

A brief history of equality
Lessons from *Capital and Ideology*
& the *World Inequality Database*

Thomas Piketty

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CAPITAL AND IDEOLOGY



THOMAS
PIKETTY

Author of the #1 *New York Times* Bestseller
Capital in the Twenty-First Century

TRANSLATED BY ARTHUR GOLDHAMMER

In this talk, I present some of the figures & tables gathered in my book *Capital and ideology* (2020)

An economic, social & political history of inequality regimes, from trifunctional and colonial societies to post-communist, post-colonial hyper-capitalist societies

As compared to *Capital in the 21st century* (2014): *Capital and ideology* is less western-centered, and focuses on the key role of politics & ideology

An optimistic book: the long-run rise of equality

See piketty.pse.ens.fr/ideology & wid.world for the full set of data series and figures

WORLD

BY COUNTRY ▾

DATA

WORLD
INEQUALITY
DATABASE

METHODOLOGY ▾

ABOUT US ▾

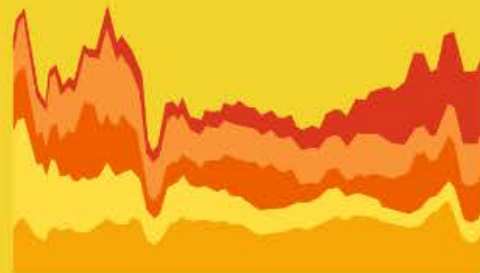
NEWS ▾

WORLD VIEW



Compare inequality between countries on an interactive world map

COUNTRY GRAPHS

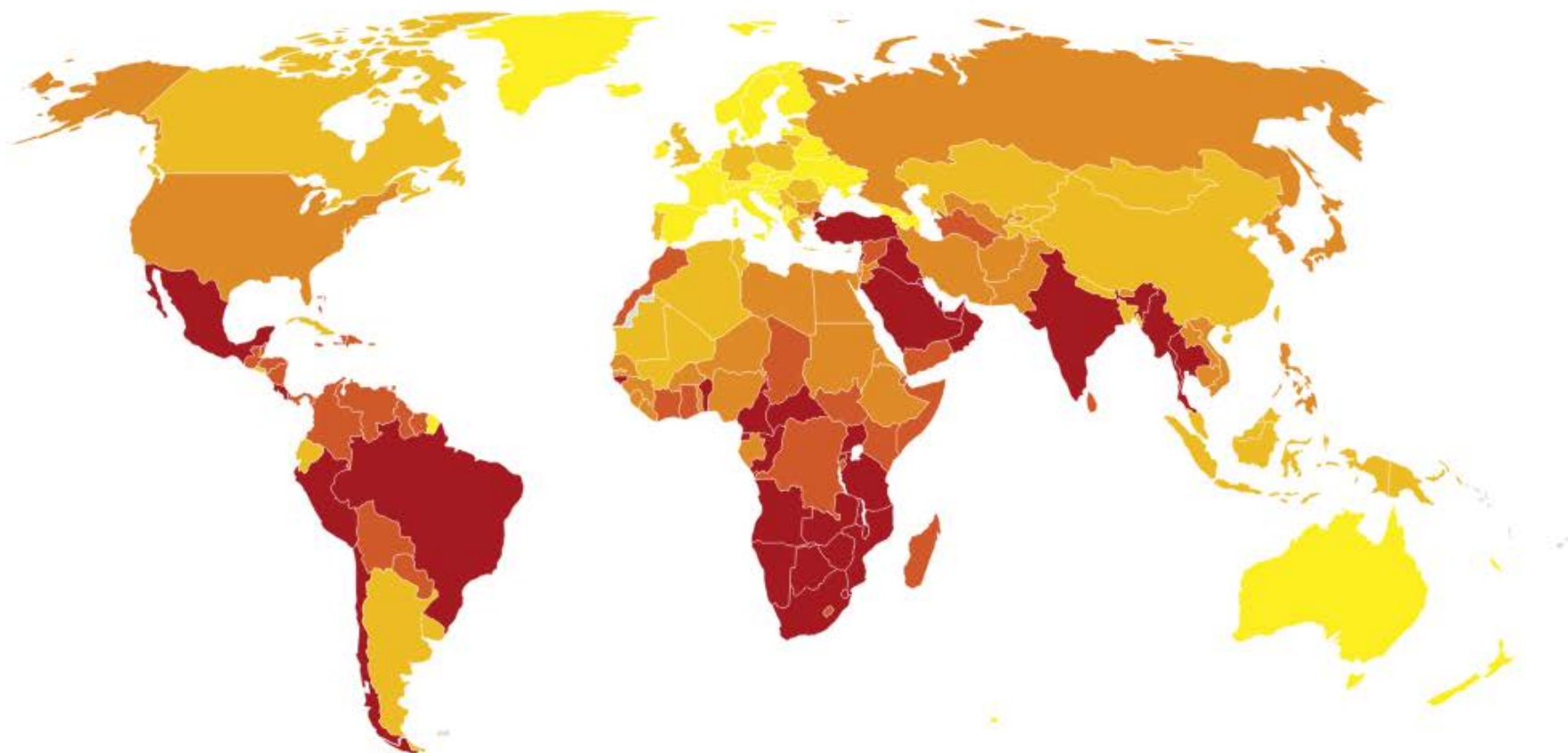


Follow the evolution of inequality within countries with user-friendly graphs

DATA TABLES

Download our open-access datasets

Top 10% national income share

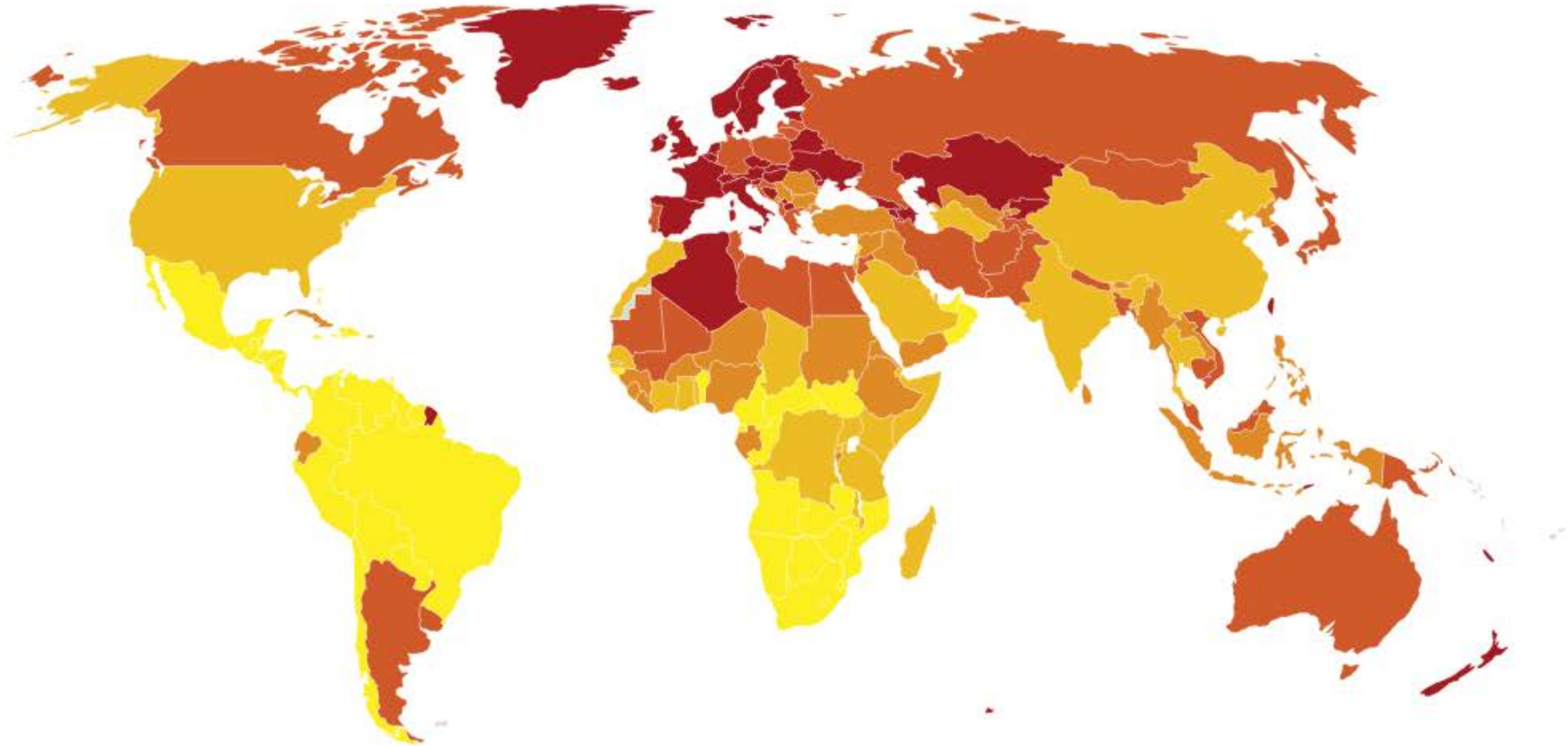


Share of total (%)



Graph provided by www.wid.world

Bottom 50% national income share

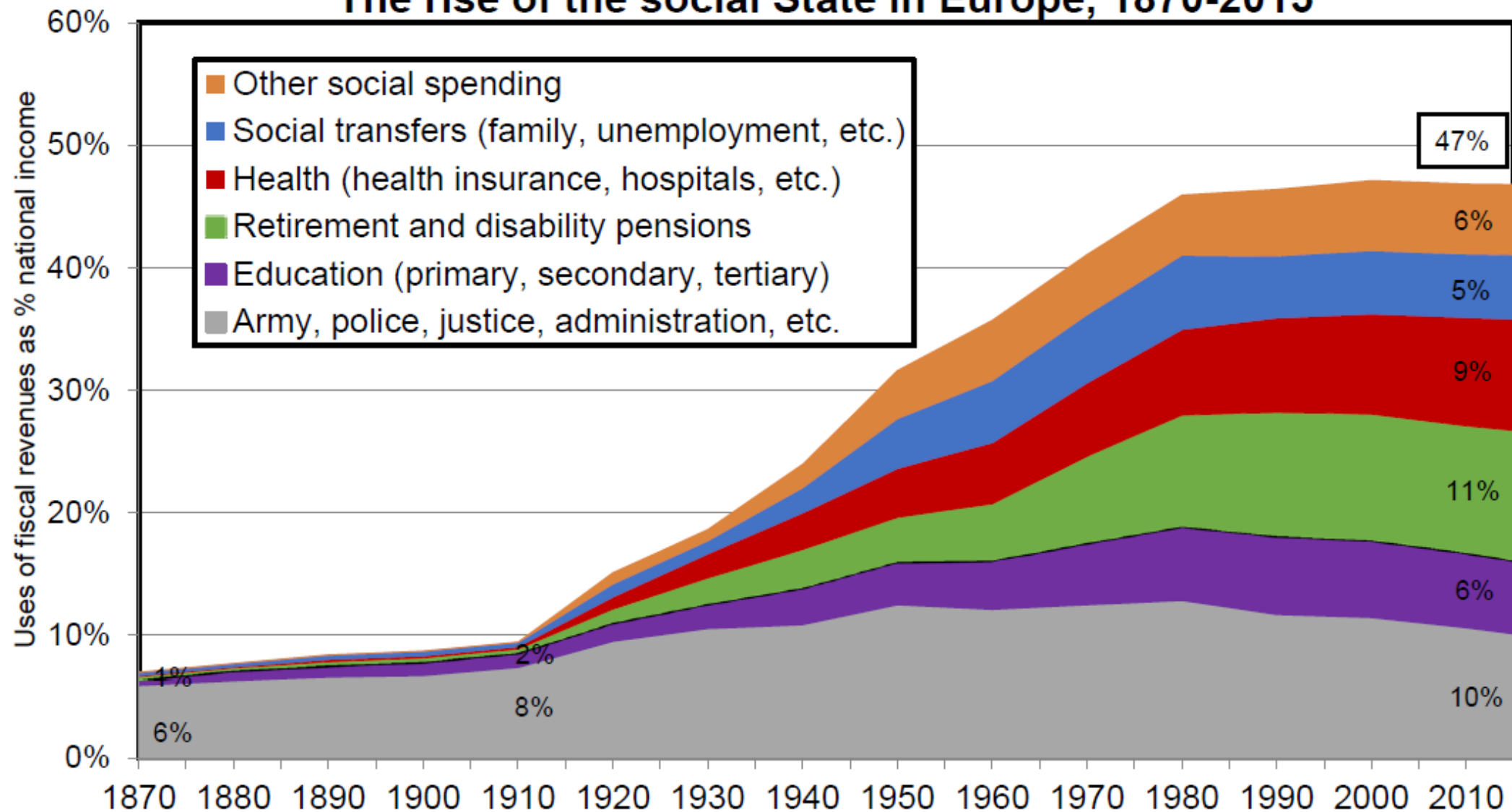


Share of total (%)



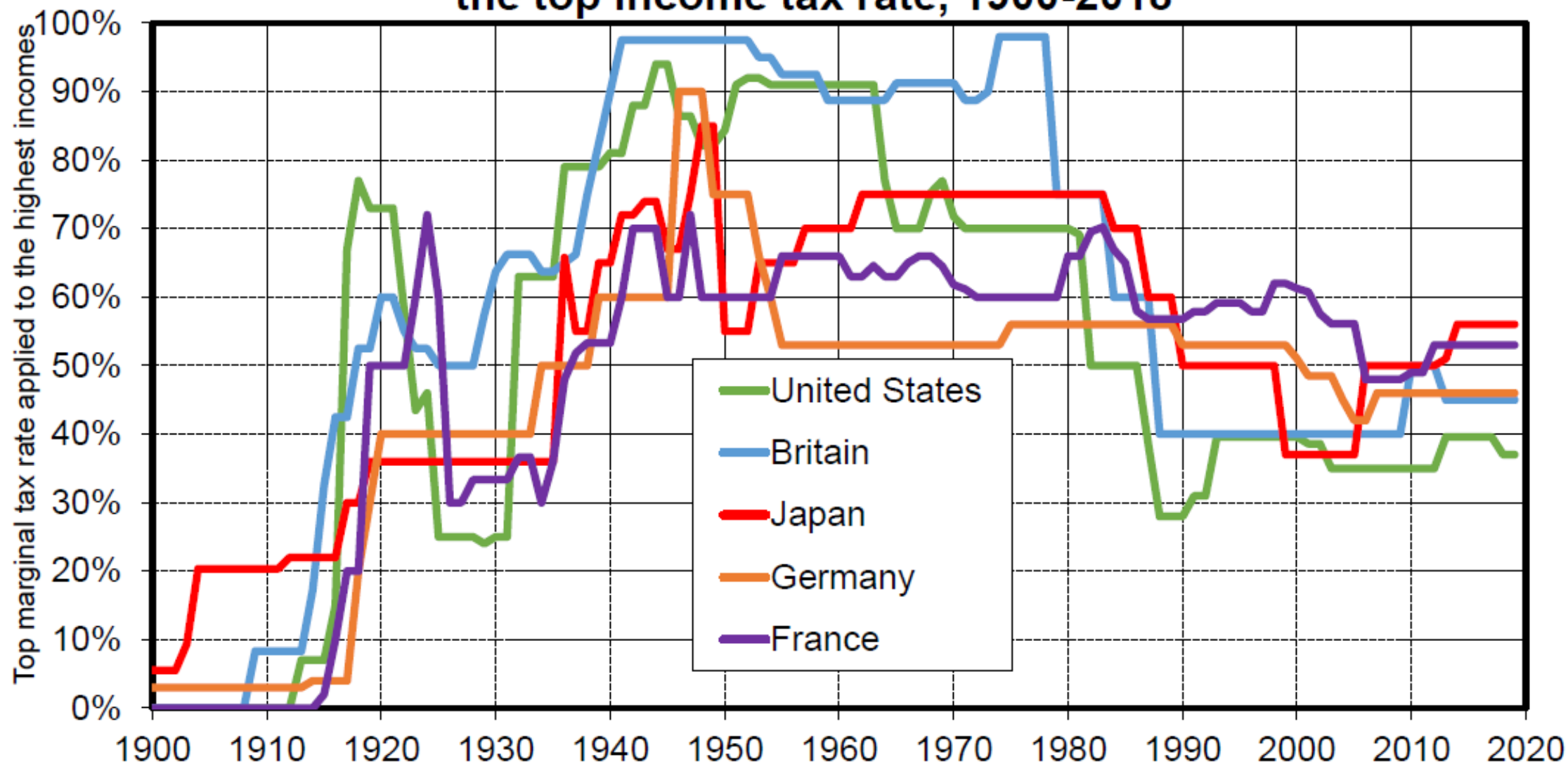
Graph provided by www.wid.world

The rise of the social State in Europe, 1870-2015



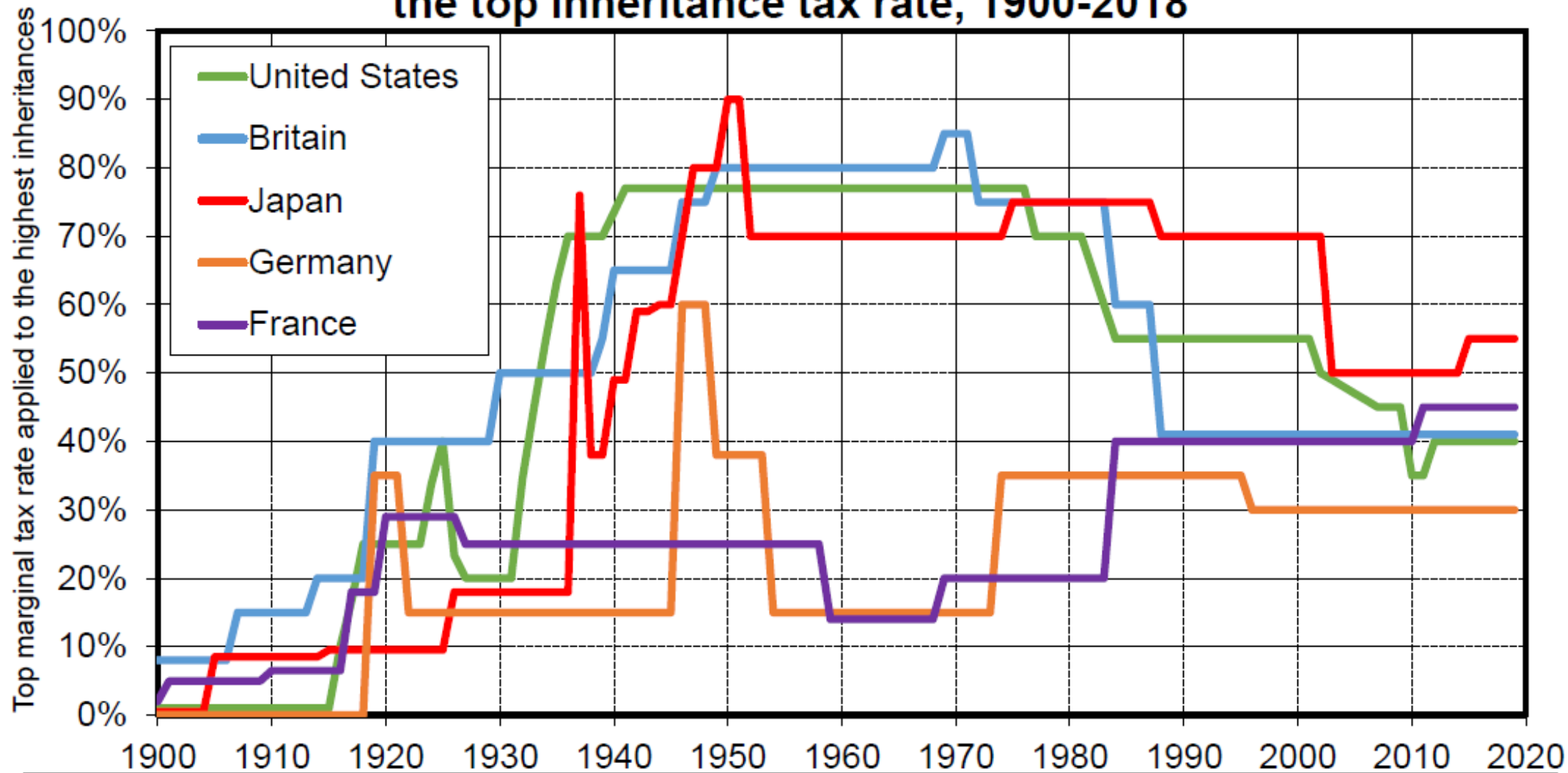
Interpretation. In 2015, fiscal revenues represented 47% of national income on average in Western Europe et were used as follows: 10% of national income for regalian expenditure (army, police, justice, general administration, basic infrastructure: roads, etc.); 6% for education; 11% for pensions; 9% for health; 5% for social transfers (other than pensions); 6% for other social spending (housing, etc.). Before 1914, regalian expenditure absorbed almost all fiscal revenues. **Note.** The evolution depicted here is the average of Germany, France, Britain and Sweden (see figure 10.14). **Sources and séries:** see piketty.pse.ens.fr/ideology (figure 10.15).

The invention of progressive taxation: the top income tax rate, 1900-2018



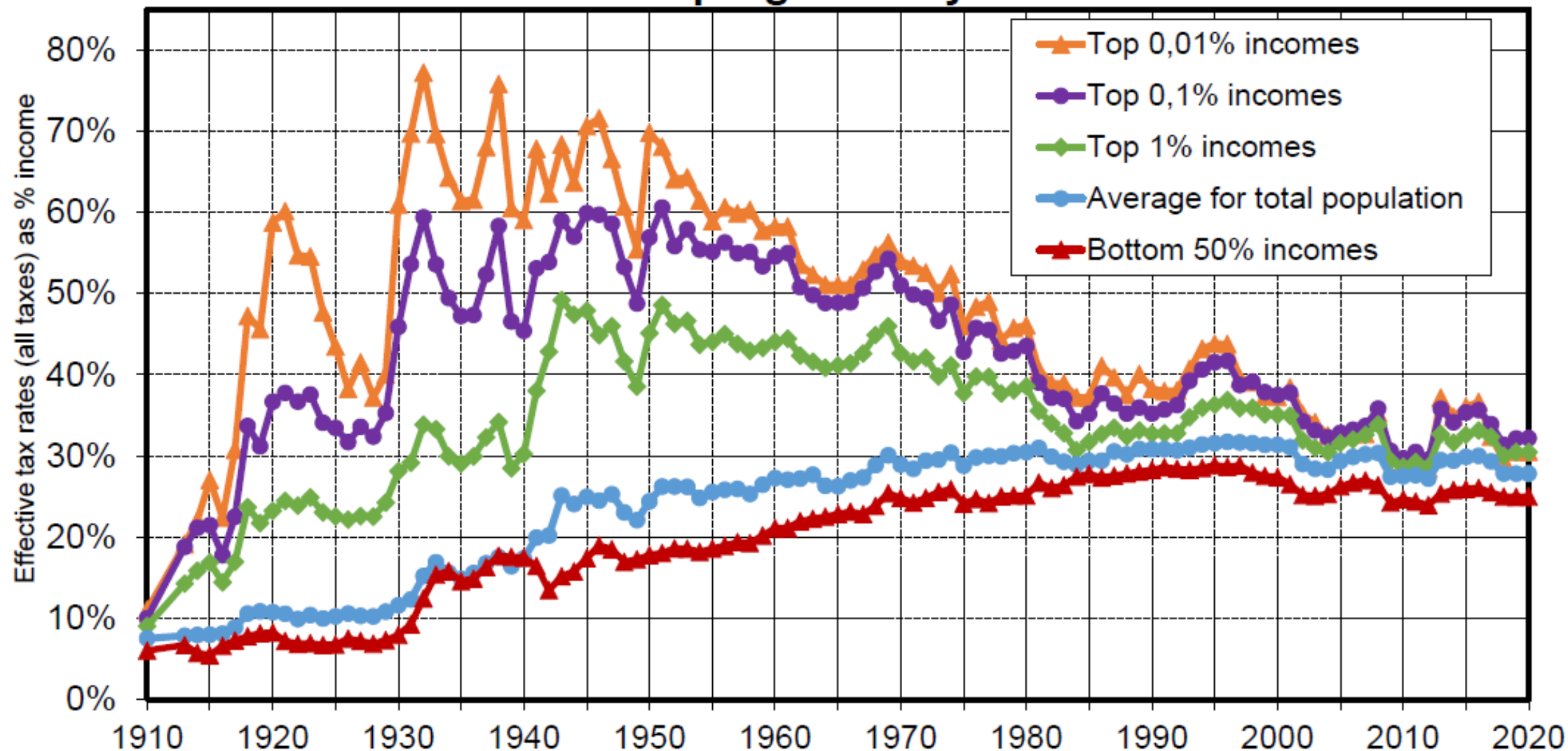
Interpretation. The marginal income tax rate applied to the highest incomes was on average 23% in the U.S. from 1900 to 1932, 81% from 1932 to 1980 and 39% from 1980 to 2018. Over these same periods, the top rate was equal to 30%, 89% and 46% in Britain, 26%, 68% and 53% in Japan, 18%, 58% and 50% in Germany, and 23%, 60% and 57% in France. Progressive taxation peaked in mid-century, especially in the U.S. and in Britain. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 10.11).

The invention of progressive taxation: the top inheritance tax rate, 1900-2018



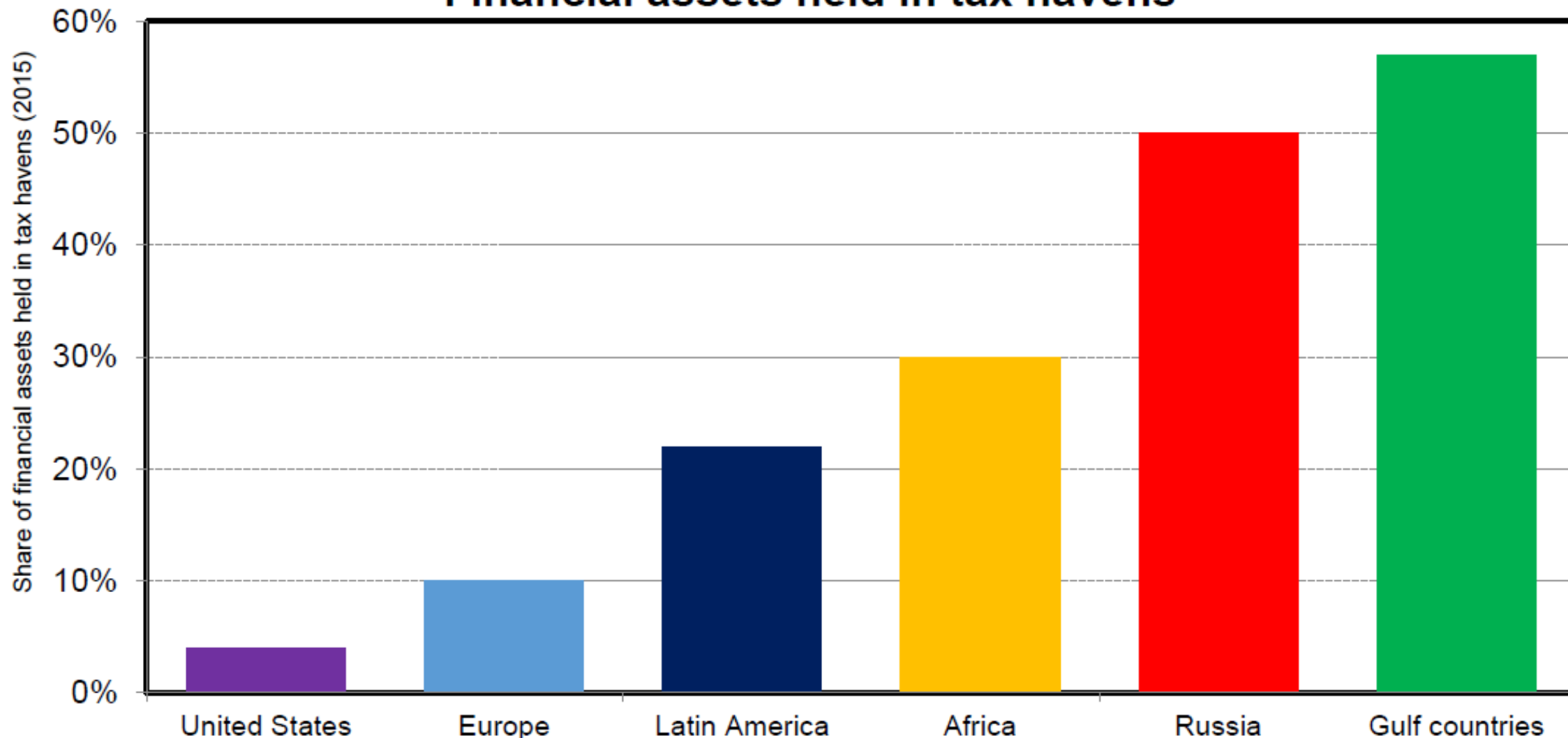
Interpretation. The marginal inheritance tax rate applied to the highest inheritances was on average 12% in the U.S. from 1900 to 1932, 75% from 1932 to 1980 and 50% from 1980 to 2018. Over these same periods, the top rate was equal to 25%, 72% and 46% in Britain, 9%, 64% and 63% in Japan, 8%, 23% and 32% in Germany, and 15%, 22% and 39% in France. Progressivity was maximal in mid-century, especially in the U.S. and in Britain. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 10.12).

