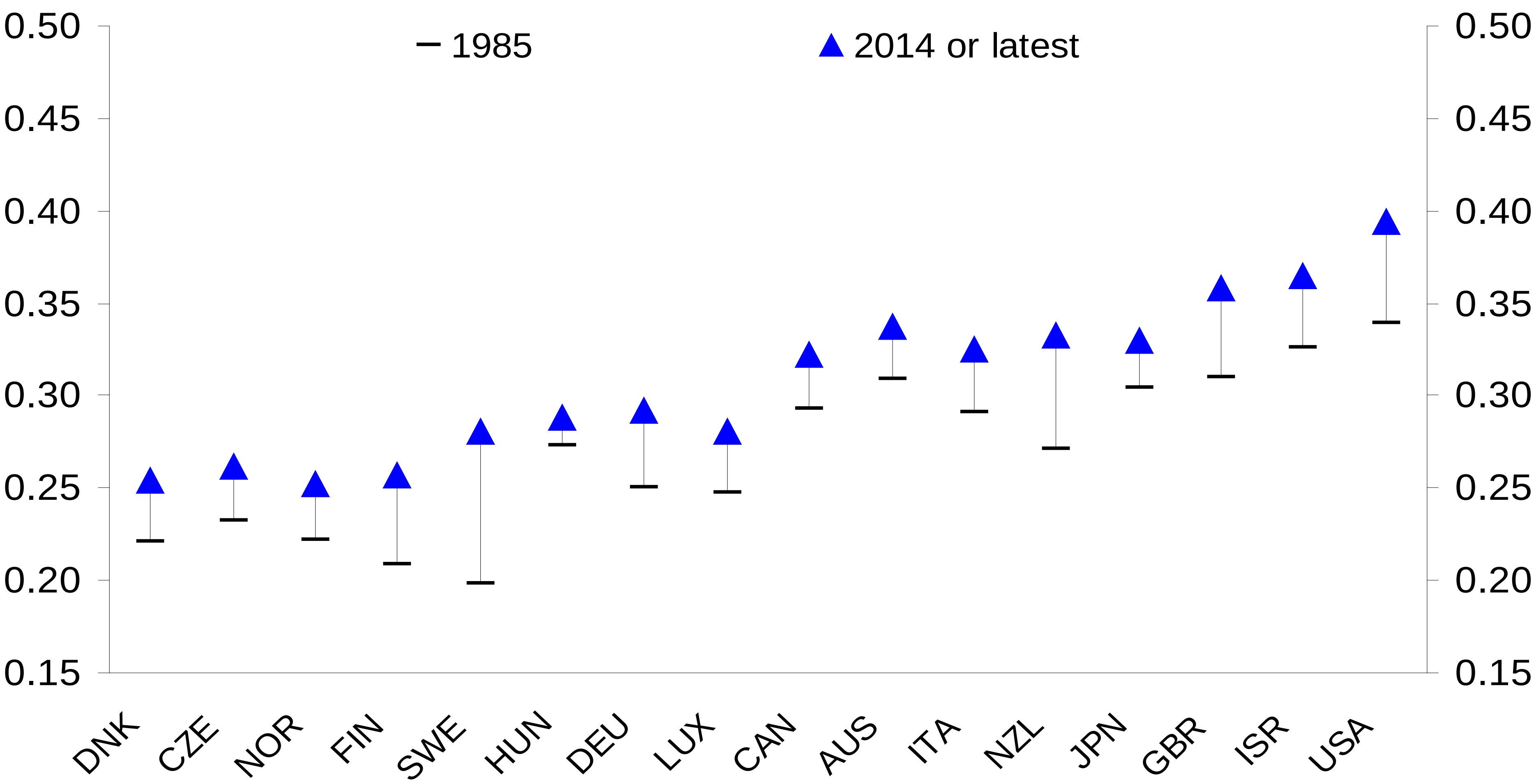
Income inequality increasing everywhere

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

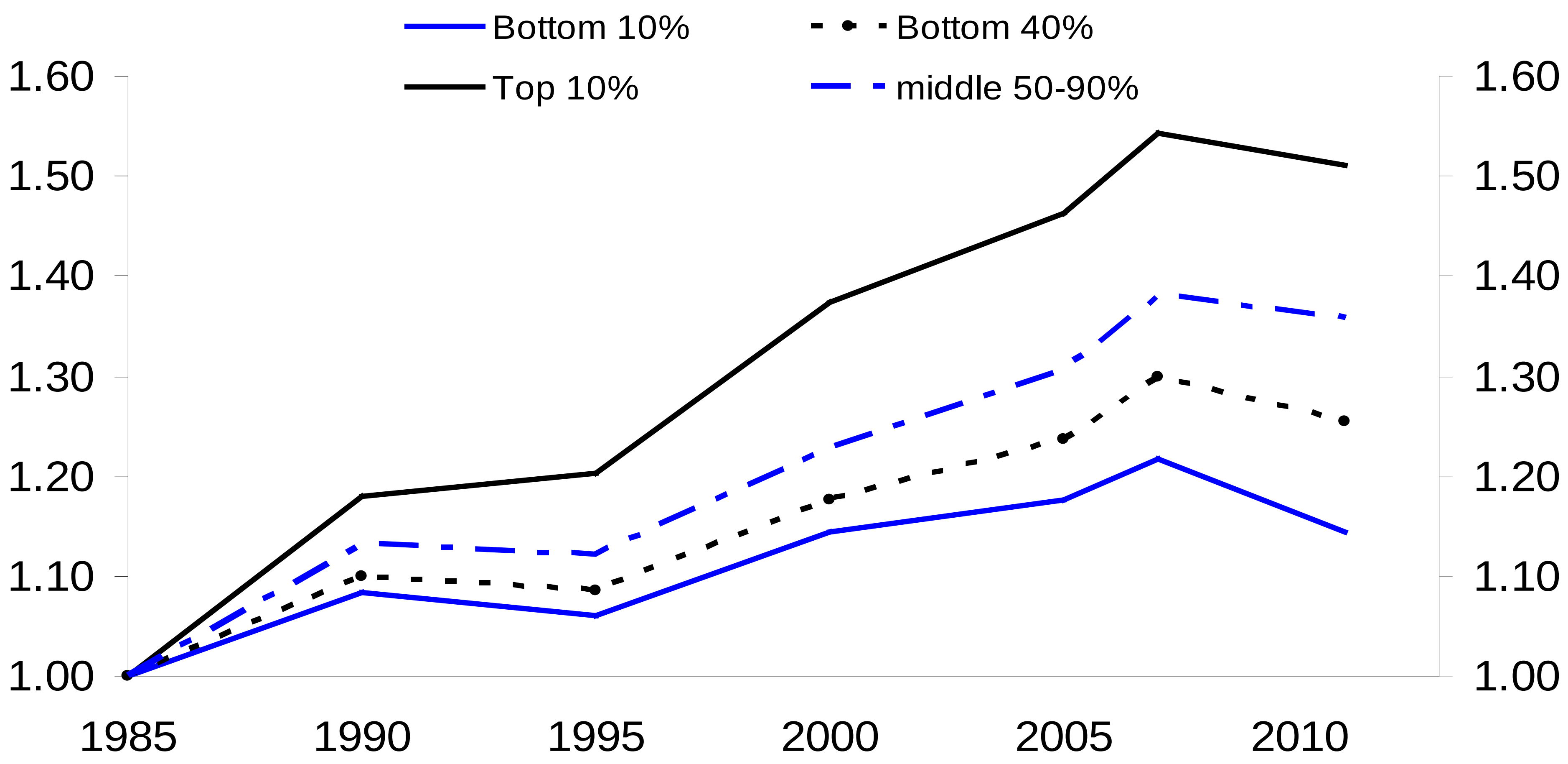


Note: Note: Income refers to disposable household income, corrected for household size.

Source: OECD , DB Global Markets Research

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

Trends in real household incomes at the bottom, the middle and the top, OECD average, 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 Markets Research

US Income inequality today and over time

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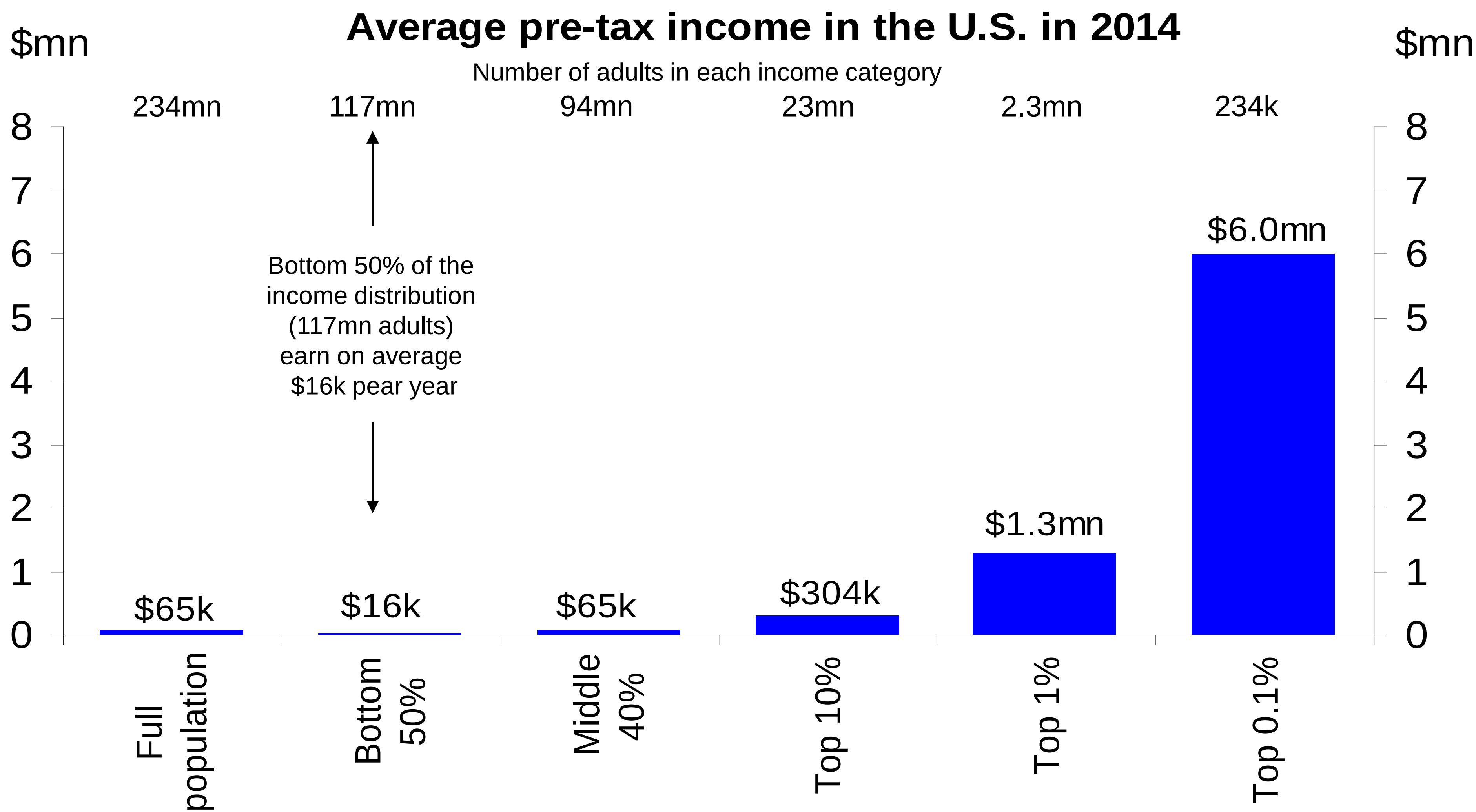
The 2.3 million people in the top 1% of the income distribution earn on average $1.3mn per year



Source: Pikketty, Saez, and Zucman (2016, Table 1), DB Global Markets Research

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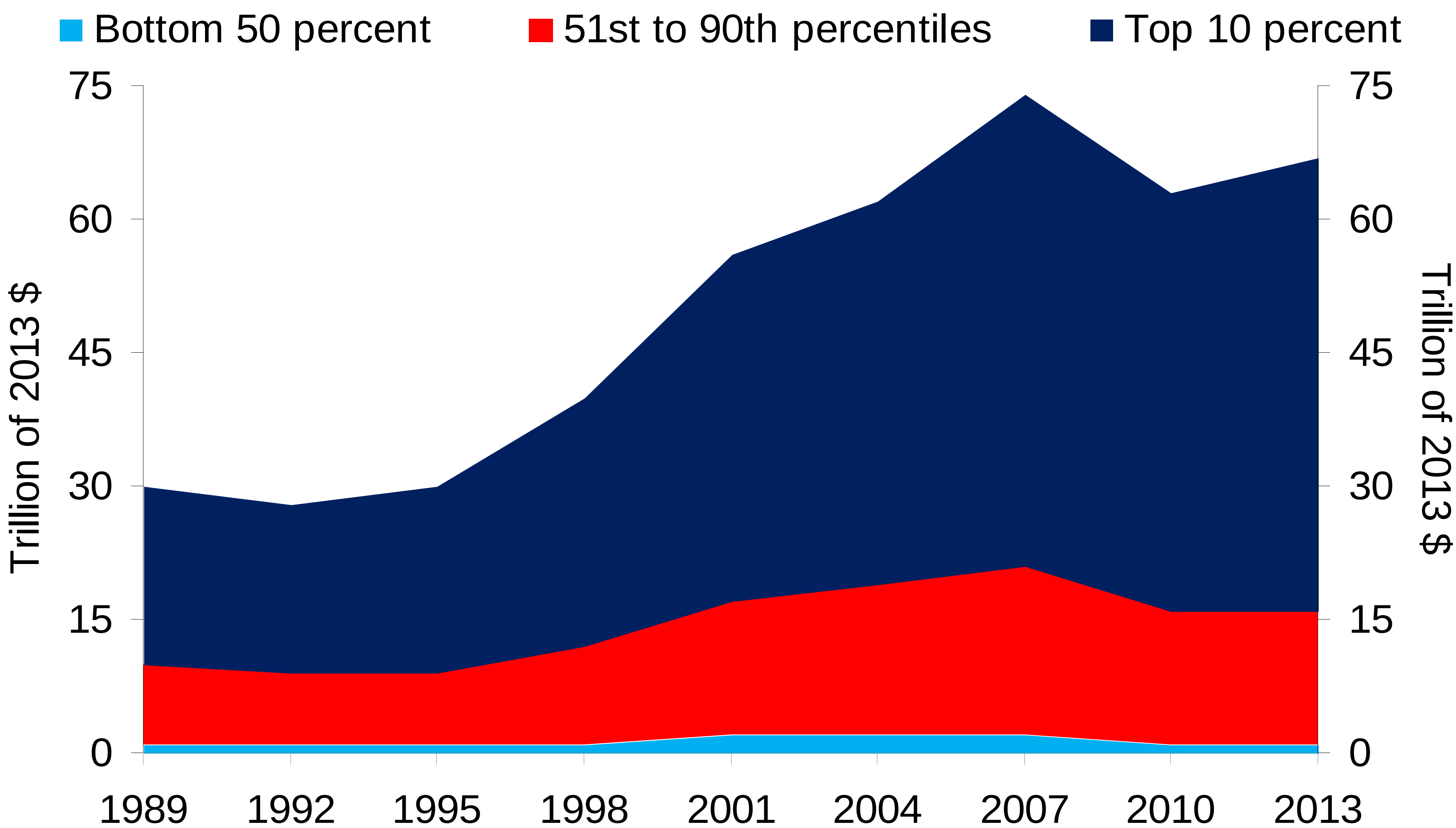
US: The top 10 percent of families own $51trn in wealth, or about 75% of total household wealth

Holdings of family wealth, by wealth group



Source: Congressional Budget Office, using data from the Survey of Consumer Finances, supplemented with data from Forbes magazine's list of the nation's 400 wealthiest people, DB Global Markets Research

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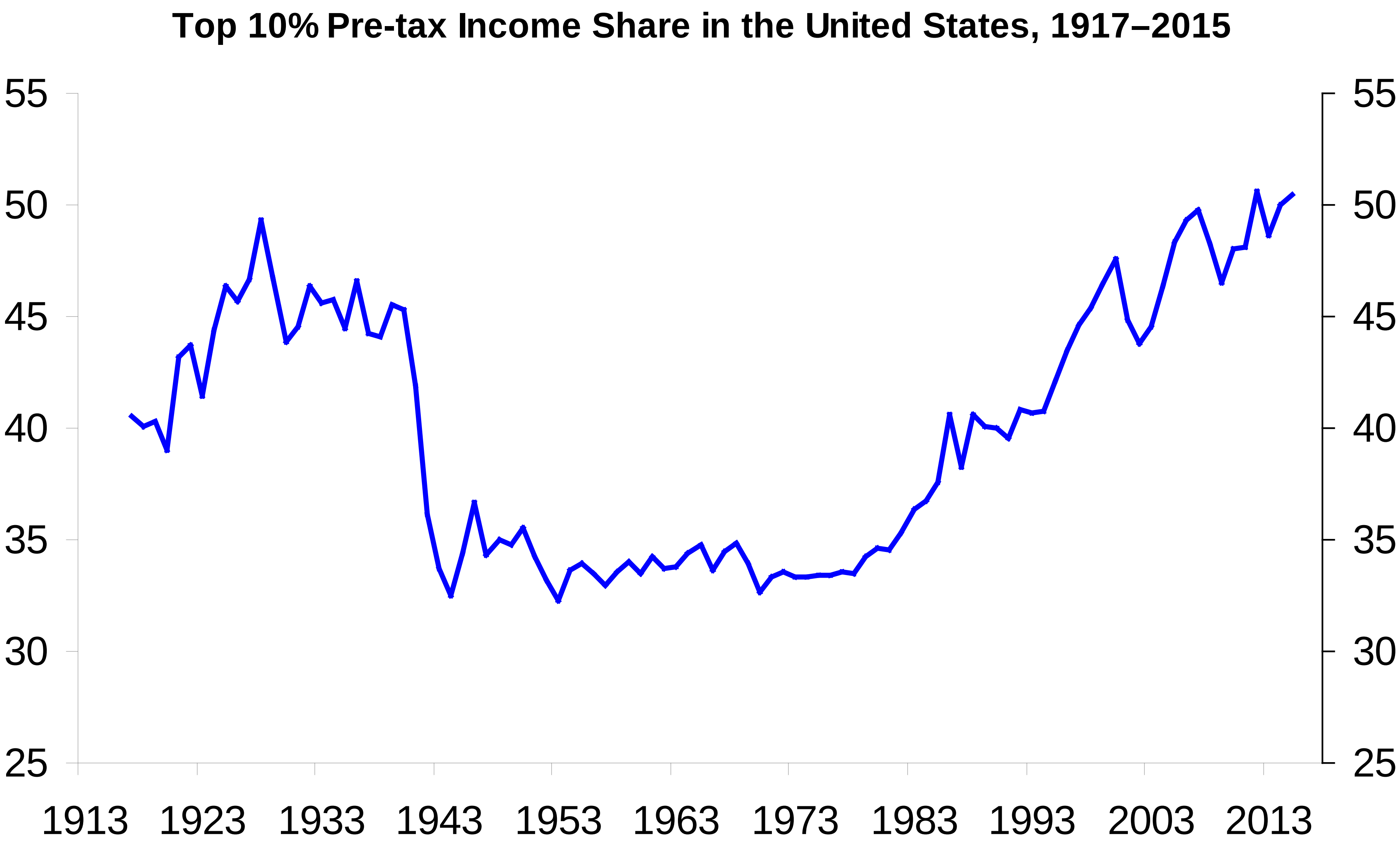
Income share up significantly for highest incomes