Effective rates and progressivity in the U.S. 1910-2020



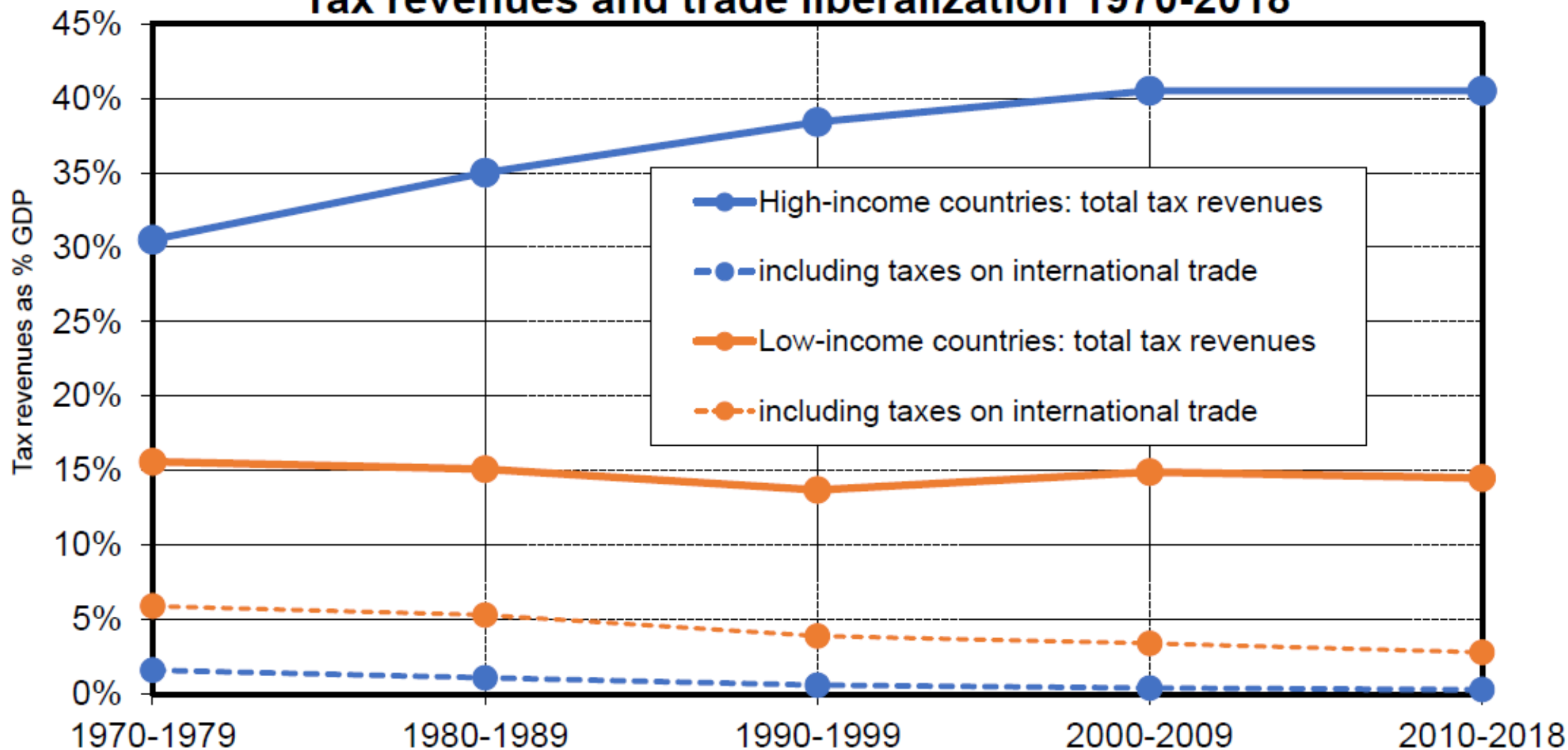
Interpretation. From 1915 to 1980, the tax system was highly progressive in the U.S., in the sense that effective tax rates paid by the highest income groups (all taxes included, and as % of pretax income) was significantly larger than the average effective tax rate paid by the the total population (and particularly by the bottom 50% incomes). Since 1980, the tax system has not been very progressive, with little differences in effective tax rates across groups. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 10.13).

Financial assets held in tax havens



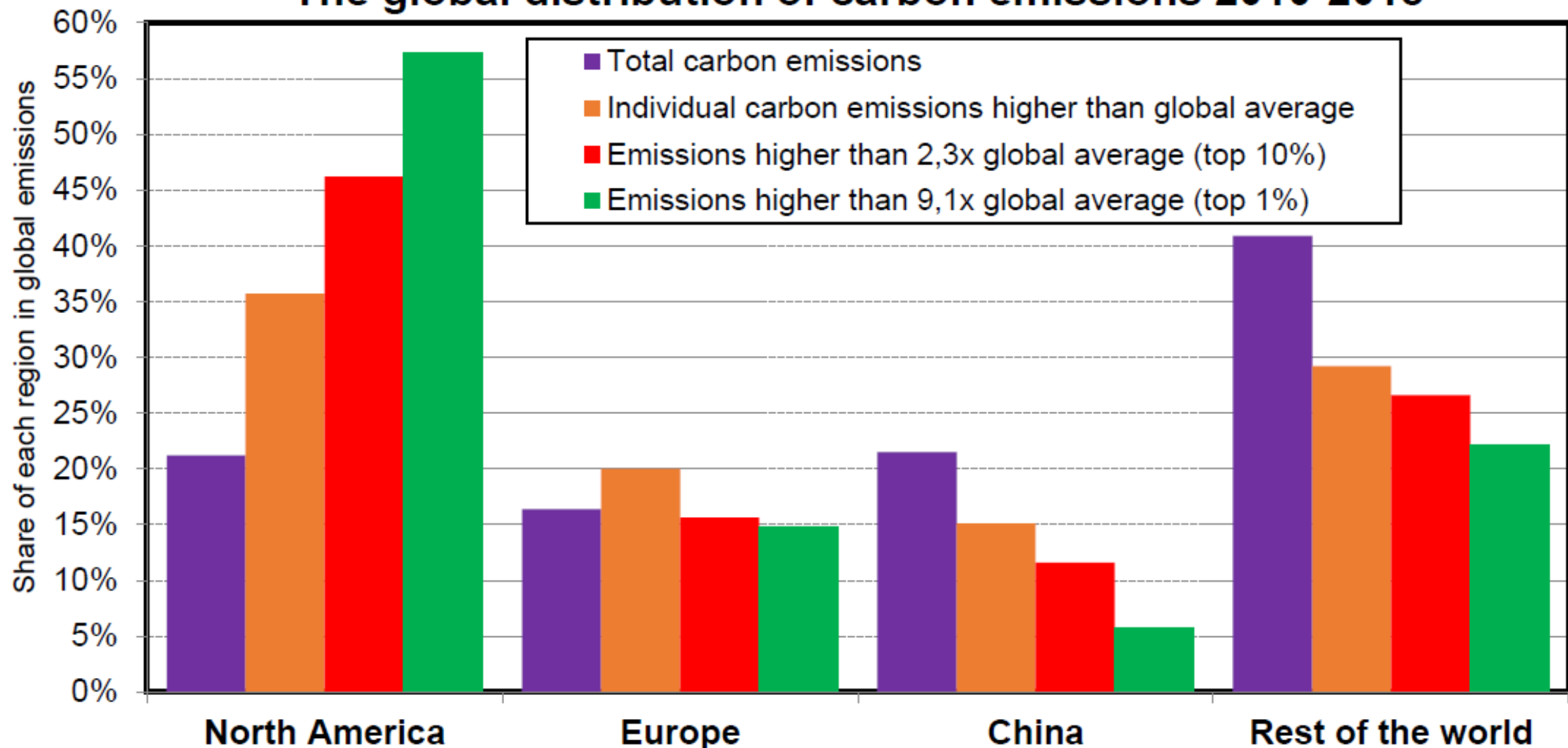
Interpretation. By exploiting anomalies in international financial statistics and the breakdowns by country of residence published by the Bank of International Settlements and the Swiss National Bank, one can estimate that the share of financial assets held via tax havens reaches 4% in the U.S., 10% in Europe and 50% in Russia. These estimates exclude non-financial assets (such as real estate) and financial assets unreported to BIS and SNB and should be considered minimum estimates. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 12.5).

Tax revenues and trade liberalization 1970-2018



Interpretation. In low-income countries (bottom third: Sub-Saharan Africa, South Asia, etc.), tax revenues dropped from 15,6% of GDP in 1970-1979 to 13,7% in 1990-1999 and 14,5% in 2010-2018, partly due to the uncompensated fall in customs duties and other taxes on international trade (which raised 5,9% of GDP in 1970-1979, 3,9% in 1990-1999 and 2,8% in 2010-2018). In high-income countries (top third: Europe, North America, etc.), customs duties were already very small at the beginning of the period and tax revenues kept rising before stabilizing. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 13.12).

The global distribution of carbon emissions 2010-2018



Interpretation. The share of North America (U.S.-Canada) in total global emissions (direct and indirect) was 21% on average in 2010-2018; this share rises to 36% if one looks at emissions greater than global average (6,2t CO₂e per year), 46% for emissions above 2,3 times the global average (i.e. the top 10% of world emitters, accounting for 45% of total emissions, compared to 13% for the bottom 50% of world emitters), and 57% of those emitting over 9,1 times the global average (i.e. the top 1% of world emitters, accounting for 14% of total emissions).

Sources and series: see piketty.pse.ens.fr/ideology (figure 13.7).

Conclusion

- By developing an economic, social, intellectual and political history of inequality regimes, I have tried in this book to show the fragilities and the permanent transformations of inequality regimes
- Today's inequality ideologies are not always more reasonable than those of the past, and they will also end up being replaced by others
- **History as the struggle of ideologies and the quest of justice**
- Unlike the pure class struggle, the struggle of ideologies relies on the exchange of ideas, the sharing of experience, and extensive deliberation. Nobody will ever have the ultimate truth on just property, just education, just taxation. Class struggles & ideological struggles are closely related, but are never fully aligned.

- **The conclusions presented in this book on participatory socialism and social-federalism may seem radical. But in fact they stand in the continuity of a long-run process toward democratic socialism** that has been going on since the 19th century and of institutional transformations experienced in the 20th century:
 - German-Nordic co-management, Anglo-American fiscal progressivity, Indian quotas-reservations, etc.
- Our modern democratic disarray partly stems from the fact that, insofar as the civic and political sphere is concerned, economics has attempted to cut itself free from the other social sciences. One central goal of this book is to try to enable citizens to reclaim possession of economic and historical knowledge.
- **Thanks a lot for your attention!**

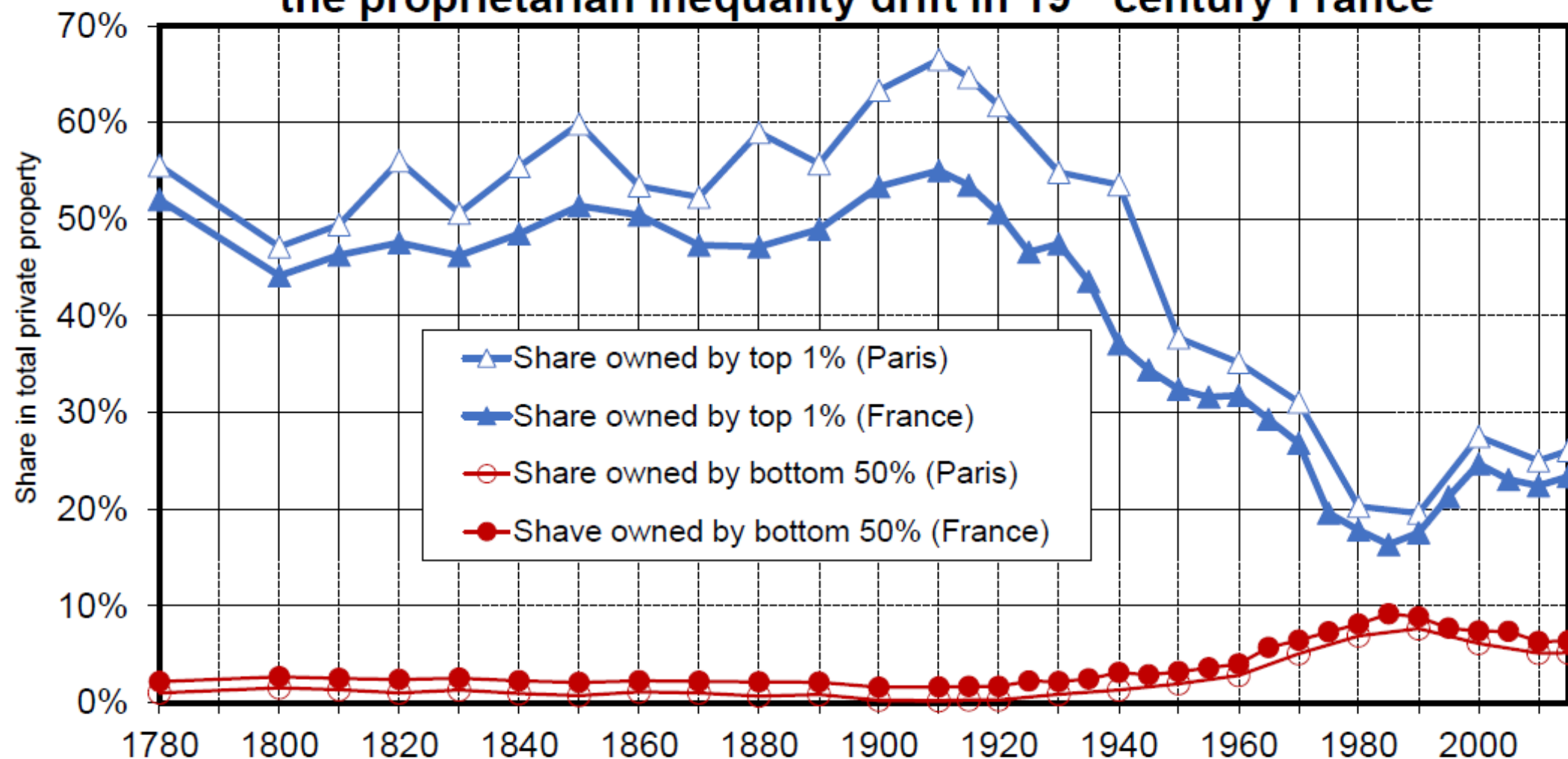
Elements for a longer presentation

- **1. The failure of Atlantic Revolutions, the sacralisation of property in the 19th century, the colonial inequality peak**
- **2. Social mobilizations, the political contradictions of capital accumulation, and the reduction of inequality in the 20th century**
- **3. Post-communism, the failure of reaganism, rising inequality and the risk of a new nationalist and identitarian drift in the 21st century**
- **4. Elements for an alternative path: the (slow) rise of social-federalism and participatory socialism**

1. The failure of Atlantic Revolutions, the sacralisation of property in the 19th century, the colonial inequality peak

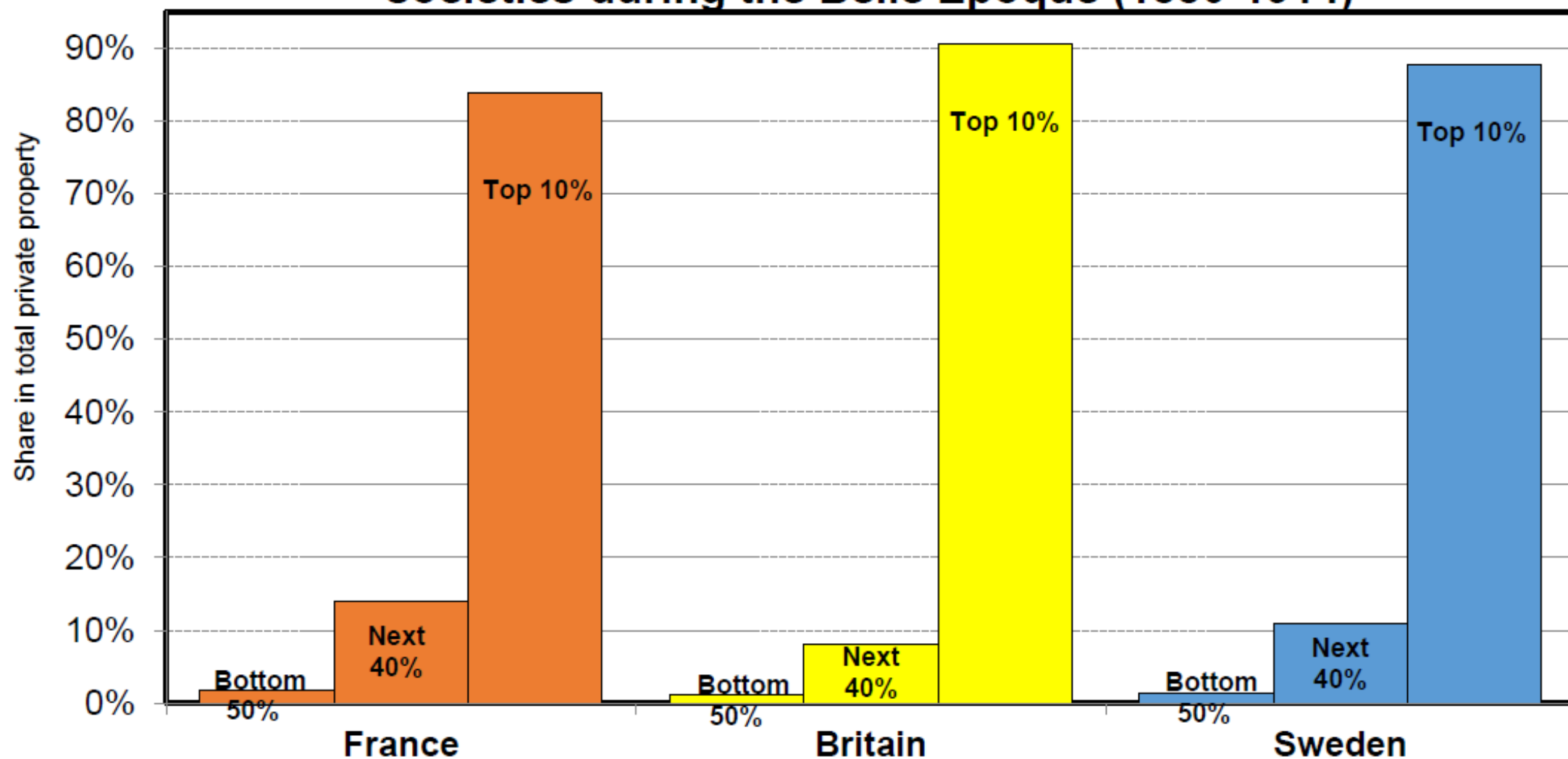
- French & US Revolutions proclaim the formal equality of rights. But in practice they largely rely on slavery, colonialism and racial segregation, and they sacralize the right of property as a new religion, partly because of the fear of not knowing where to stop redistribution.
→ rising inequality between 1815 and 1914
- Financial compensation to slave owners as an extreme form of sacralization of property and inequality
- **The colonial inequality peak: Europe's proprietarian societies 1880-1914**

The failure of the French Revolution: the proprietarian inequality drift in 19th century France



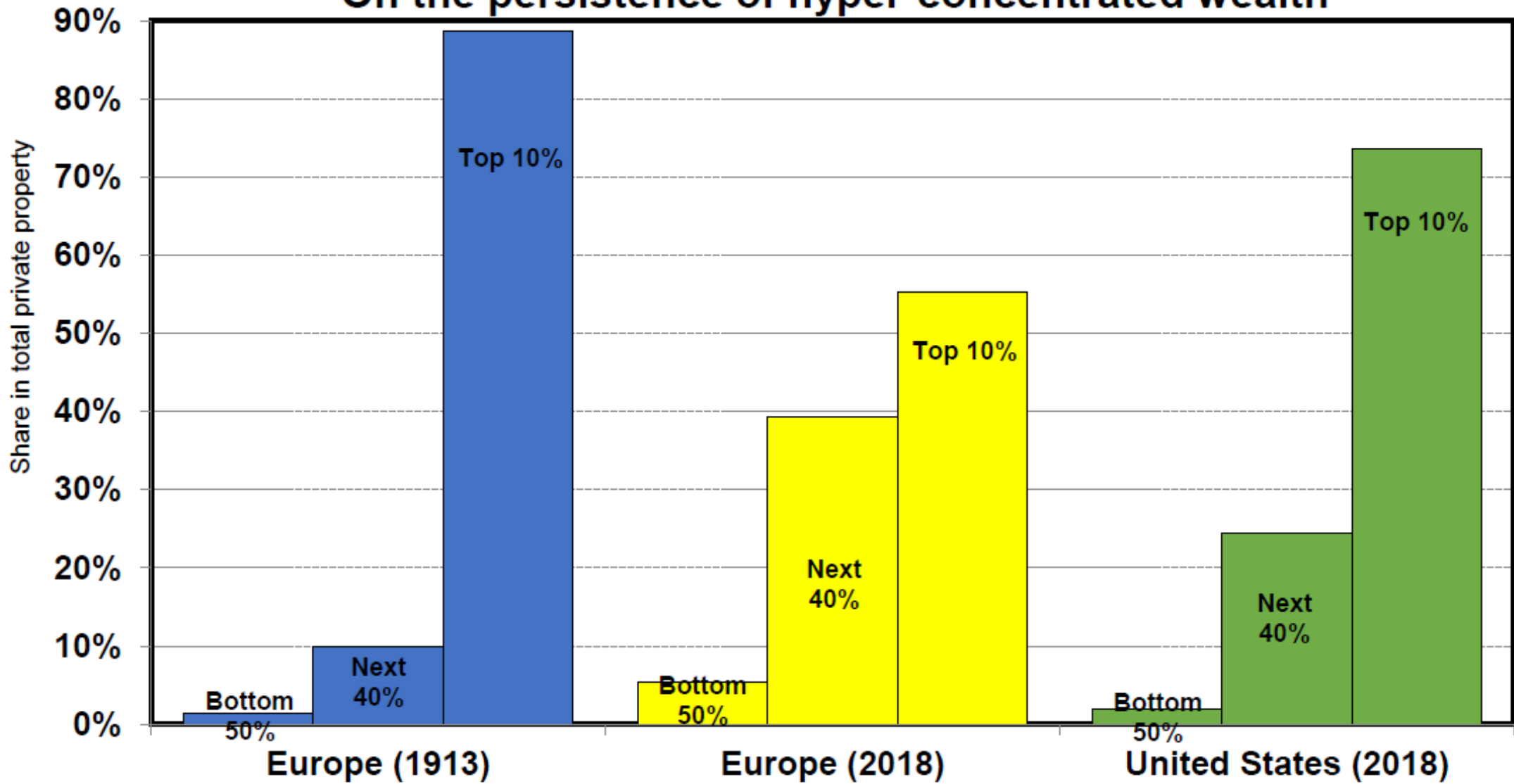
Interpretation. In Paris, the richest 1% owned about 67% of total private property in 1910 (all assets combined: real, financial, business, etc.), vs. 49% in 1810 and 55% in 1780. After a small drop during the French Revolution, the concentration of property rose in France (and particularly in Paris) during the 19th century and until World War I. In the long run, the fall in inequality occurred following the world wars (1914-1945), rather than following the Revolution of 1789. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 4.1)..

Extreme patrimonial inequality: Europe's proprietarian societies during the Belle Epoque (1880-1914)



Interpretation. The share the richest 10% in total private property (all assets combined: real estate, business and financial assets, net of debt) was on average 84% in France between 1880 and 1914 (vs. 14% for the next 40% and 2% for the bottom 50%), 91% in Britain (vs 8% and 1%) and 88% in Sweden (vs 11% and 1%). **Sources and series:** see piketty.pse.ens.fr/ideology (figure 5.6).

On the persistence of hyper-concentrated wealth



Reading. The share of the richest 10% in total private property was 89% in Europe (average of Britain, France and Sweden) in 1913 (compared with 1% for the bottom 50%), 55% in Europe in 2018 (compared to 5% for the bottom 50%) and 74% in the United States in 2018 (compared to 2% for the bottom 50%). **Sources and series:** see piketty.pse.ens.fr/ideology (figure 13.10).

Some progressive tax projects in 18th century France

Graslin : progressive tax on income

(Essai analytique sur la richesse et l'impôt , 1767)

Multiple of average income	Effective tax rate
0,5	5%
20	15%
200	50%
1300	75%

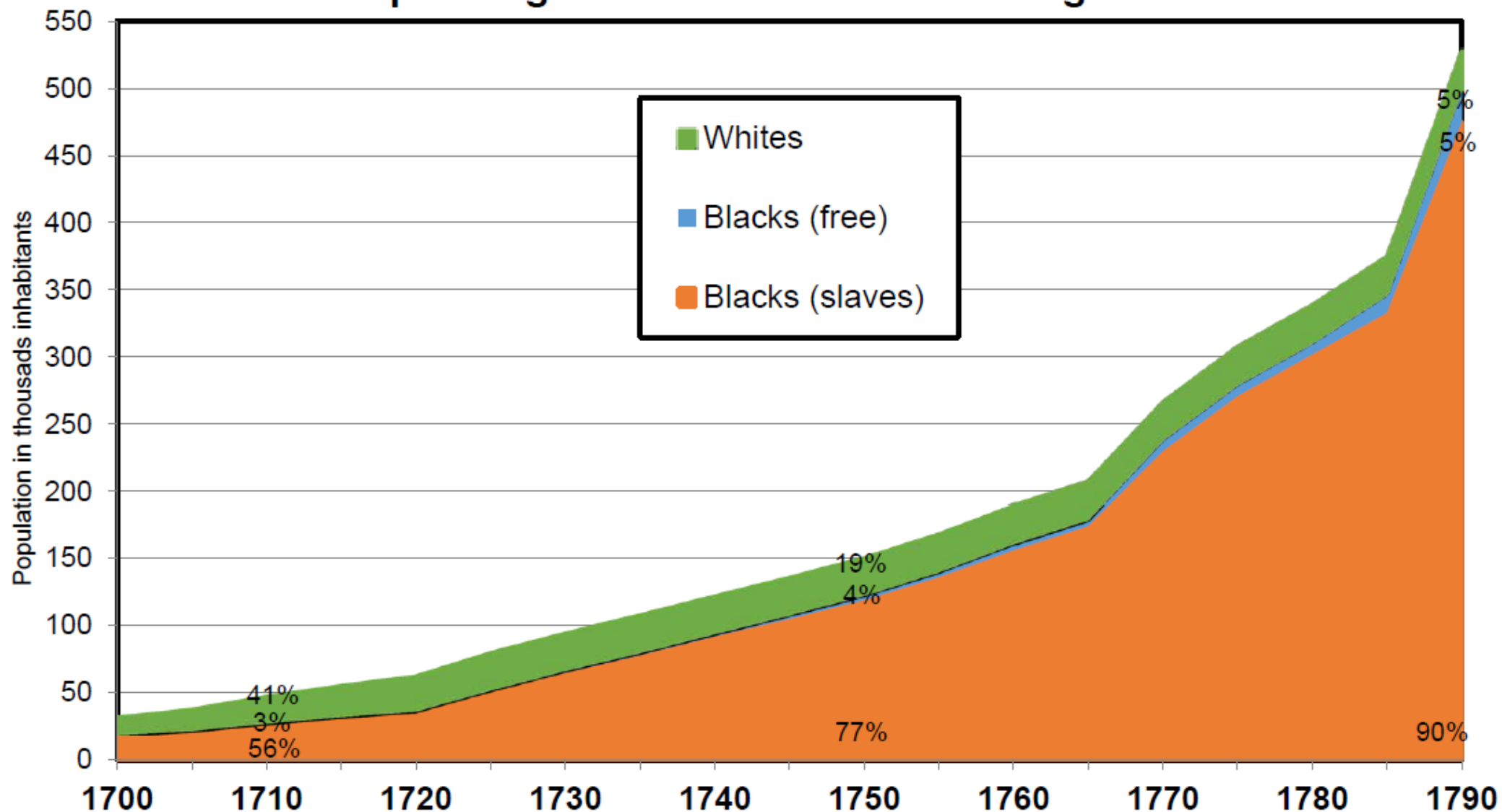
Lacoste : progressive tax on inheritance

(Du droit national d'hérédité, 1792)

Multiple of average wealth	Effective tax rate
0,3	6%
8	14%
500	40%
1500	67%

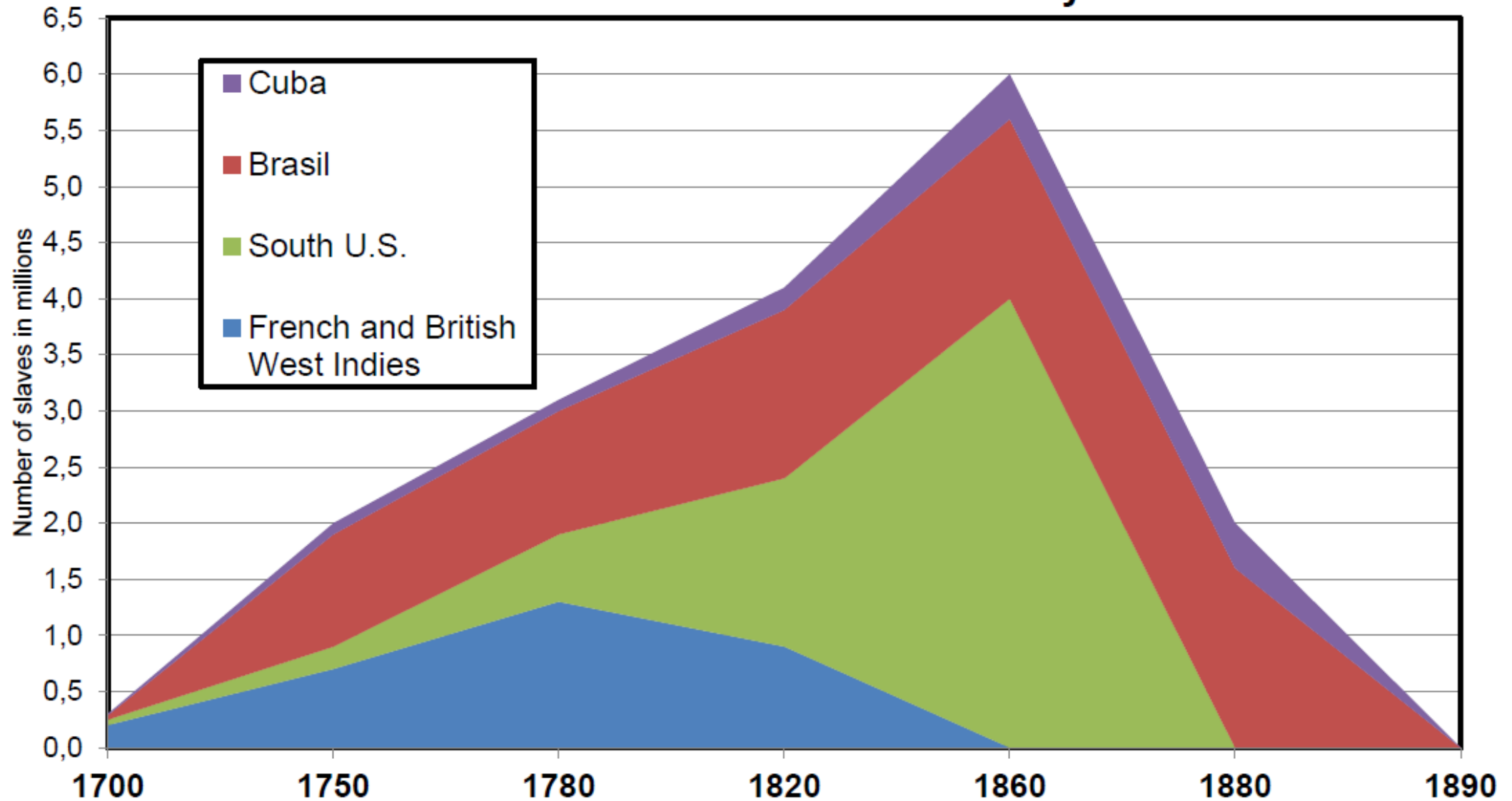
Interpretation. In the progressive income tax project presented by Graslin in 1767, the effective tax rate rose gradually from 5% for an annual income of 150 livres tournois (about half of average per adult income at the time) to 75% for an annual income of 400000 livres (about 1300 times average income). One observes a comparable progressivity with the progressive inheritance tax project presented by Lacoste in 1792. **Sources:** see piketty.pse.ens.fr/ideology (table 3.1).

An expanding slave island: Saint-Domingue 1700-1790



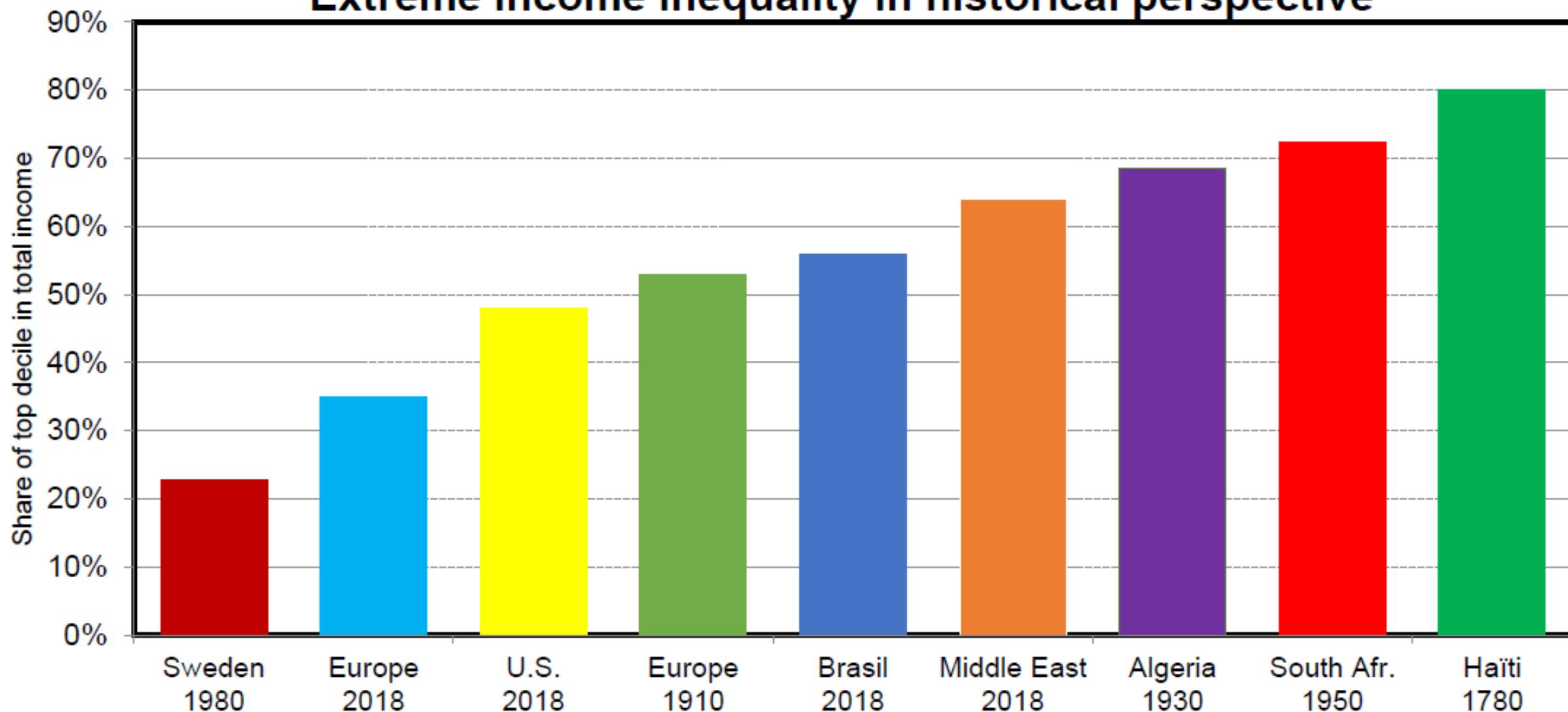
Interpretation. The total population of Saint-Domingue (Haïti) rose from less than 50 000 individuals in 1700-1710 (including 56% of slaves, 3% of coloured and mulatto free individuals and 41% of whites) to over 500 000 individuals in 1790 (including 90% of slaves, 5% of coloured and mulatto free individuals and 5% of whites). **Sources and series:** see piketty.pse.ens.fr/ideology (figure 6.2).

The rise and fall of Euro-American slavery 1700-1890



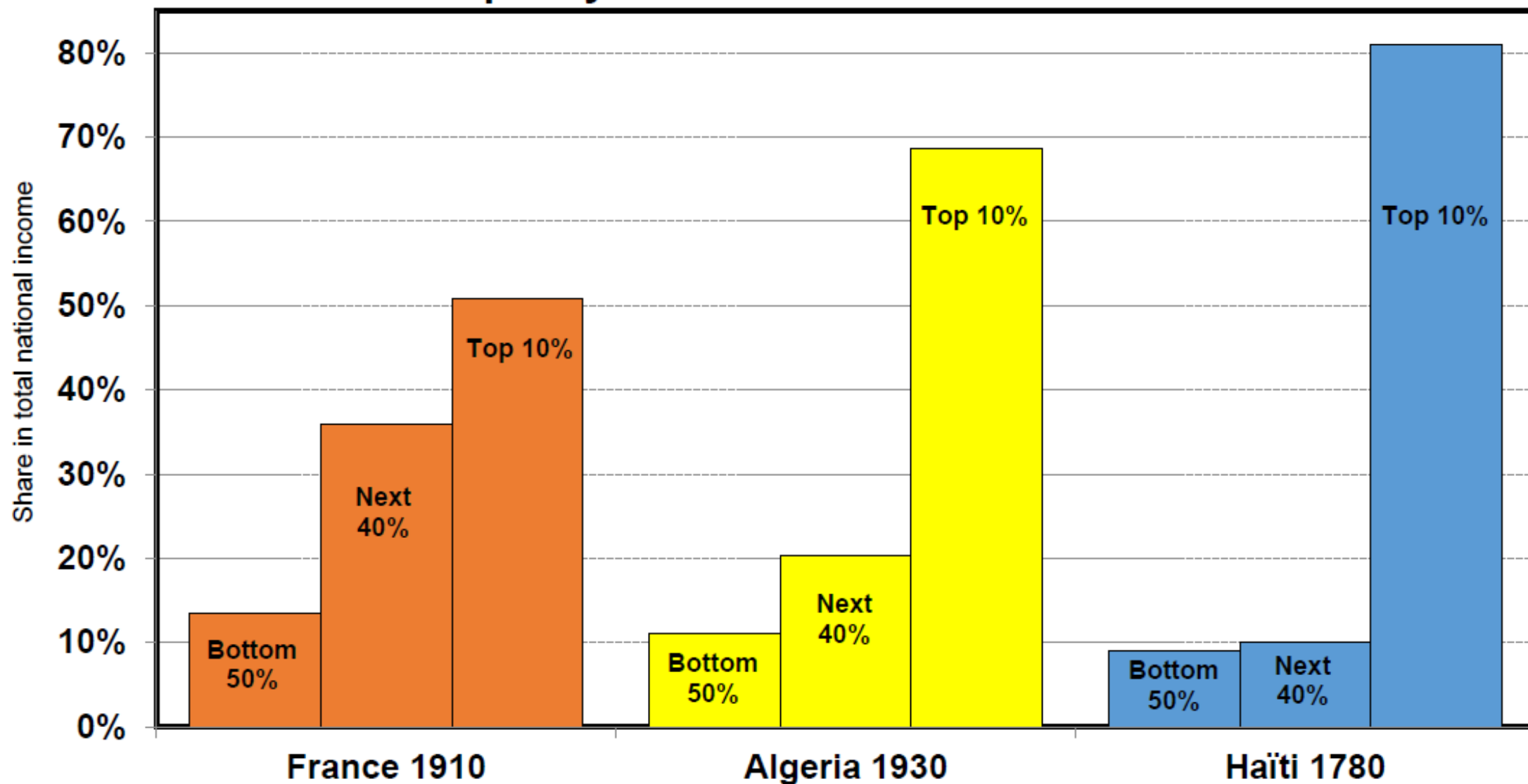
Interpretation. The total number of slaves in Euro-American Atlantic plantations reached 6 millions in 1860 (including 4 millions in south U.S., 1,6 millions in Brasil and 0,4 million in Cuba). Slavery in French and British West Indies (to which we added Mauritius, Reunion and Cape colony) reached its apex around 1780-1790 (1,3 millions) and then declined following the slave revolt in Saint-Domingue (Haïti) and the abolitions of 1833 and 1848. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 6.4).

Extreme income inequality in historical perspective



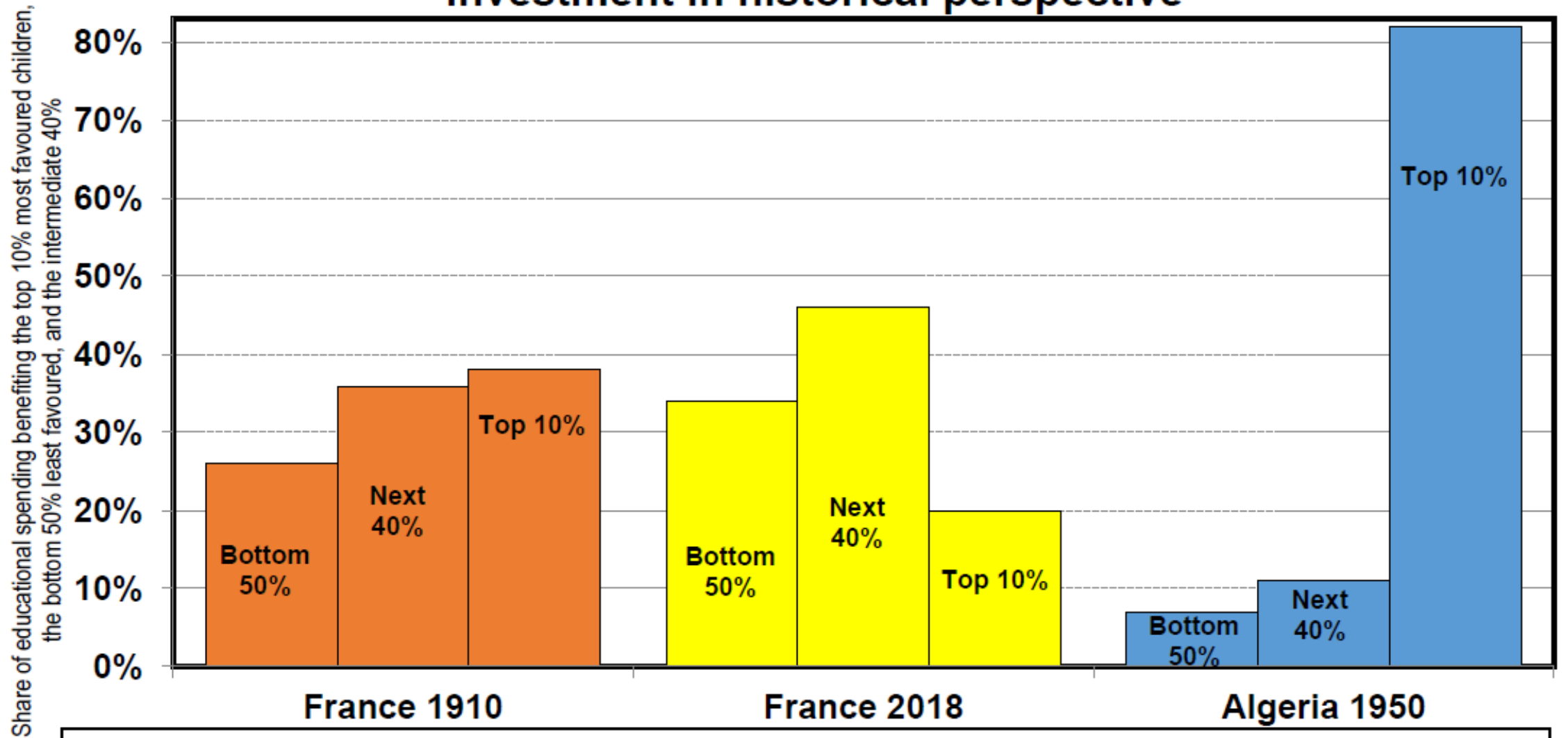
Interpretation. Over all observed societies, the share of total income received by the top 10% highest incomes varied from 23% in Sweden in 1980 to 81% in Saint-Domingue (Haiti) in 1780 (which included 90% of slaves). Colonial societies such as Algeria and South Africa have in 1930-1950 among the highest inequality levels ever observed in history, with about 70% of total income received by the top decile, which includes approximately the European population. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 7.3).

Inequality in colonial and slave societies



Interpretation. The share of the top 10% highest incomes in total income exceeded 80% in Saint-Domingue (Haïti) in 1780 (then made of about 90% slaves and less than 10% European settlers), vs close to 70% in colonial Algeria in 1930 (then made of about 90% local population and 10% European settlers), and about 50% in metropolitan France in 1910. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 7.2).

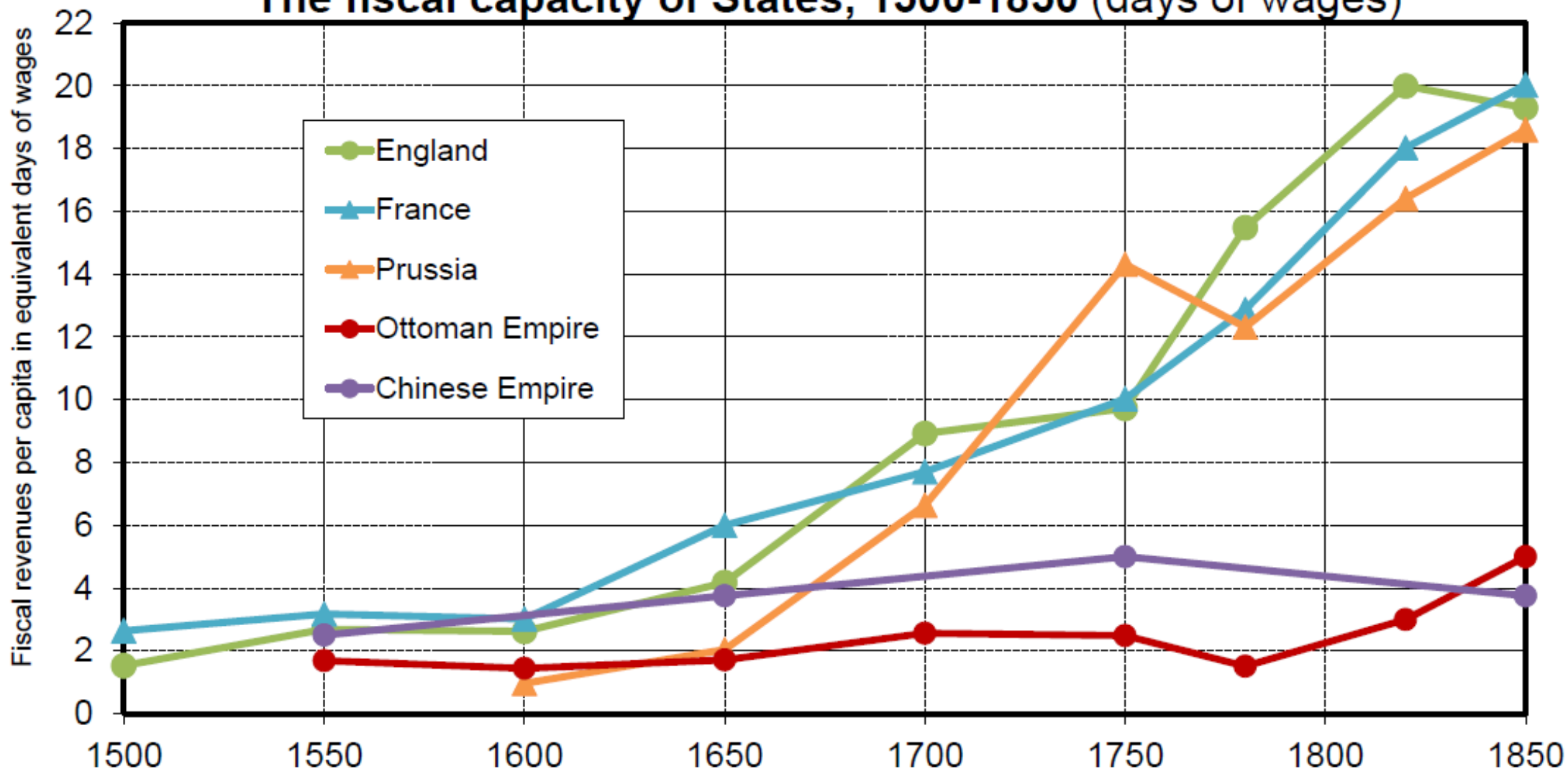
Colonies for the colonizers: inequality of educational investment in historical perspective



Interpretation. In Algeria in 1950, the 10% the most favoured (the settlers) benefited from 82% of total educational spending. By comparison, the share of total educational spending benefiting the top 10% of the population which benefited from the highest educational investment (i.e. those children which did the longest and most expensive studies) was 38% in France in 1930 and 20% in 2018.

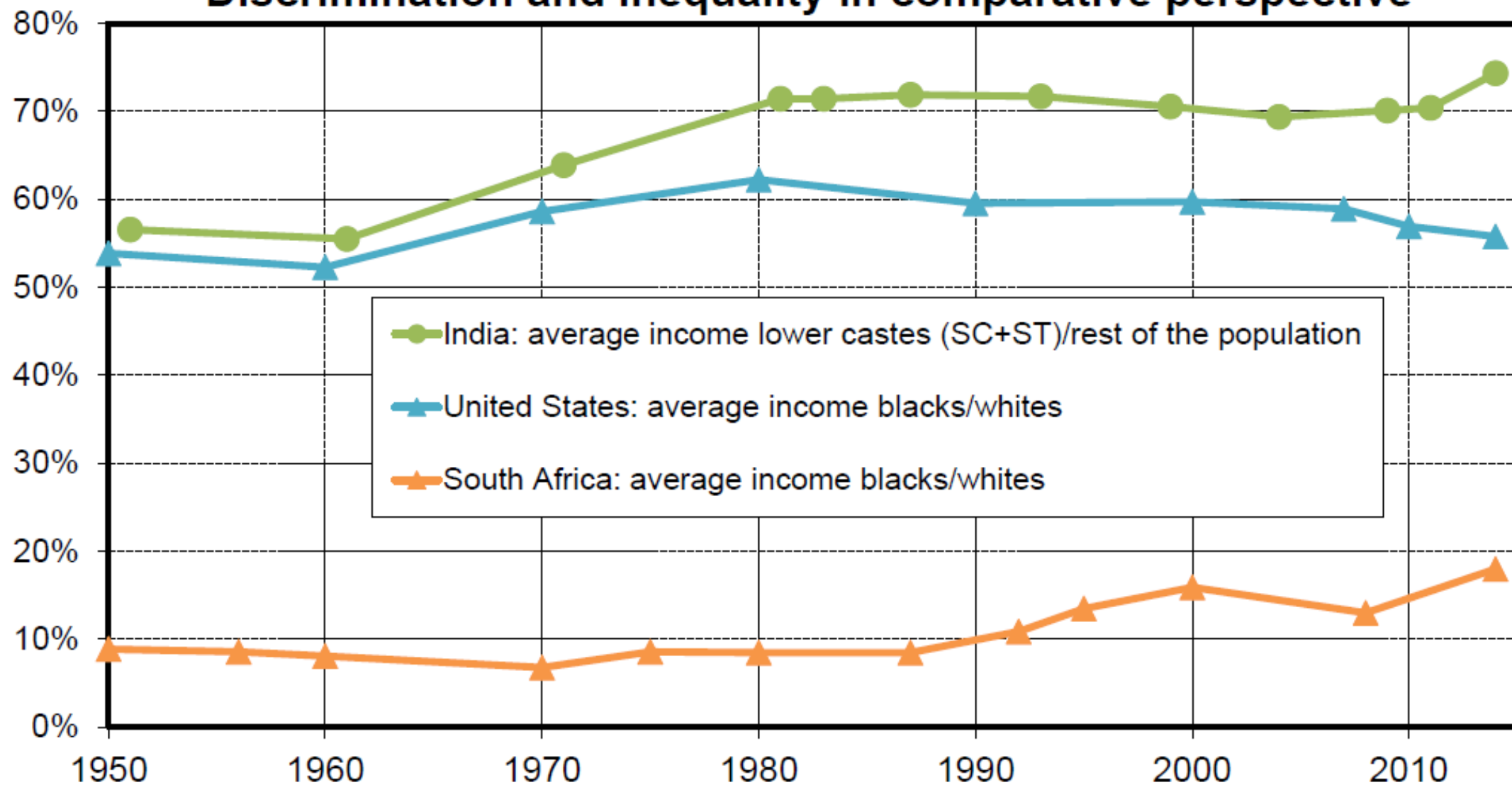
Sources and series: see piketty.pse.ens.fr/ideology (figure 7.8).

The fiscal capacity of States, 1500-1850 (days of wages)



Interpretation. Around 1500-1600, tax revenues per inhabitant the main European States were between 2 and 4 days of urban unskilled maneuver wages; in 1750-1780, they were between 10 and 20 days of unskilled wages. Per inhabitant fiscal revenues remained around 2-5 days of wages in the Ottoman Empire as well as in the Chinese Empire. With a per inhabitant national income estimated to be around 250 days of unskilled urban wage, this implies that tax revenues have stagnated around 1%-2% of national income in Chinese and Ottoman Empires, while they rose from 1%-2% to 6%-8% of national income in Europe. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 9.2).

Discrimination and inequality in comparative perspective

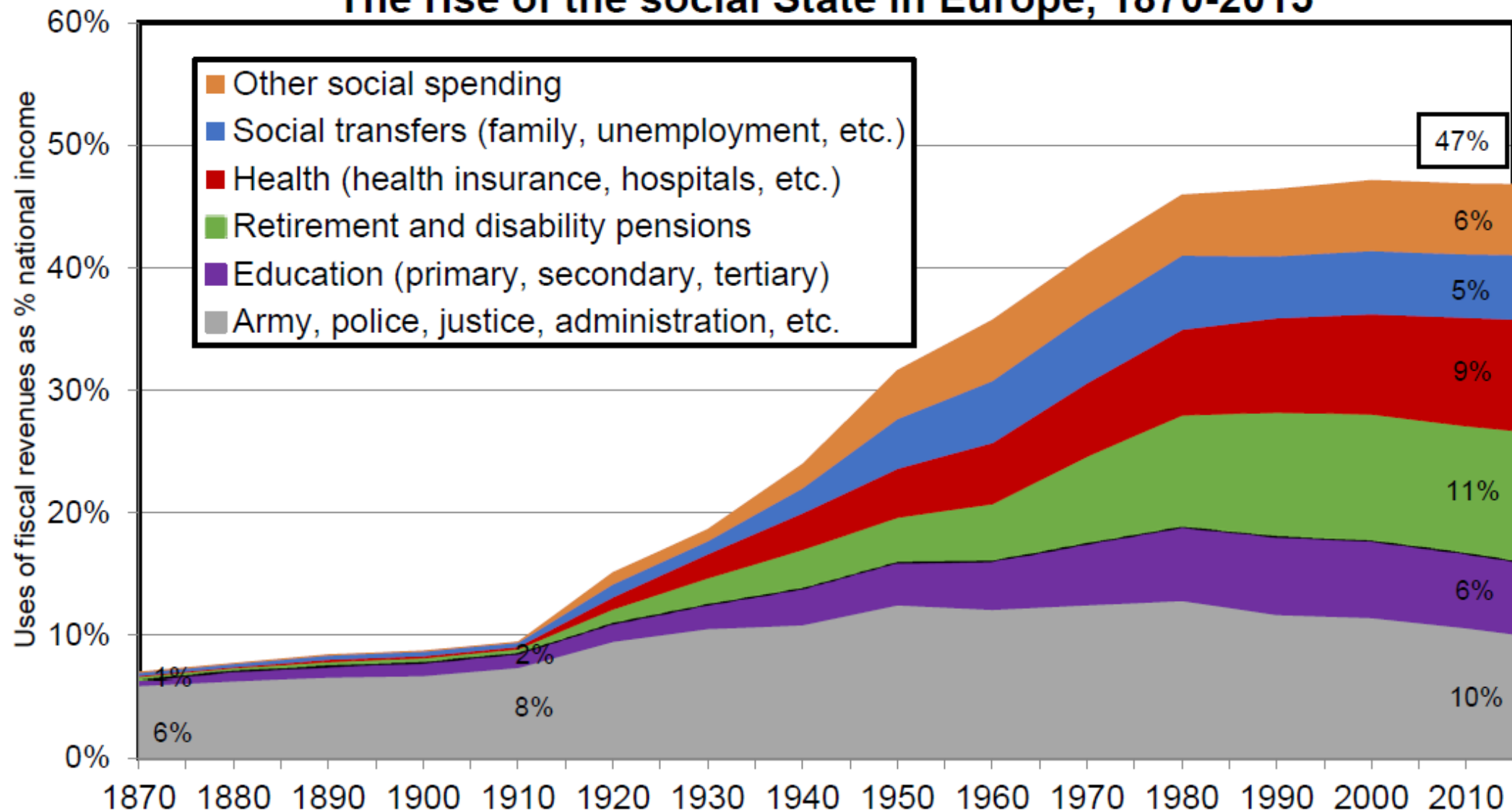


Interpretation. The ratio between the average income of lower castes in India (scheduled castes and tribes, SC+ST, ancient discriminated groups of untouchables and aboriginal tribes) and that of the rest of the population rise from 57% in 1950 to 74% in 2014. The ratio between the average income of Blacks and Whites rose over the same period from 54% to 56% in the United States, and from 9% to 18% in South Africa. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 8.6).