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

Source: Alvaredo et al. (2016)., DB Global Markets Research

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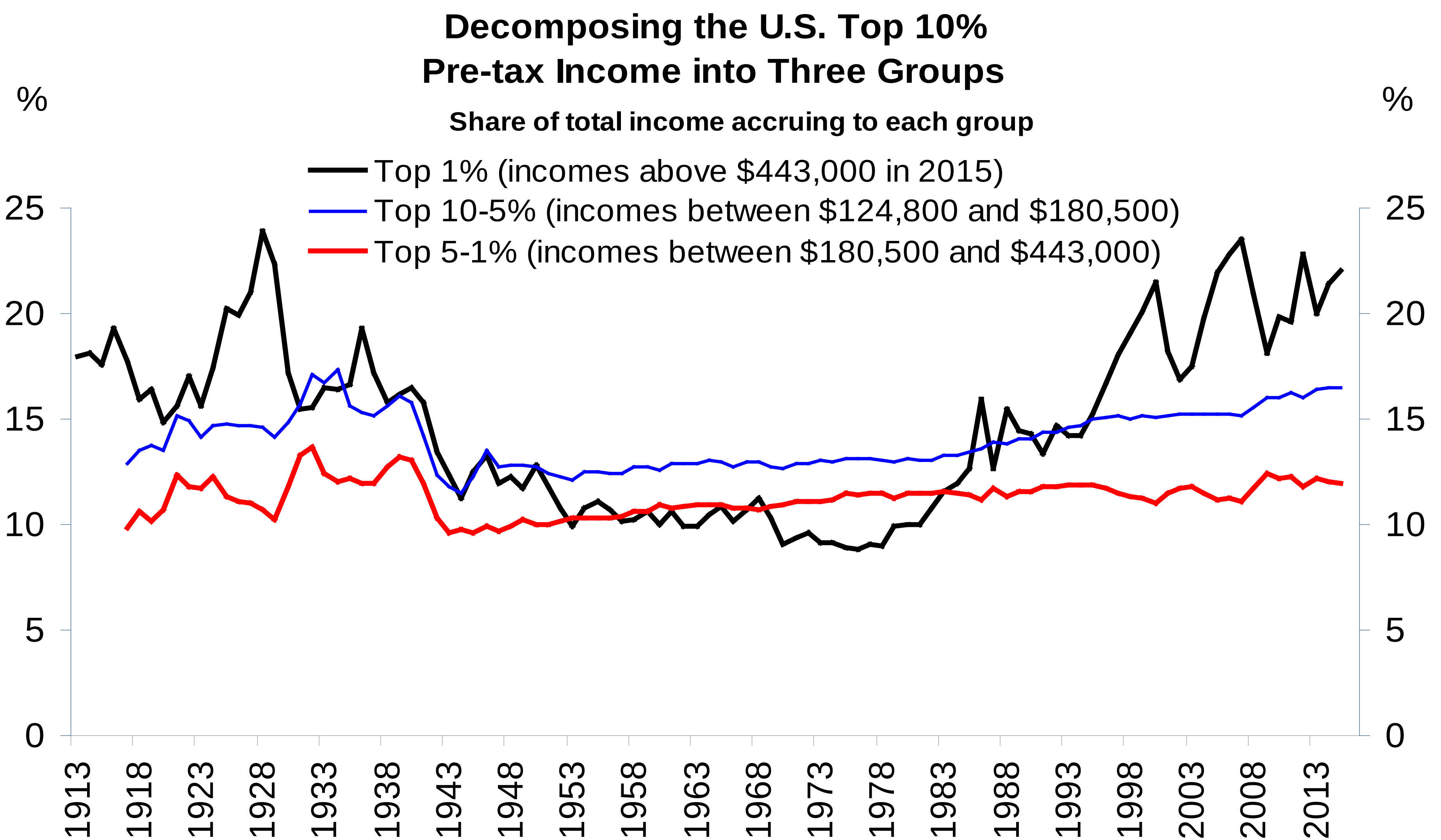
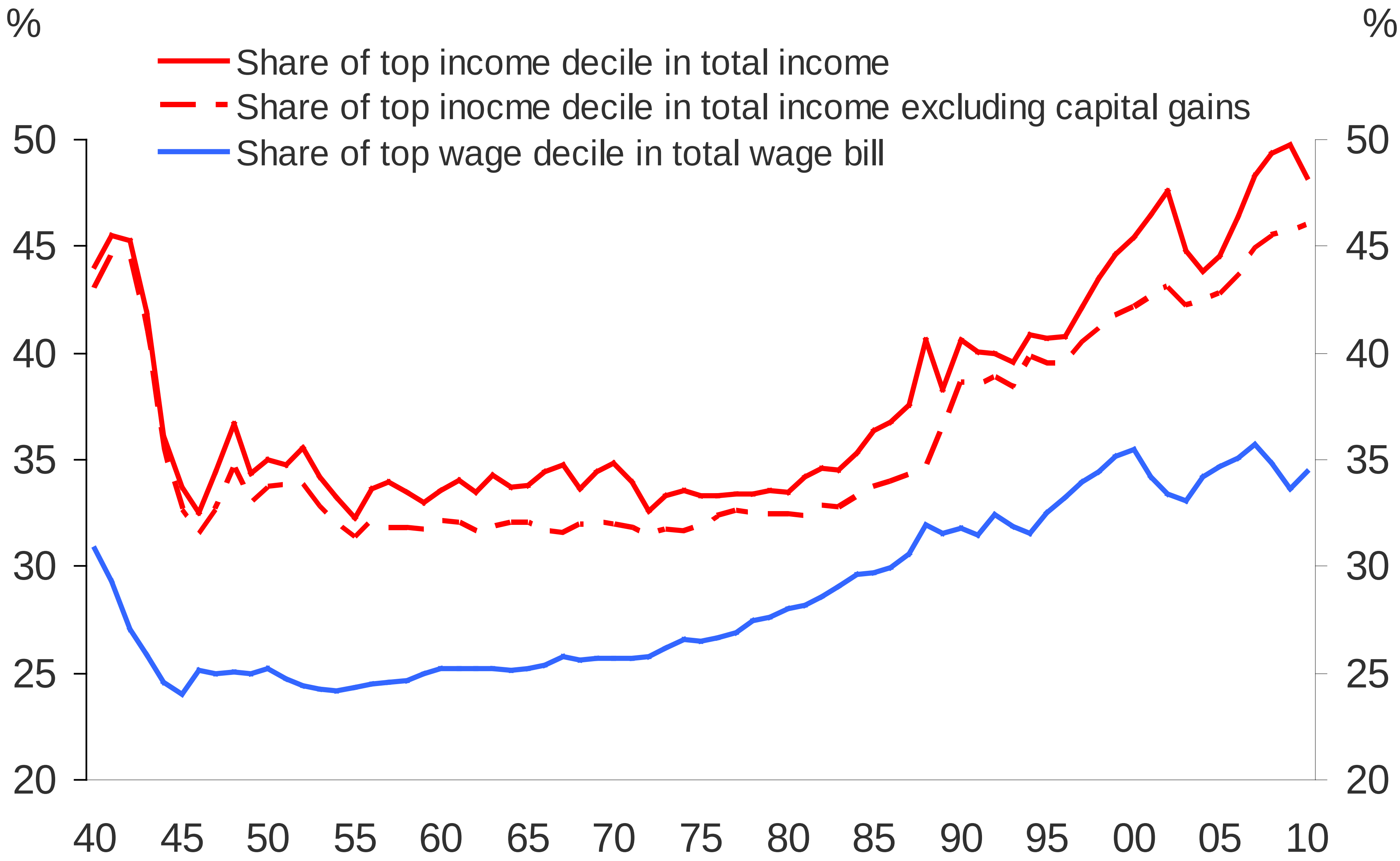
Top 1% earn 22% of total income, up from 8% in the 1970s



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

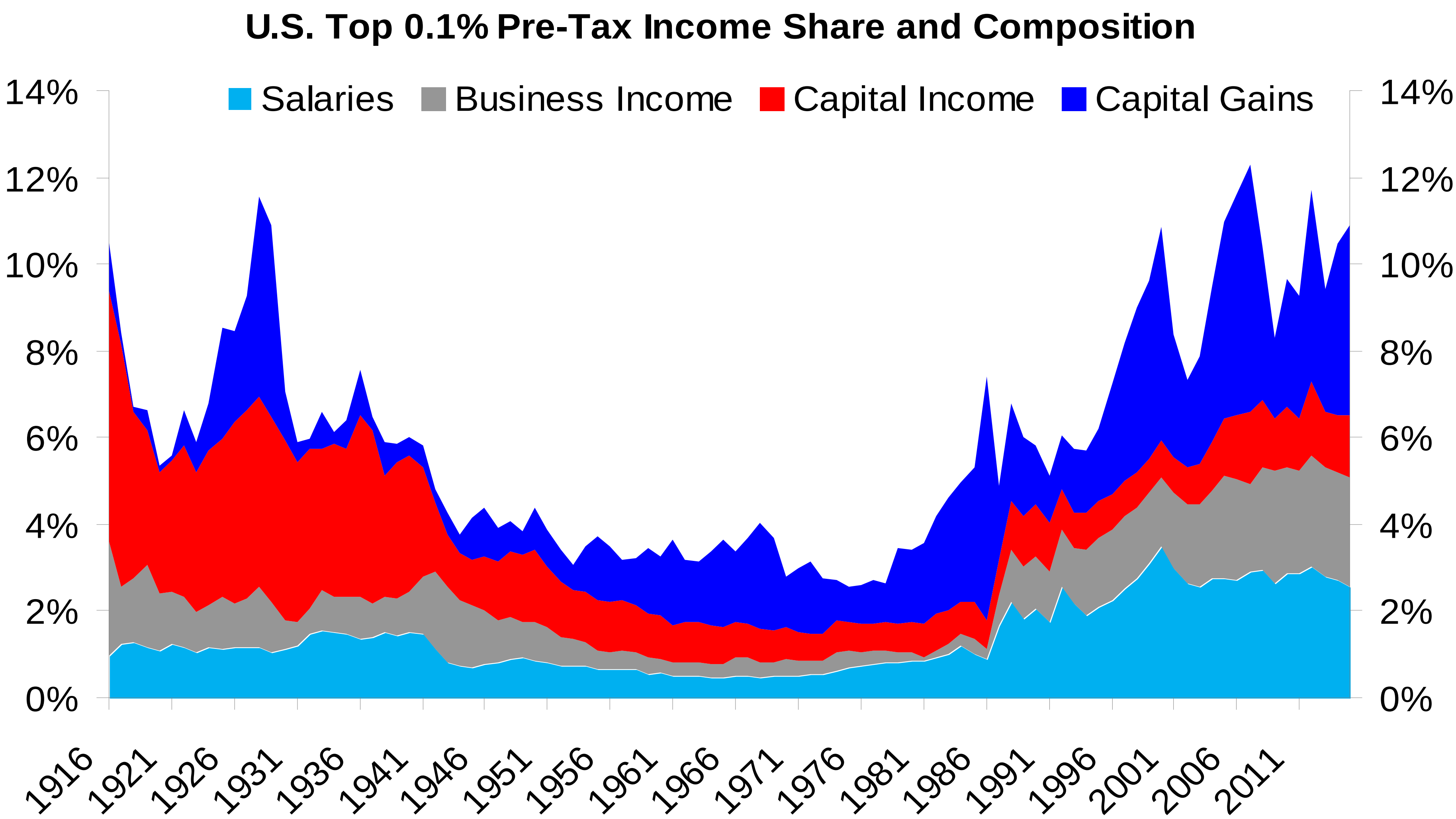
Source: Atkinson, Piketty and Saez. (2015)., DB Global Markets Research

Wage inequality a key driver of income inequality



Source: Piketty (2014)., DB Global Markets Research

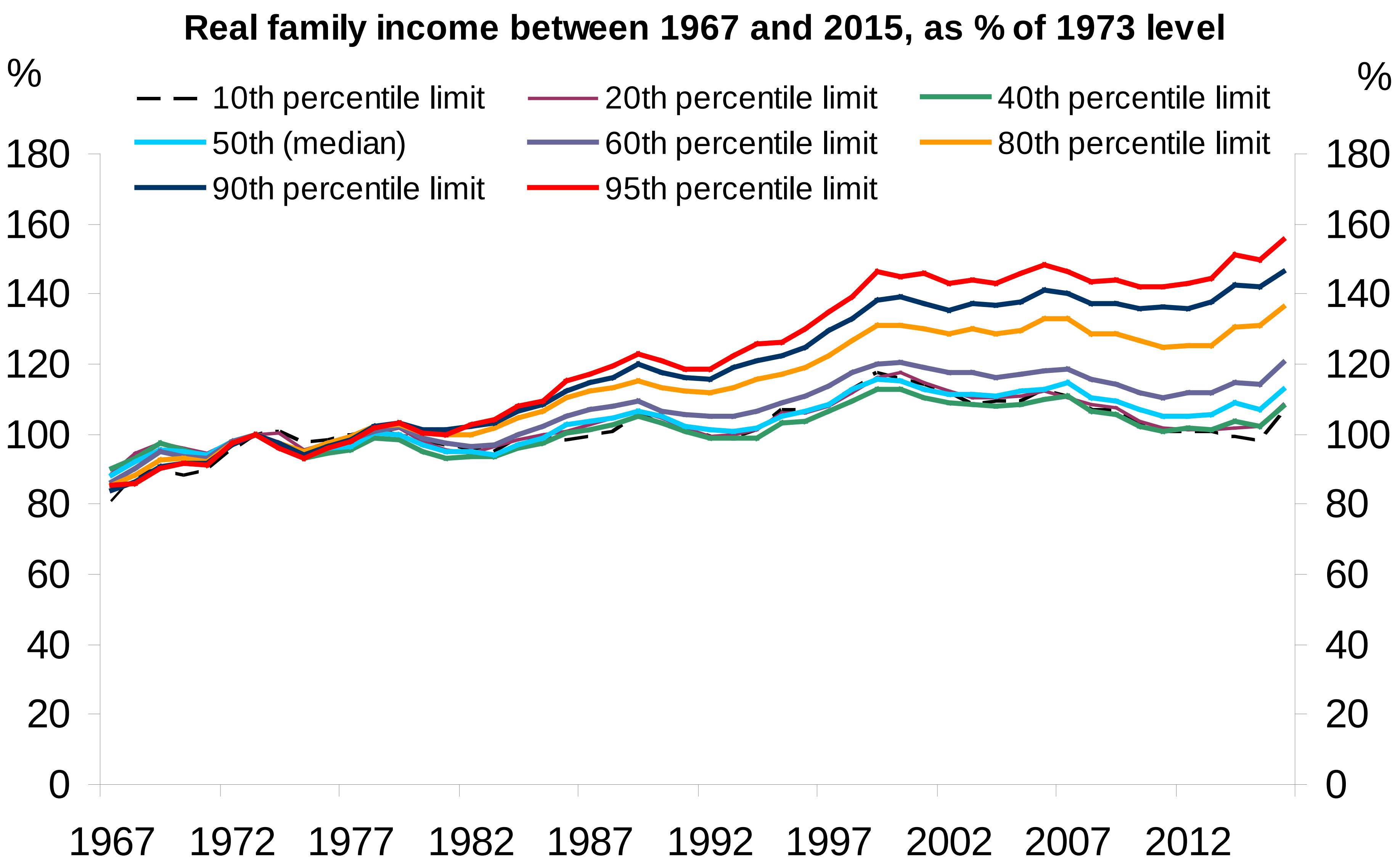
Business income and capital gains make up bigger share of income for the Top 0.1%



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

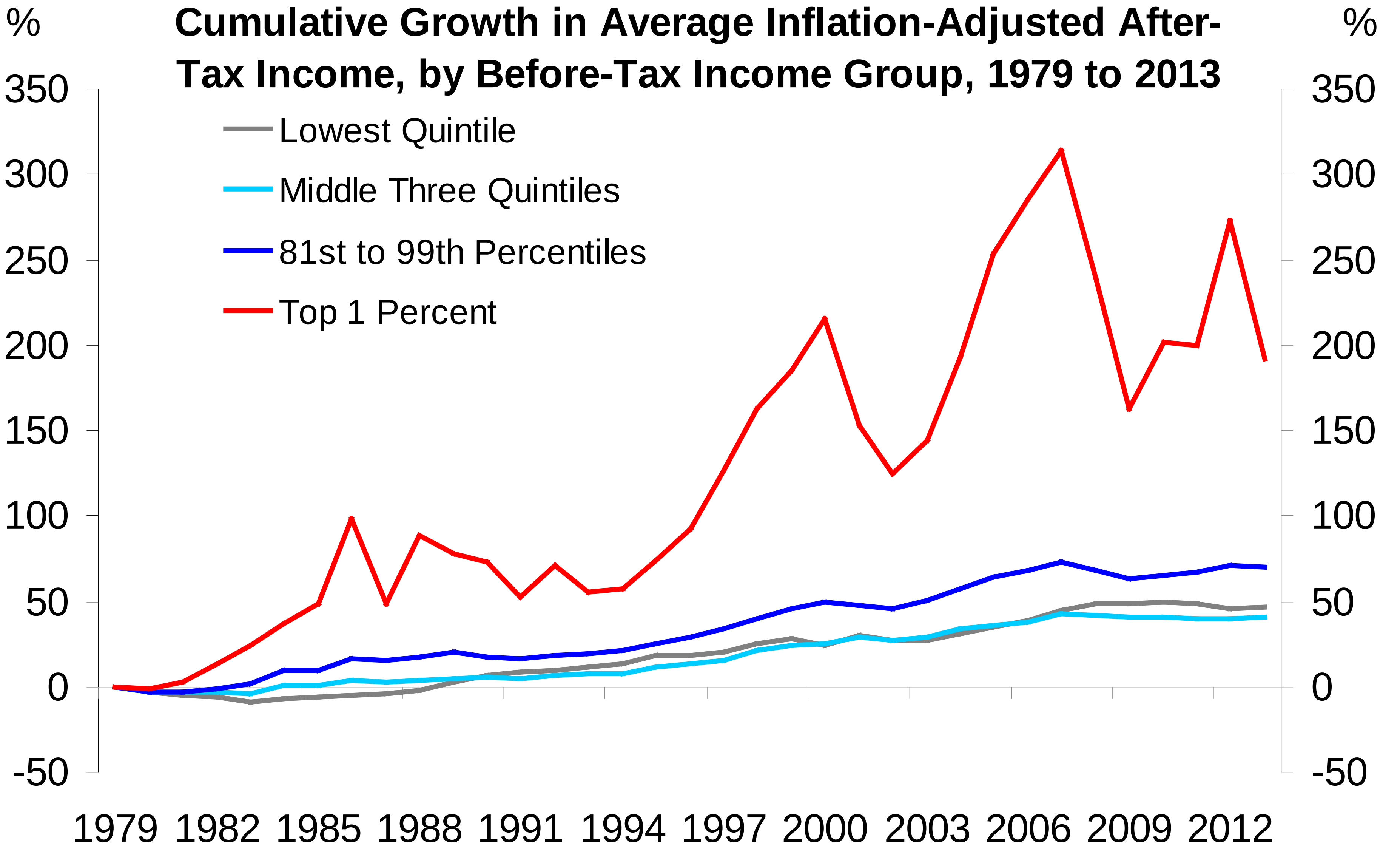
Source: Atkinson, Piketty and Saez. (2015)., DB Global Markets Research

Incomes have stagnated for lower income groups, increased for higher income groups