2. Social mobilizations, the political contradictions of capital accumulation, and the reduction of inequality in the 20th century

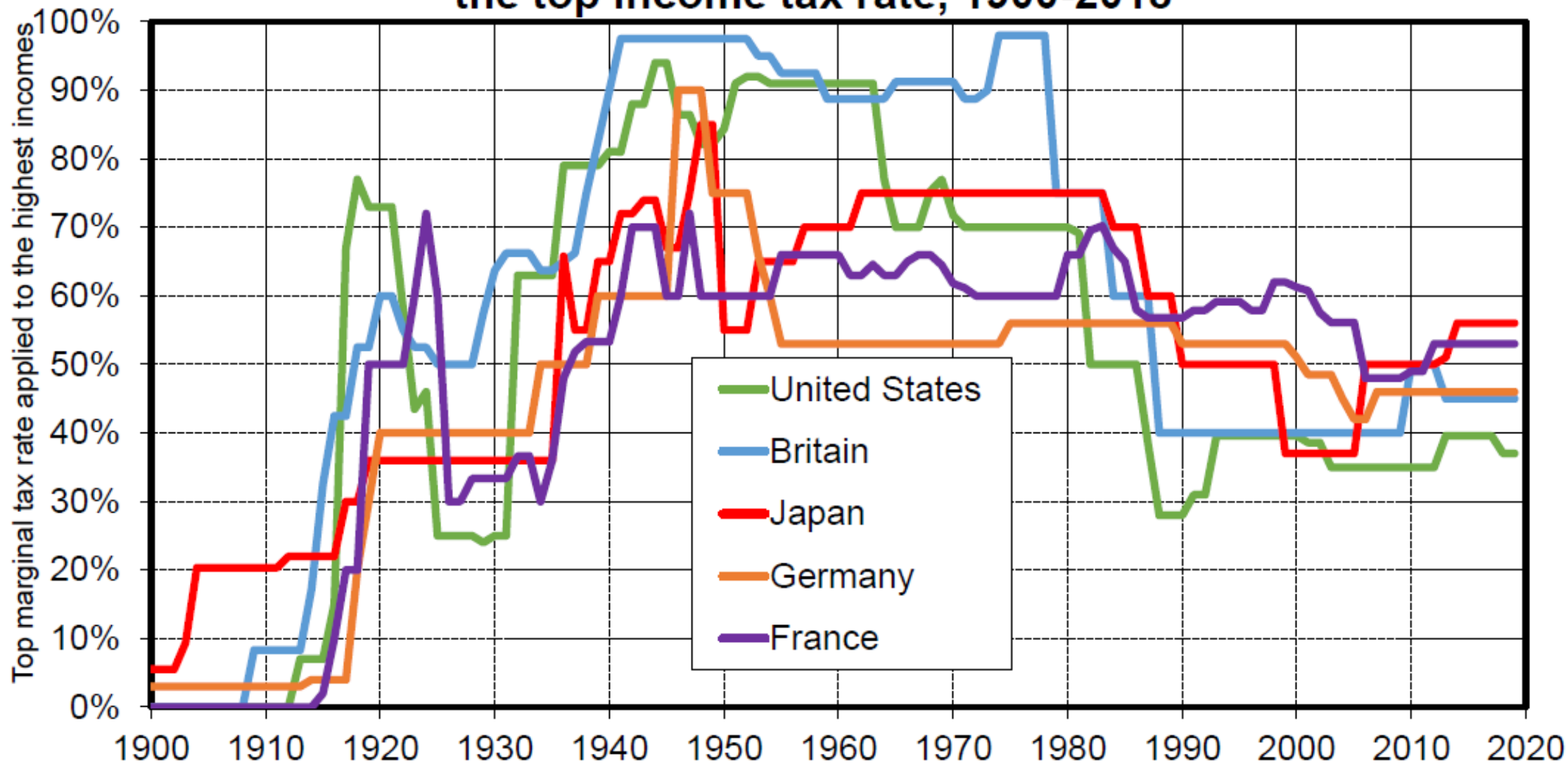
- Social mobilizations and socialist movements led to the beginning of a process toward the reduction of inequality in the late 19th and early 20th centuries
- This process has been strongly accelerated by the violent crisis of the 1914-1945 period, which can themselves be viewed as the consequences of the strong tensions created by domestic and international inequality

The rise of the social State in Europe, 1870-2015



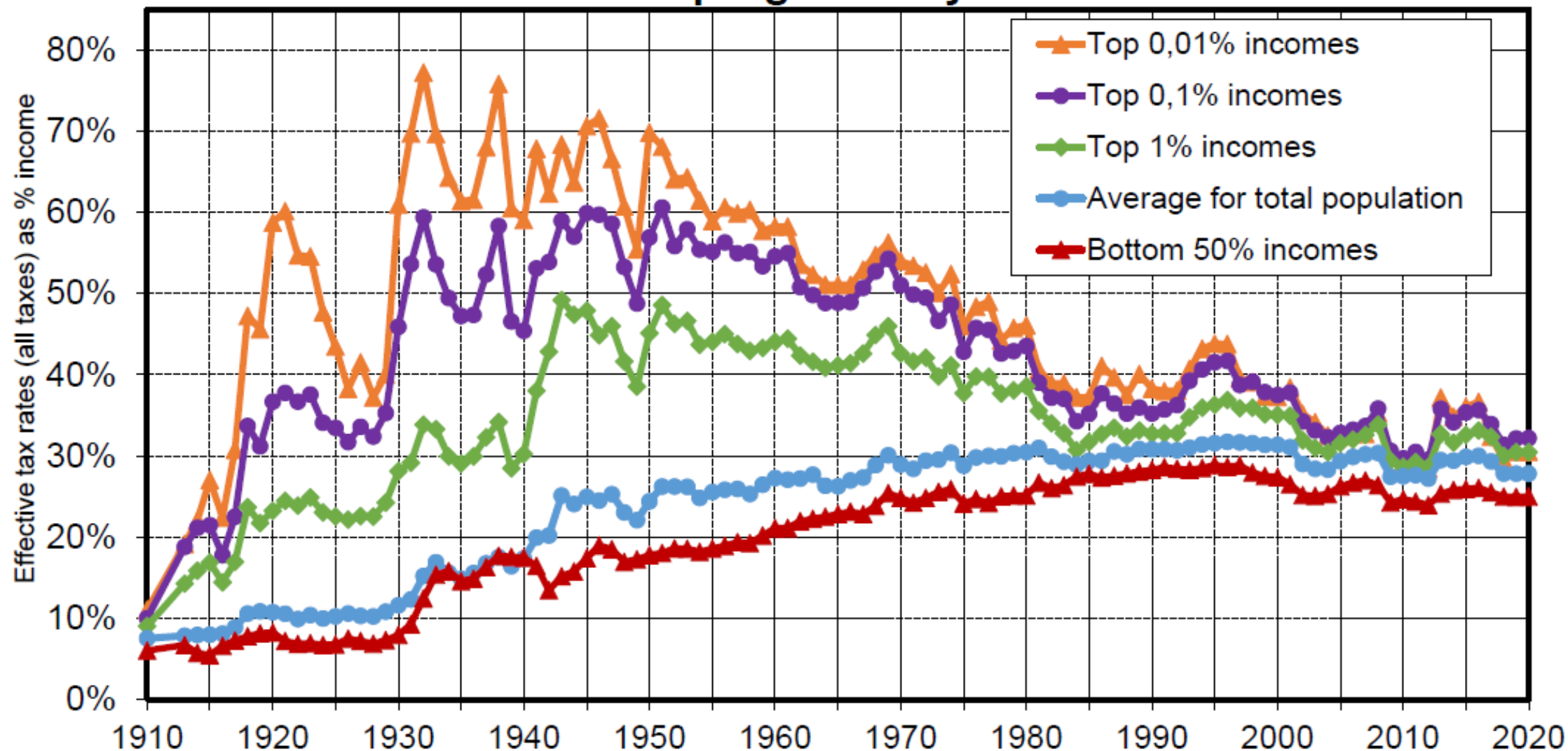
Interpretation. In 2015, fiscal revenues represented 47% of national income on average in Western Europe et were used as follows: 10% of national income for regalian expenditure (army, police, justice, general administration, basic infrastructure: roads, etc.); 6% for education; 11% for pensions; 9% for health; 5% for social transfers (other than pensions); 6% for other social spending (housing, etc.). Before 1914, regalian expenditure absorbed almost all fiscal revenues. **Note.** The evolution depicted here is the average of Germany, France, Britain and Sweden (see figure 10.14). **Sources and séries:** see piketty.pse.ens.fr/ideology (figure 10.15).

The invention of progressive taxation: the top income tax rate, 1900-2018



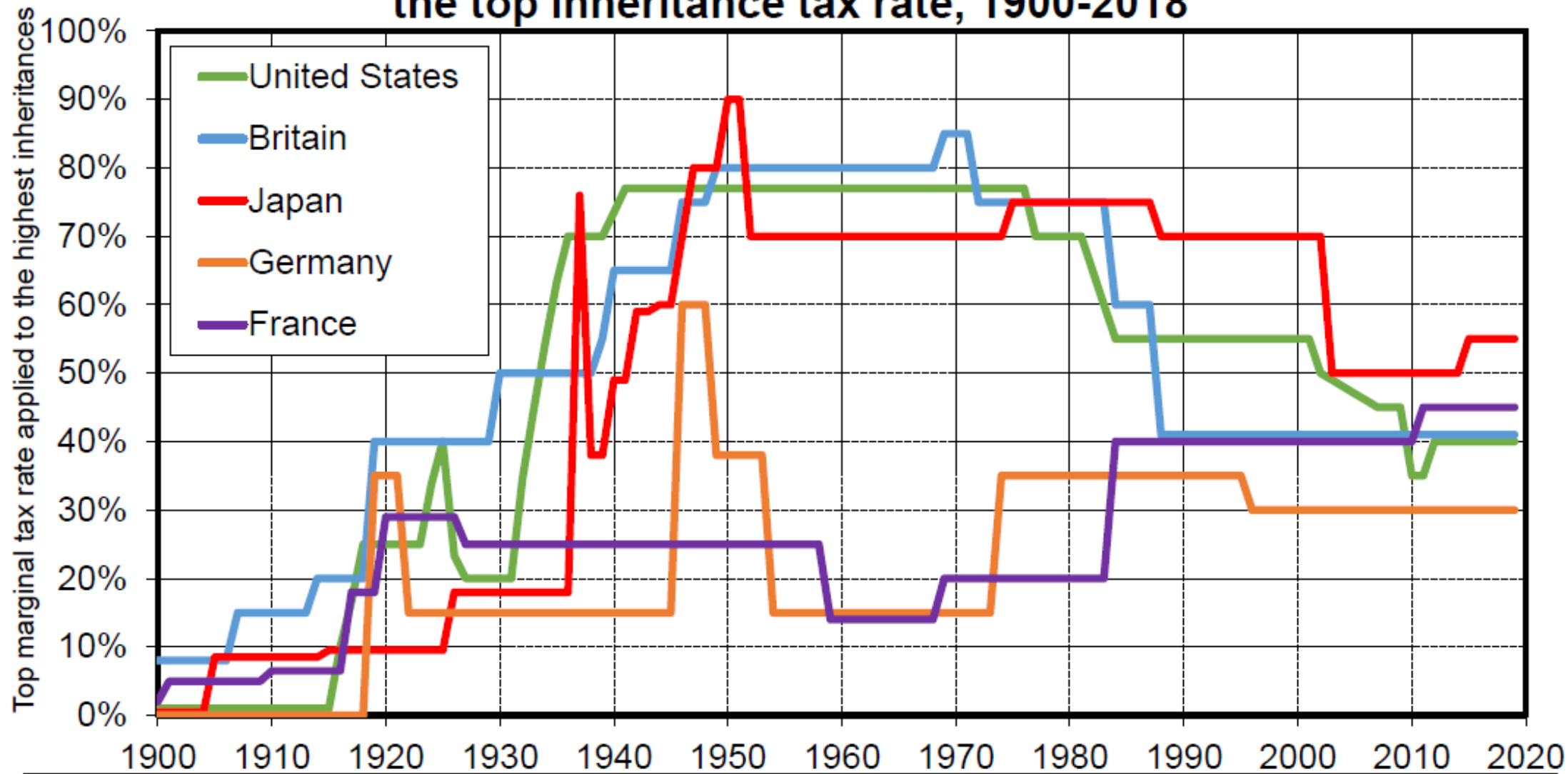
Interpretation. The marginal income tax rate applied to the highest incomes was on average 23% in the U.S. from 1900 to 1932, 81% from 1932 to 1980 and 39% from 1980 to 2018. Over these same periods, the top rate was equal to 30%, 89% and 46% in Britain, 26%, 68% and 53% in Japan, 18%, 58% and 50% in Germany, and 23%, 60% and 57% in France. Progressive taxation peaked in mid-century, especially in the U.S. and in Britain. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 10.11).

Effective rates and progressivity in the U.S. 1910-2020



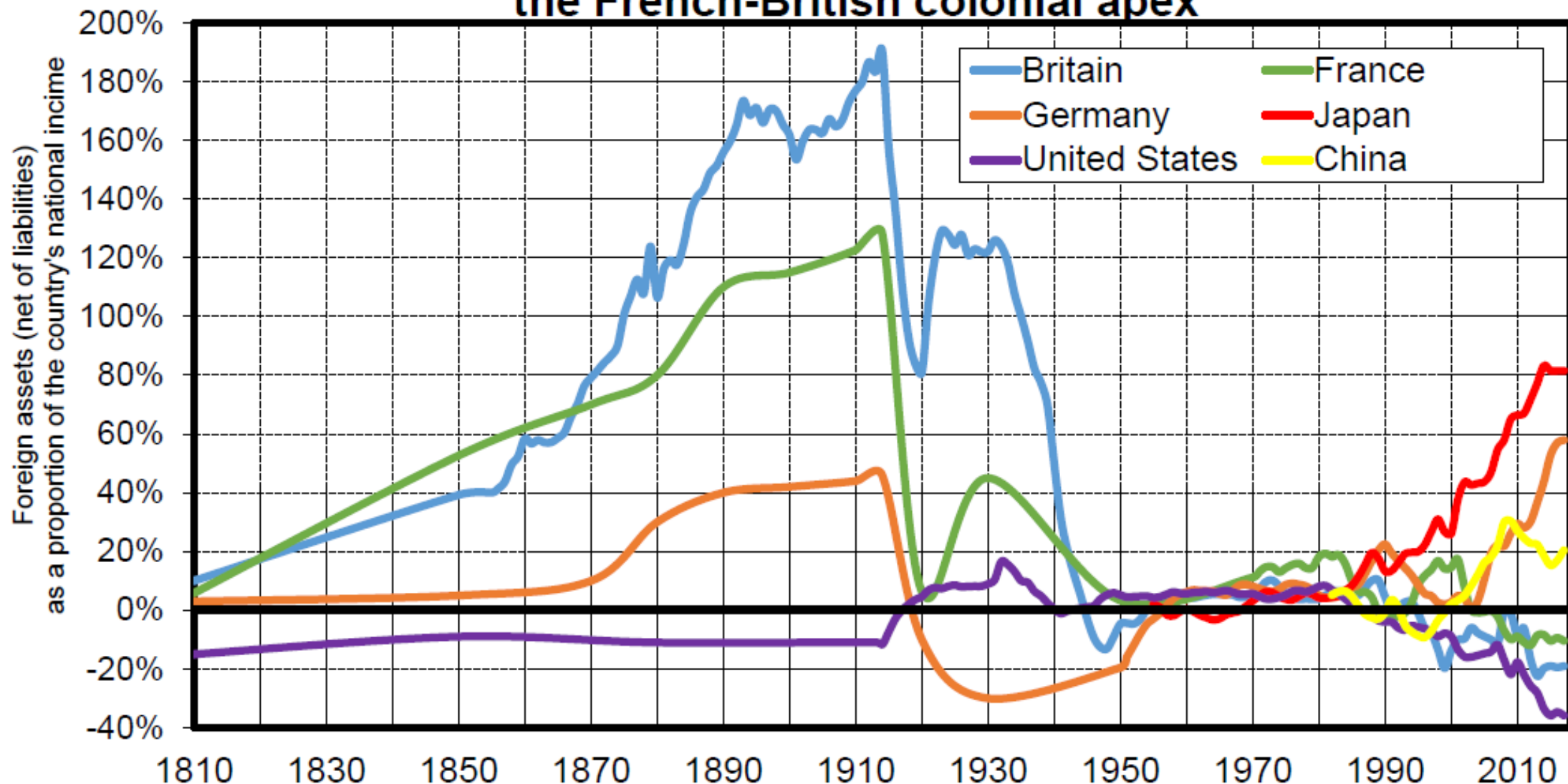
Interpretation. From 1915 to 1980, the tax system was highly progressive in the U.S., in the sense that effective tax rates paid by the highest income groups (all taxes included, and as % of pretax income) was significantly larger than the average effective tax rate paid by the the total population (and particularly by the bottom 50% incomes). Since 1980, the tax system has not been very progressive, with little differences in effective tax rates across groups. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 10.13).

The invention of progressive taxation: the top inheritance tax rate, 1900-2018



Interpretation. The marginal inheritance tax rate applied to the highest inheritances was on average 12% in the U.S. from 1900 to 1932, 75% from 1932 to 1980 and 50% from 1980 to 2018. Over these same periods, the top rate was equal to 25%, 72% and 46% in Britain, 9%, 64% and 63% in Japan, 8%, 23% and 32% in Germany, and 15%, 22% and 39% in France. Progressivity was maximal in mid-century, especially in the U.S. and in Britain. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 10.12).

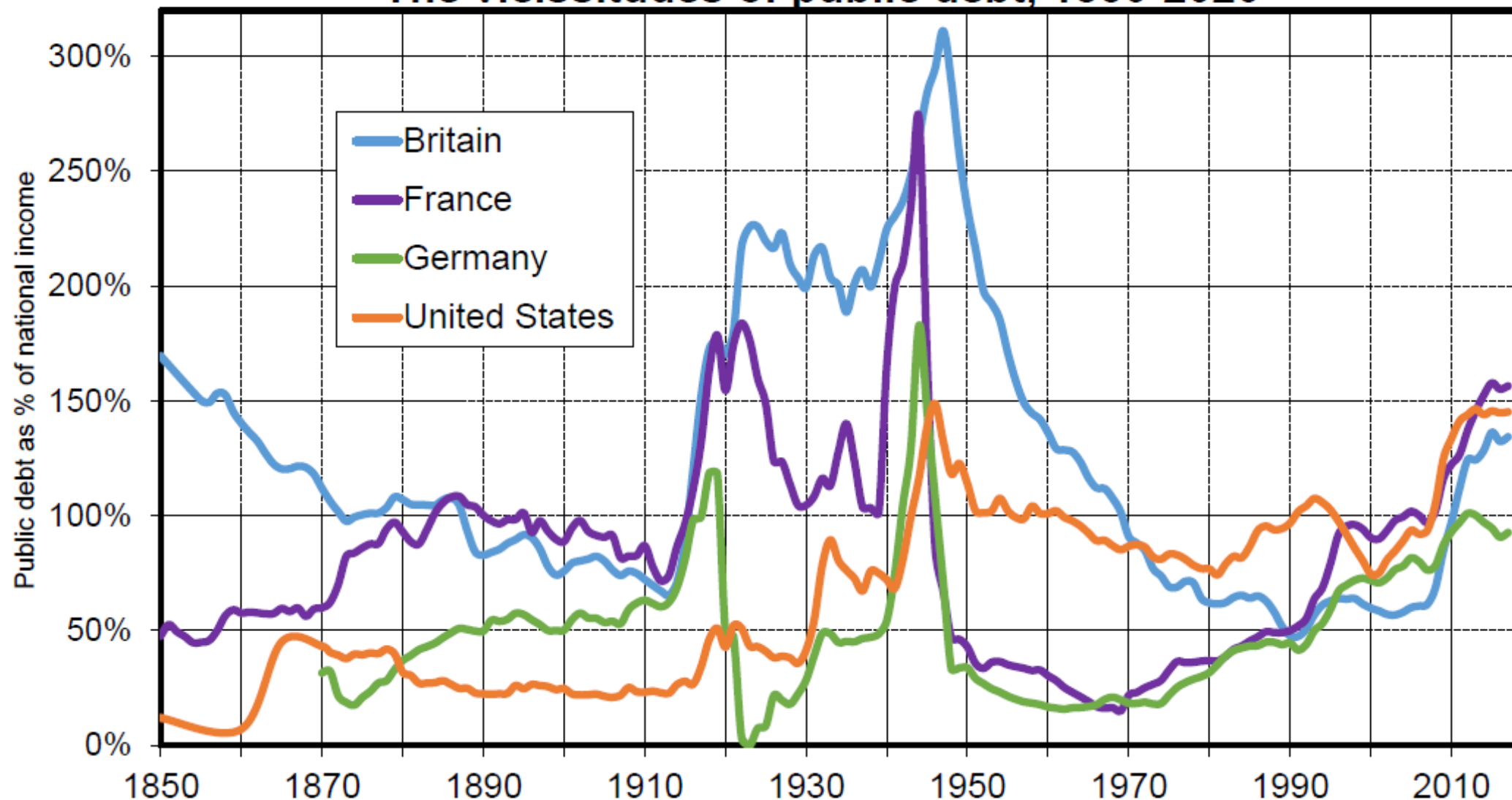
Foreign assets in historical perspective: the French-British colonial apex



Interpretation. Net foreign assets, i.e. the difference between assets owned abroad by resident owners (including in some cases the government) and liabilities (i.e. assets owned in the country by foreign owners), amounted in 1914 to 191% of national income in Britain and 125% in France. In 2018, net foreign assets reach 80% of national income in Japan, 58% in Germany and 20% in China.

Sources and series: see piketty.pse.ens.fr/ideology (figure 7.9).

The vicissitudes of public debt, 1850-2020

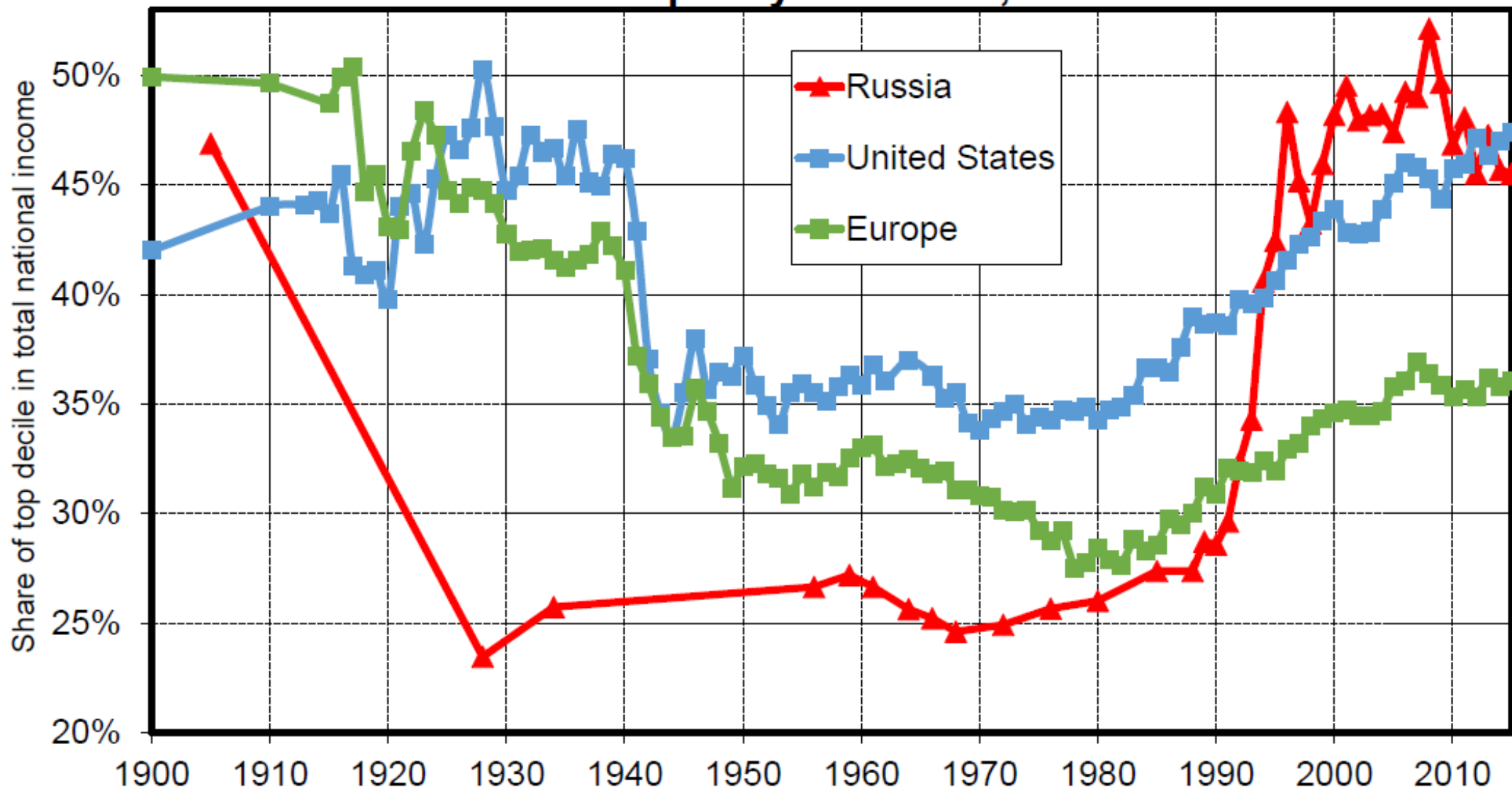


Interpretation. Public debt rose strongly after each world war and reached between 1500% and 300% of national income in 1945-1950, before falling sharply in Germany and France (debt cancellations, high inflation) and more gradually in Britain and the U.S. (moderate inflation, growth). Public assets (especially real estate and financial assets) have fluctuated less strongly over time and generally represent around 100% of national income. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 10.9).

3. Post-communism, the failure of reaganism, rising inequality and the risk of a new nationalist and identitarian drift in the 21st century

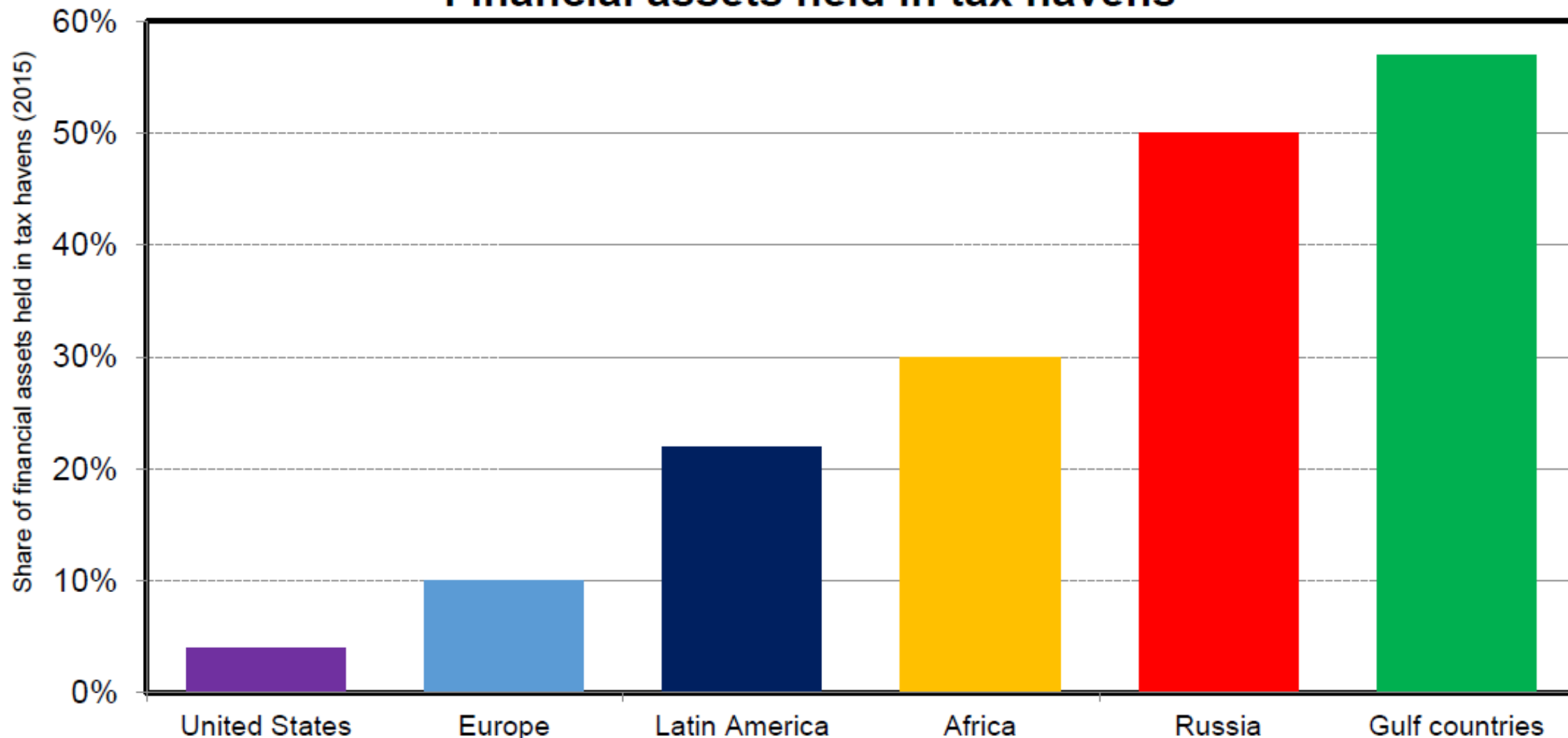
- Post-communism has become the best ally of hyper-capitalism: it feeds a general disillusion about the possibility of a just economy and of any form of egalitarian internationalism
- The failure of reaganism and the rise of inequality have also contributed to the new forms of nationalism and identitarian drifts
- **Crisis are not sufficient to lead to the reduction of inequality. See e.g. post-2008 money creation. It all depends on the intellectual, political and institutional mobilizations and solutions emerging from the crisis.**
In the short-run, the nativist-proprietary path may look easier to follow than the internationalist-socialist path. But it won't solve the problems.

Income inequality in Russia, 1900-2015



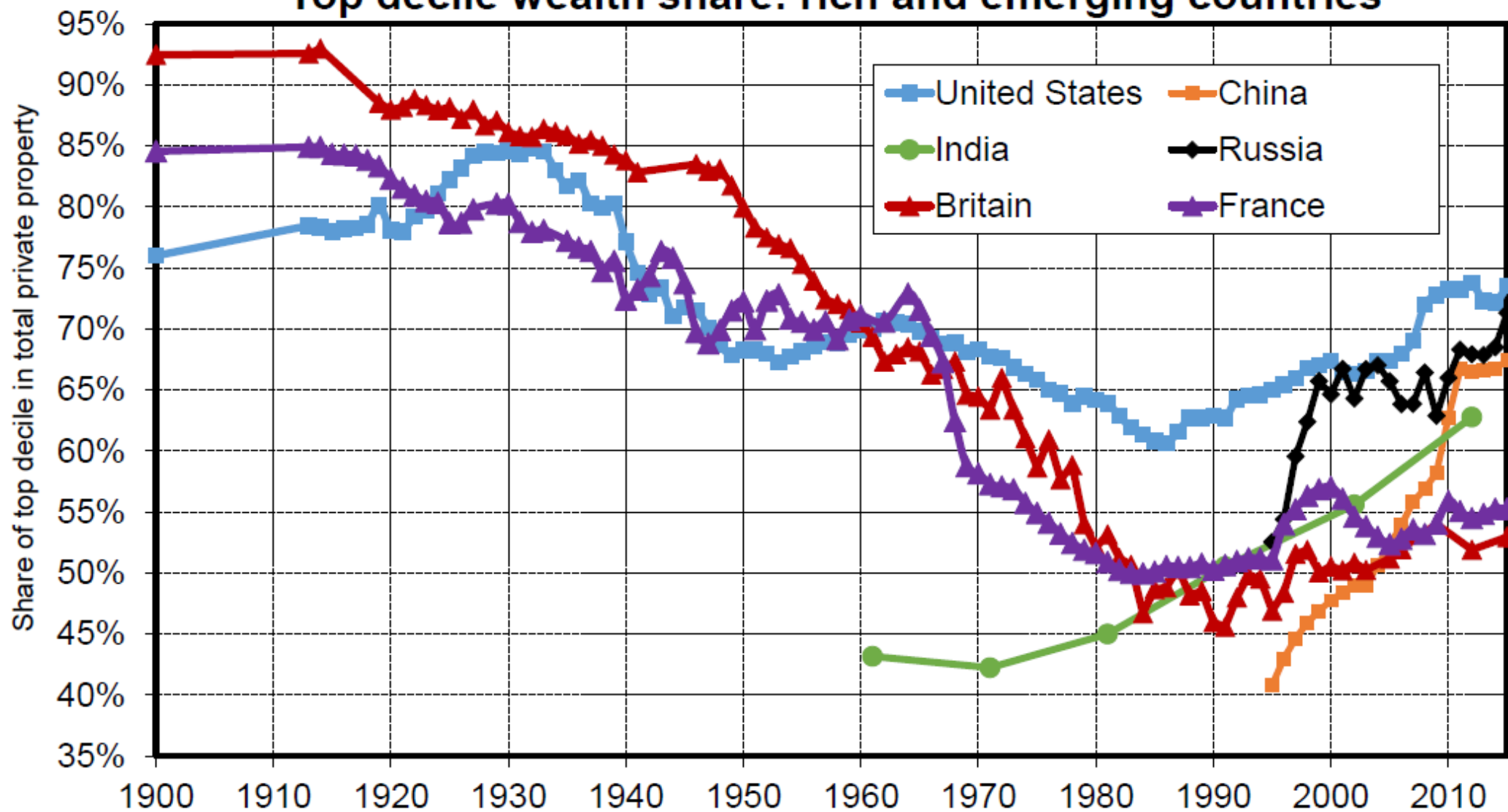
Interpretation. The share of the top decile (the 10% highest incomes) in total national income was on average about 25% in soviet Russia, i.e. at a lower level than in Western Europe and the U.S., before rising to 45%-50% after the fall of communism, surpassing both Europe and the U.S.. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 12.1).