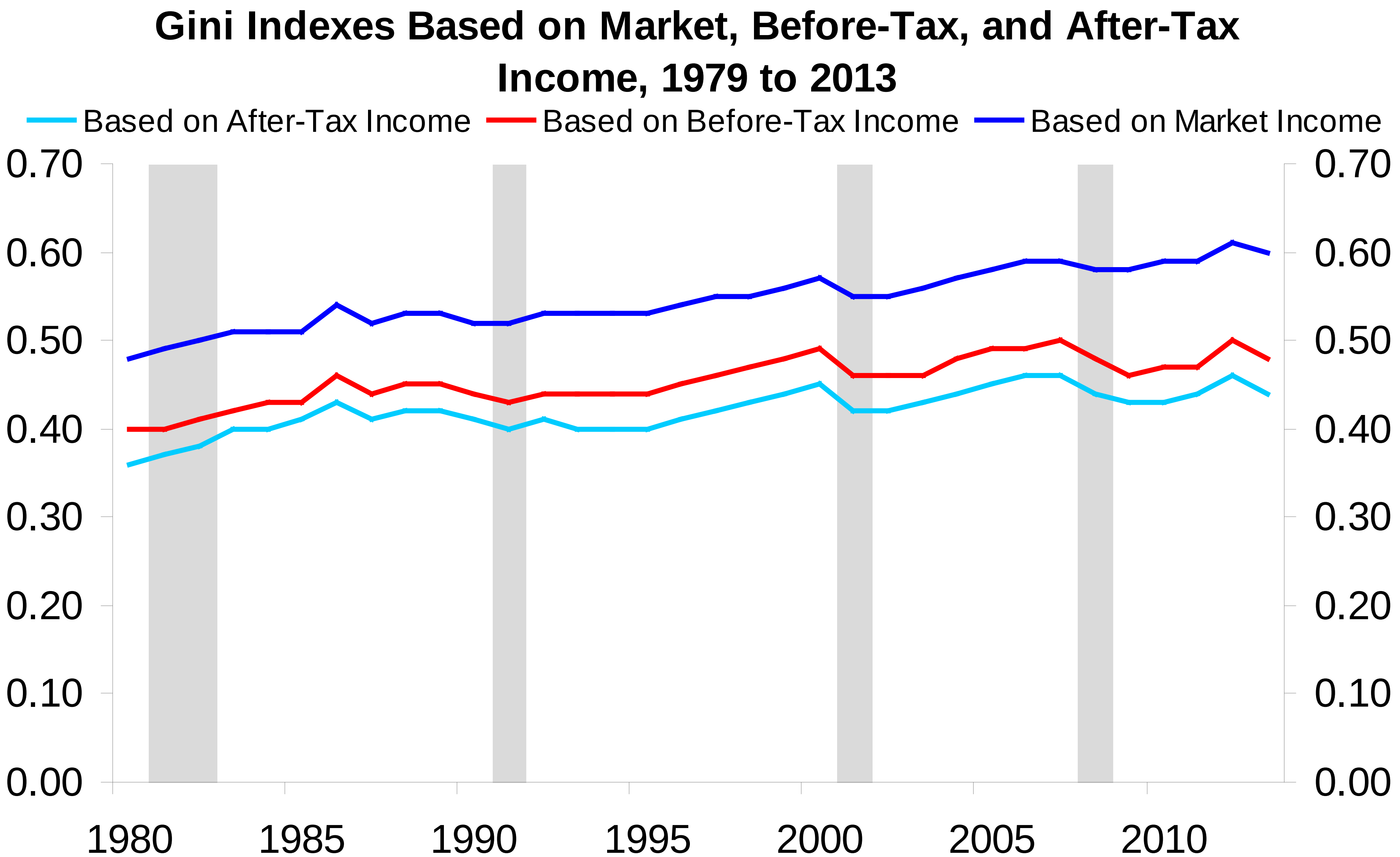
Source: US Census, DB Global Markets Research

Higher income growth at the top of the income distribution



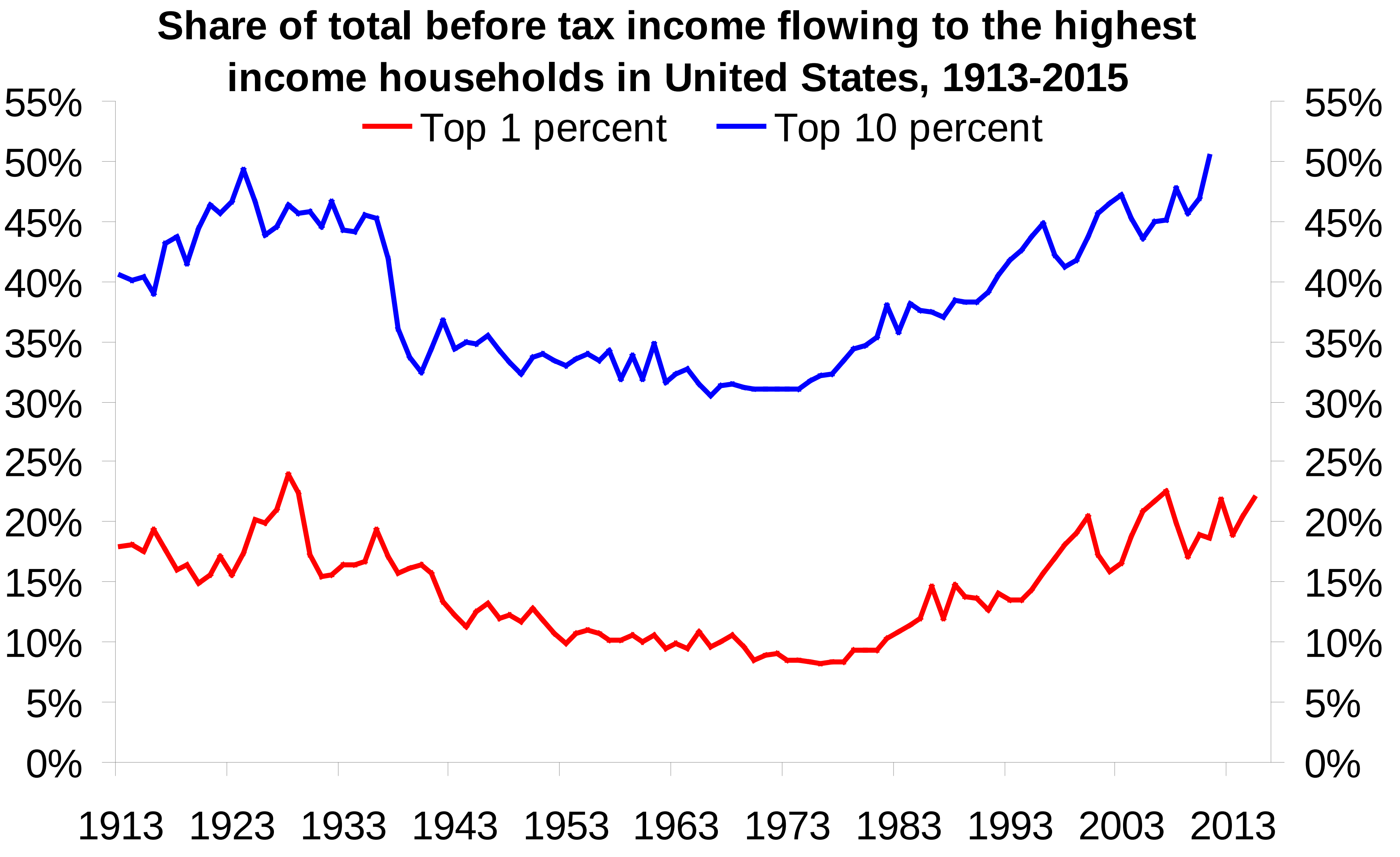
Source: CBO, DB Global Markets Research

Income inequality up no matter how you measure the Gini coefficient



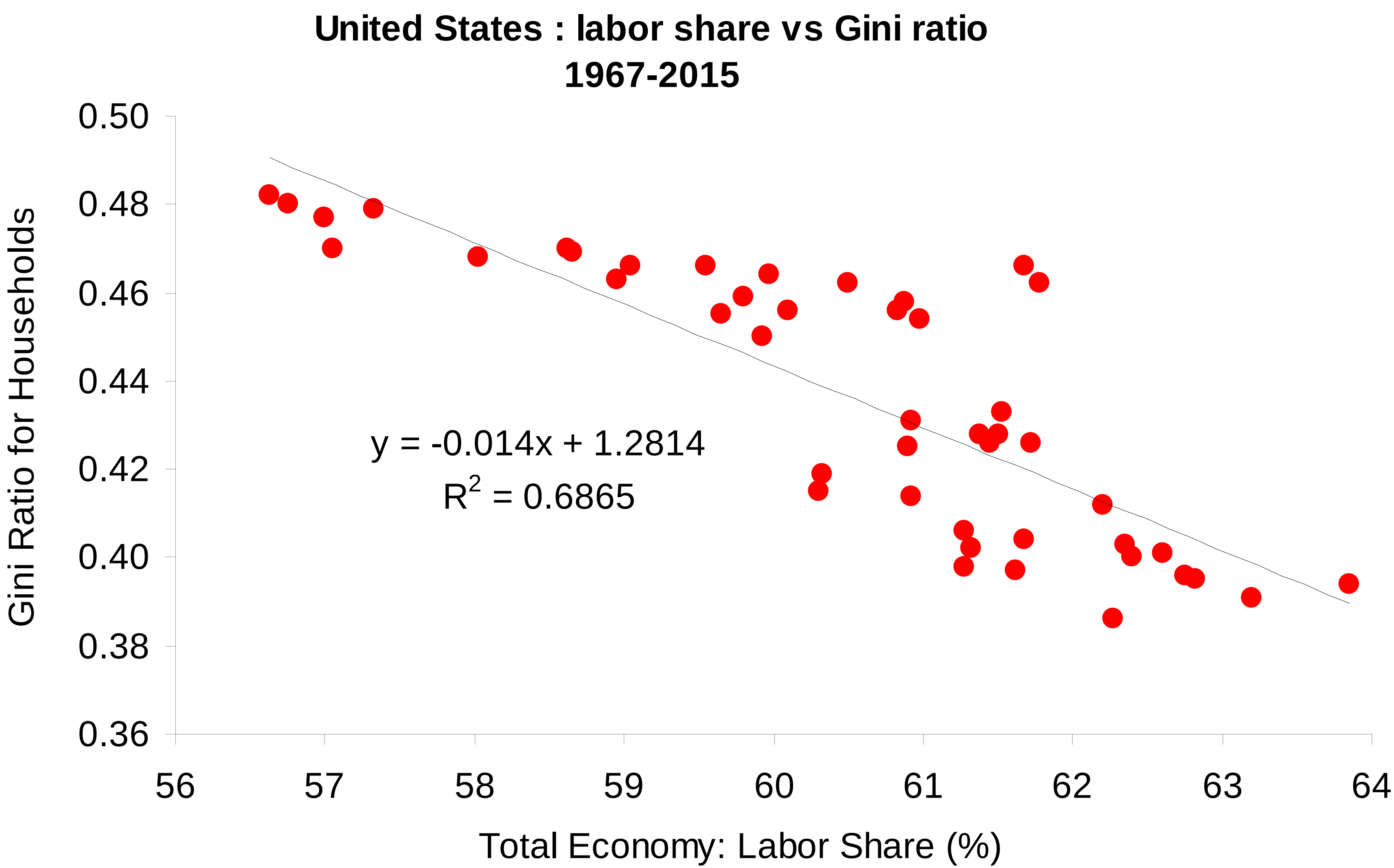
Source: CBO, DB Global Markets Research

Income concentration at the top has increased since the 1970s



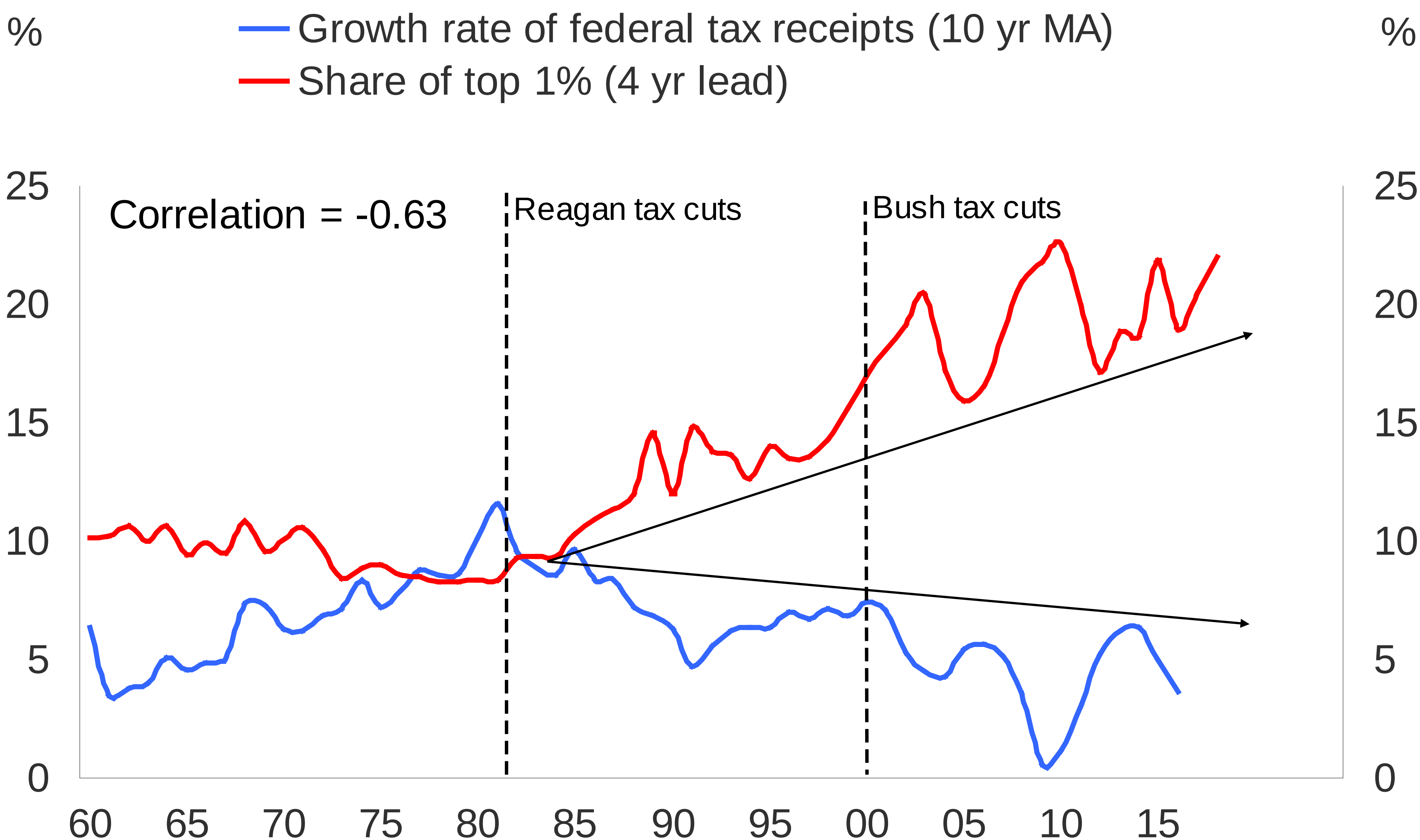
Source: World Wealth and Income database , DB Global Markets Research

Declining labor share is negatively related to higher inequality



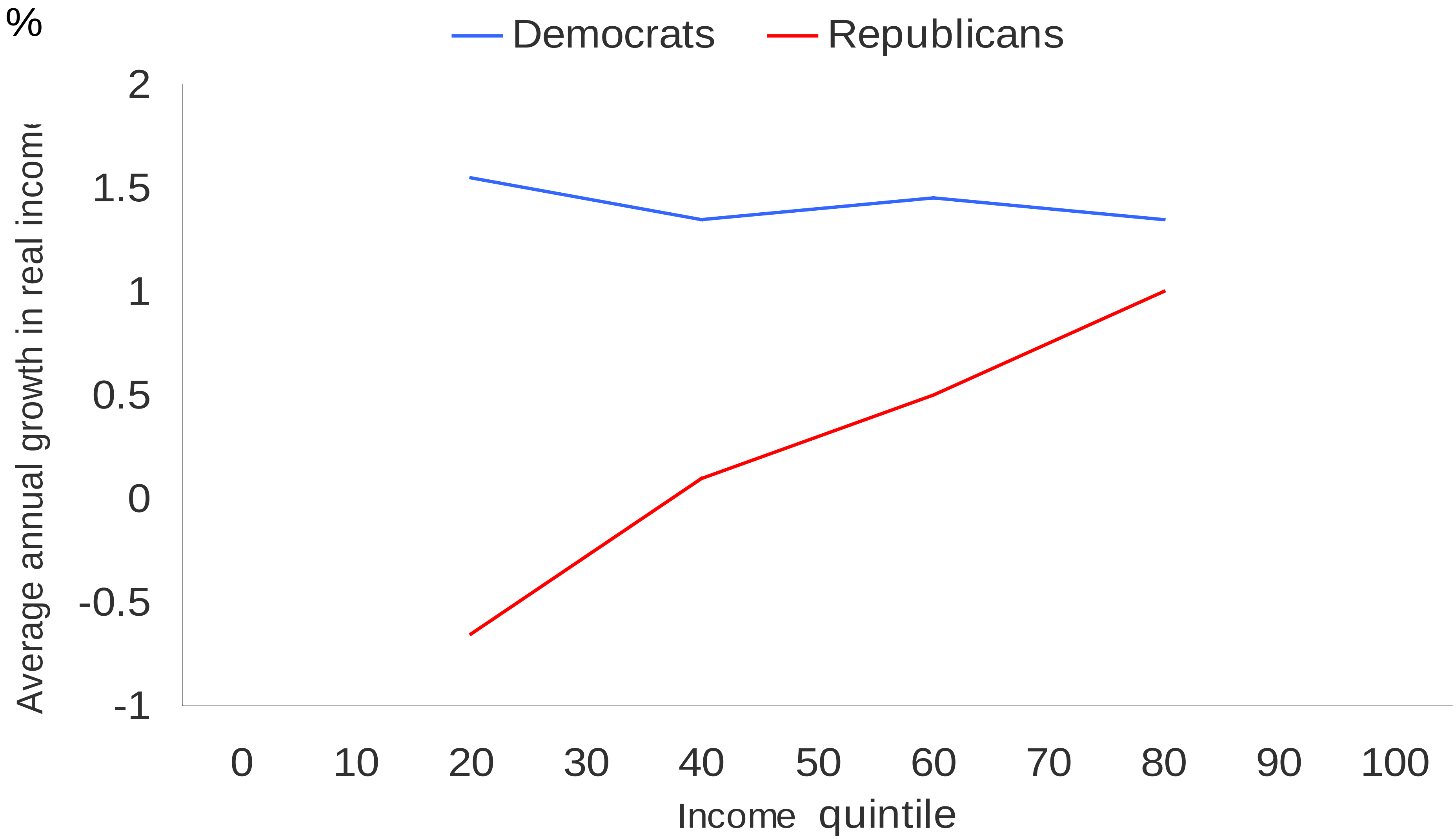
Source: Census, BLS, Haver Analytics, DB Global Markets Research

Tax cuts have increased inequality



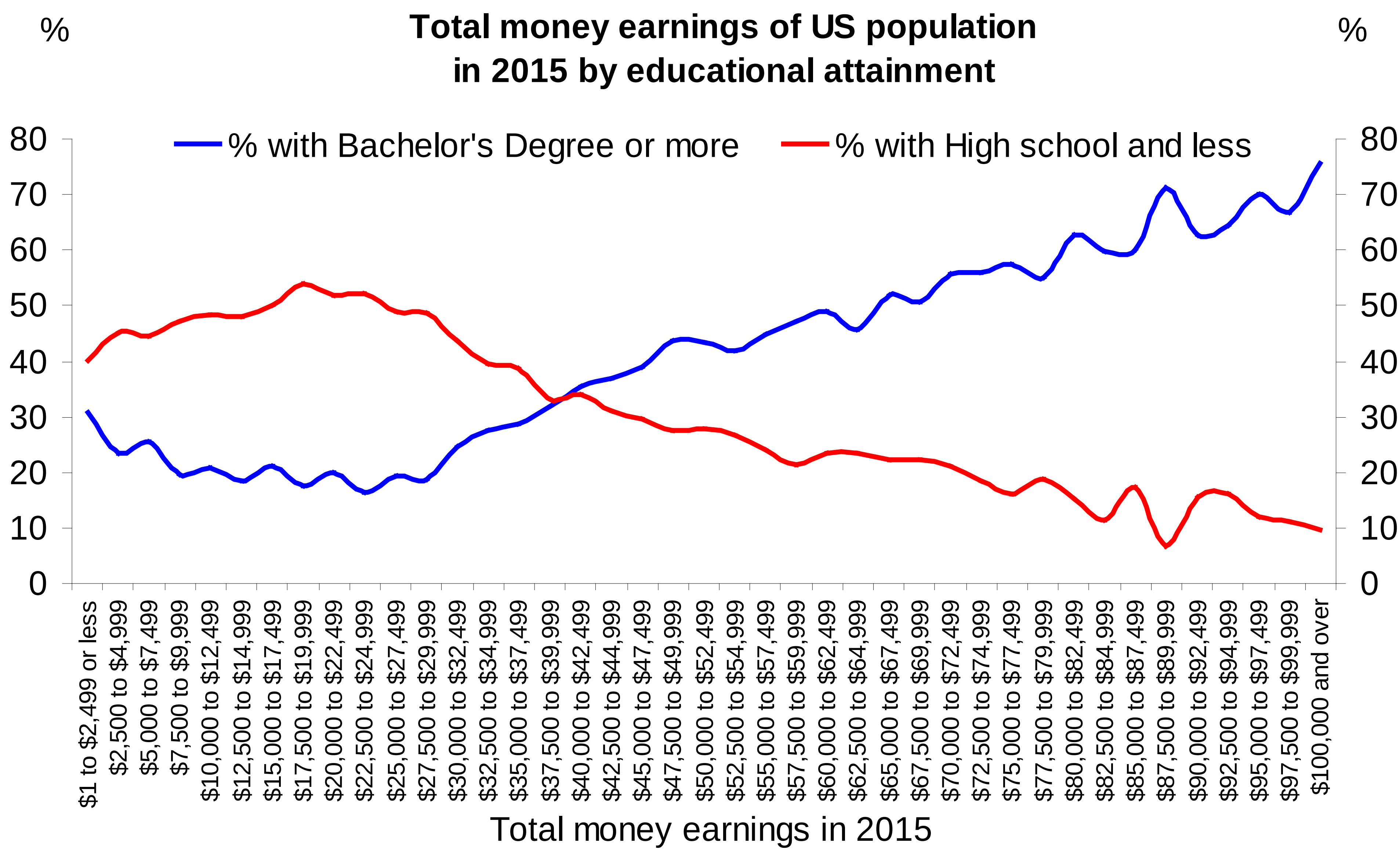
Source: BLS, FRED, Piketty 2014 database, DB Global Markets Research

Different income growth under different political parties



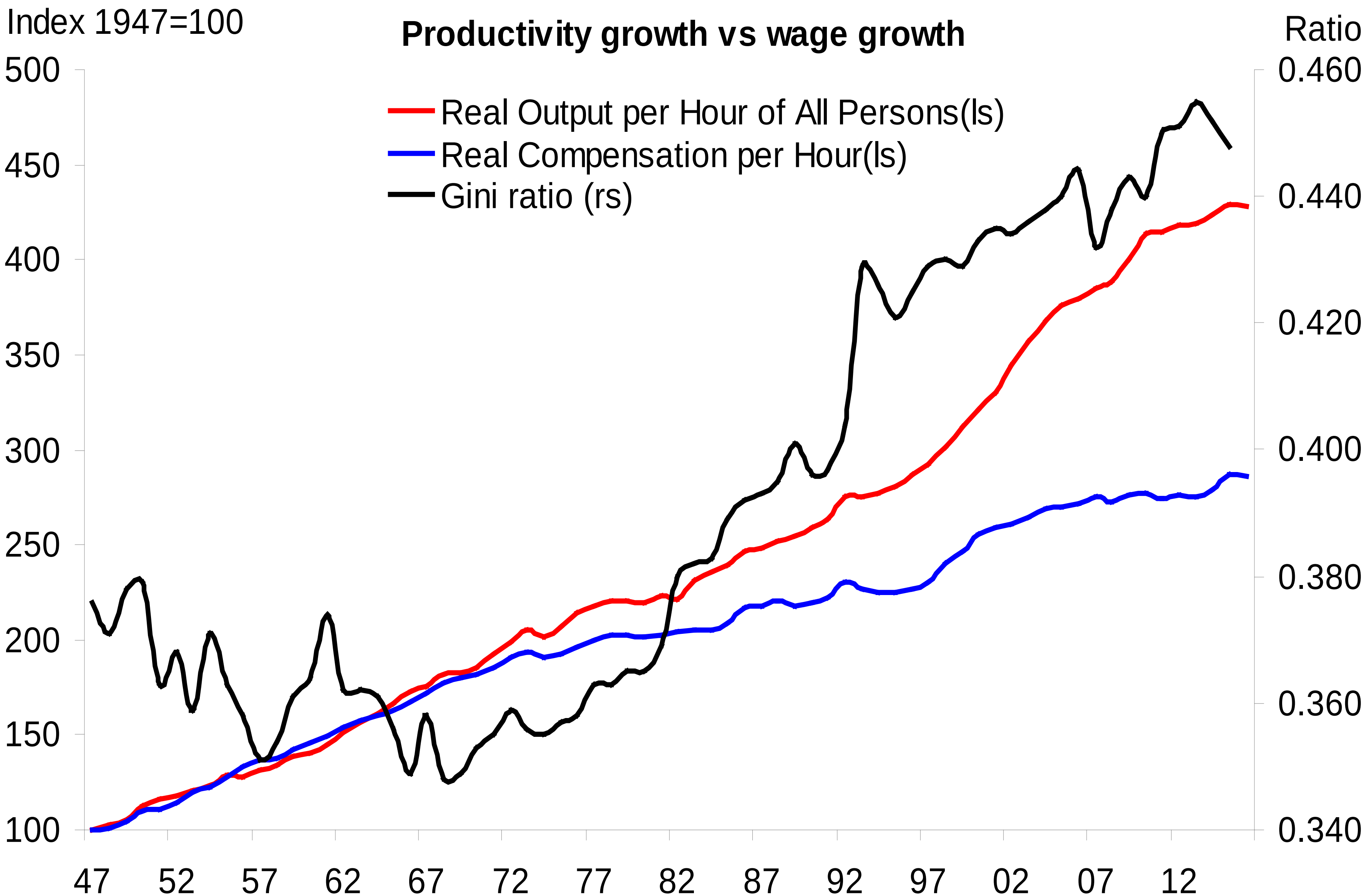
Source: *Unequal democracy* by Larry Bartels, DB Global Markets Research

The more education you have the higher are your earnings



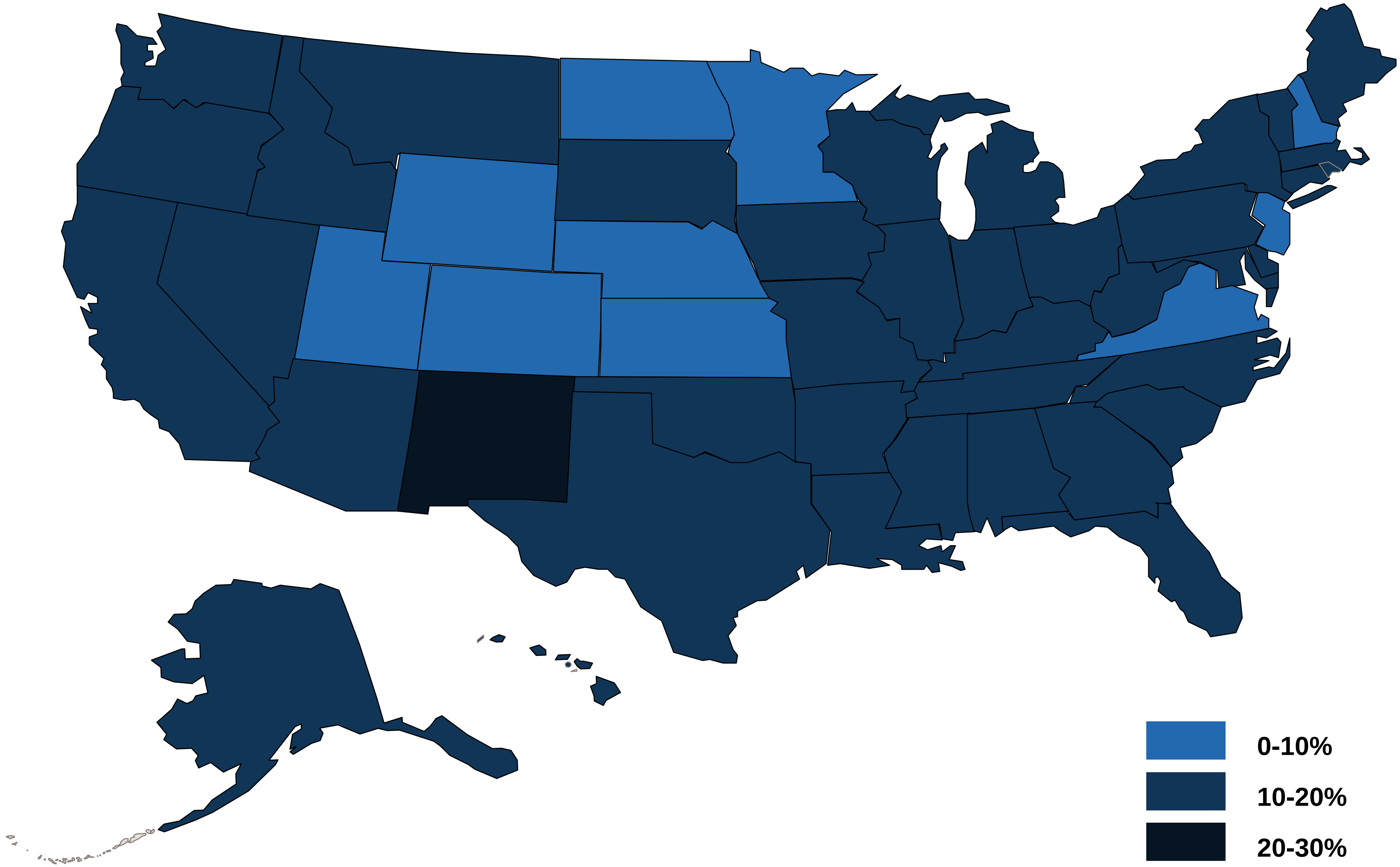
Source: Census, DB Global Markets Research

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



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

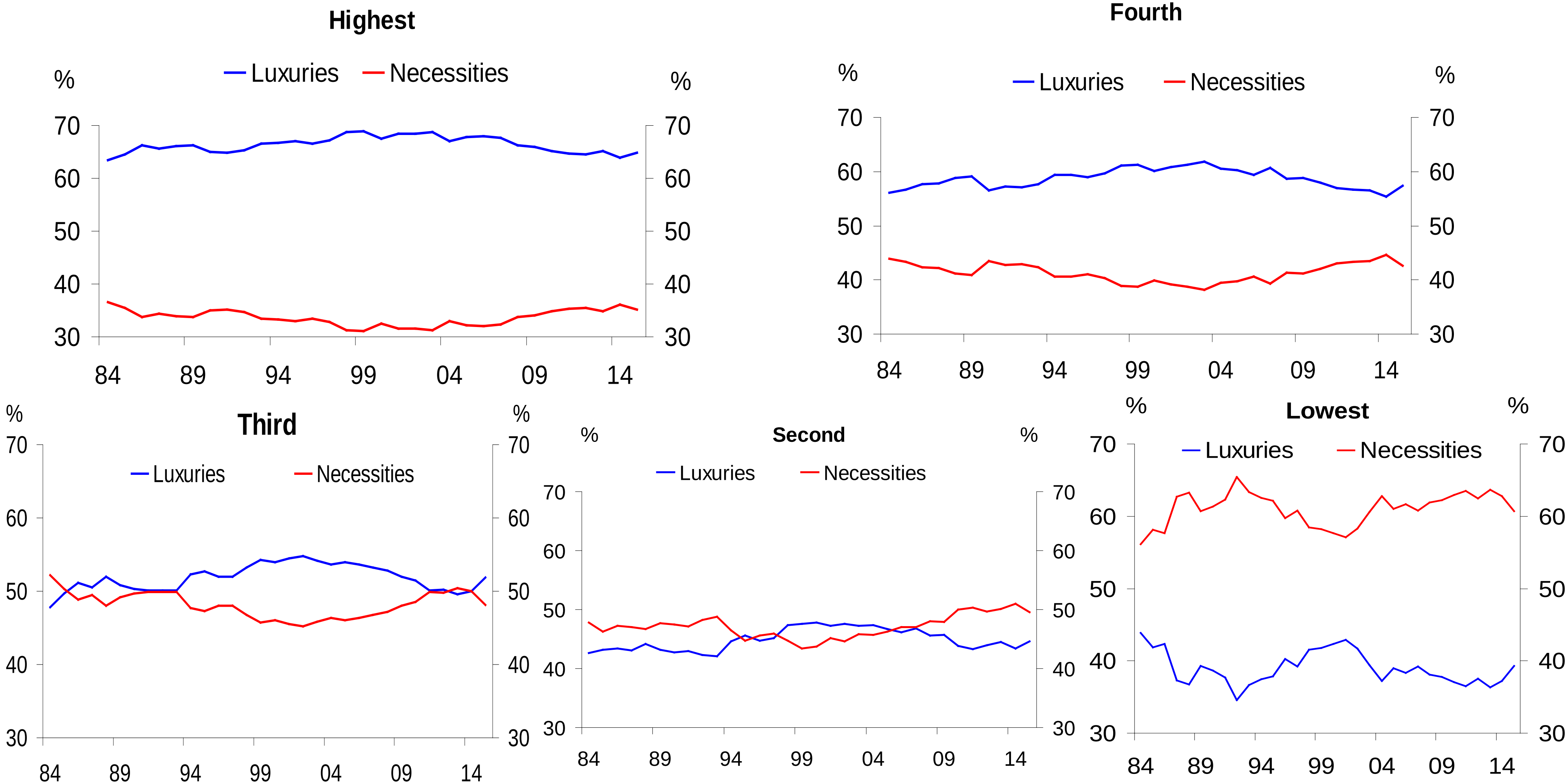
Percentage of population receiving food stamps, 2016



Source: CBPP, DB Global Markets Research

Spending on luxuries and necessities by income

Nominal consumption shares in total expenditure by income quintile



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 Markets Research

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US wealth inequality today and over time

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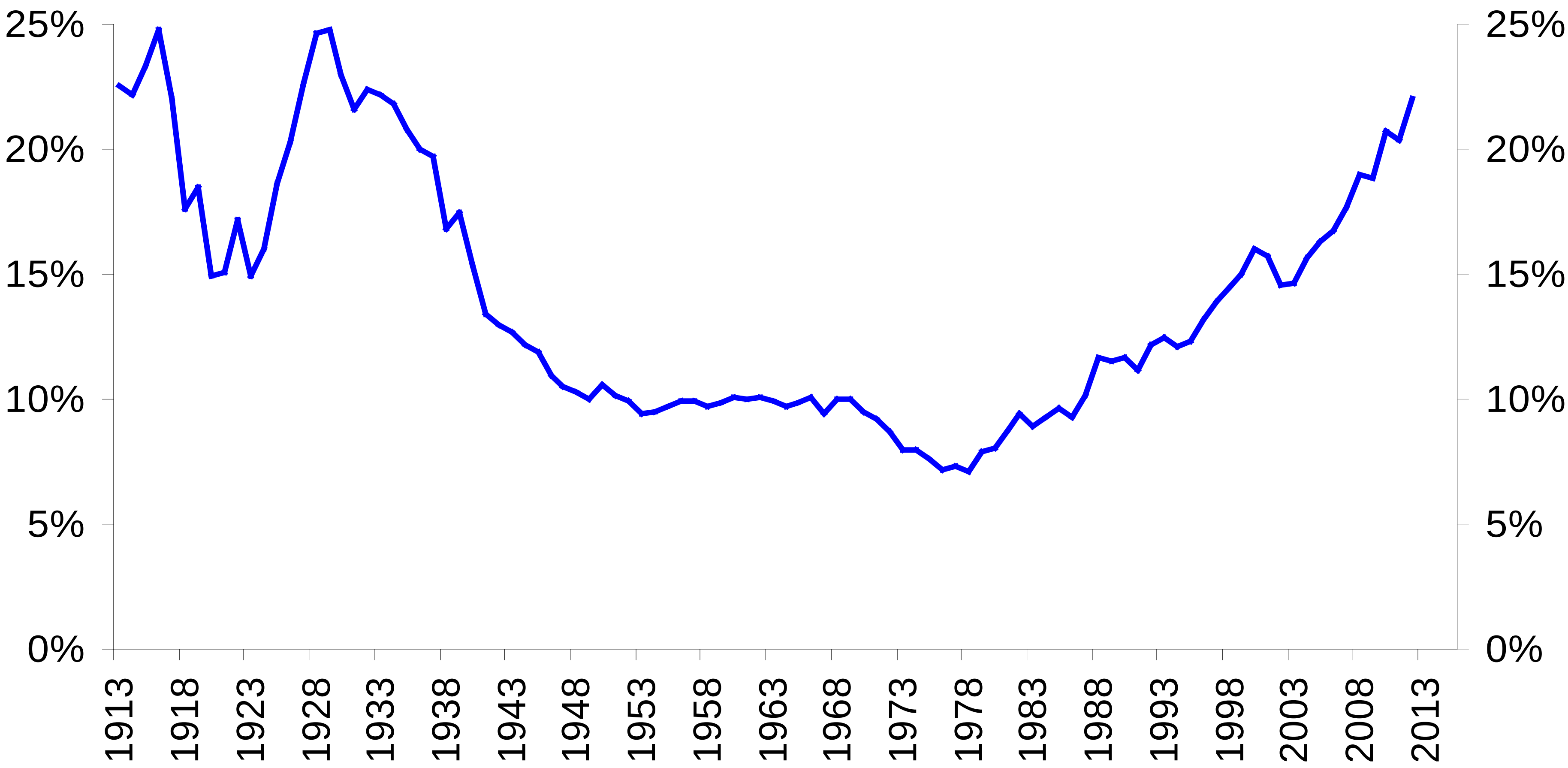
Wealth inequality has also increased