Financial assets held in tax havens



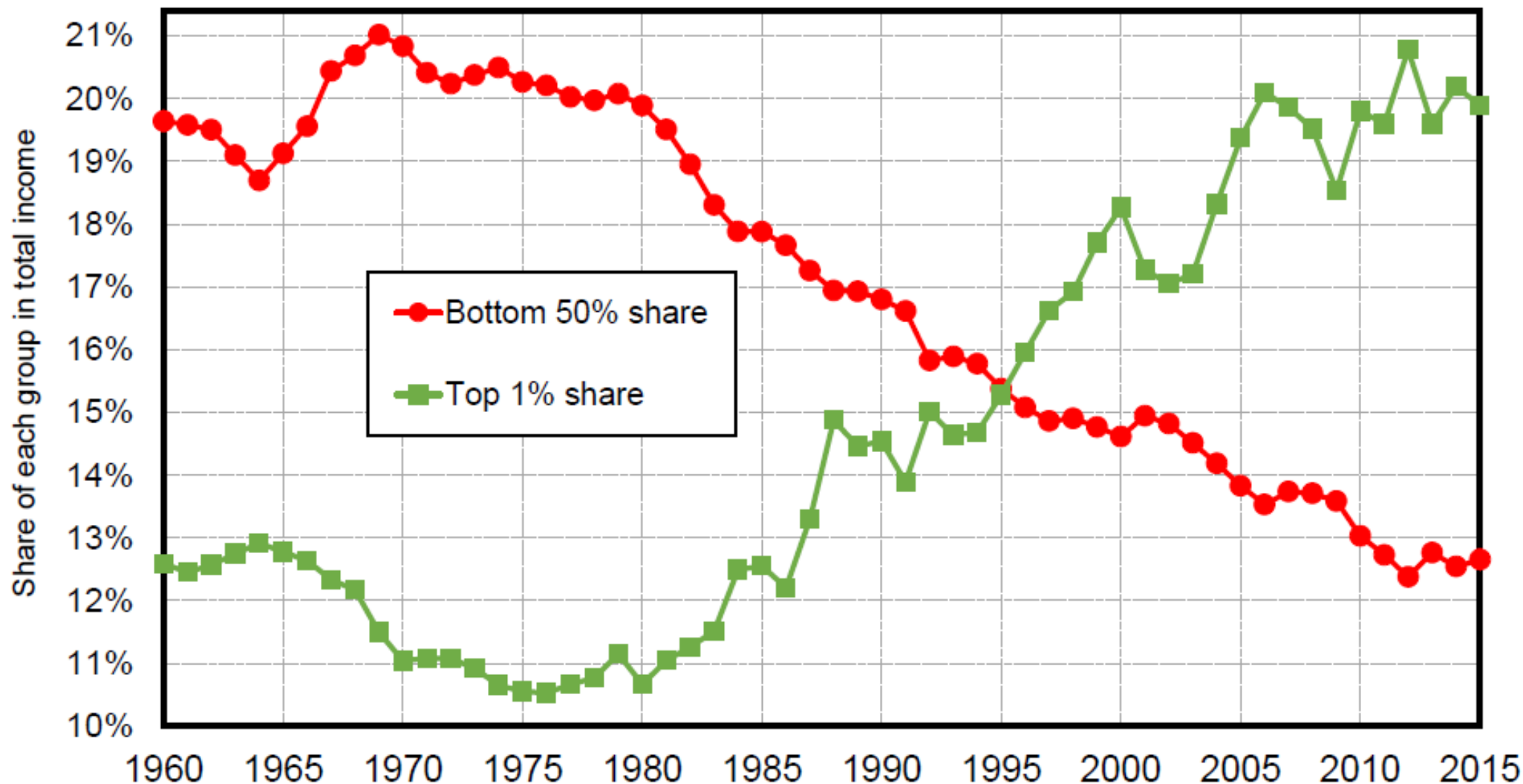
Interpretation. By exploiting anomalies in international financial statistics and the breakdowns by country of residence published by the Bank of International Settlements and the Swiss National Bank, one can estimate that the share of financial assets held via tax havens reaches 4% in the U.S., 10% in Europe and 50% in Russia. These estimates exclude non-financial assets (such as real estate) and financial assets unreported to BIS and SNB and should be considered minimum estimates. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 12.5).

Top decile wealth share: rich and emerging countries



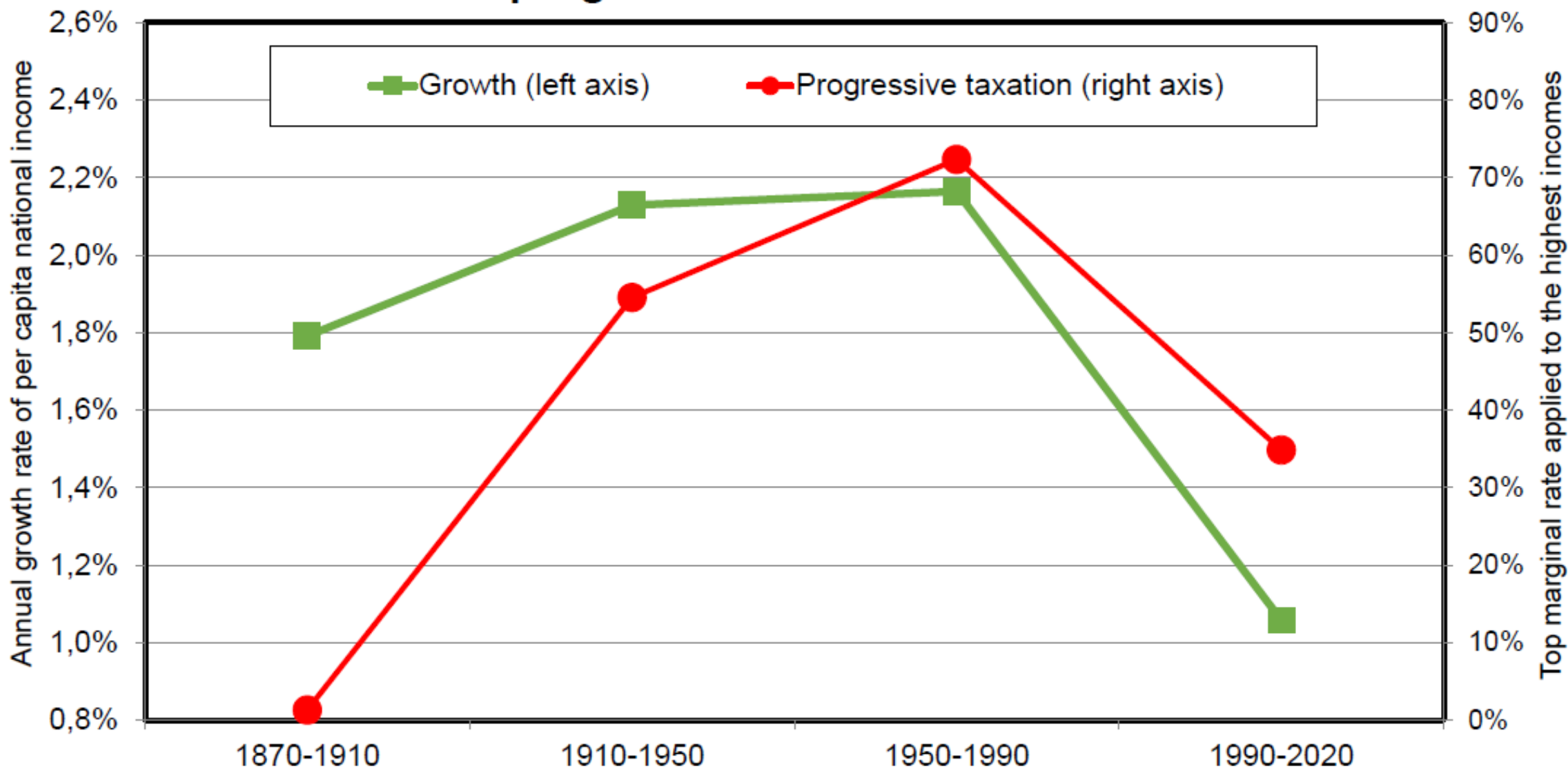
Reading. The share of the top decile (the 10% largest wealth owners) in total private property (all assets combined: real estate, business and financial assets, net of debt) increased strongly in China, Russia, India and the United States since the 1980s-1990s, and to a lesser extent in Britain and France. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 13.8).

The fall of the bottom 50% share: U.S. 1960-2015



Interpretation. The share of the bottom 50% lowest incomes in the U.S. dropped from about 20% of total income in the 1970s to about 12%-13% in the 2010s. Over the same period, the share going to the top 1% highest incomes rose from 11% of total income to 20%-21%. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 11.5).

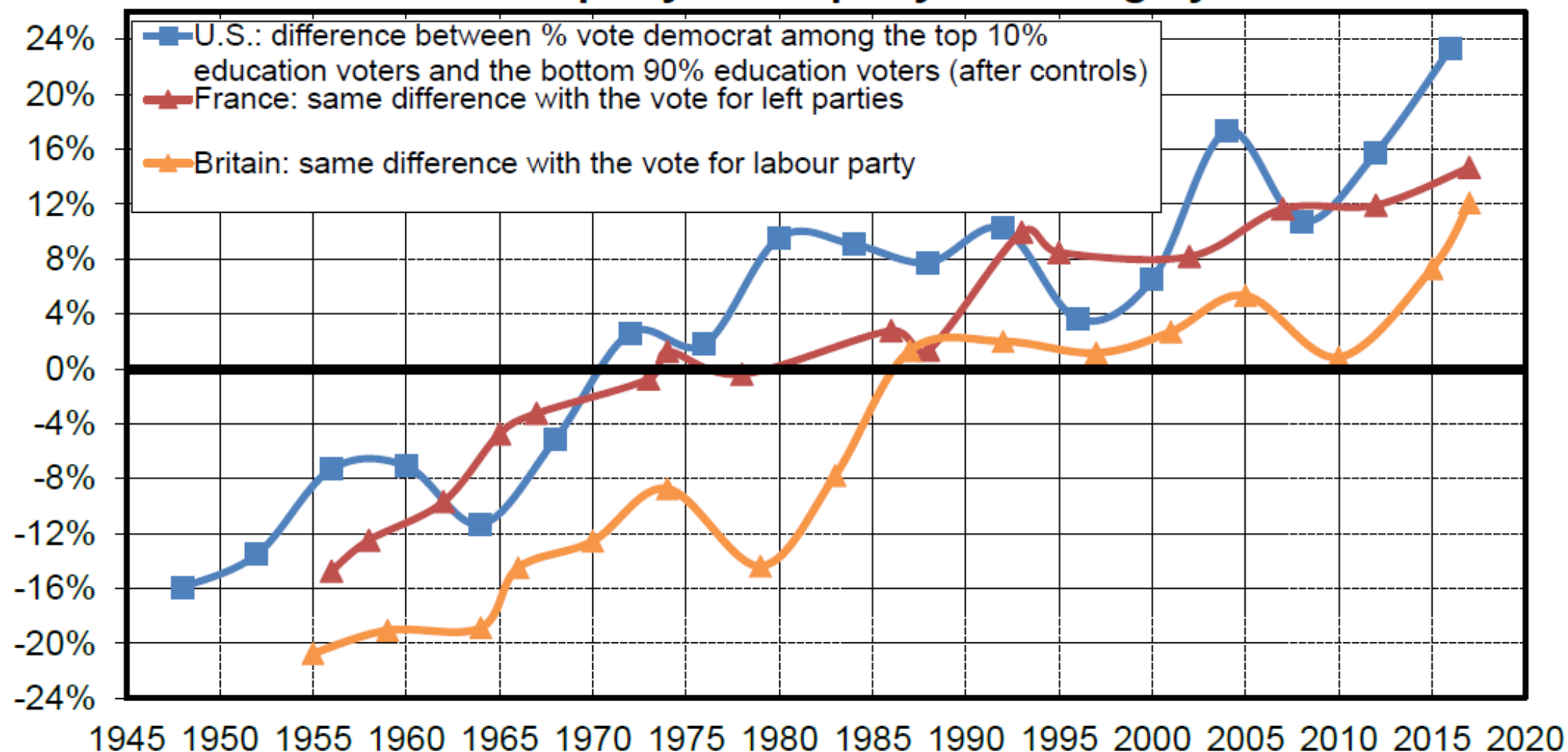
Growth and progressive taxation in the U.S. 1870-2020



Interpretation. in the U.S., the growth rate of per capita national income dropped from 2,2% per year between 1950 and 1990 to 1,1% between 1990 and 2020, while the top marginal tax rate applied to the highest incomes dropped from 72% to 35% over the same period.

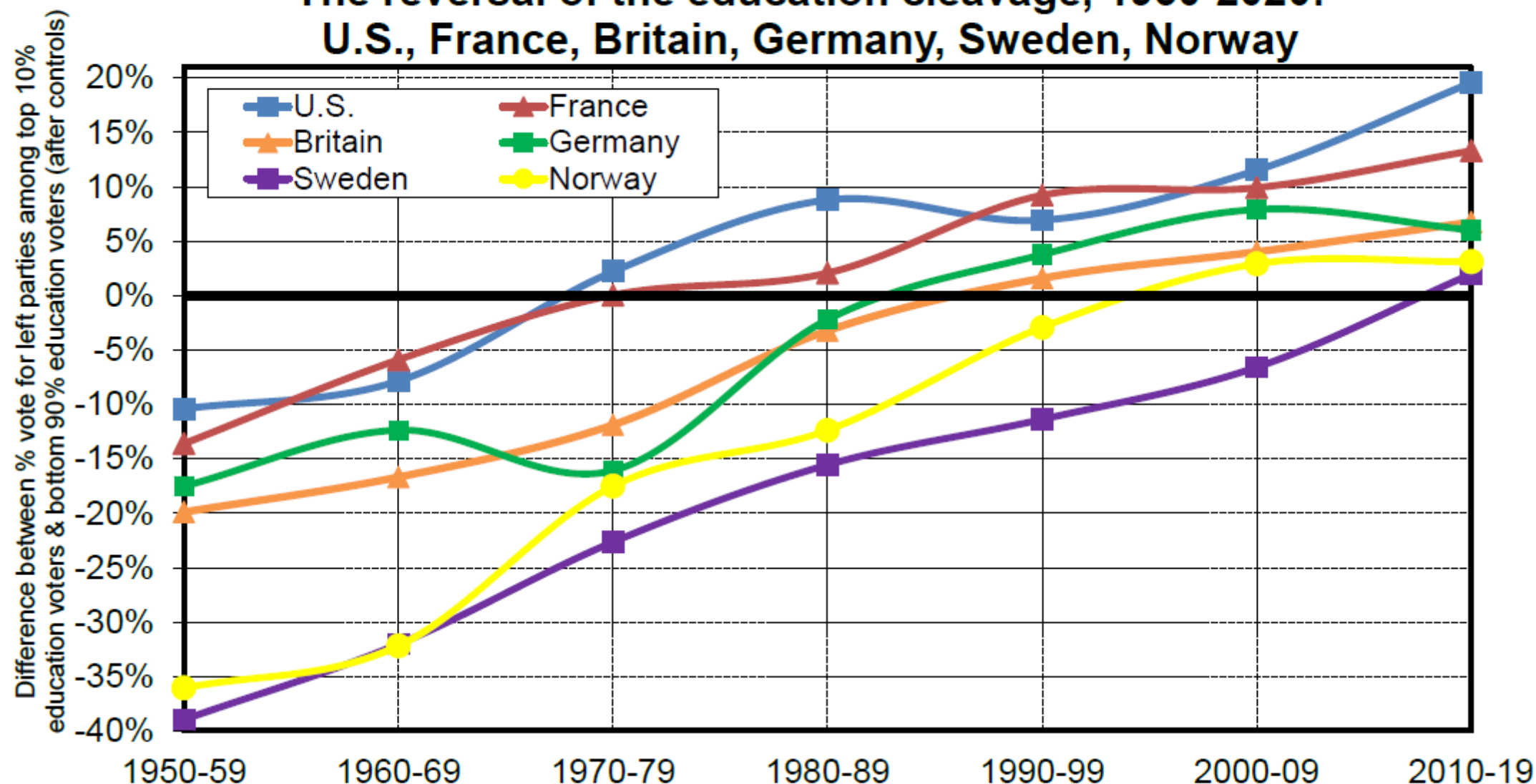
Sources and series: see piketty.pse.ens.fr/ideology (figure 11.13).

Electoral left in Europe and the U.S. 1945-2020: from the workers' party to the party of the highly educated



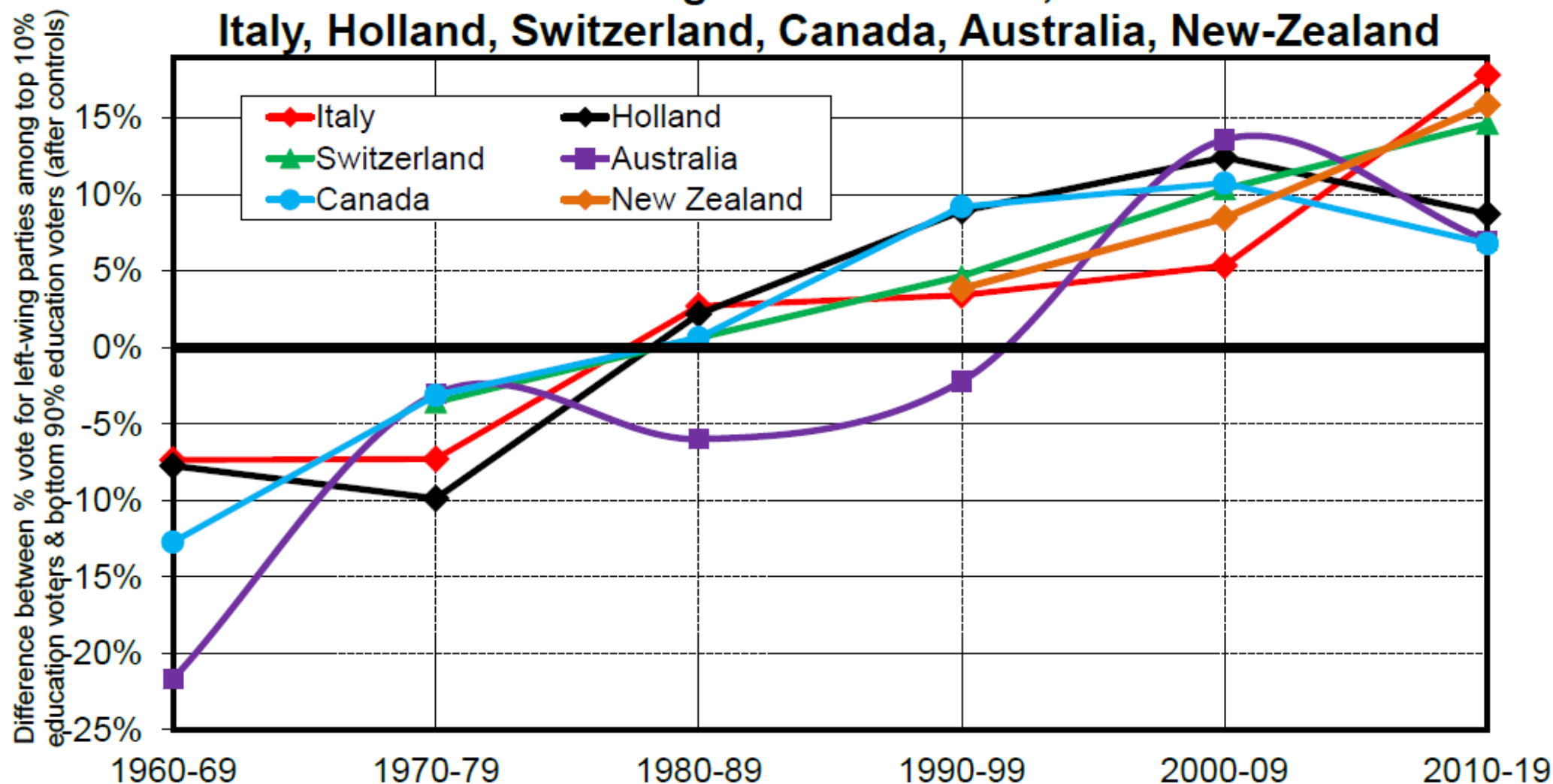
Interpretation. In the 1950-1970 period, the vote for the democrats in the U.S., left-wing parties (socialists-communists-radicals-greens) in France and the labour party in Britain was associated to voters with the lowest education; in the 1990-2010 period, it became associated to the voters with the highest education degrees. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 14.2).

The reversal of the education cleavage, 1950-2020: U.S., France, Britain, Germany, Sweden, Norway



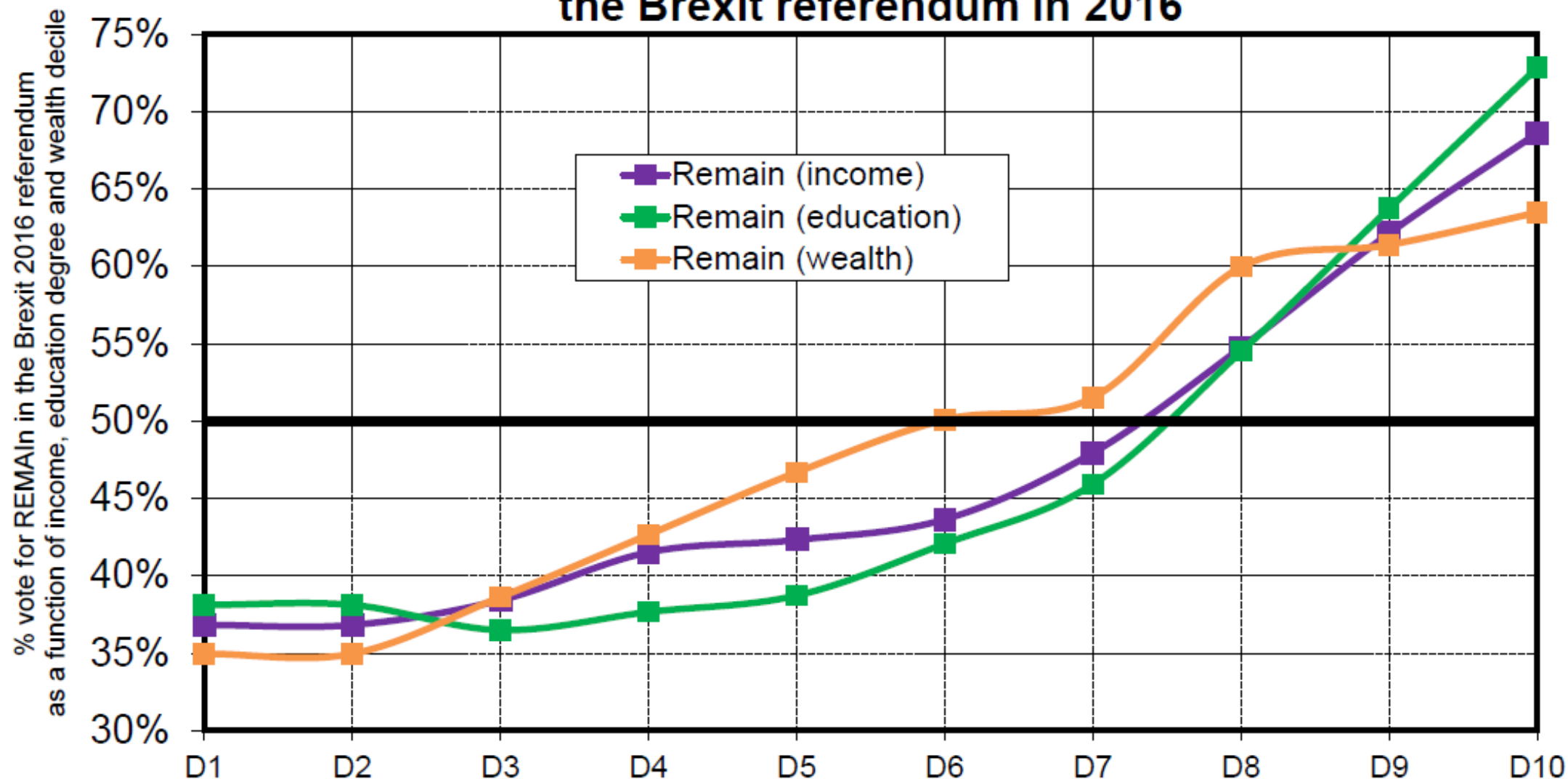
Interpretation. During the 1950-1970 period, the vote for the democratic party in the U.S. and for the various left-wing parties in Europe (labour, social-democrats, socialists, communists, greens, etc.) was stronger among the voters with the lowest education levels; in the period 2000-2020, it has become associated with the voters with the highest diplomas. The trend happens later in Nordic Europe, but follows the same direction. **Note:** "1950-59" includes elections conducted between 1950 and 1959, etc. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 16.1).

Political cleavage and education, 1960-2020: Italy, Holland, Switzerland, Canada, Australia, New-Zealand



Interpretation. During the 1960-1980 period, the vote for left-wing parties (labour, social-democrats, socialists, communists, radicals, greens, etc.) was associated to the voters with the lowest education levels; in the period 2000-2020, it has become associated to those with the highest diplomas. This general evolution happened in the U.S. and in Europe, as well as in Canada, Australia and New Zealand. **Note:** "1960-69" includes elections conducted between 1960 and 1969, "1970-79" those conducted from 1970 to 1979, etc. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 16.2).

The European cleavage in Britain: the Brexit referendum in 2016

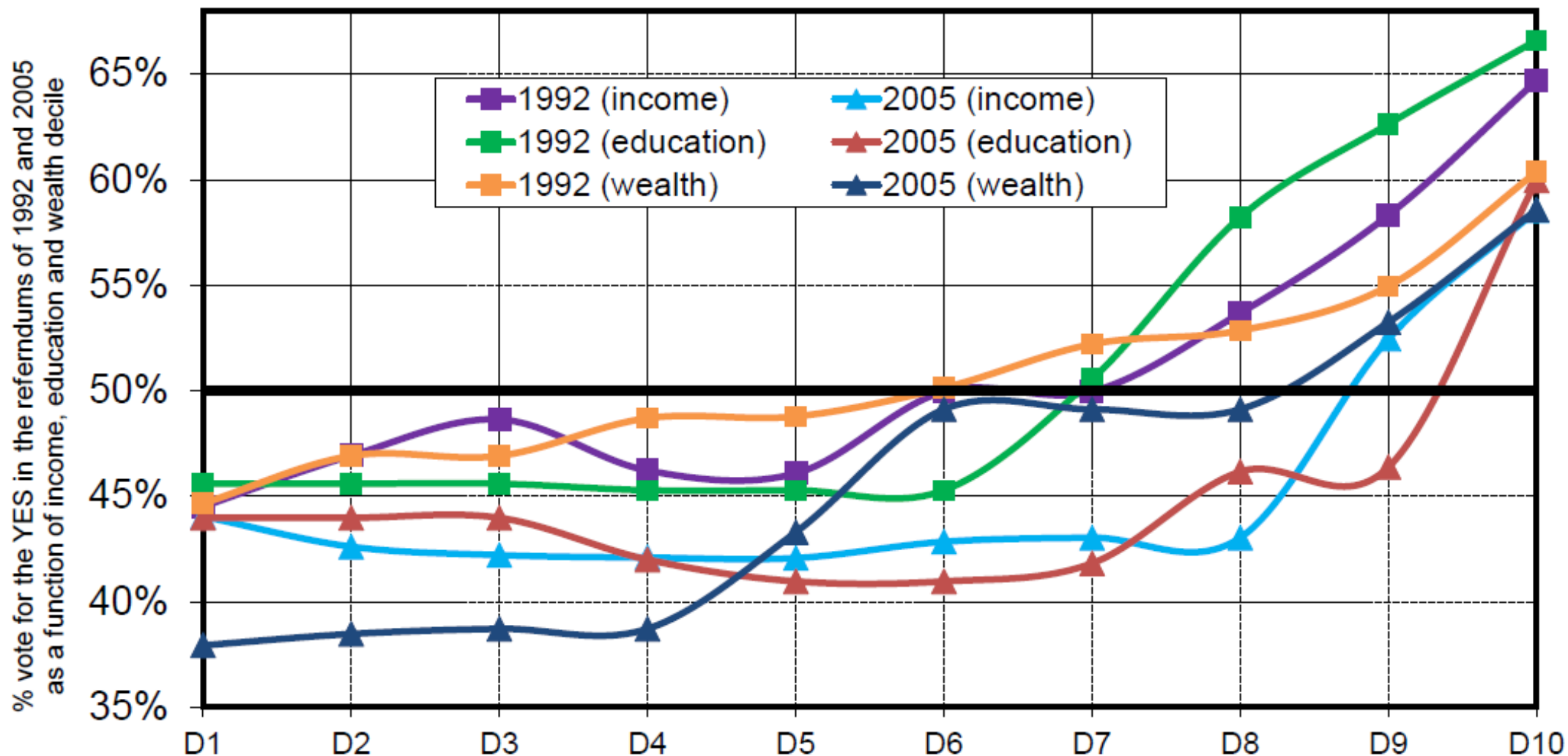


Interpretation. In the 2016 referendum over Brexit (victory of Leave with 52%), one observes a very strong social cleavage of the vote: the top deciles of income, education and wealth vote strongly for Remain, while bottom deciles vote for Leave.