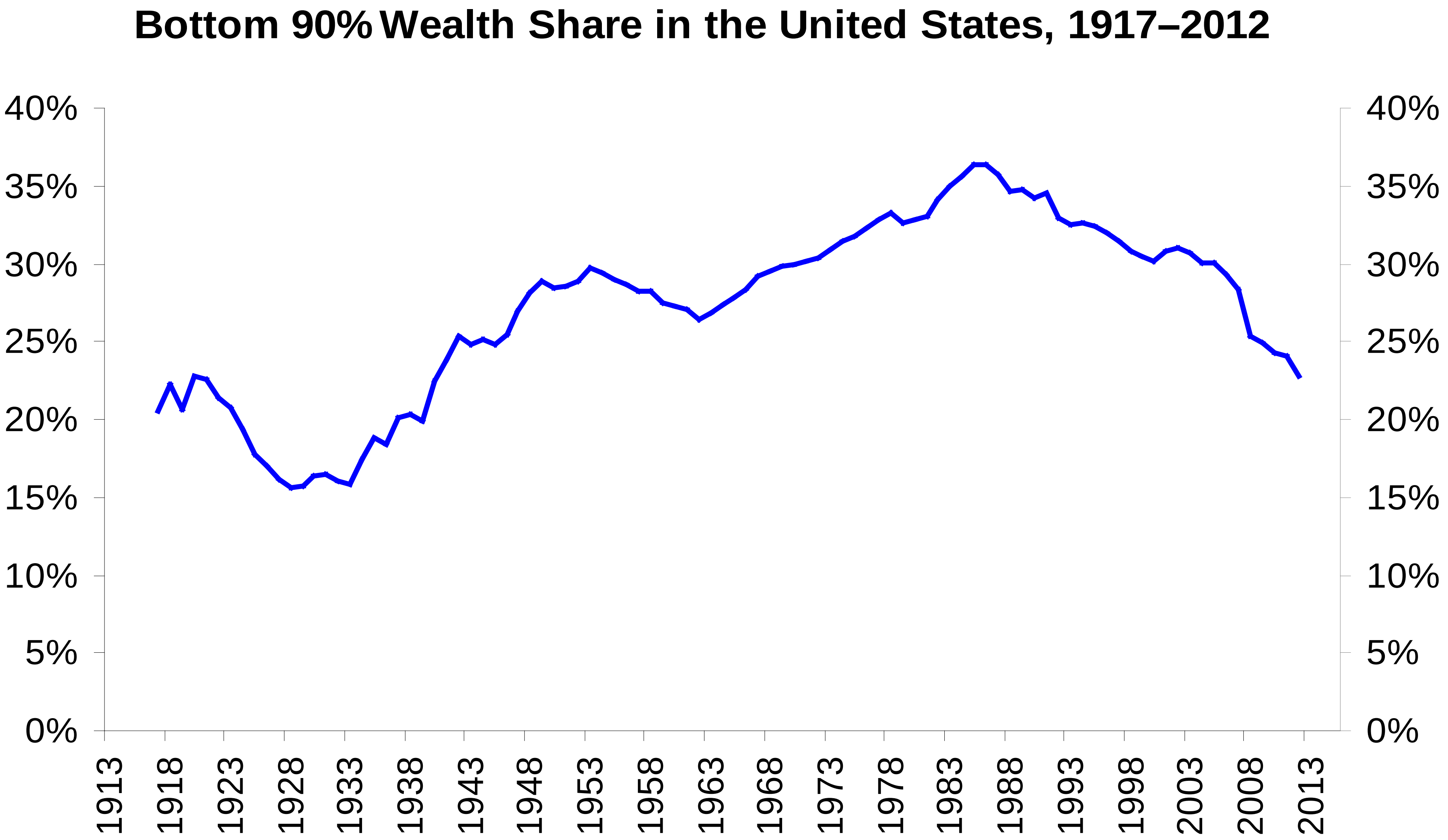
Top 0.1% (above $20 million) Wealth Share in the United States, 1913–2012



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. (2015)., DB Global Markets Research

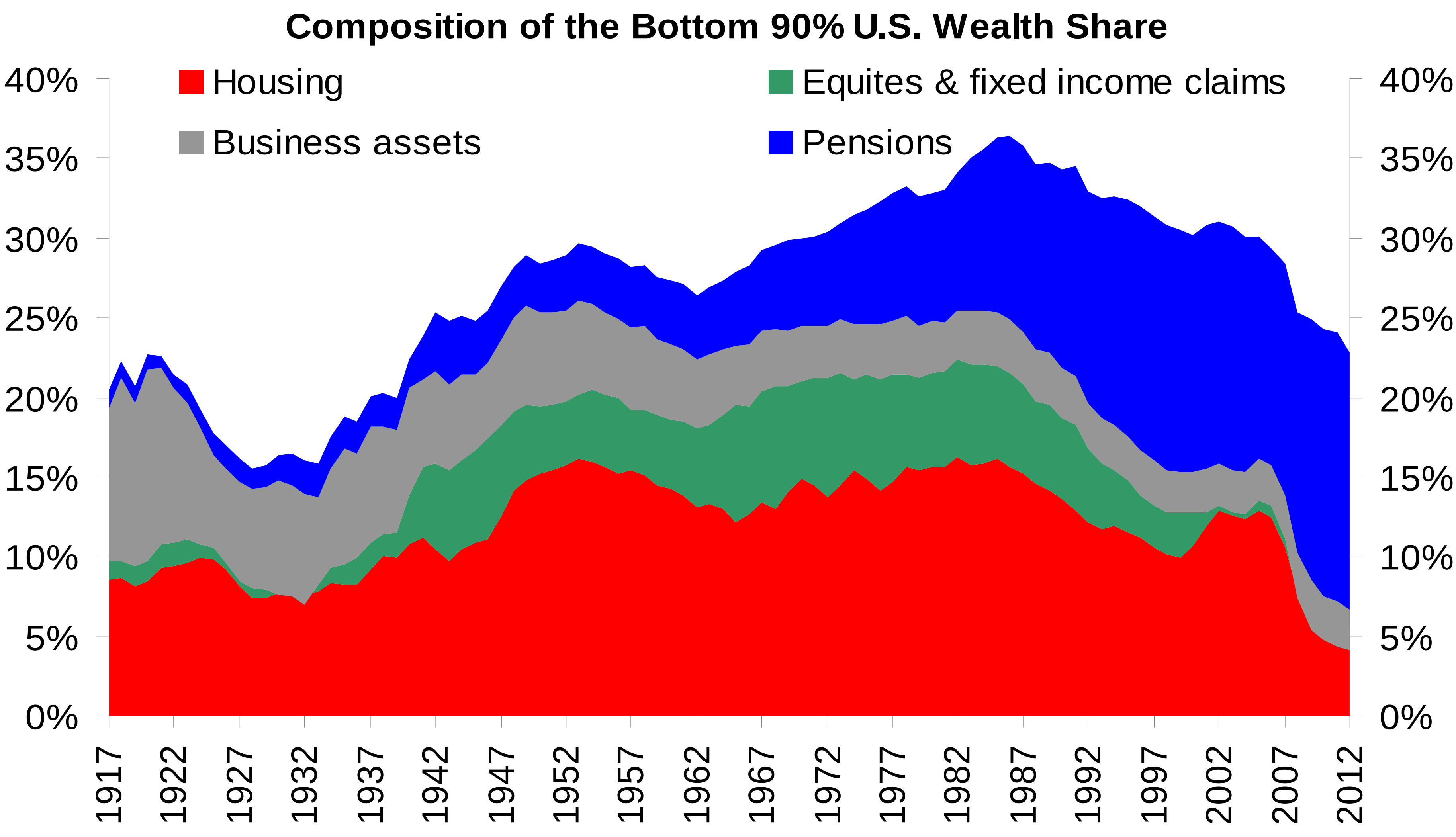
Share of wealth owned by the bottom 90% has gone down



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. (2015)., DB Global Markets Research

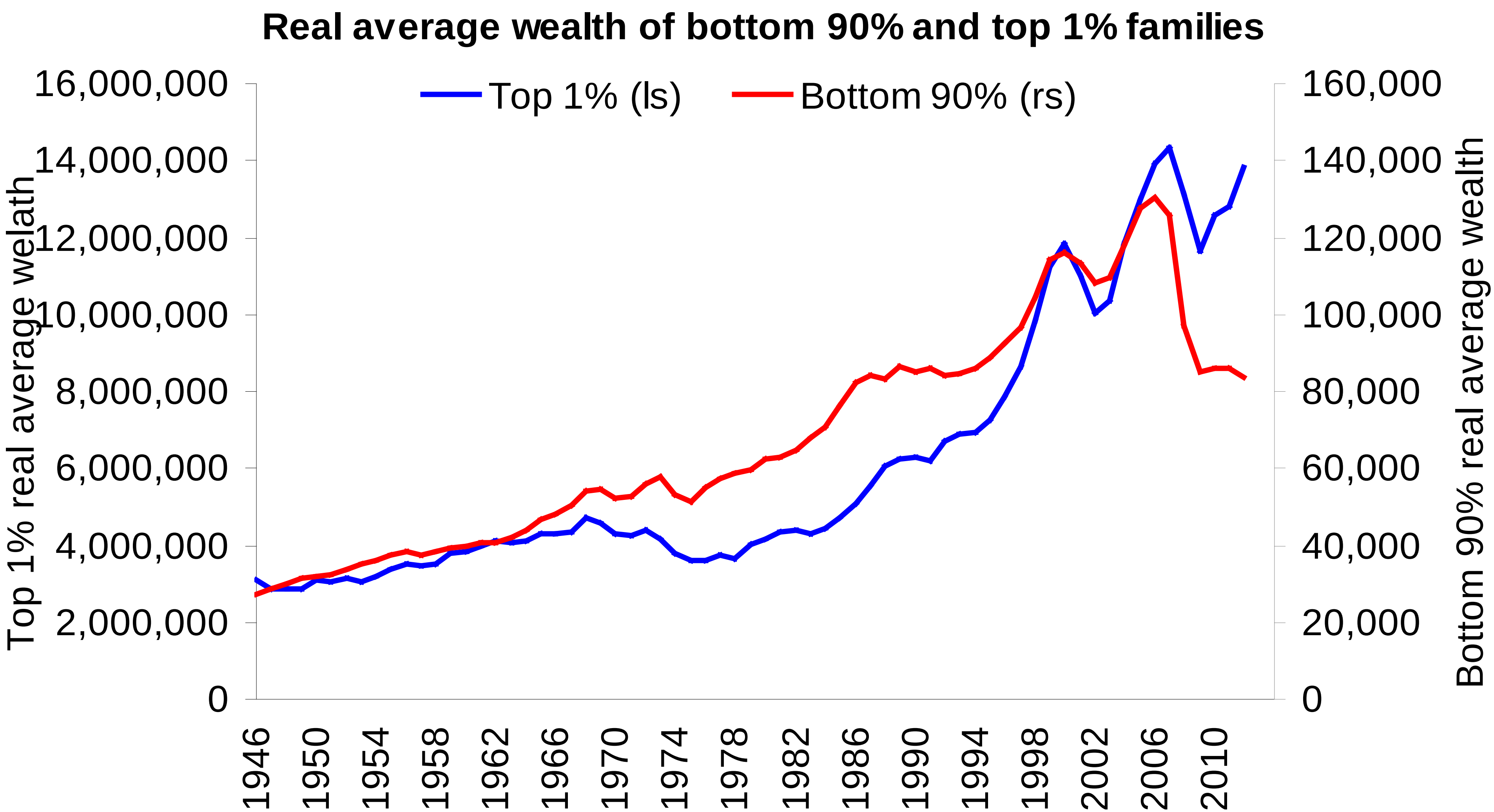
Composition of wealth for the bottom 90%



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. (2015)., DB Global Markets Research

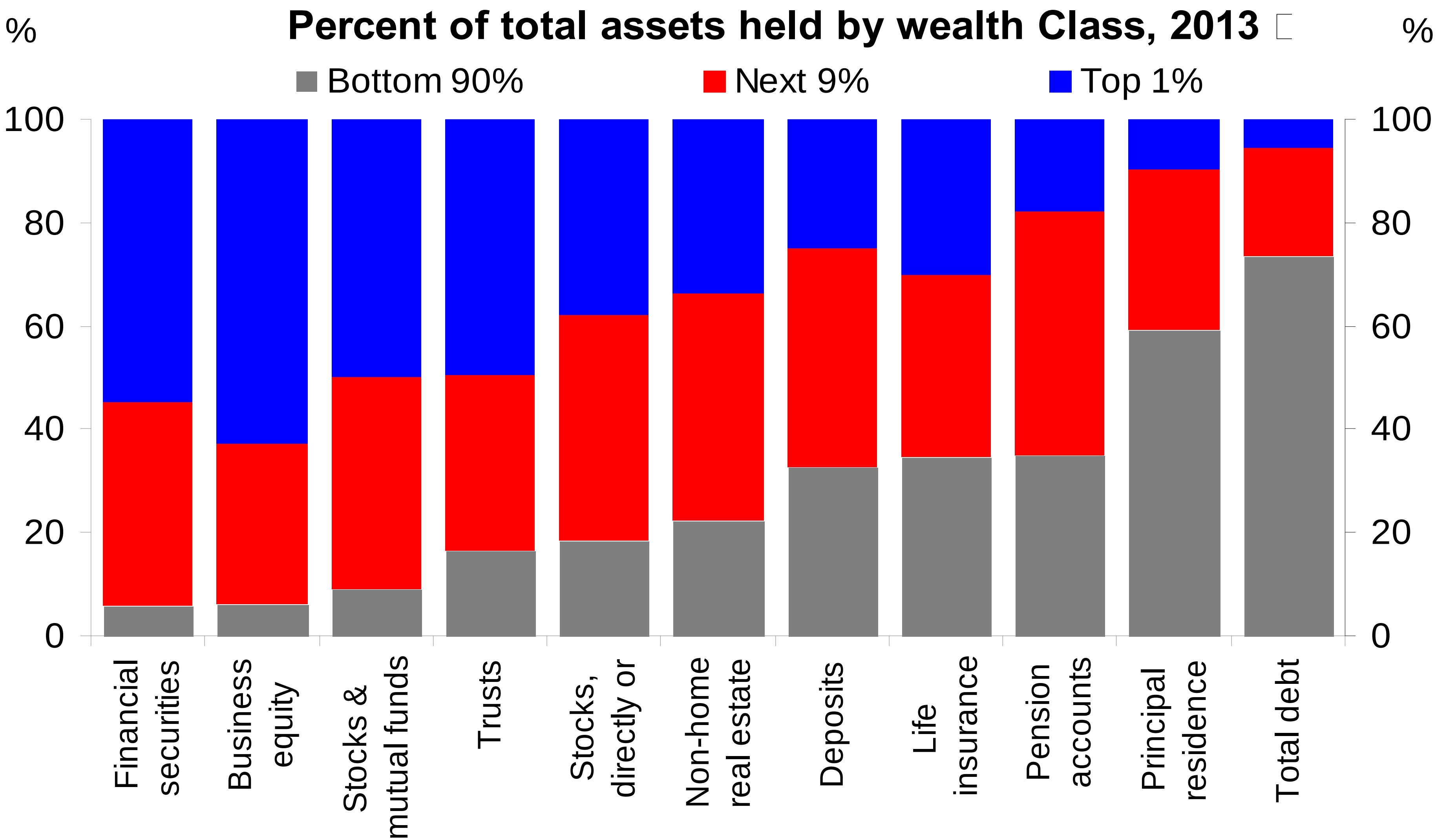
Average wealth for the Top 1% and the Bottom 90%



Real values are obtained by using the GDP deflator, 2010 dollars.

Source: Saez and Zucman (2016).)., DB Global Markets Research

Types of assets held across wealth distribution



Households are classified into wealth class according to their net worth. Brackets for 2013 are:
Top one percent: Net worth of $7,766,500 or more.
Next 9 percent: Net worth between $980,900 and $7,766,500.
Bottom 90 Percent: Net worth less than $908,900.

Source: Edward N. Wolff, (2014), Survey of Consumer Finances, DB Global Markets Research

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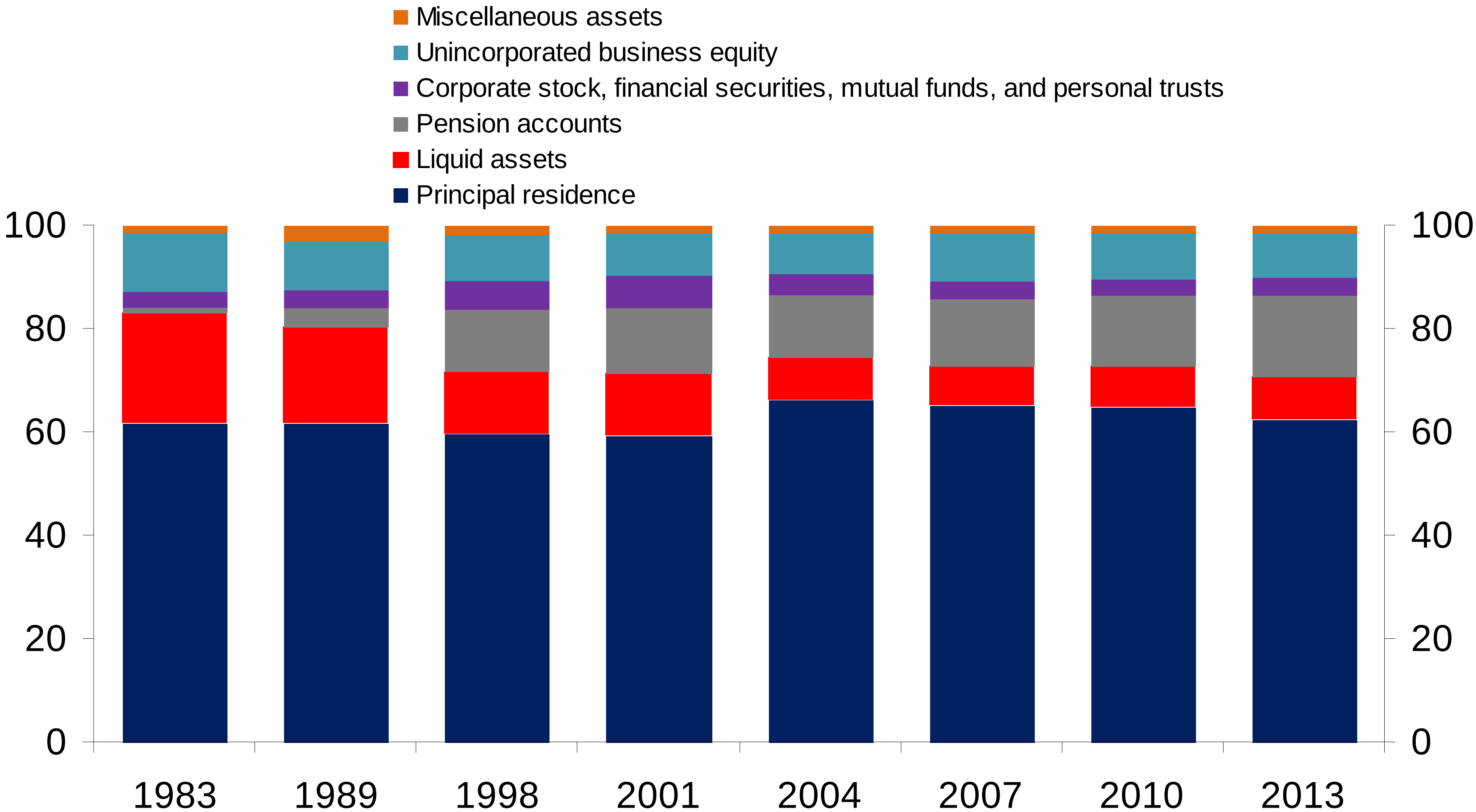
Wealth composition for middle income America

Composition of household wealth of the middle three wealth quintiles, 1983-2013



Source: Edward N. Wolff, (2014), Survey of Consumer Finances, DB Global Markets Research

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Comparing US inequality with inequality in other countries

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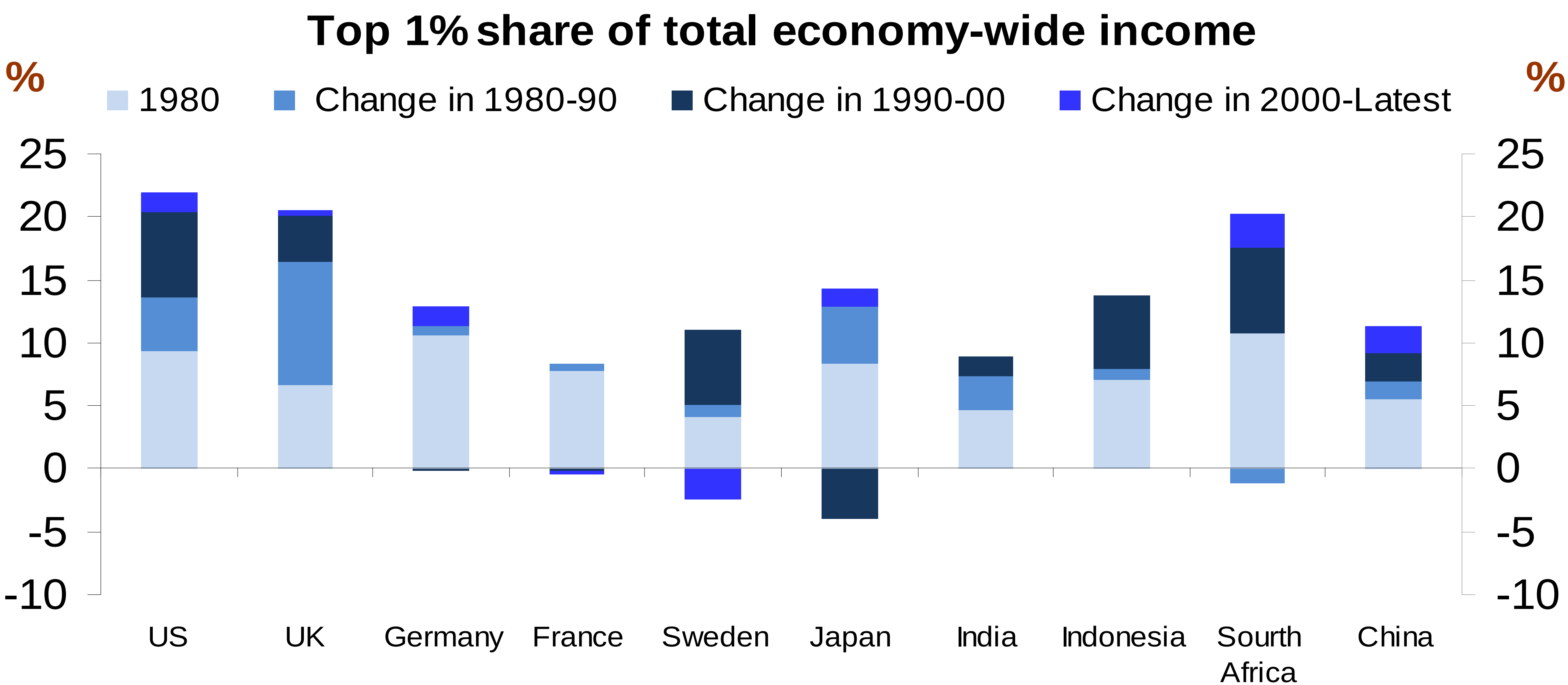
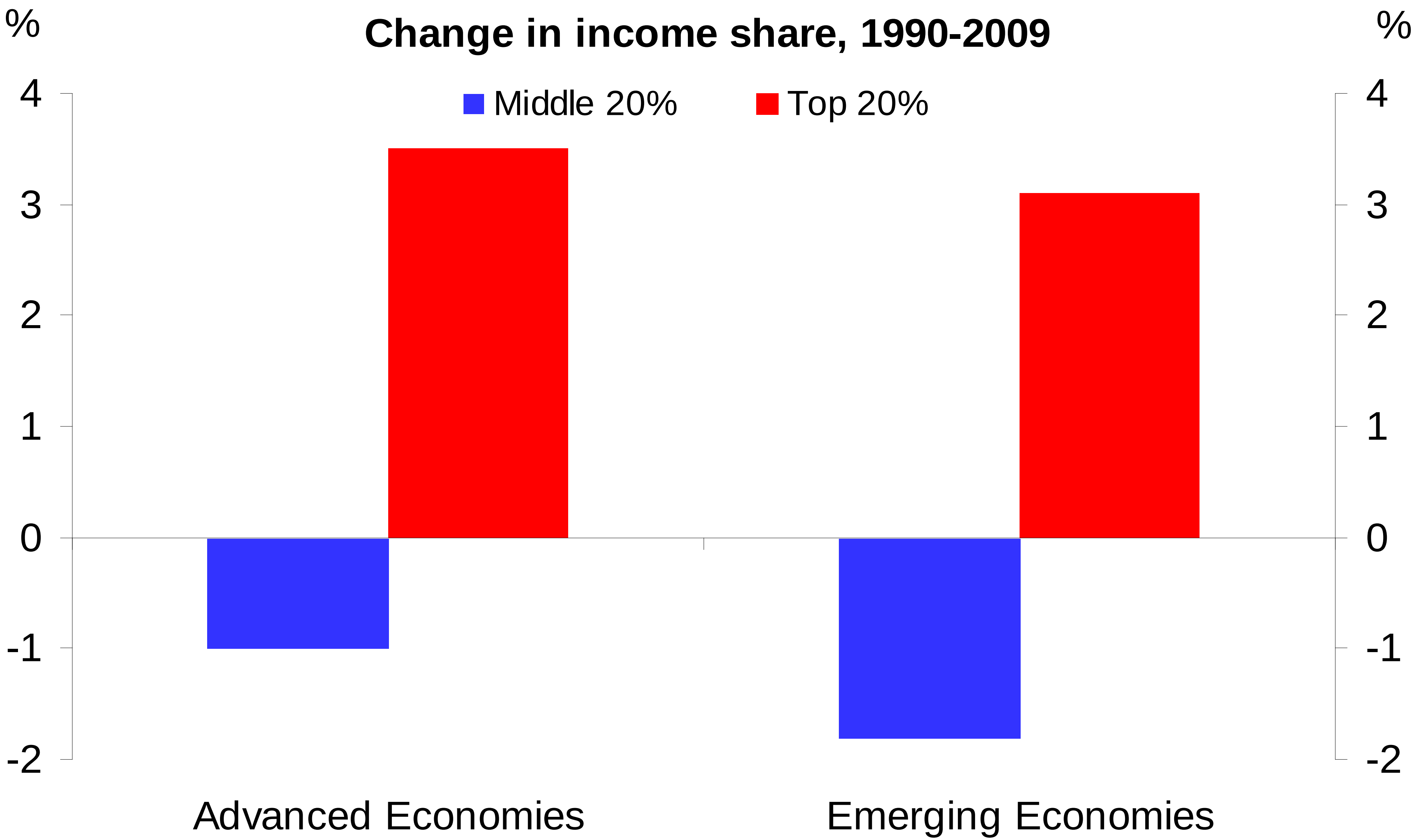
The rich has gotten richer over time in most countries



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 Markets Research

Incomes of the top 20% increased while incomes of middle 20% decreased



Source: WID database, DB Global Markets Research

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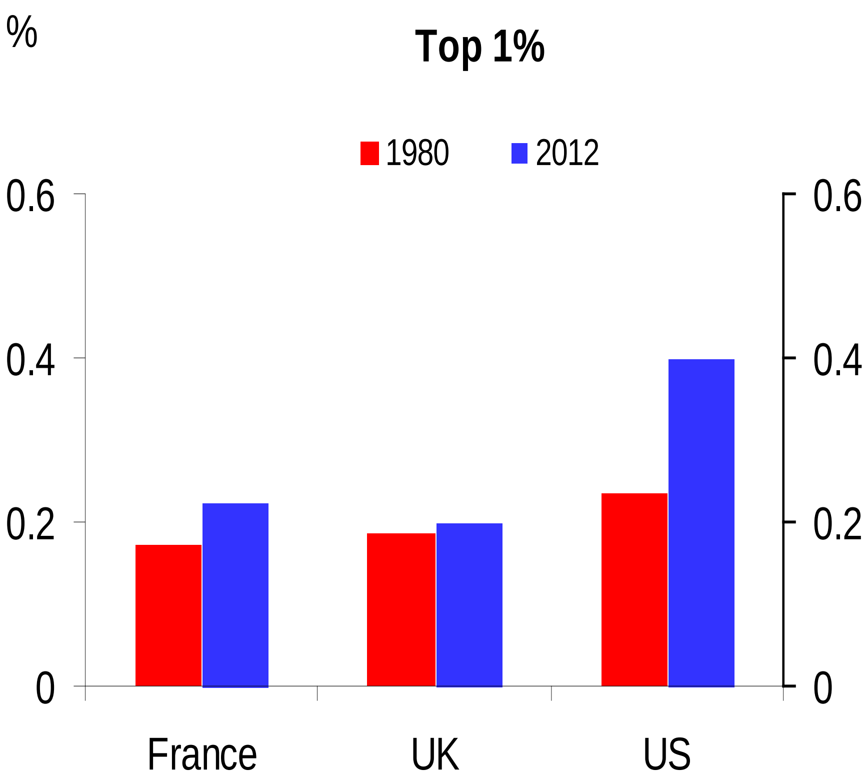
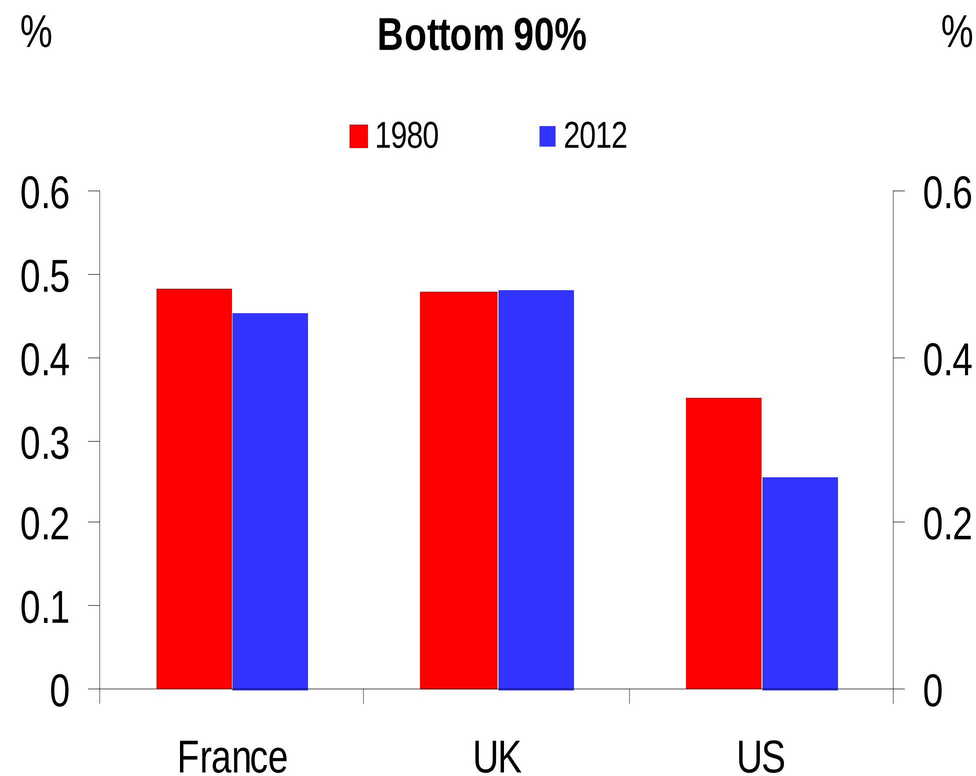
Comparing inequality in US with France and UK

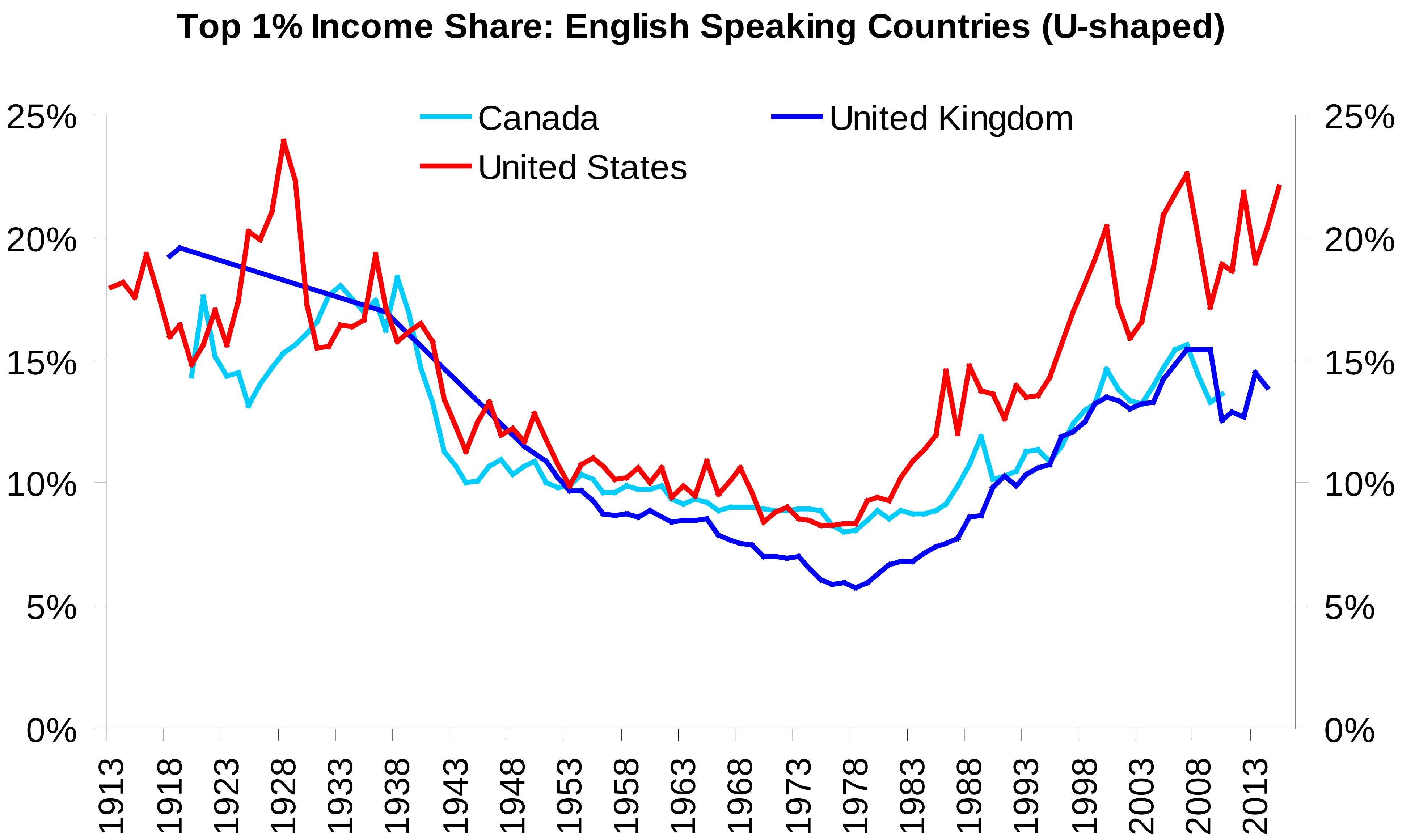
The top 1% and bottom 90% wealth distribution





Source: WID database, DB Global Markets Research

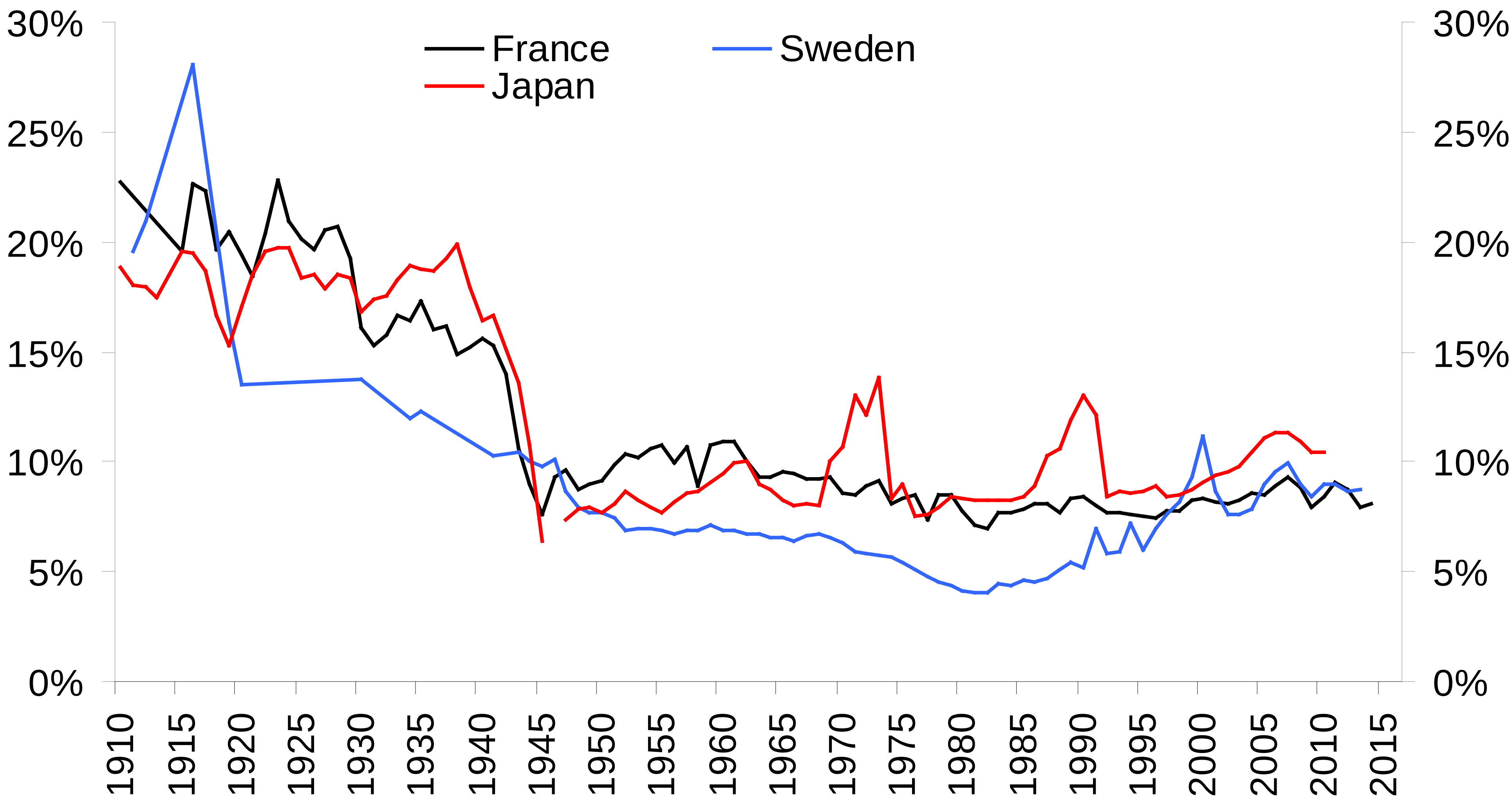
U-shaped development in income inequality in English speaking countries