Note: D1 refers to the bottom 10% (either for income, education or wealth), D2 for the next 10%, etc., and D10 for the top 10%.

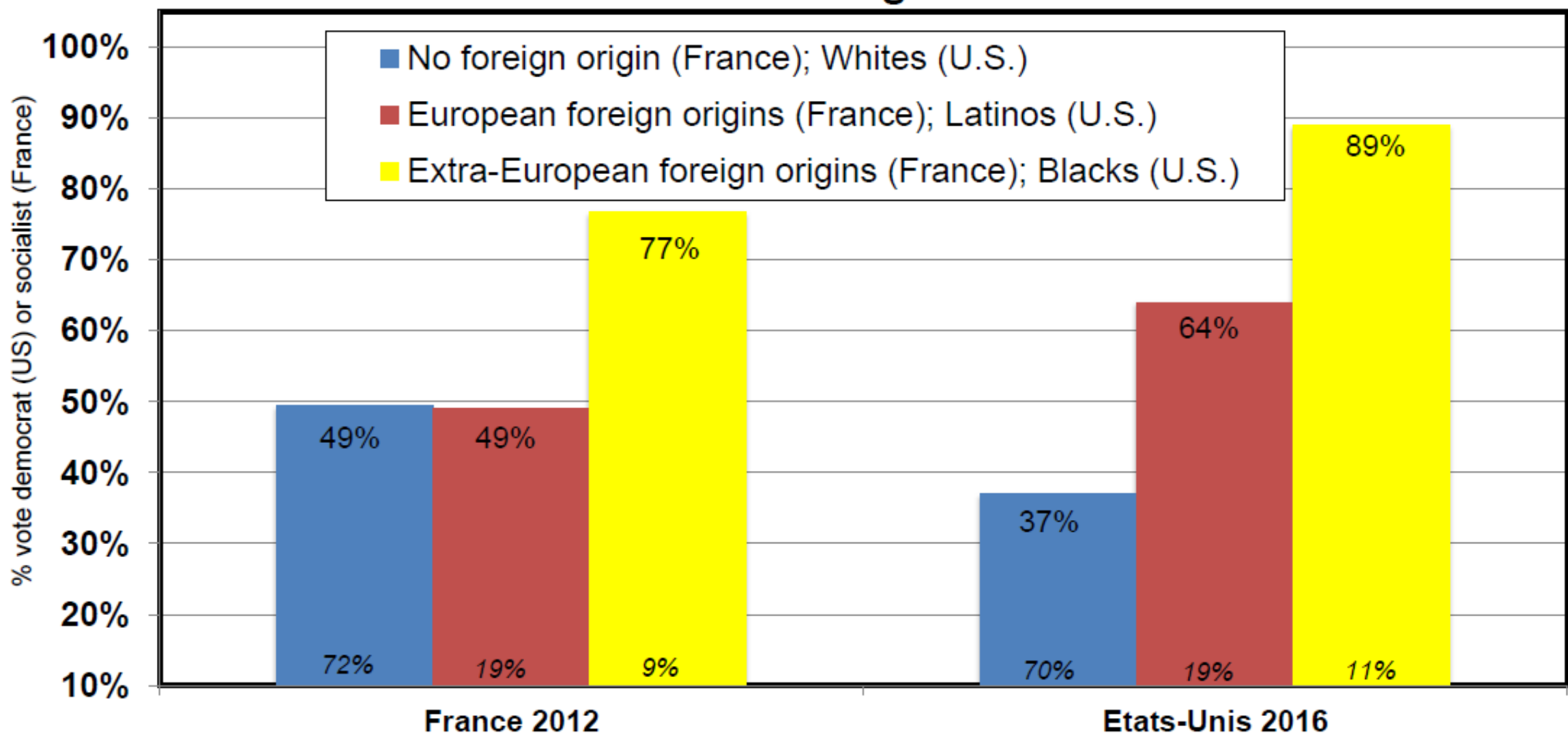
Sources and series: see piketty.pse.ens.fr/ideology (figure 15.18).

The European cleavage in France: the referenda of 1992 and 2005



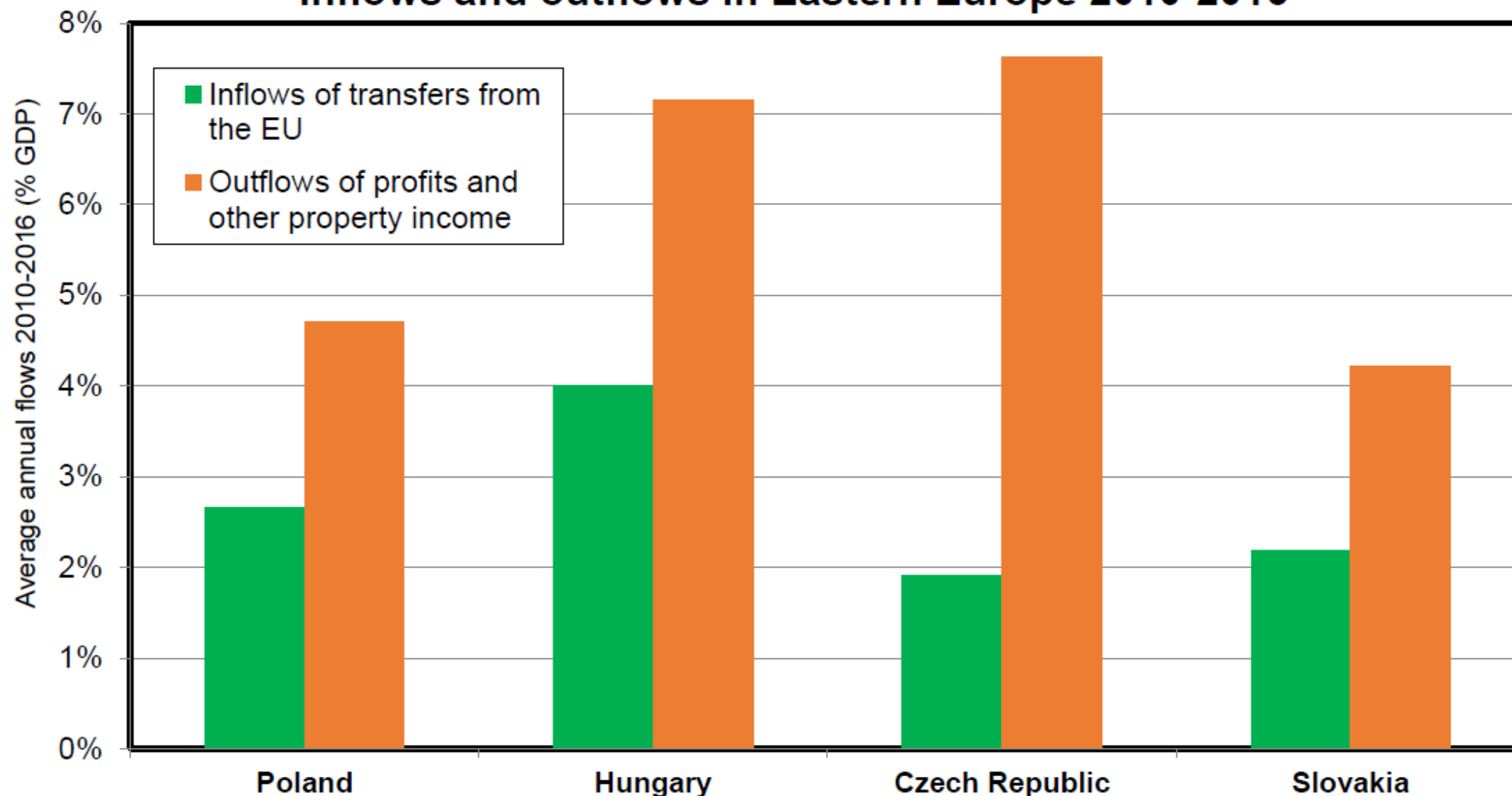
Interpretation. In the 1992 referendum over the Maastricht treaty ("yes" won with 51%) as well as in the 2005 referendum on the European constitutional treaty ("yes" lost with 45%), one observes a very strong social cleavage: top deciles of income, educational degrees and wealth vote strongly for the "yes", while bottom deciles vote for the "no". **Note:** D1 represents the bottom 10% (for the distribution of income, education or wealth), D2 the next 10%,..., and D10 the top 10%. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 14.20).

Political conflict and origins: France & the US



Interpretation. In 2012, the socialist candidate in the second round of the French presidential election obtained 49% of the vote among voters with no foreign origin (no reported foreign grand-parent) and among voters with European foreign origins (in practice mostly Spain, Italy, Portugal) and 77% of the vote among voters with extra-European foreign origins (in practice mostly North Africa and Subsaharan Africa). In 2016, the democratic candidate at the U.S. presidential election obtained 37% of the vote among white voters, 64% among latinos and other minority voters and 89% among black voters. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 15.9).

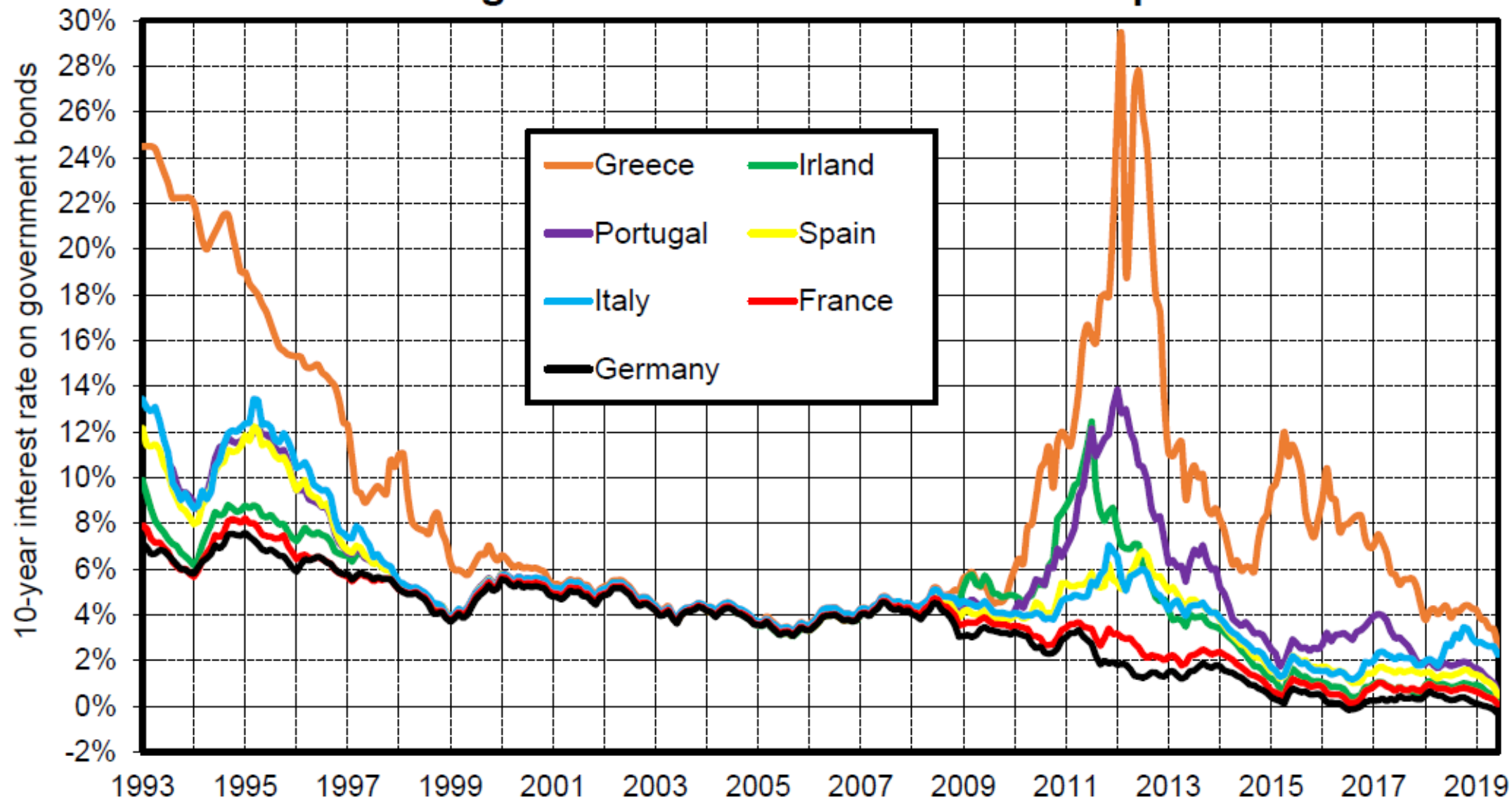
Inflows and outflows in Eastern Europe 2010-2016



Interpretation. Between 2010 and 2016, the annual flow of net transfers from the EU (difference between total spending received and total contributions paid to EU budget) was equal to 2,7% of GDP per year on average in Poland. Over the same period, the outflow of profits and other property income (net of the corresponding inflow) was 4,7% of GDP. For Hungary, the same figures were 4,0% and 7,2%.

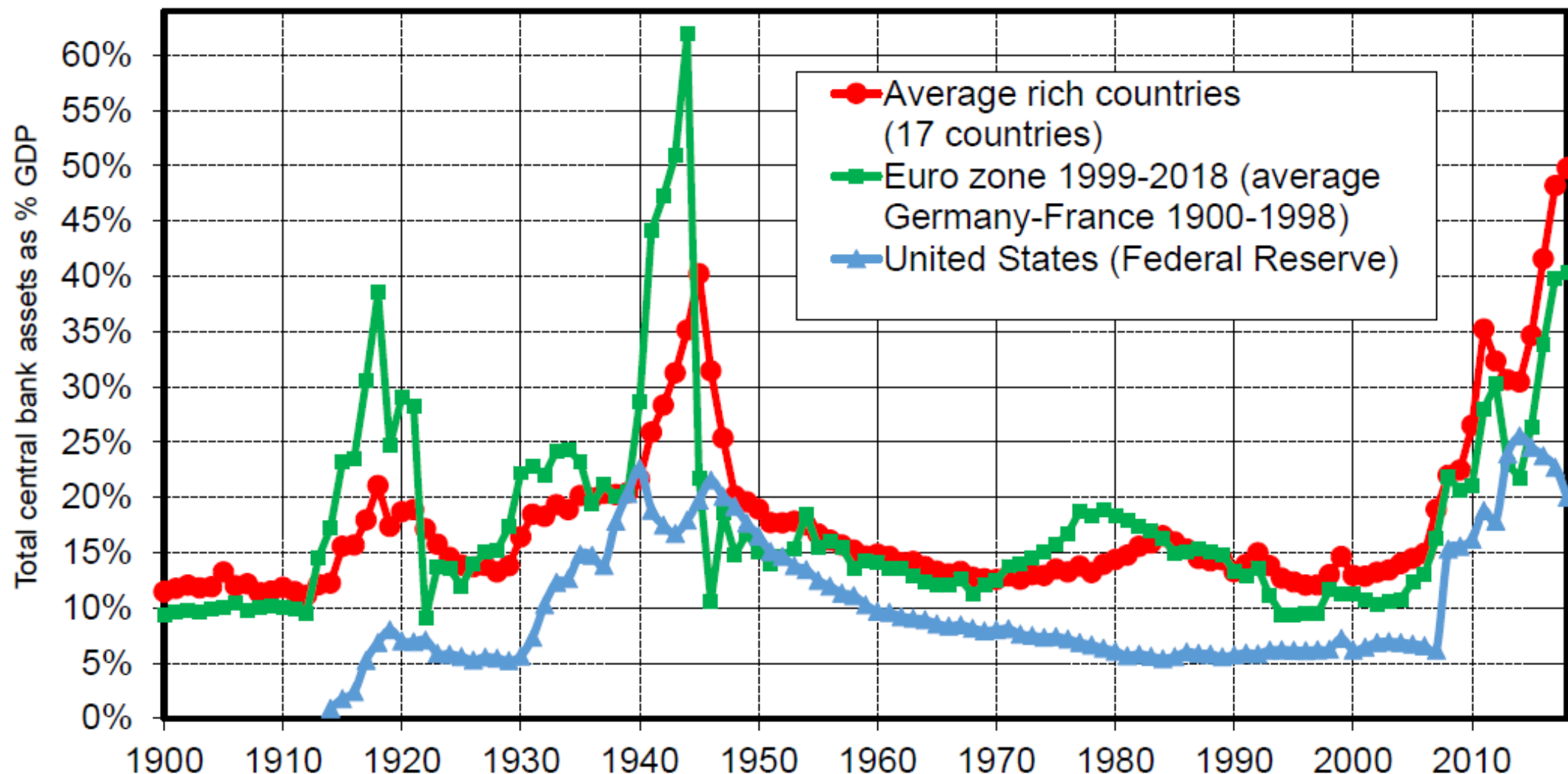
Sources and series: see piketty.pse.ens.fr/ideology (figure 12.10).

Political integration and interest rates: Europe 1993-2019



Interpretation. Nominal interest rates on 10-year government debt had converged within the euro area following the introduction of the euro in 1999-2002, before diverging following the 2008 financial crisis (Lehman bankruptcy in september 2008) and the euro area debt crisis in 2010-2012. **Sources and series:** see piketty.pse.ens.fr/ideology (figure S12.11).

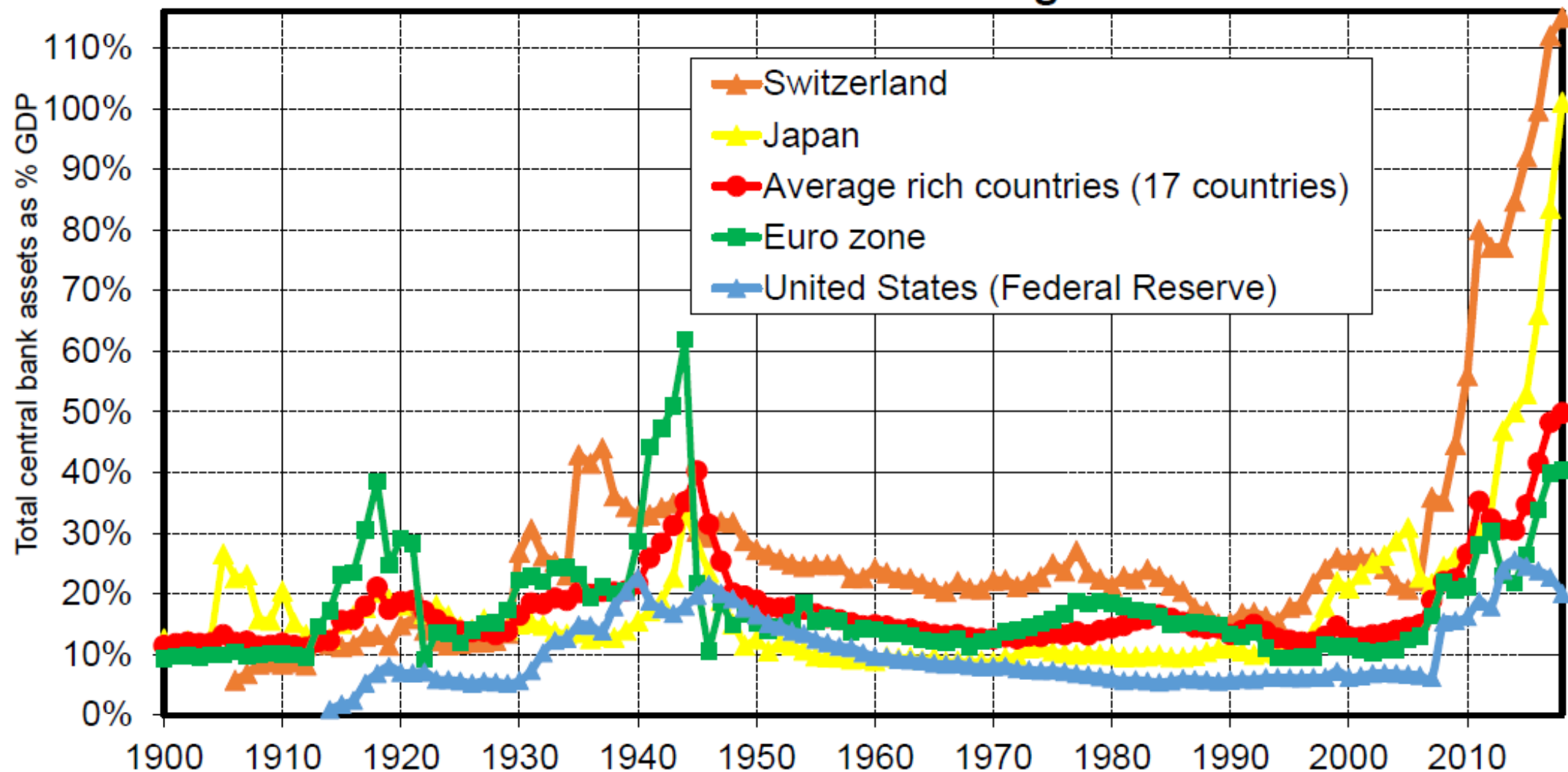
The size of central bank balance sheets 1900-2018



Interpretation. Total assets of the European Central Bank (ECB) rose from 11% of euro zone GDP on 31/12/2004 to 41% on 31/12/2018. The evolution 1900-1998 indicates the average obtained for the balance sheets of the German and French central banks (with peaks equal to 39% in 1918 and 62% in 1944). Total assets of the Federal Reserve (created in 1913) rose from 6% of GDP in 2007 to 26% at the end of 2014.

Note. The average of rich countries is the arithmetic average of the 17 following countries: Australia, Belgium, Britain, Canada, Denmark, France, Finland, Germany, Holland, Italy, Japan, Norway, Portugal, Spain, Sweden, Switzerland, U.S.). **Sources and series:** see piketty.pse.ens.fr/ideology (figure 13.13).

Central banks and financial globalization

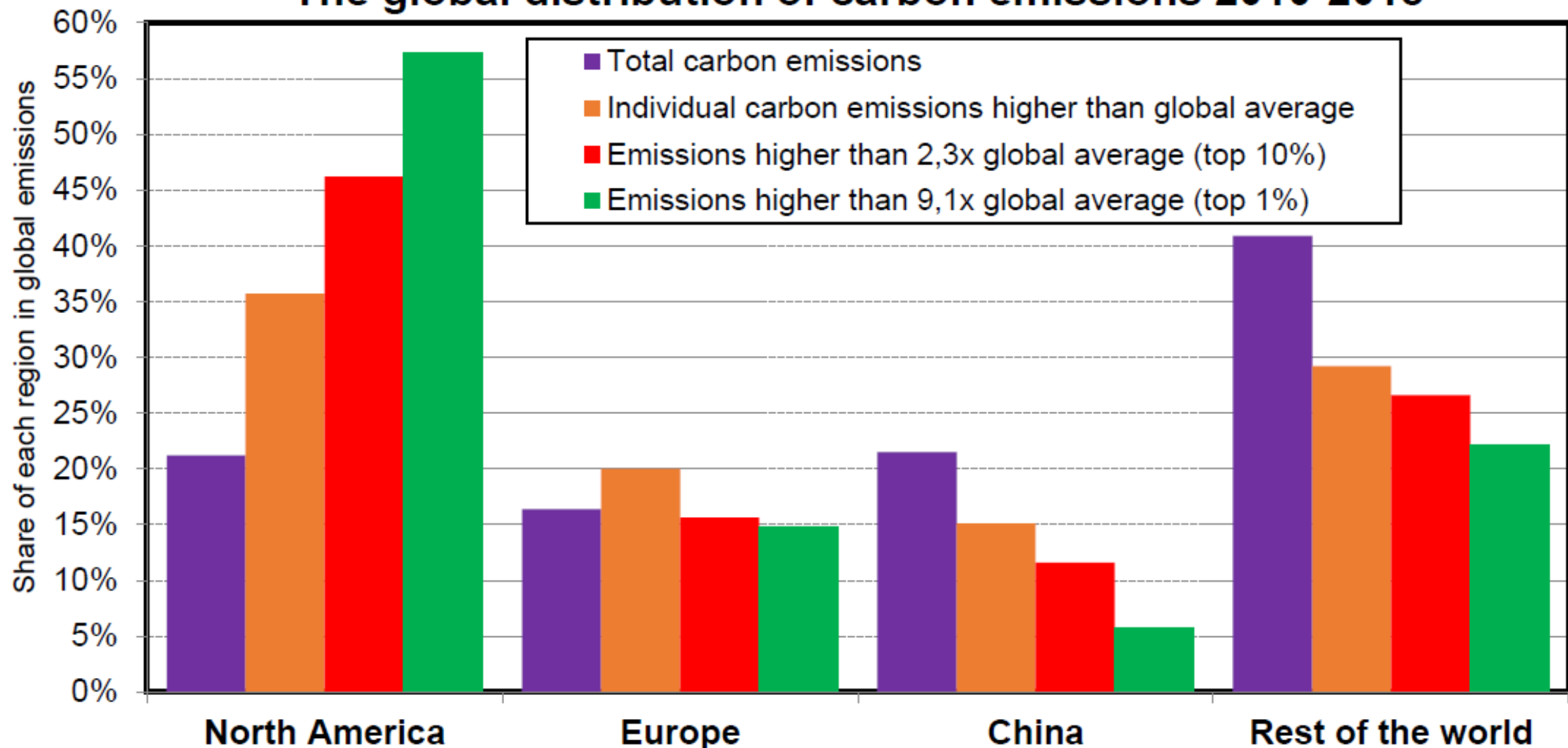


Interpretation. Total assets of the central banks of rich countries rose from 13% of GDP on 31/12/2000 to 51% on 31/12/2018. The assets of the central banks of Japan and Switzerland exceeded 100% of GDP in 2017-2018. **Note.** The average of rich countries is the arithmetic average of the 17 following countries: Australia, Belgium, Britain, Canada, Denmark, France, Finland, Germany, Holland, Italy, Japan, Norway, Portugal, Spain, Sweden, Switzerland, U.S.). **Sources and series:** see piketty.pse.ens.fr/ideology (figure 13.14).

4. Elements for an alternative path: the (slow) rise of social-federalism and participatory socialism

- In order to properly address the social & environmental challenges of our time, one needs to go beyond capitalism and the sacralization of private property (over natural resources, over knowledge, etc.).
The nationalist path may be easier to follow but it won't work.
- **Educational justice:** effective and verifiable
- **Social and temporary property:** we need to balance owners' rights with workers' rights (extension of German-Nordic co-management), to favour the permanent circulation of power and property (inheritance for all equal to 120 000€), and to limit individual accumulations to a reasonable magnitude (on the basis of historical experiments)
- **Social-federalism:** free exchange must be made conditional upon binding objectives regarding social, fiscal and environmental justice

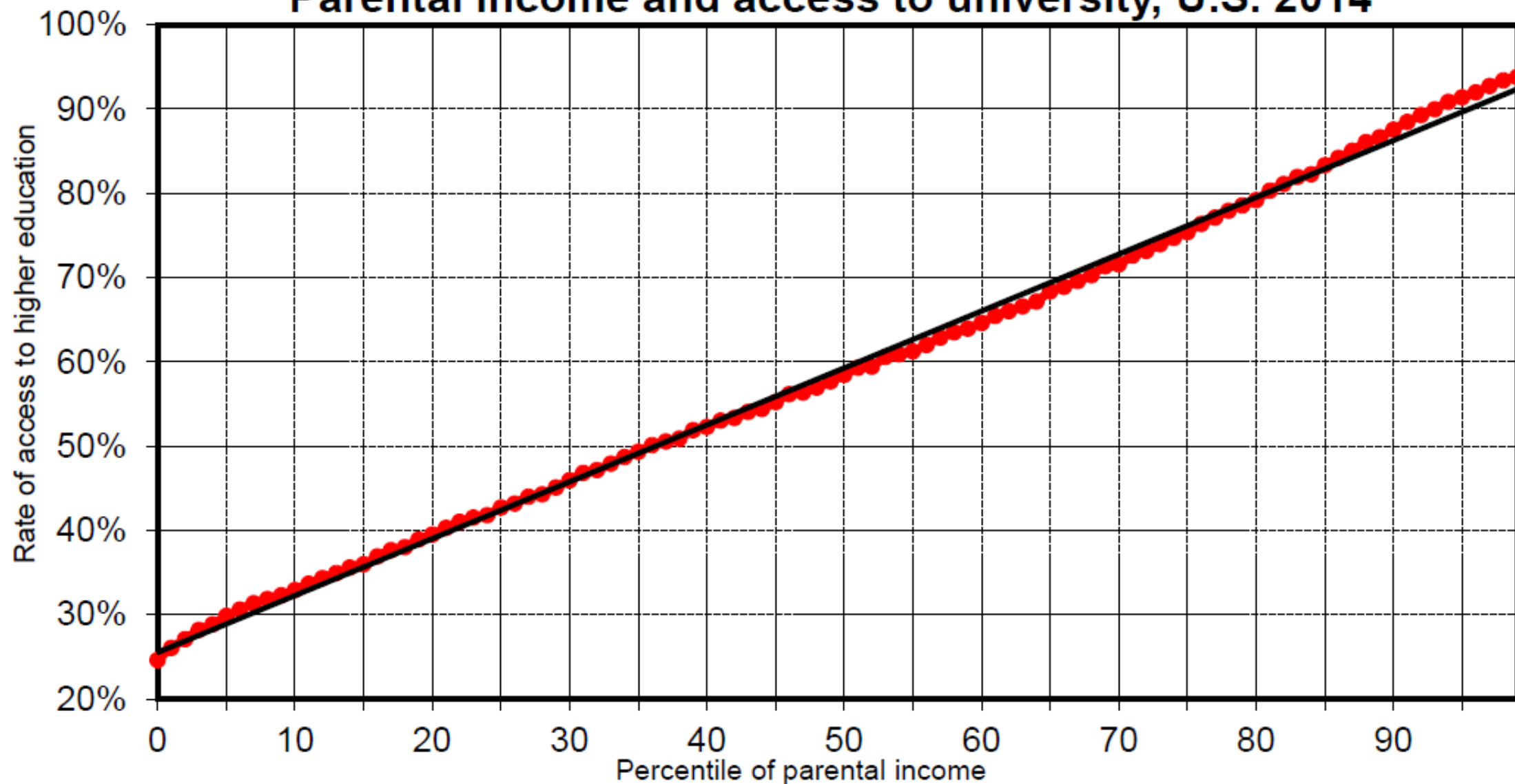
The global distribution of carbon emissions 2010-2018



Interpretation. The share of North America (U.S.-Canada) in total global emissions (direct and indirect) was 21% on average in 2010-2018; this share rises to 36% if one looks at emissions greater than global average (6,2t CO₂e per year), 46% for emissions above 2,3 times the global average (i.e. the top 10% of world emitters, accounting for 45% of total emissions, compared to 13% for the bottom 50% of world emitters), and 57% of those emitting over 9,1 times the global average (i.e. the top 1% of world emitters, accounting for 14% of total emissions).

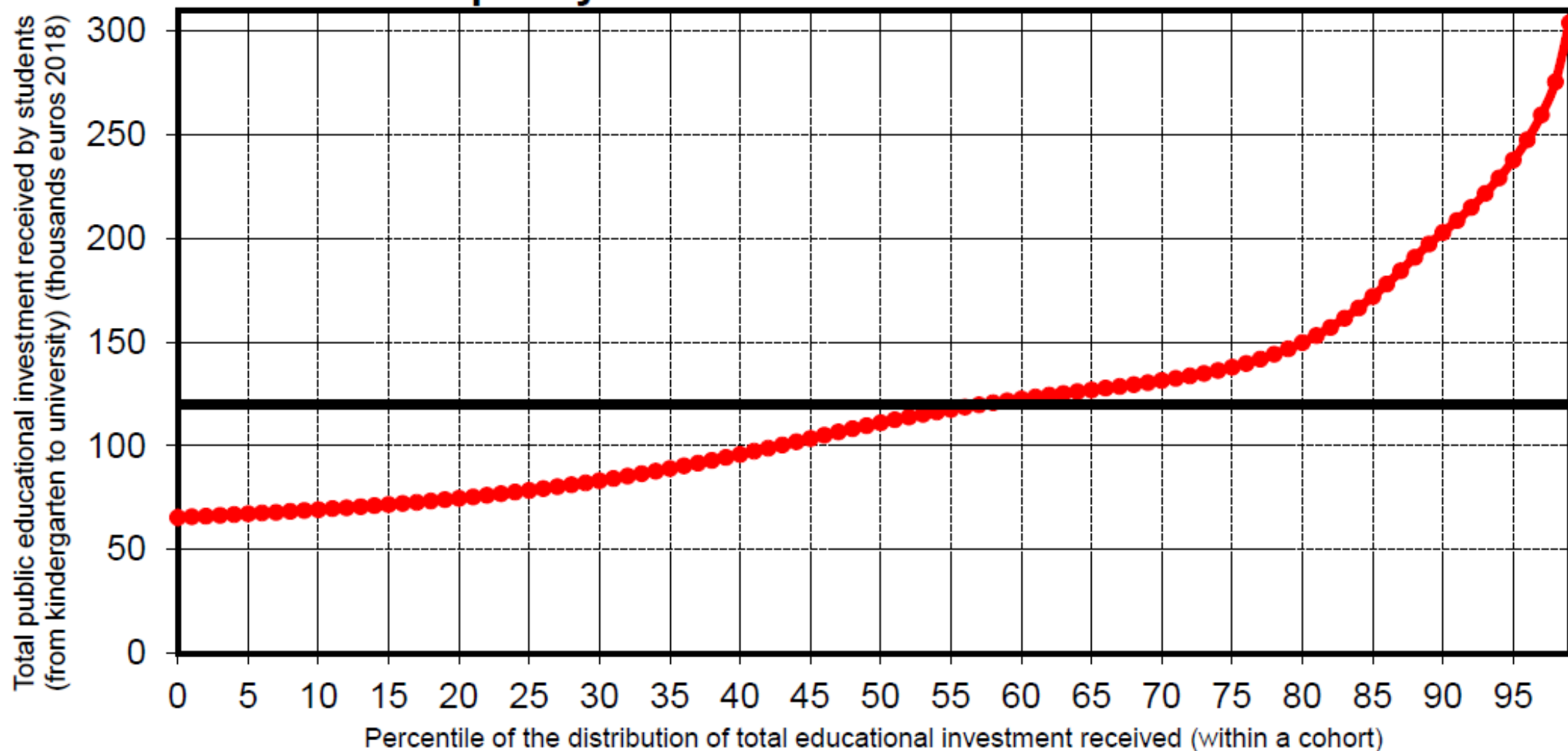
Sources and series: see piketty.pse.ens.fr/ideology (figure 13.7).

Parental income and access to university, U.S. 2014



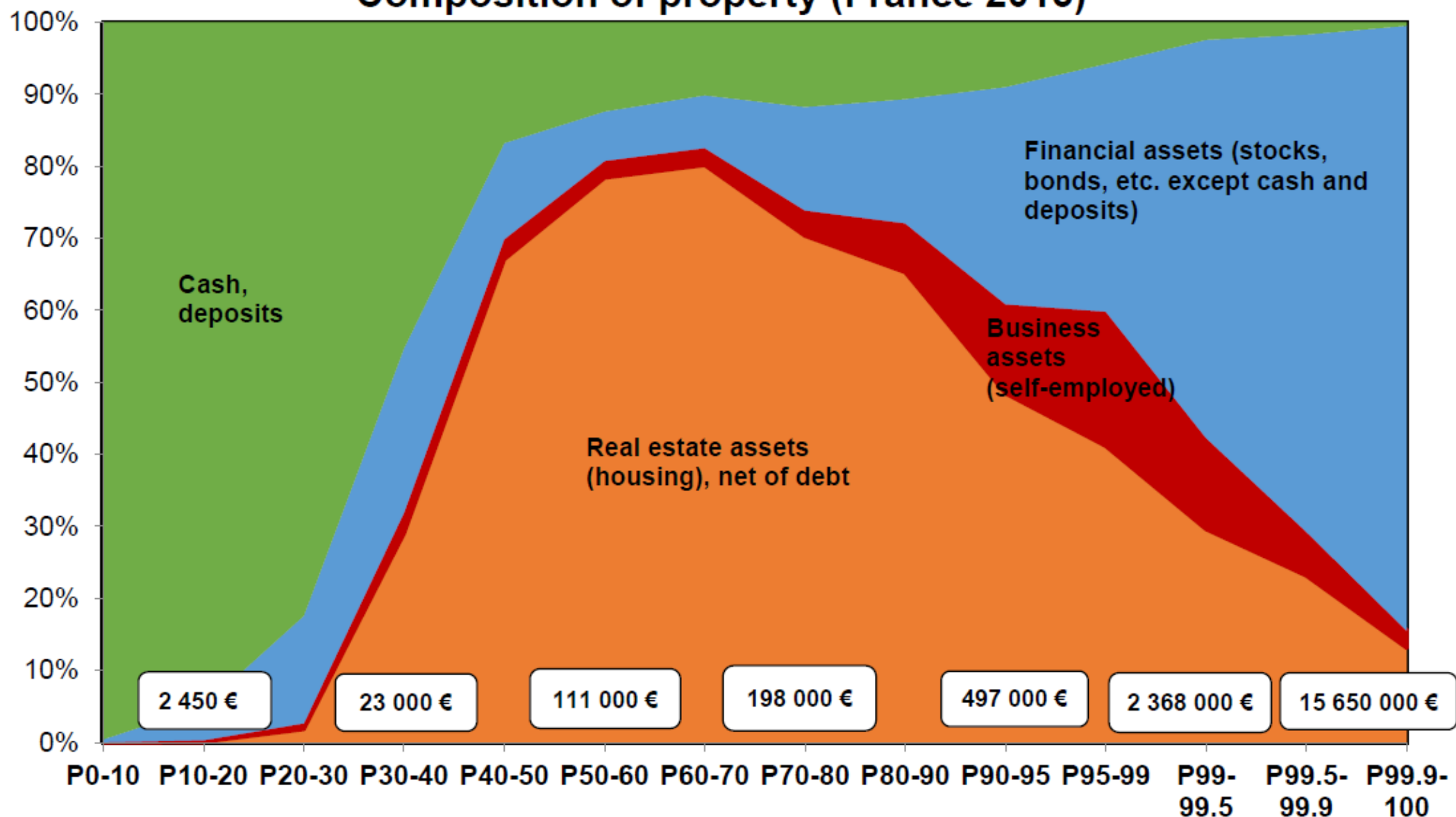
Interpretation. In 2014, the rate of access to higher education (percentage of individuals aged 19-21 enrolled in a university, college or any other institution of higher education) was barely 30% among the bottom 10% poorest children in the United States, and over 90% among the top 10% richest children. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 0.8).

The inequality of educational investment: France 2018



Interpretation. Total public educational investment received during their studies (from kindergarten to university) by students of the cohort reaching 18 in 2018 will be about 120 k€ (i.e. about 15 years of studies for an average cost of 8000€ per year). Within this generation, the 10% of students receiving the smallest educational investment receive about 65-70 k€, while the 10% receiving the most receive between 200 k€ and 300 k€. **Note:** average costs per year of study in the French educational system in 2015-2018 rank from 5-6 k€ in kindergarten-primary to 8-10 k€ in secondary, 9-10 k€ in universities and 15-16 k€ in preparatory classes to *grandes écoles* (elite tracks). **Sources and series:** see piketty.pse.ens.fr/ideology (figure 17.1).

Composition of property (France 2015)



Interpretation. In France in 2015 (as in most countries where data are available), small fortunes consist primarily cash and bank deposits, medium fortunes of real estate, and large fortunes of financial assets (mainly stocks). **Note:** the distribution shown here is per adult wealth (wealth of couples divided by two). **Sources and series:** see piketty.pse.ens.fr/ideology (figure 11.17).

The circulation of property and progressive taxation

Progressive tax on property (funding of the capital endowment allocated to each young adult)

Multiple of average wealth	Annual tax on property (effective tax rate)	Tax on inheritances (effective tax rate)
0,5	0,1%	5%
2	1%	20%
5	2%	50%
10	5%	60%
100	10%	70%
1000	60%	80%
10000	90%	90%

Progressive tax on income (funding of basic income and social and ecological State)

Multiple of average income	Effective tax rate (including social contributions and carbon tax)
0,5	10%
2	40%
5	50%
10	60%
100	70%
1000	80%
10000	90%

Interpretation. The proposed tax system includes a progressive tax on property (annual tax and inheritance tax) funding a capital endowment for all young adults and a progressive tax on income (including social contributions and progressive tax on carbon emissions) funding the basic income and the social and ecological State (health, education, pensions, unemployment, energy, etc.). This system favouring the circulation of property is one of the constituting elements of participatory socialism, together with a 50-50 split of voting rights among workers representatives and shareholders in corporations. **Note:** in the exemple given here, the progressive property tax raises about 5% of national income (allowing to fund a capital endowment of about 60% of average net wealth, to be allocated to each young adult at 25-year of age) and the progressive income tax about 45% of national income (allowing to fund an annual basic income of about 60% of after-tax income, costing about 5% of national income, and the social and ecological State for about 40% of national income). **Sources:** see piketty.pse.ens.fr/ideology (table 17.1).

A novel organisation of globalisation: transnational democracy

Transnational Assembly

In charge of **global public goods** (climate, research, etc.) and of **global fiscal justice** (common taxes on high wealth and income holders and large corporations, carbon taxes)

National Assembly
Country A

National Assembly
Country B

National Assembly
Country C

National Assembly
Country D

...

Interpretation. According to the proposed organisation, the treaties regulating globalisation (flows of goods, capital and individuals) will henceforth include the creation between the signatories States and Regional Unions of a Transnational Assembly in charge of global public goods (climate, research, etc.) and global fiscal justice (common taxes on high wealth and income holders and large corporations, carbon taxes). **Note.** Countries A, B, C, D can be States like France, Germany, Italy, Spain, etc., in which case the Transnational Assembly will be the European Assembly; or countries A, B, etc. could be Regional Unions like the European Union, the African Union, etc., in which case the Transnational Assembly would be that of the Euro-African Union. The Transnational Assembly could be formed of deputies from the National Assemblies and/or of transnational deputies especially elected for this purpose, depending on the situation. **Sources:** see piketty.pse.ens.fr/ideology (table 17.2).

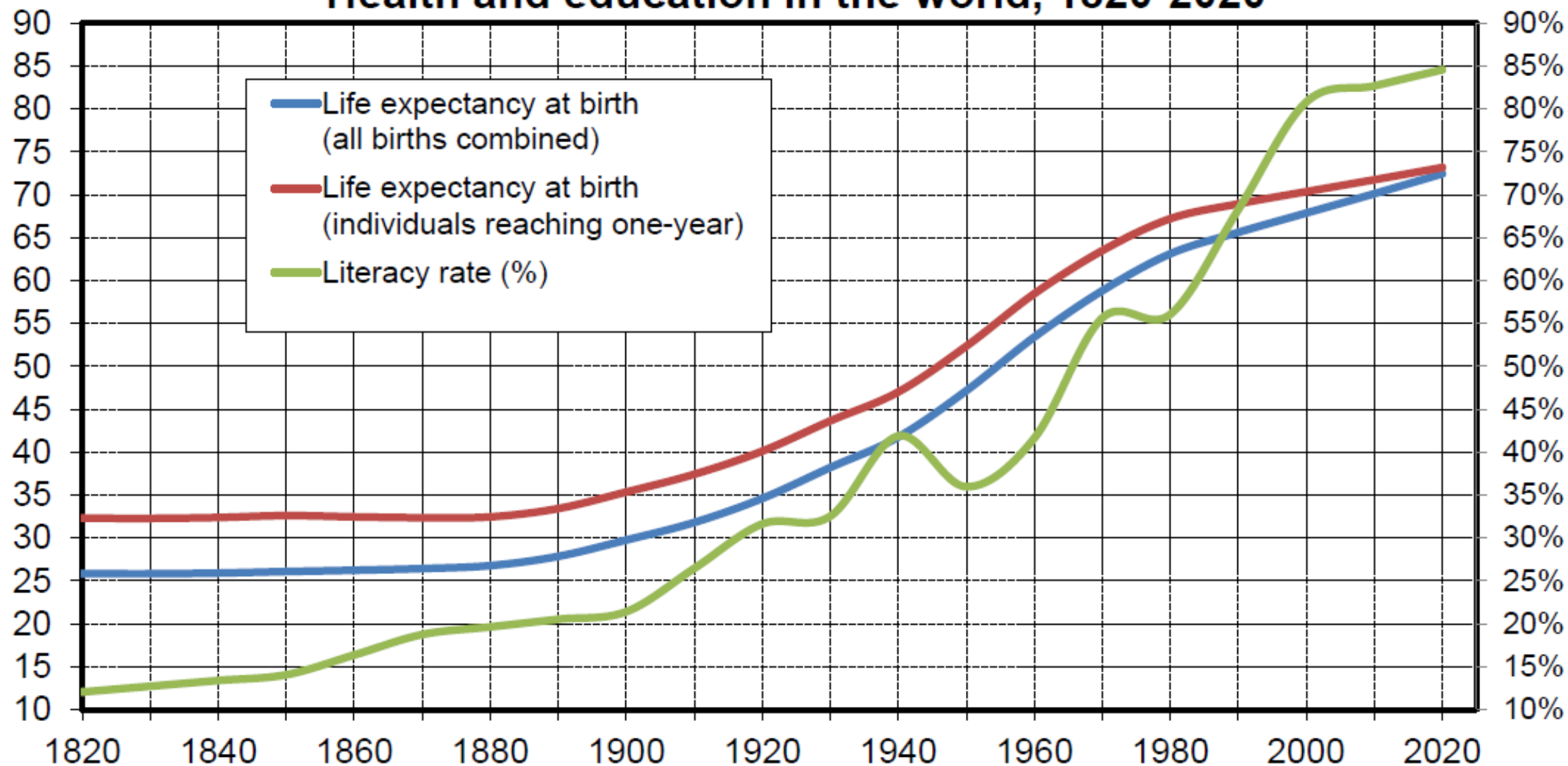
Conclusion

- By developing an economic, social, intellectual and political history of inequality regimes, I have tried in this book to show the fragilities and the permanent transformations of inequality regimes
- Today's inequality ideologies are not always more reasonable than those of the past, and they will also end up being replaced by others
- **History as the struggle of ideologies and the quest of justice**
- Unlike the pure class struggle, the struggle of ideologies relies on the exchange of ideas, the sharing of experience, and extensive deliberation. Nobody will ever have the ultimate truth on just property, just education, just taxation. Class struggles & ideological struggles are closely related, but are never fully aligned.

- The conclusions presented in this book on participatory socialism and social-federalism may seem radical. But in fact they stand in the continuity of a process toward democratic socialism that has been going on since the 19th century and of institutional transformations experienced in the 20th century:
 - German-Nordic co-management, Anglo-American fiscal progressivity, Indian quotas-reservations, etc.
- Our modern democratic disarray stems from the fact that, insofar as the civic and political sphere is concerned, economics has attempted to cut itself free from the other social sciences. One central goal of this book is to try to enable citizens to reclaim possession of economic and historical knowledge.
- **Thanks a lot for your attention!**

**Extra figures:
responses to questions**

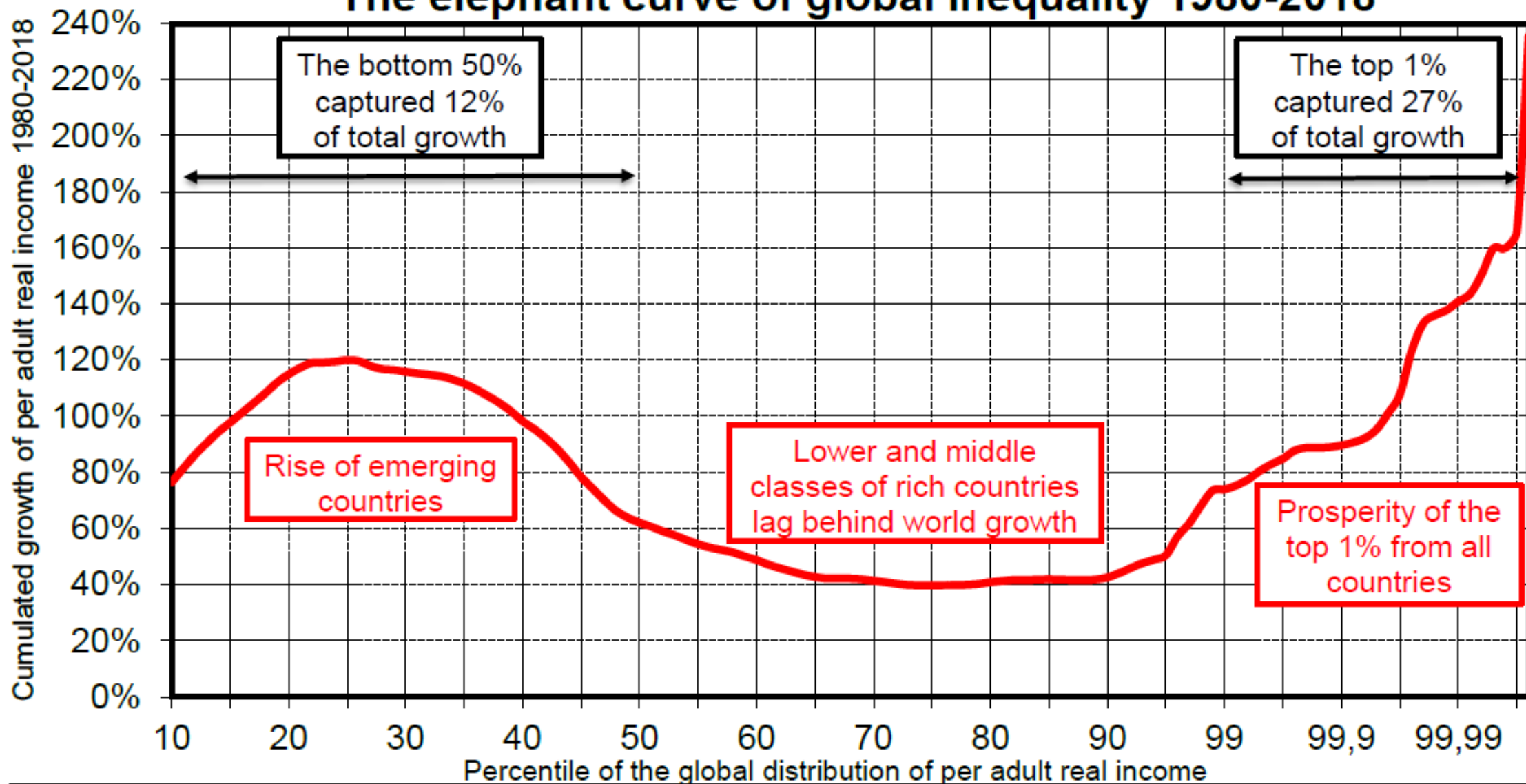
Health and education in the world, 1820-2020



Interpretation. Life expectancy at birth worldwide increased from an average of 26 years in the world in 1820 to 72 years in 2020. Life expectancy for those living to age 1 rose from 32 years to 73 years (because infant mortality before age 1 decreased from 20% in 1820 to less than 1% in 2020). The literacy rate for 15-year-olds-and-over worldwide rose from 12% to 85%.

Sources and series: see piketty.pse.ens.fr/ideology (figure 0.1).

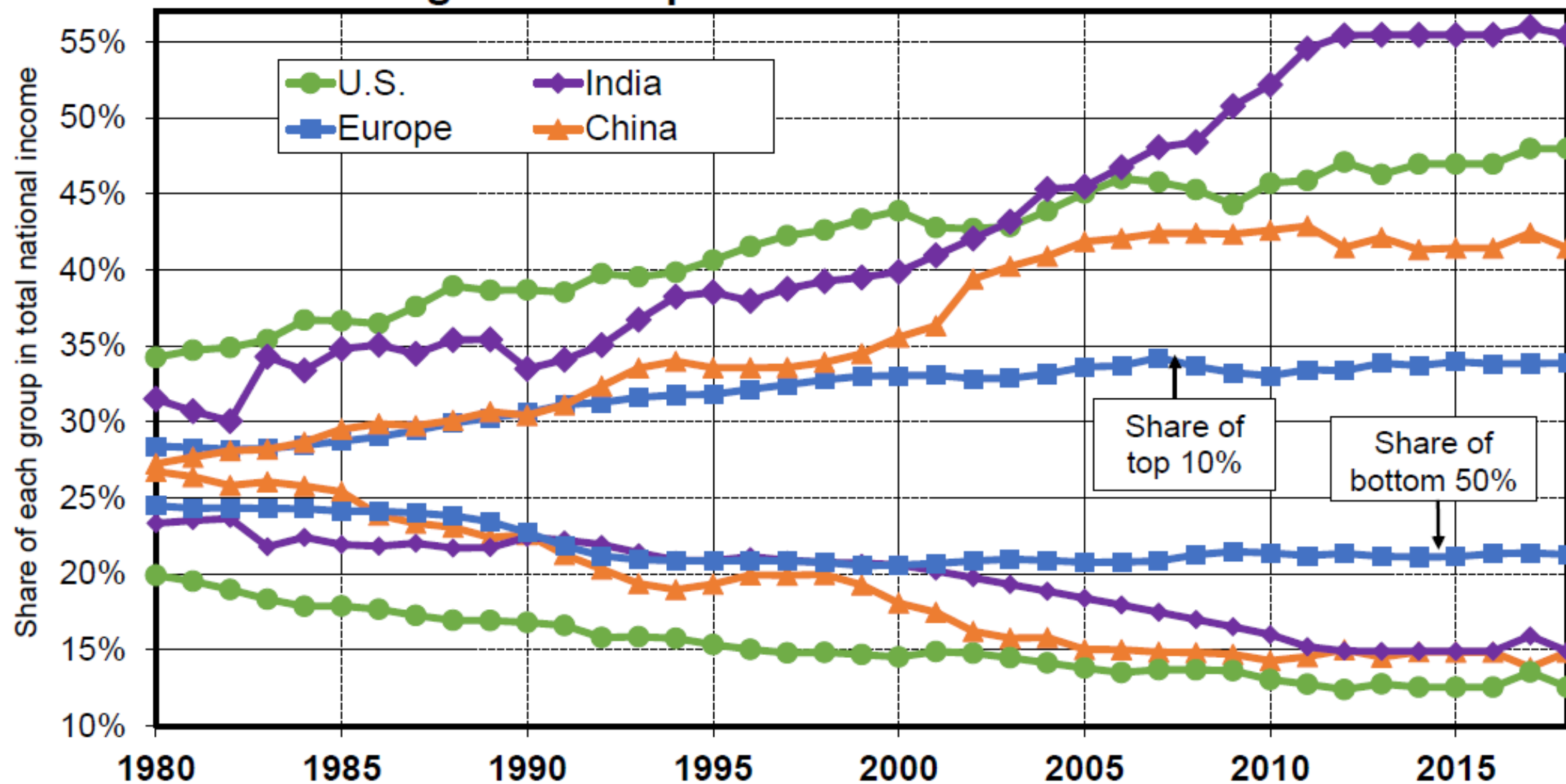
The elephant curve of global inequality 1980-2018



Interpretation. The bottom 50% incomes of the world saw substantial growth in purchasing power between 1980 and 2018 (between +60% and +120%). the top 1% incomes saw even stronger growth (between +80% and +240%). Intermediate categories grew less. In sum, inequality decreased between the bottom and the middle of the global income distribution, and increased between the middle and the top.

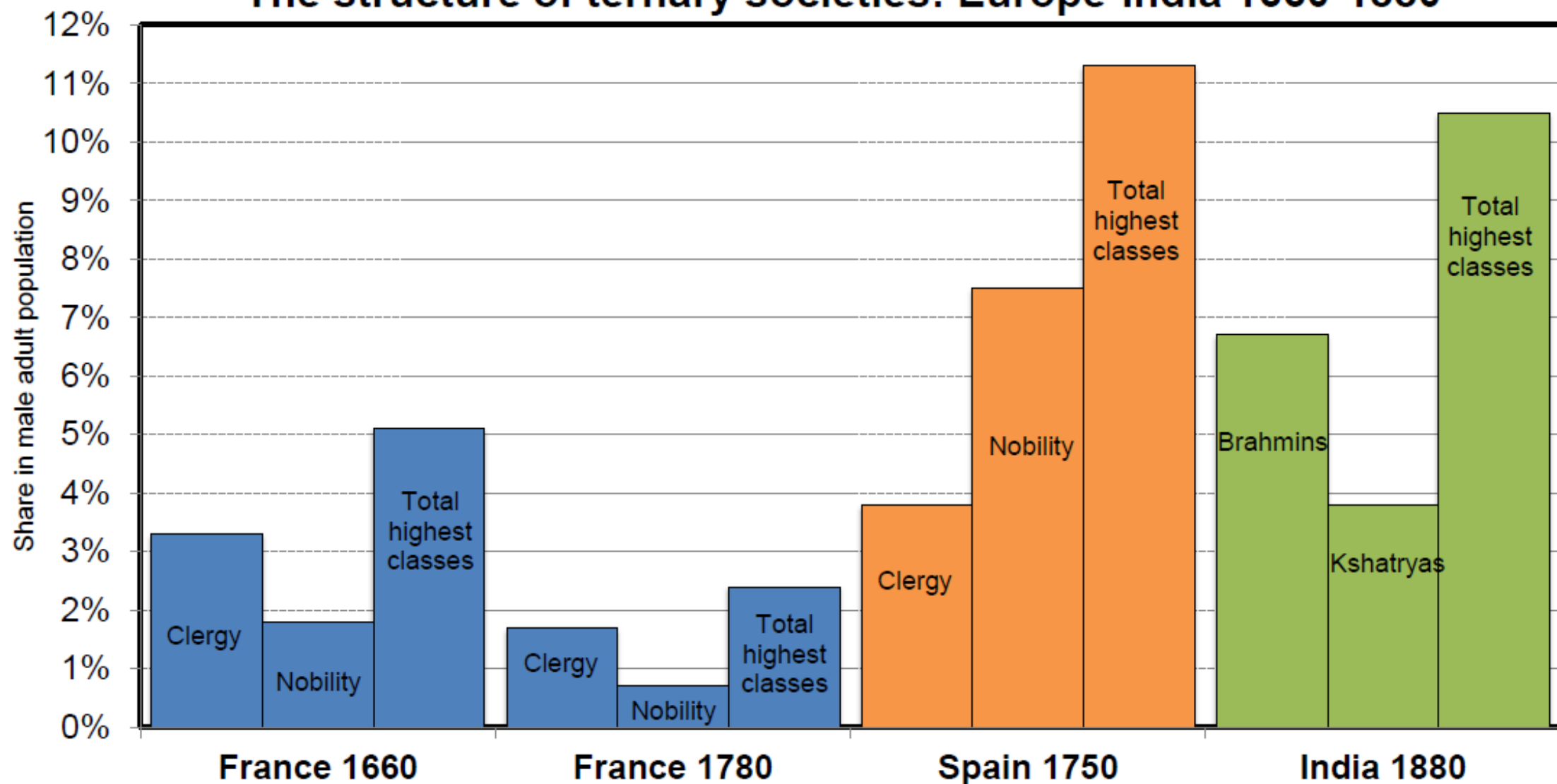
Sources and series: see piketty.pse.ens.fr/ideology (figure 0.5).