Source: WID database, DB Global Markets Research

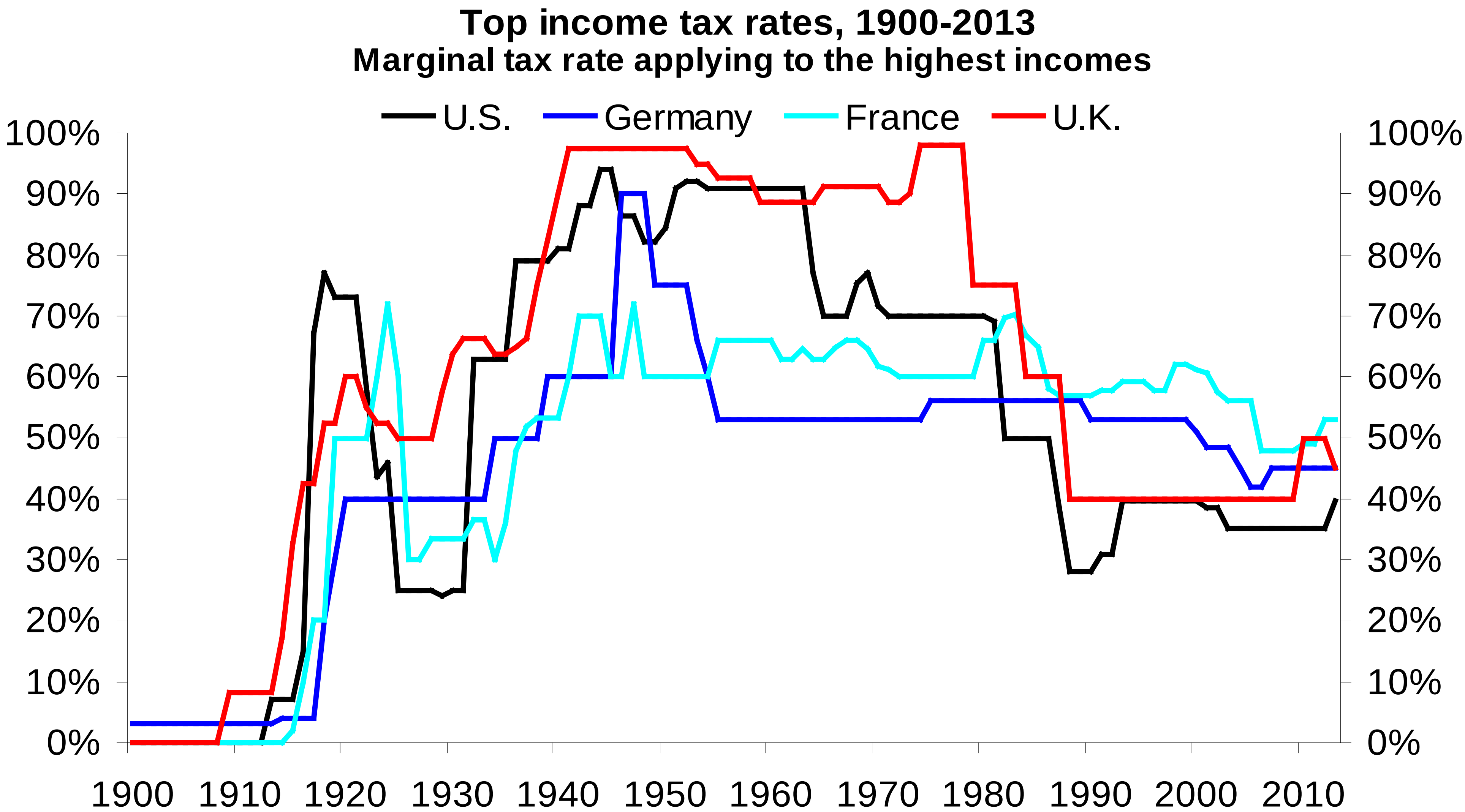
L-shaped development in income inequality in Europe and Japan

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



Source: WID database, DB Global Markets Research

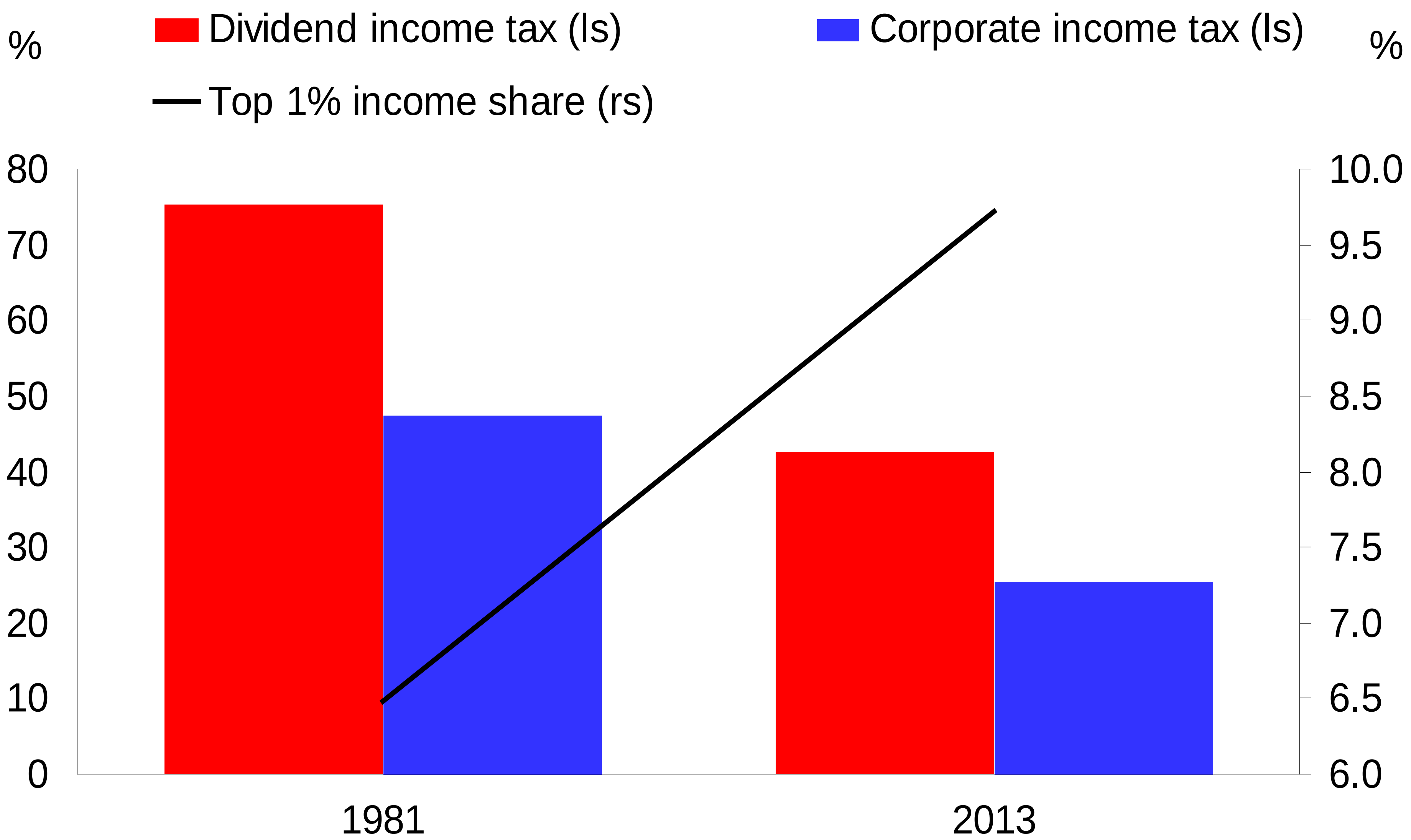
Marginal tax rates down in recent decades



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.

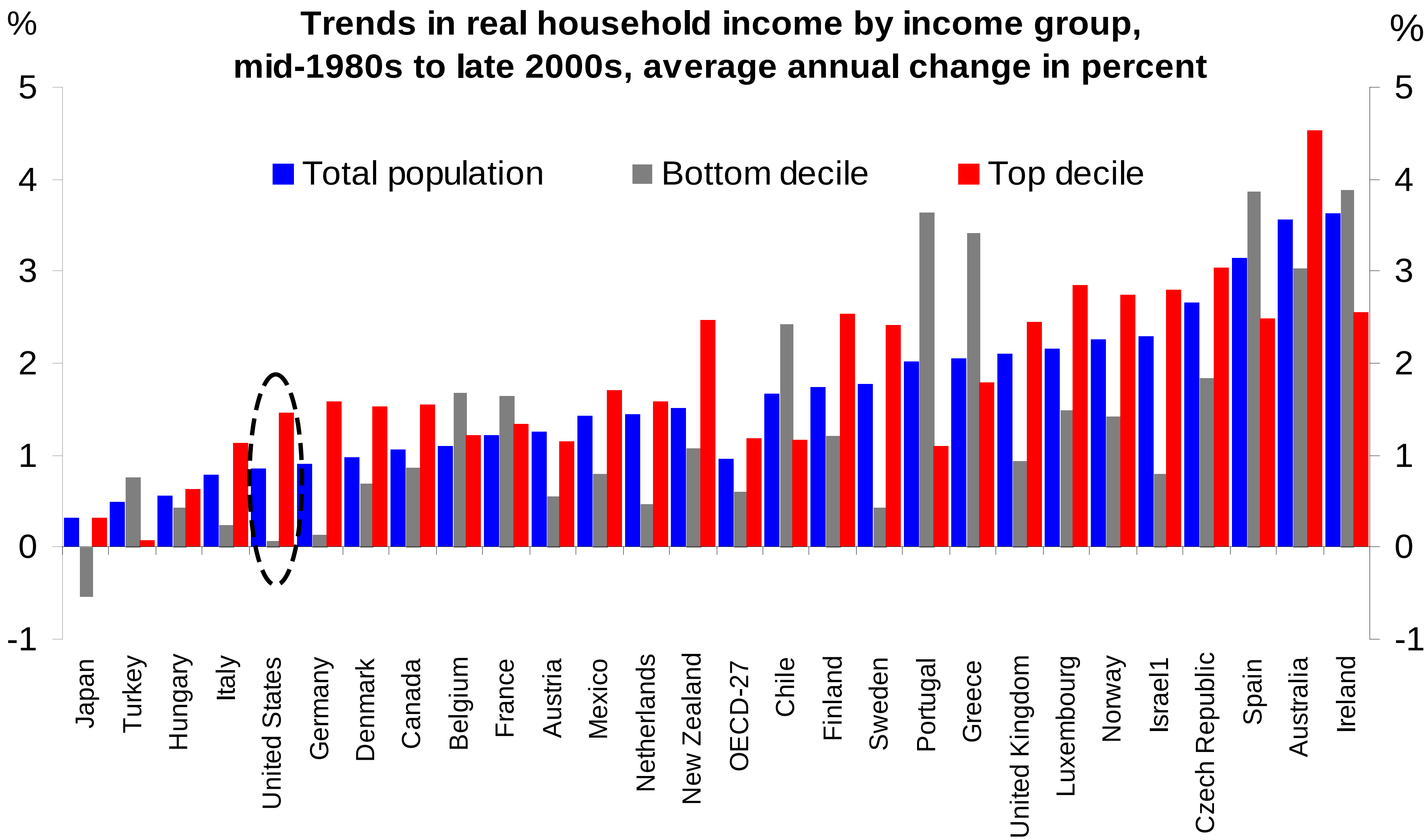
Source: Piketty (2014). Figure also appears in Piketty and Saez (2014)., DB Global Markets Research

Other taxes affecting the top 1% have also fallen



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

Big differences in income growth across the income distribution



Note: Income refers to disposable household income, corrected for household size and deflated by the consumer price index (CPI). Average annual changes are calculated over the period from 1985 to 2008, with a number of exceptions: 1983 was the earliest year for Austria, Belgium, and Sweden; 1984 for France, Italy, Mexico, Turkey and the United States; 1986 for Finland, Luxembourg, and Norway; 1987 for Ireland; 1988 for Greece; 1991 for Hungary; 1992 for the Czech Republic; 1995 for Australia and Portugal and 1996 for Chile. The latest year for Chile was 2009; for Denmark, Hungary, and Turkey it was 2007; and for Japan 2006. Changes exclude the years 2000 to 2004 for Austria, Belgium, Ireland, Portugal and Spain for which surveys were not comparable.

Source: OECD, DB Global Markets Research

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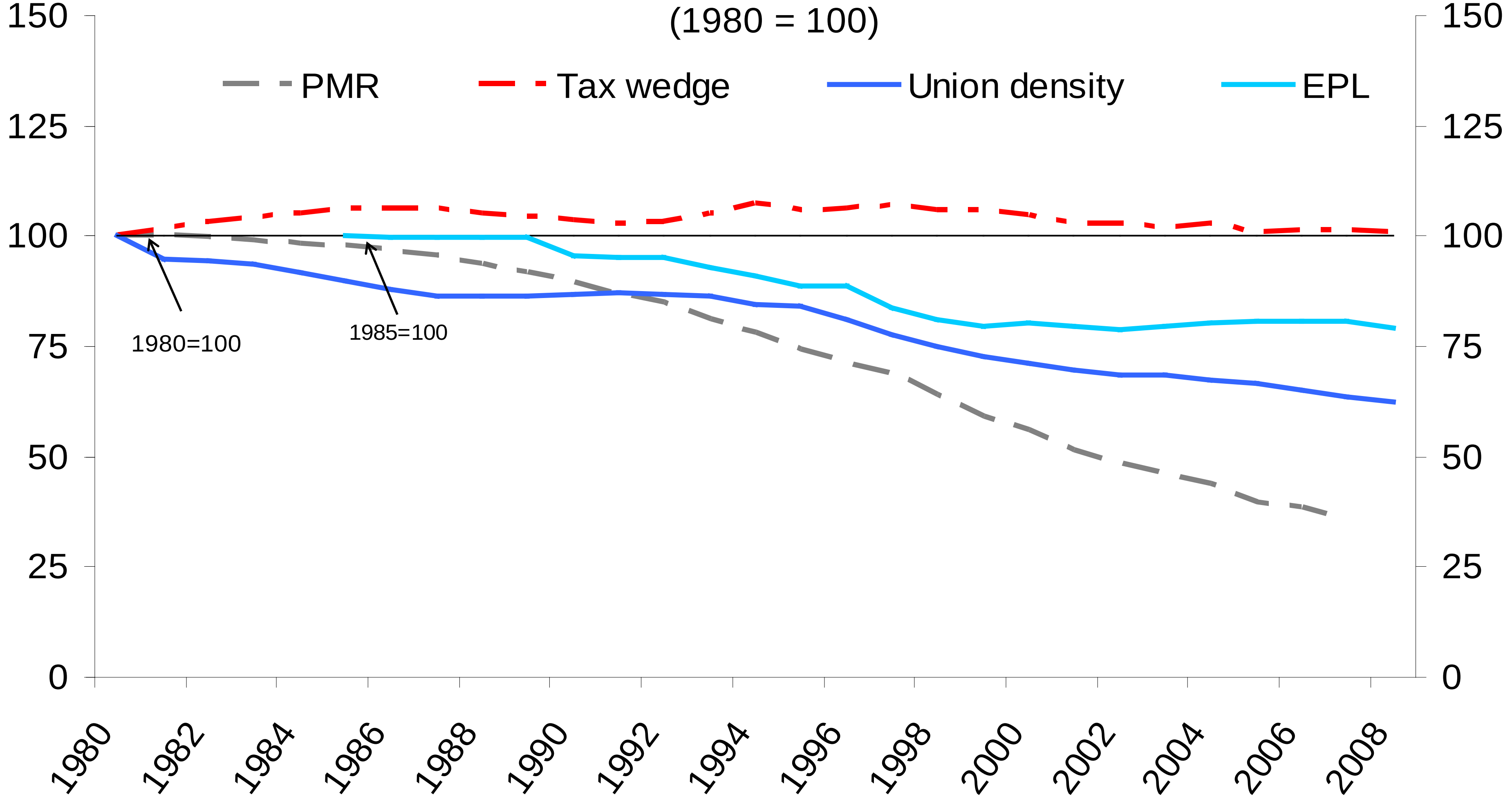
Product and labour market regulations and institutions became weaker

Developments in product market regulation, employment protection legislation, tax wedges and union density, OECD average, 1980-2008 (1980 = 100)



Note: "PMR" is a summary indicator for product market regulation. "EPL" is a summary indicator of the strictness of overall employment protection legislation (only available from 1985 onwards). "Tax wedge" refers to an average worker and is the sum of income tax and employees and employers payroll taxes as a percentage of labour costs. "Union density" is the number of union members as a proportion of all employees eligible to be members.

Source: OECD, DB Global Markets Research

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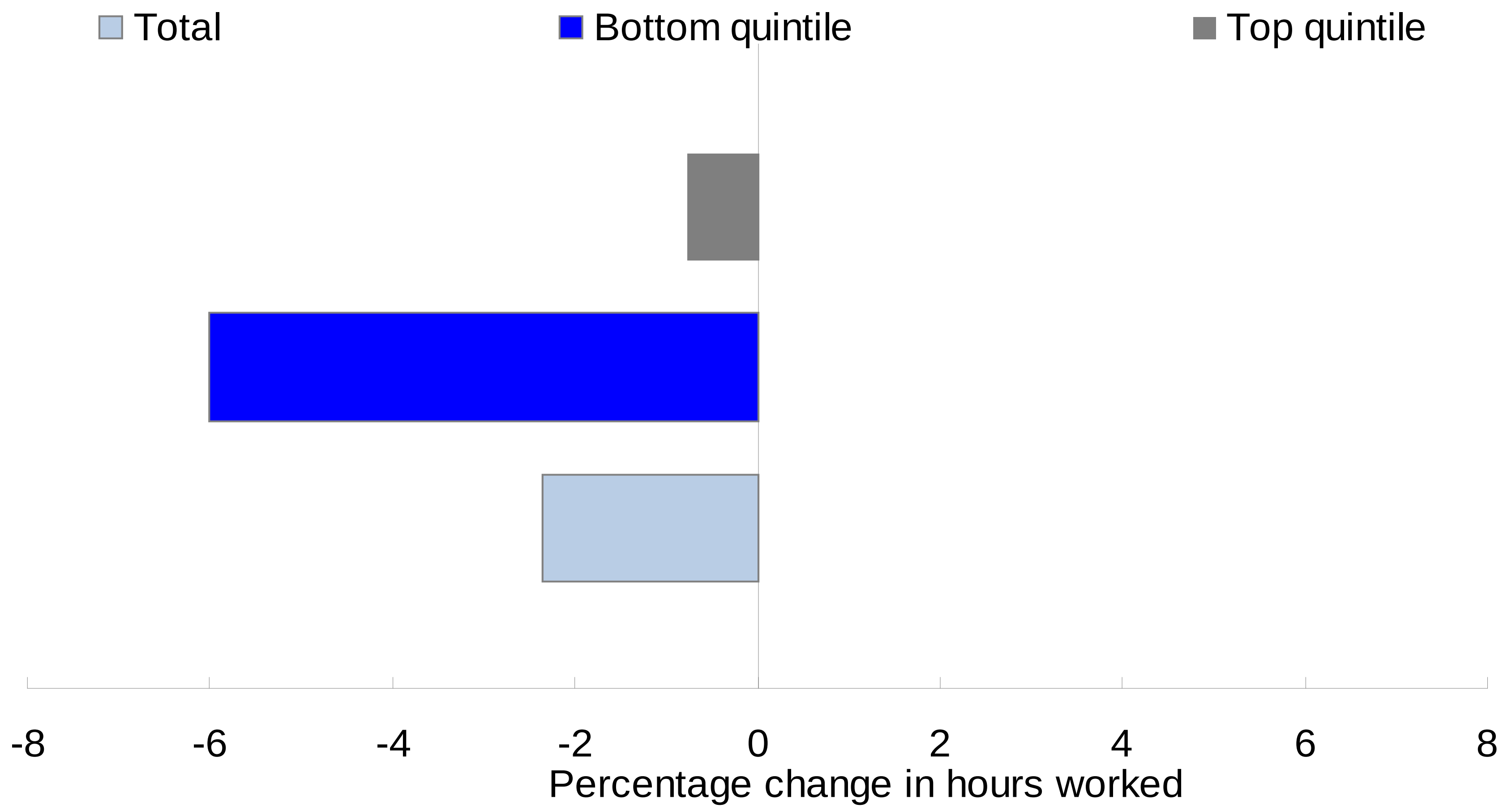
Hours worked declined more among lower-wage workers

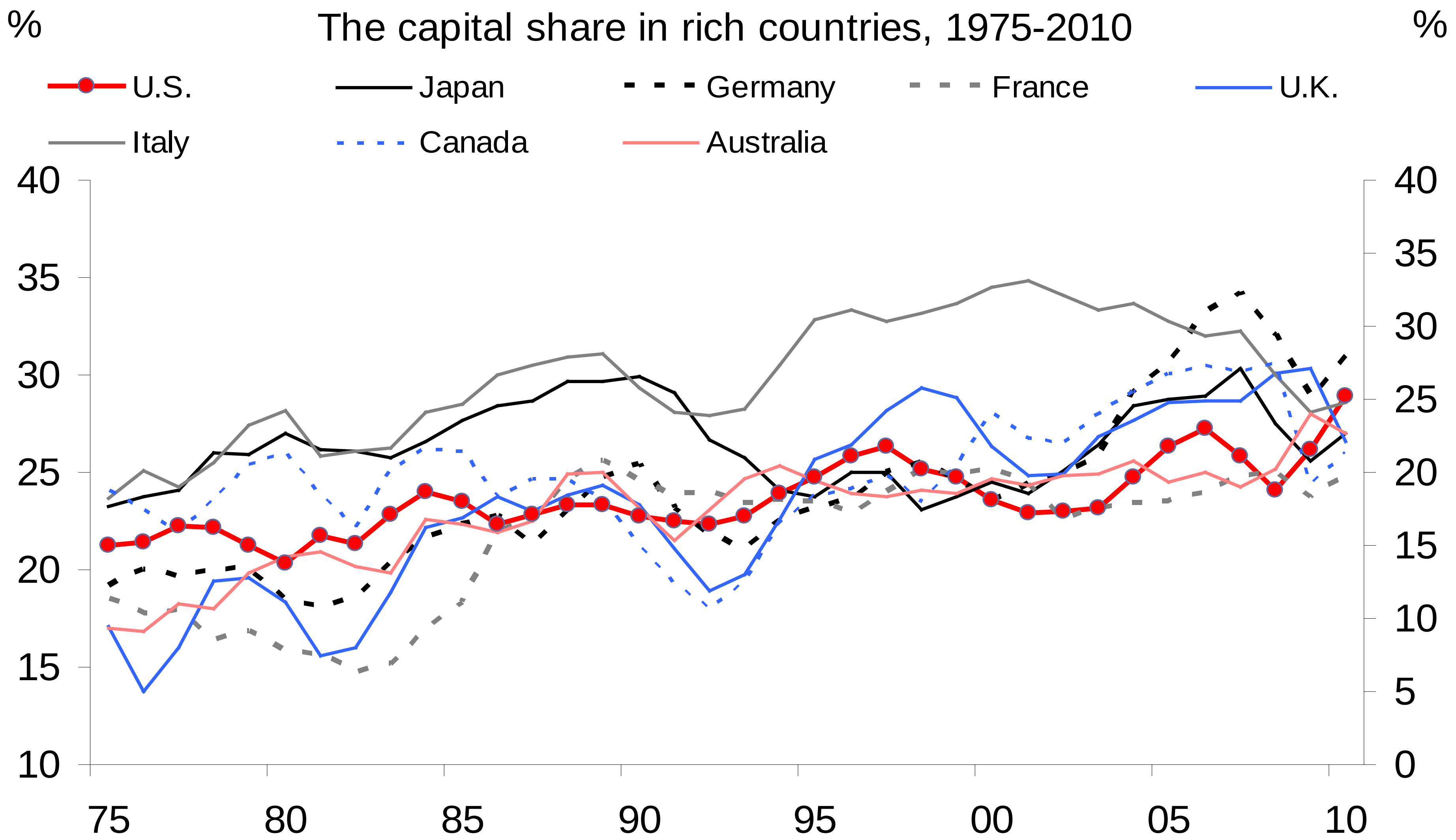
Trends in annual hours worked by the bottom and top 20% of earners, OECD average, mid-1980s to mid-2000s



Note: Paid workers of working age.

Source: OECD, DB Global Markets Research

Capital income bigger part of total income in advanced economies than in the past



Source: Piketty (2014), DB Global Markets Research

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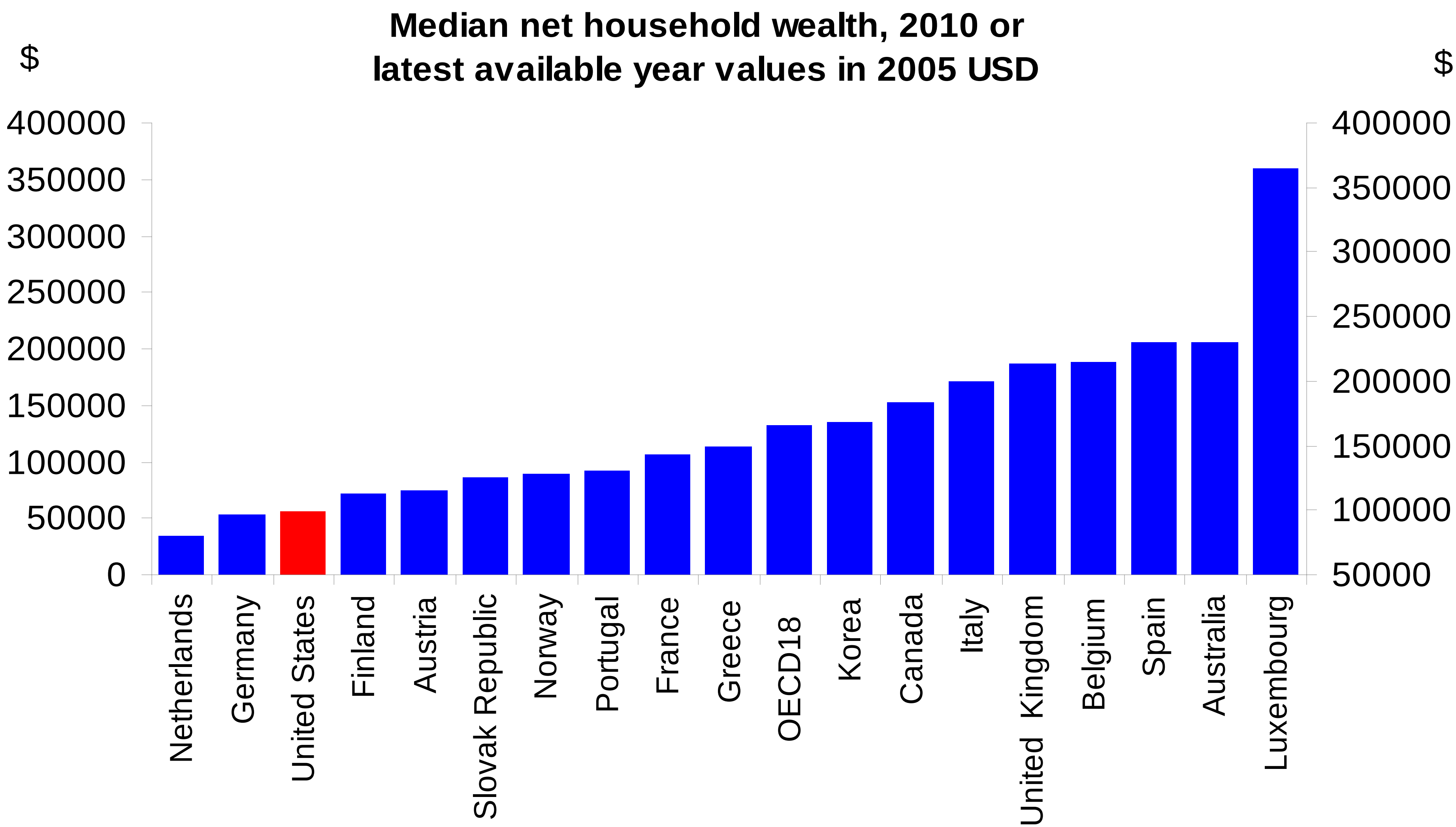
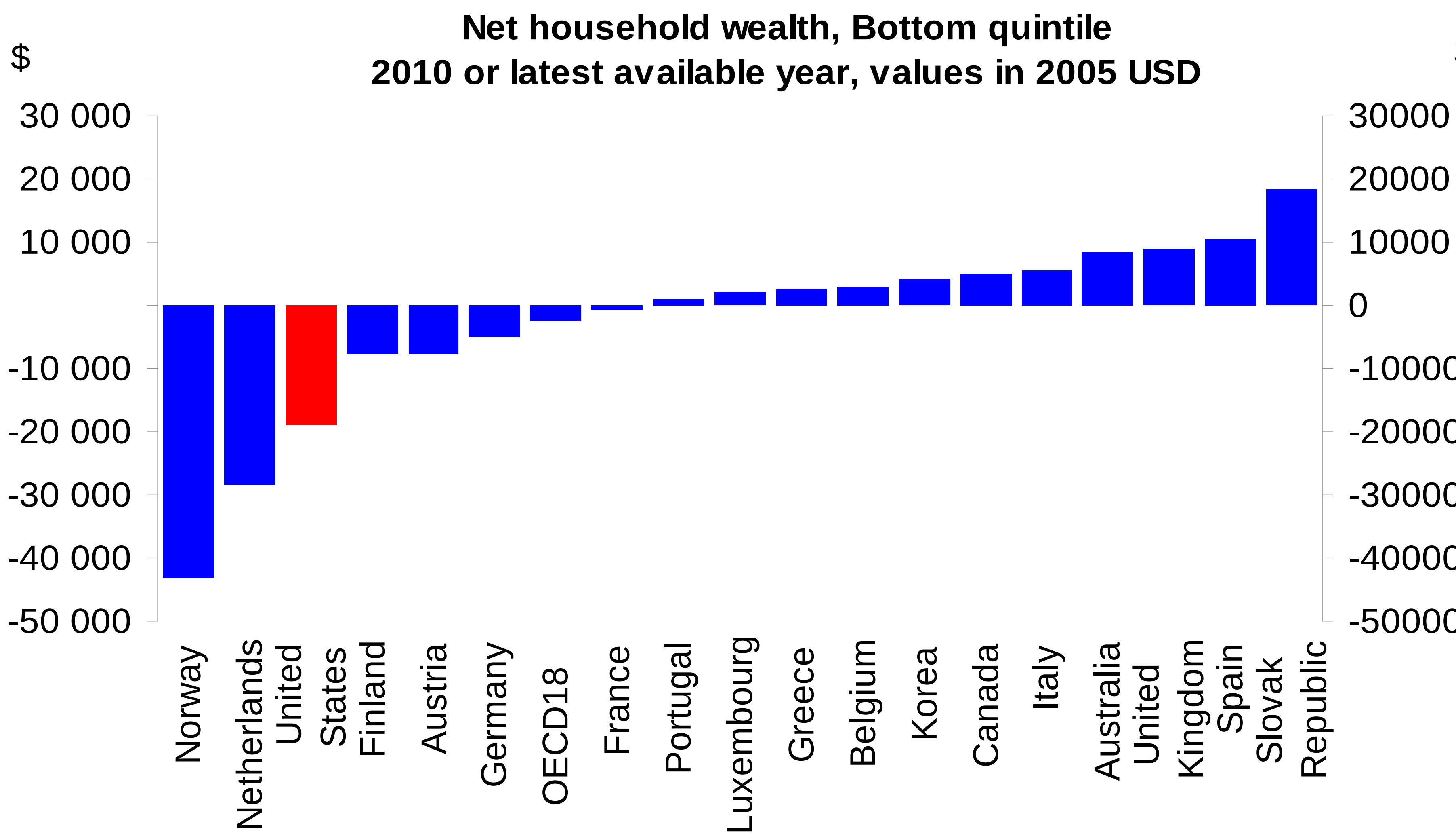
Median net household wealth low in the US



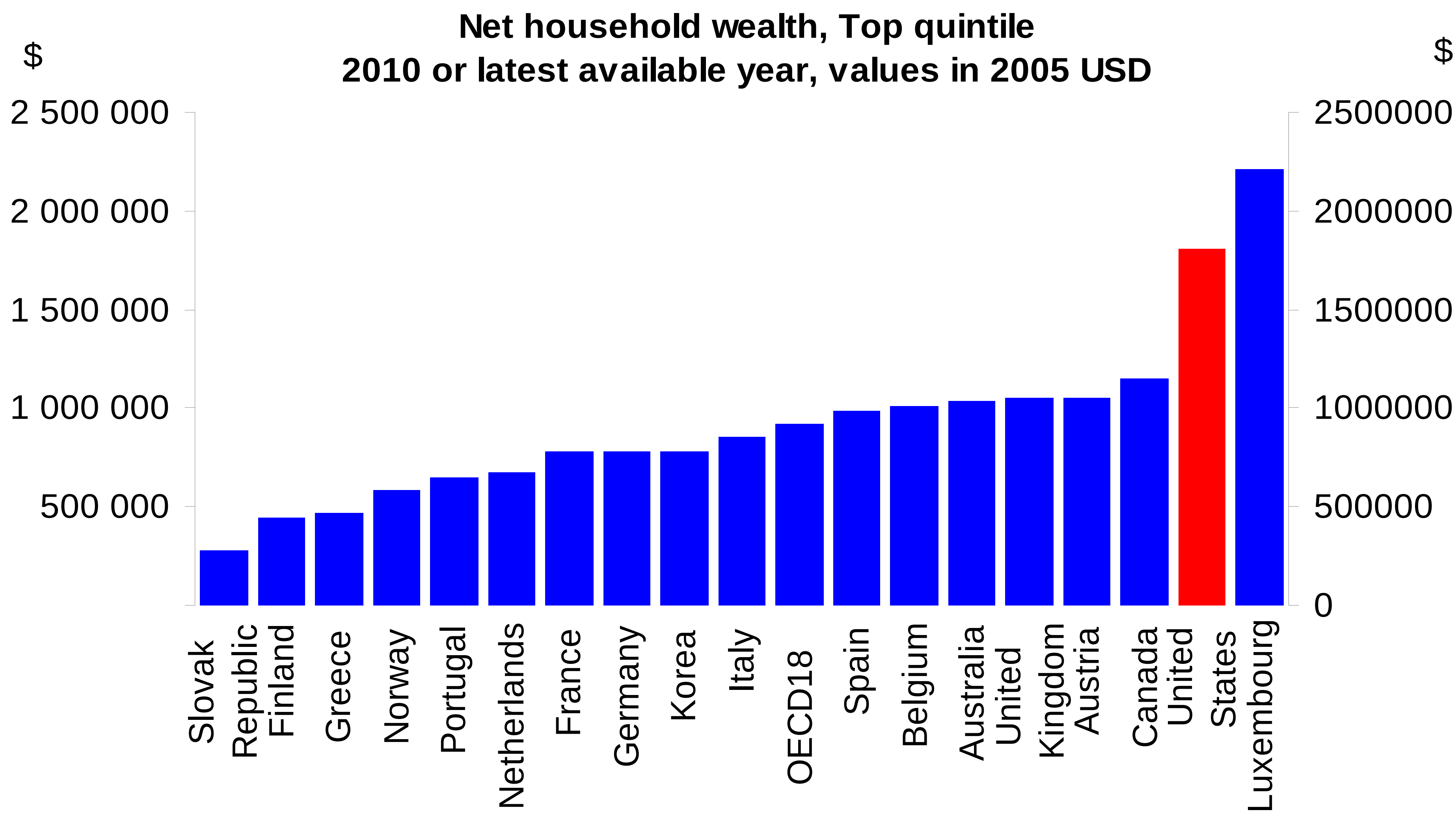
Source: OECD Wealth Distribution Database., DB Global Markets Research

Net household wealth at bottom of wealth distribution



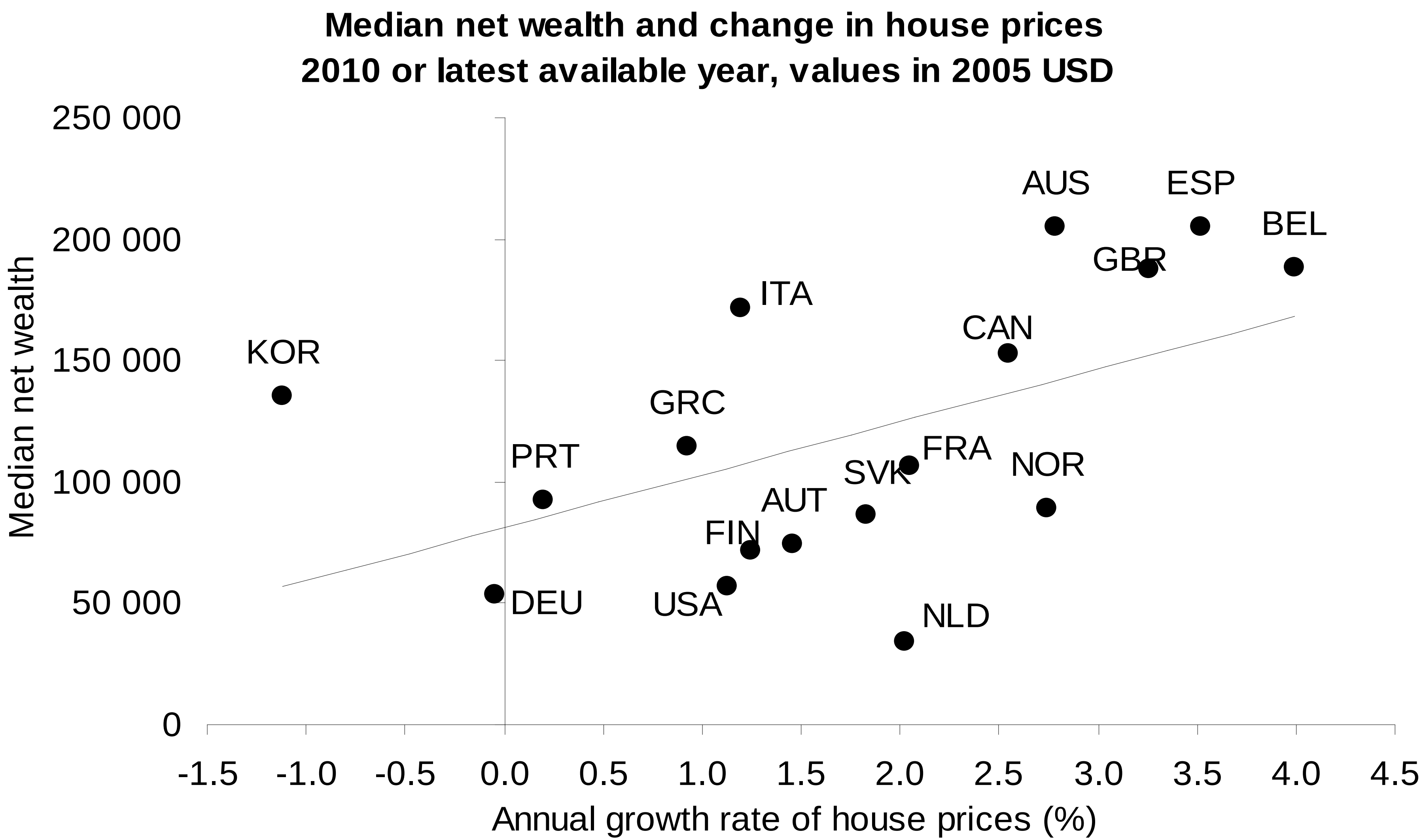
Source: OECD Wealth Distribution Database., DB Global Markets Research

Net household wealth at top of wealth distribution



Source: OECD Wealth Distribution Database., DB Global Markets Research

Housing is an important part of wealth



Note: The median net wealth is expressed in 2005 USD; changes in house prices are measured by the annual growth rate of house prices over the period 1970-2013 for most countries (refer to Table 6.2 for corresponding periods).

Source: OECD, DB Global Markets Research

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- **Peter Hooper** is currently Managing Director and Chief Economist for Deutsche Bank Securities. He joined Deutsche Bank Securities in the fall of 1999, first as Chief International Economist and shortly thereafter as Chief US Economist. He became Chief Economist and co-head of global economics in 2006. Prior to joining Deutsche Bank, Hooper enjoyed a distinguished 26-year career at the Federal Reserve Board in Washington, D.C. While rising to senior levels of the Fed staff, he held numerous positions, including as an economist on the FOMC and as Deputy Director of the Division of International Finance.
- 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.
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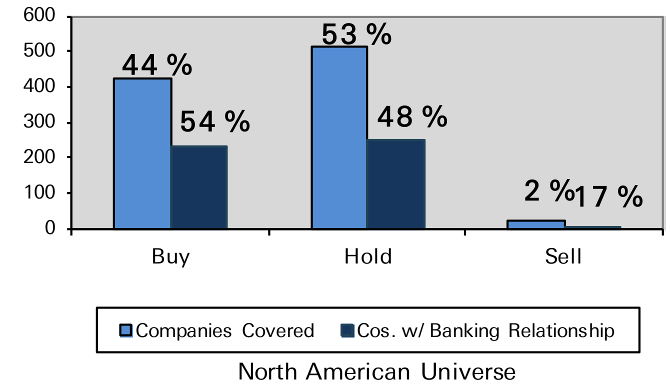

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