Divergence of top and bottom incomes 1980-2018



Interpretation. The share of the top decile (the 10% highest incomes) rose in all world regions: it was between 27% and 34% in 1980; it is between 34% and 56% in 2018. The share going to the bottom 50% dropped: it was between 20% and 27%; it is now between 12% and 21%. The divergence between bottom and top incomes is general, but its magnitude varies across countries: it is larger in India and in the U.S. than in China and in Europe. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 11.1).

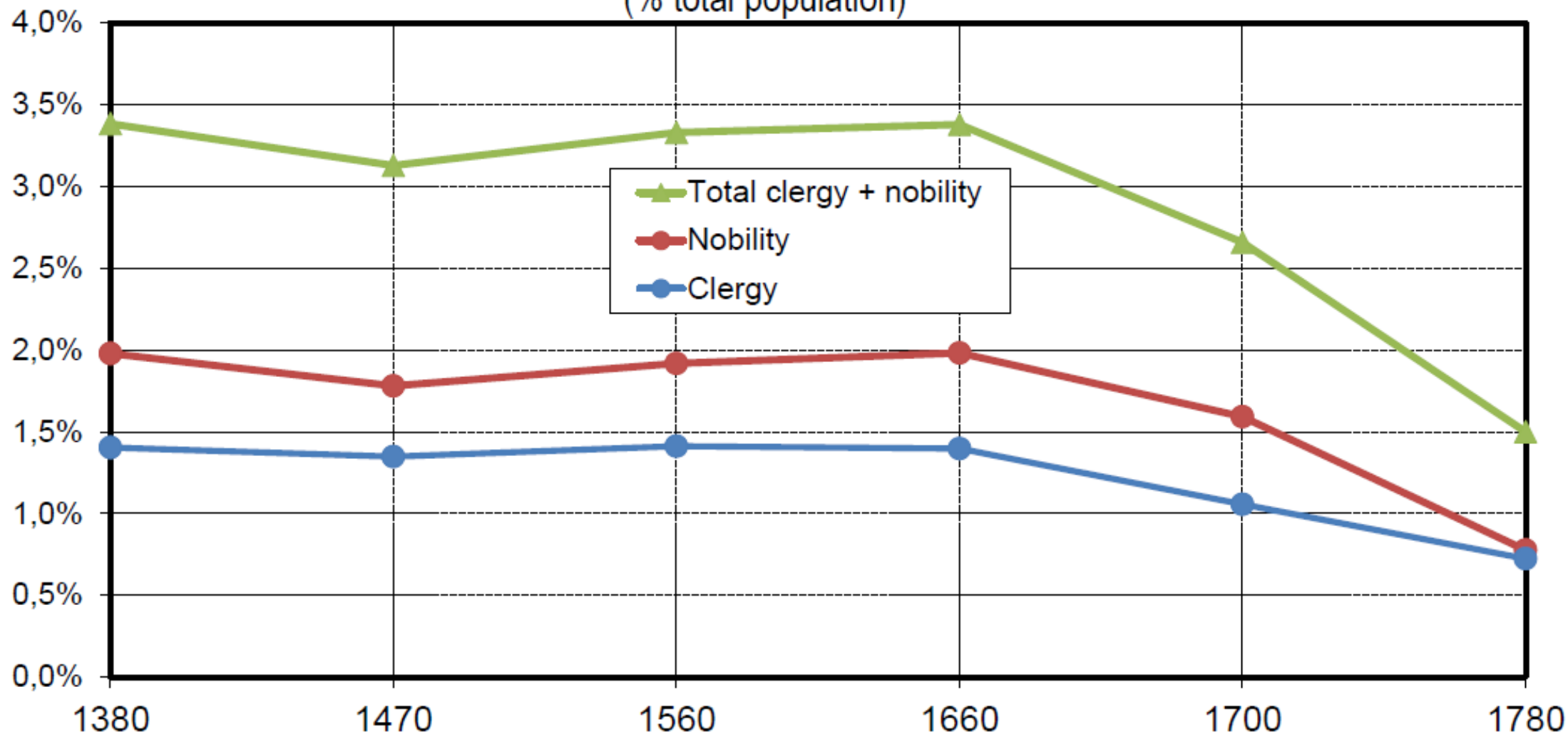
The structure of ternary societies: Europe-India 1660-1880



Interpretation. In 1660, the clergy accounted for about 3,3% of male adult population in France, and the nobility for 1,8%, for a total of 5,1% for the two dominant classes of the trifunctional society. In 1880, Brahmins (ancient class of priests, as measured by British colonial censuses) accounted for 6,7% of male adult population in India, and Kshatryas (ancient class of warriors) for 3,8%, for a total of 10,5% for the two dominant classes. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 1.1).

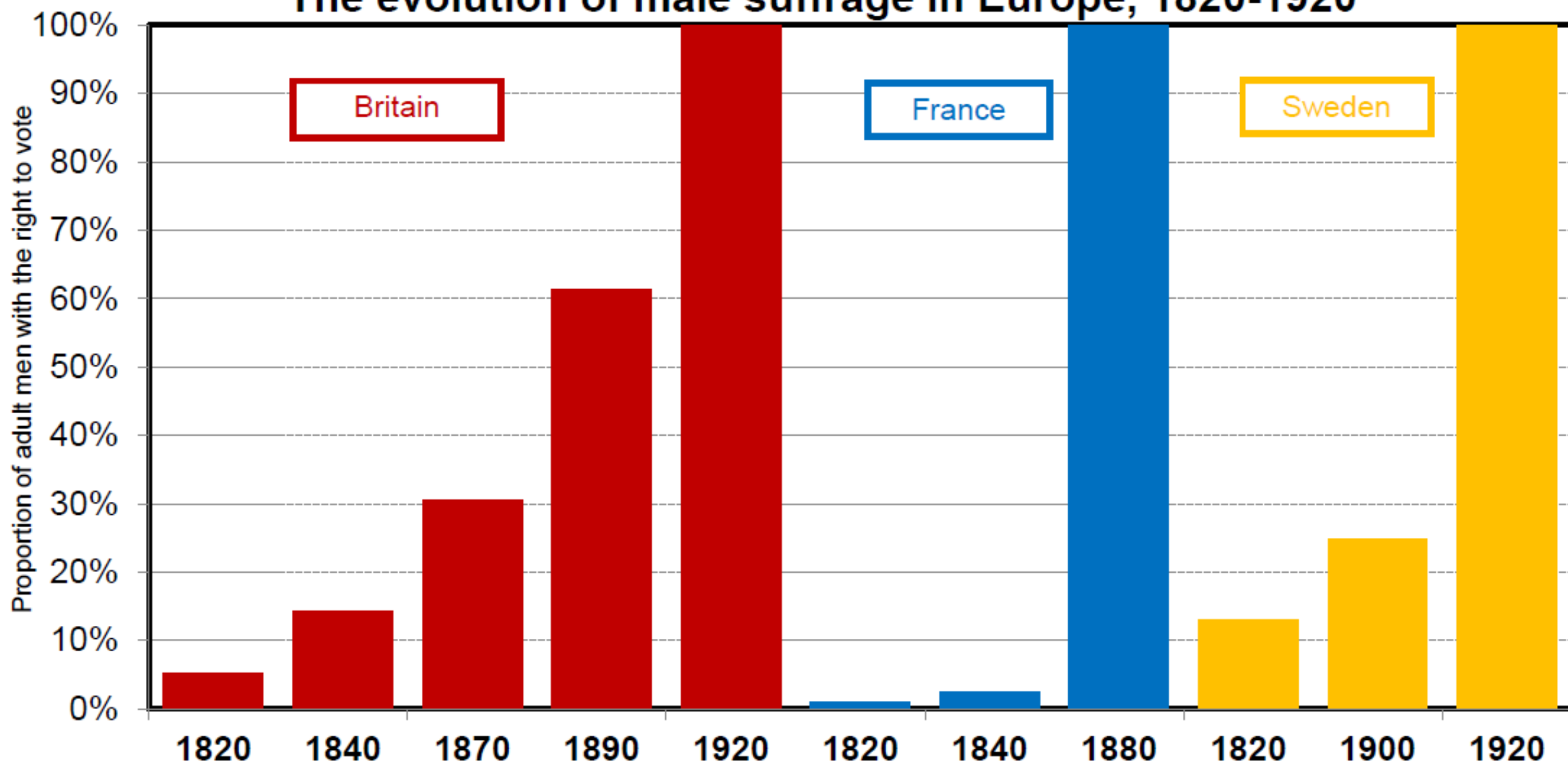
Population shares in French ternary society (1380-1780)

(% total population)



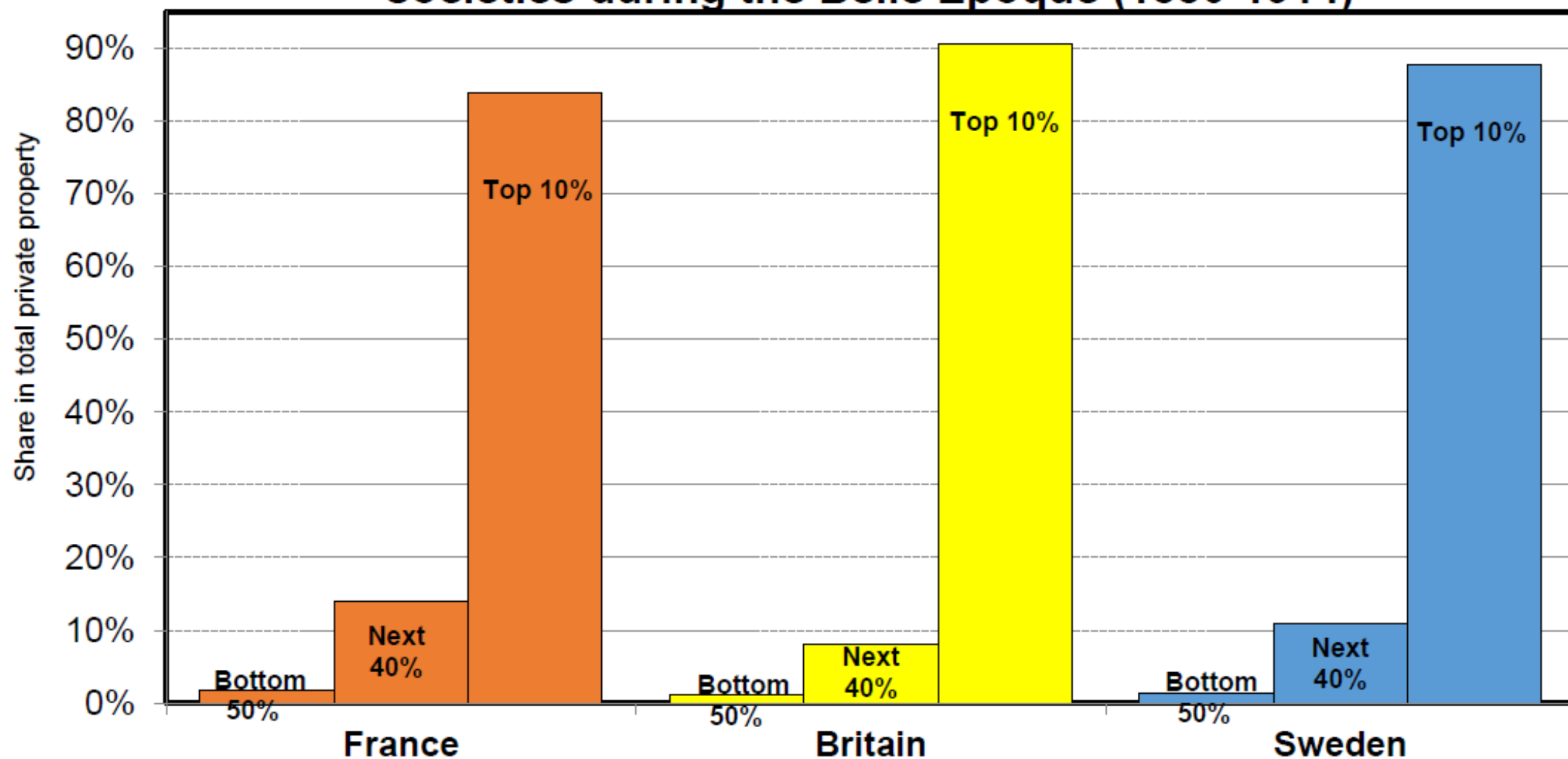
Interpretation. In 1780, the nobility and the clergy accounted respectively for 0,8% and 0,7% of total French population, or a total of 1,5% for the two dominant orders and 98,5% for the third estate; in 1660, the nobility and the clergy accounted respectively for 2,0% and 1,4% of total population, or a total of 3,4% for the two dominant orders and 96,6% for the third estate. These proportions remained fairly stable between 1380 and 1660, followed by a sharp drop between 1660 and 1780. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 2.1).

The evolution of male suffrage in Europe, 1820-1920



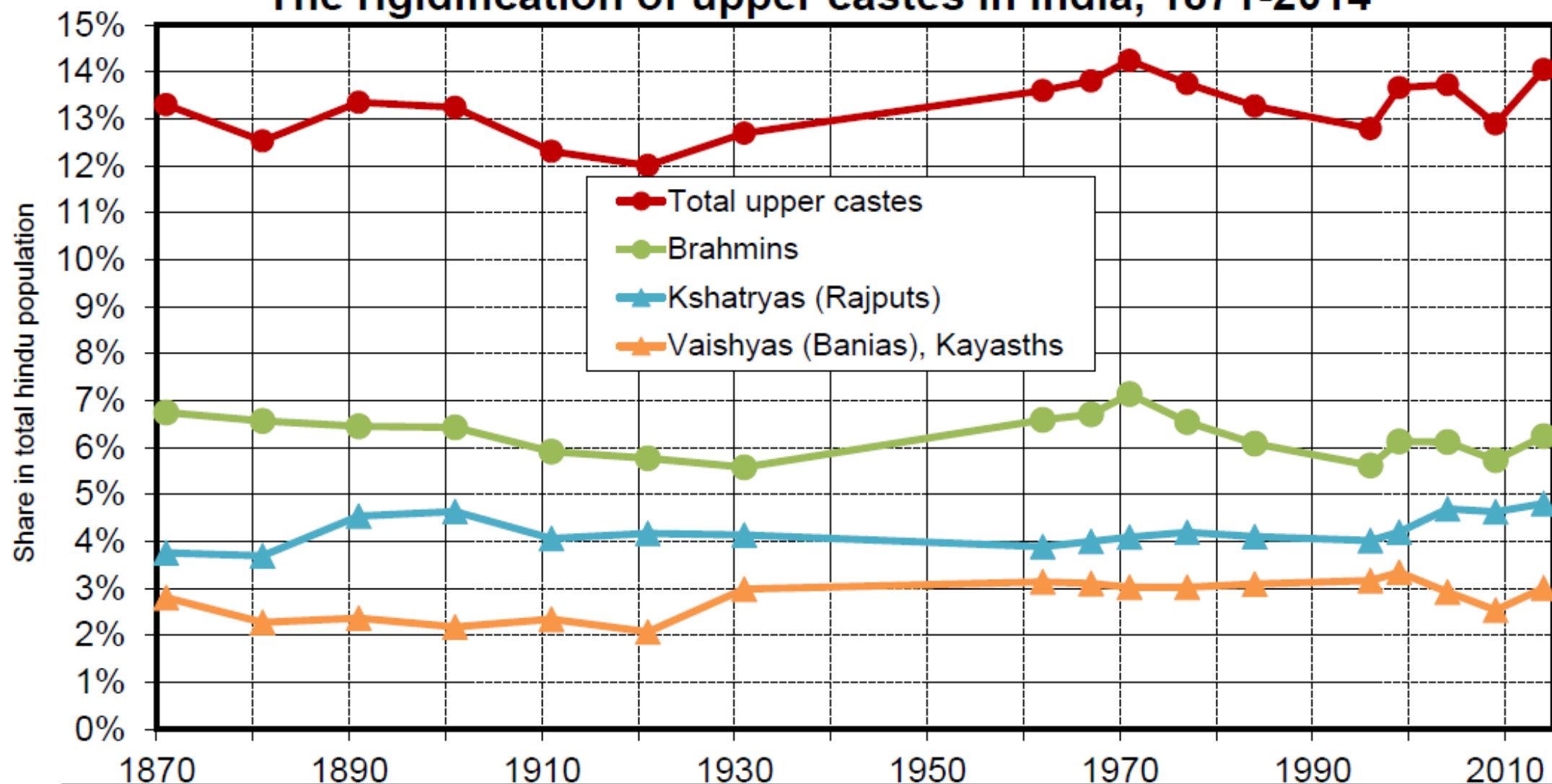
Interpretation. The proportion of adult men with the right to vote (taking into account the electoral franchise, i.e. the level of taxes to pay and/or of property to own in order to be granted this right) rose in Britain from 5% in 1820 to 30% in 1870 and 100% in 1920, and in France from 1% in 1820 to 100% in 1880. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 5.3).

Extreme patrimonial inequality: Europe's proprietarian societies during the Belle Epoque (1880-1914)



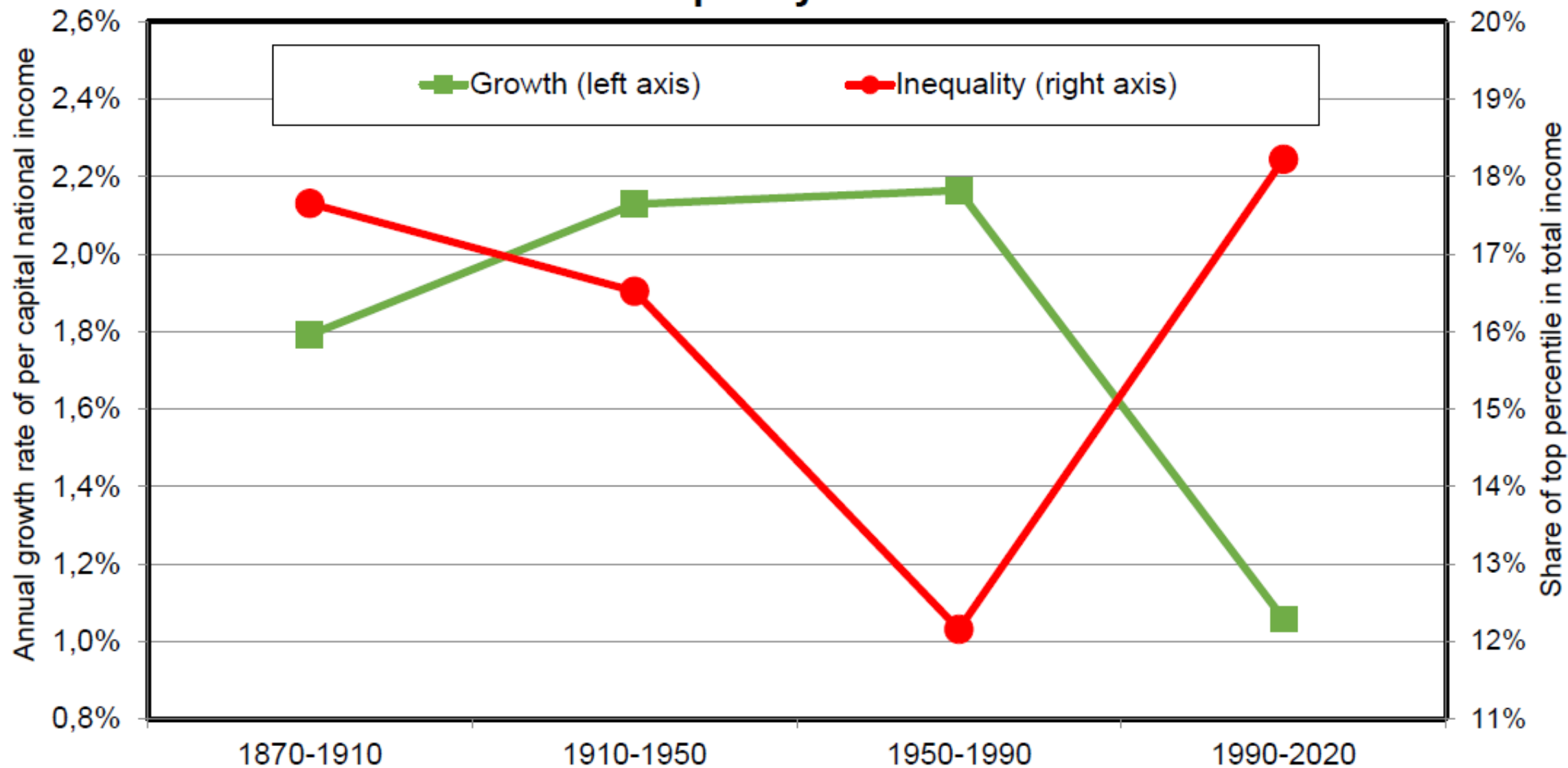
Interpretation. The share the richest 10% in total private property (all assets combined: real estate, business and financial assets, net of debt) was on average 84% in France between 1880 and 1914 (vs. 14% for the next 40% and 2% for the bottom 50%), 91% in Britain (vs 8% and 1%) and 88% in Sweden (vs 11% and 1%). **Sources and series:** see piketty.pse.ens.fr/ideology (figure 5.6).

The rigidification of upper castes in India, 1871-2014



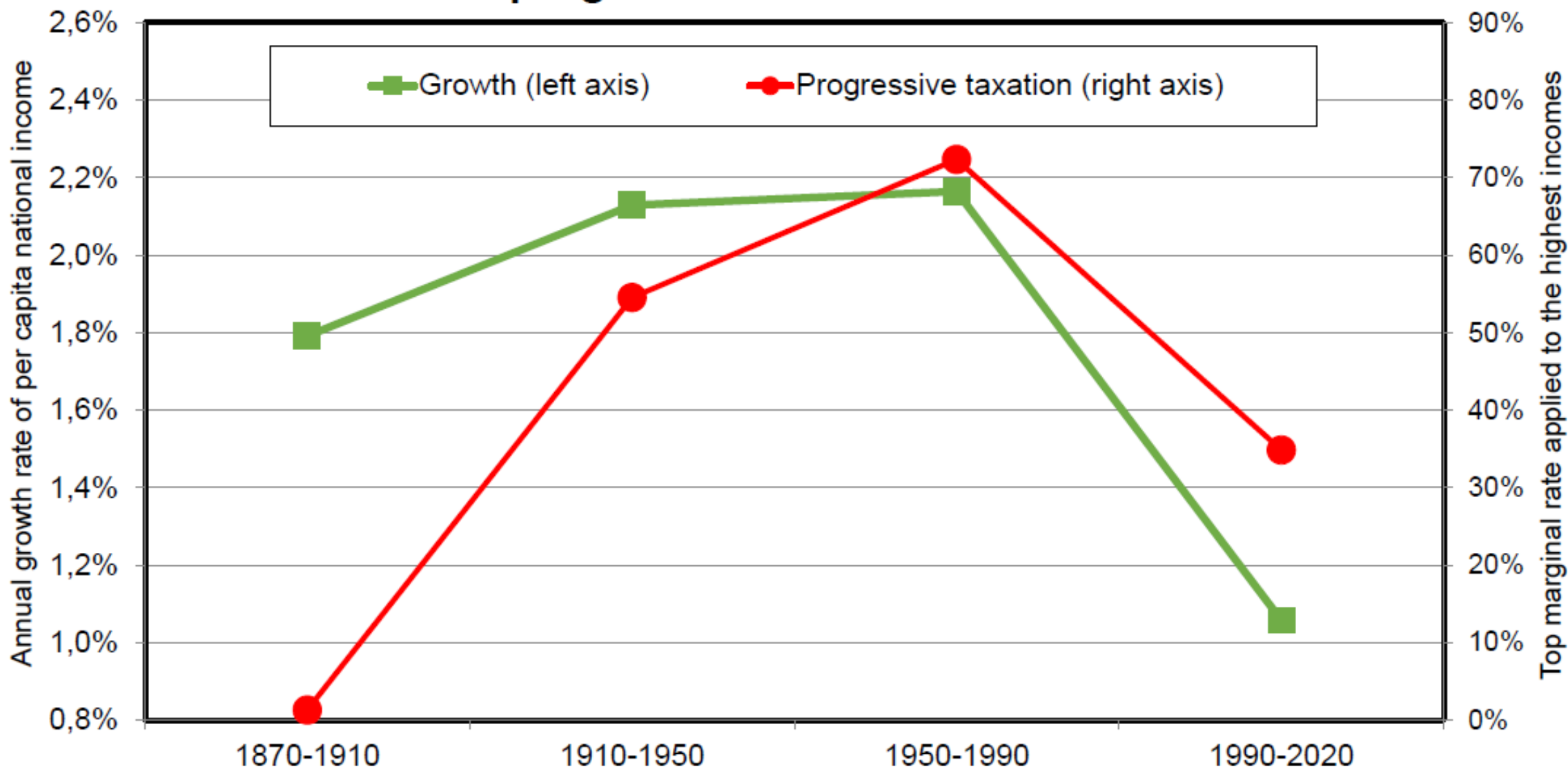
Interpretation. The results reported here were obtained from British colonial censuses conducted between 1871 and 1931 and from post-electoral surveys (self-declaration) conducted between 1962 and 2014. One observes a relative stability over time of the fraction of the population registered as brahmins (ancient class of priests and intellectuals), kshatriyas (rajputs) (ancient class of warriors) and other upper castes: vaishyas (banias) (craftsmen, tradepeople) and kayasths (writers, accountants). Other local upper castes such as marathas (about 2% of total population) were not included here. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 8.4).

Growth and inequality in the U.S. 1870-2020



Interpretation. in the U.S., the growth rate of per capita national income dropped from 2,2% per year between 1950 and 1990 to 1,1% between 1990 and 2020, while the share of the top percentile (the 1% highest incomes) in national income rose from 12% to 18% over the same period. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 11.12).

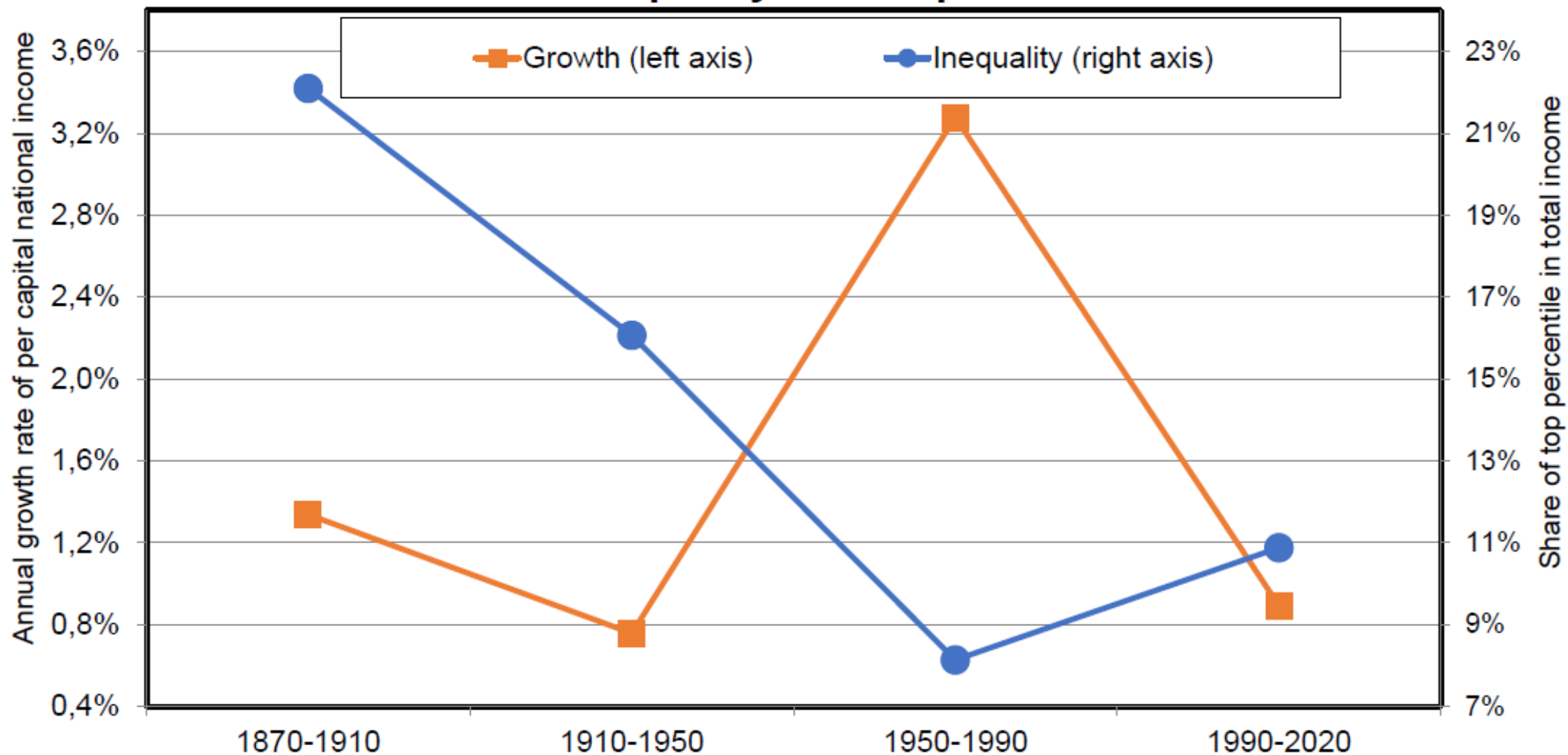
Growth and progressive taxation in the U.S. 1870-2020



Interpretation. in the U.S., the growth rate of per capita national income dropped from 2,2% per year between 1950 and 1990 to 1,1% between 1990 and 2020, while the top marginal tax rate applied to the highest incomes dropped from 72% to 35% over the same period.

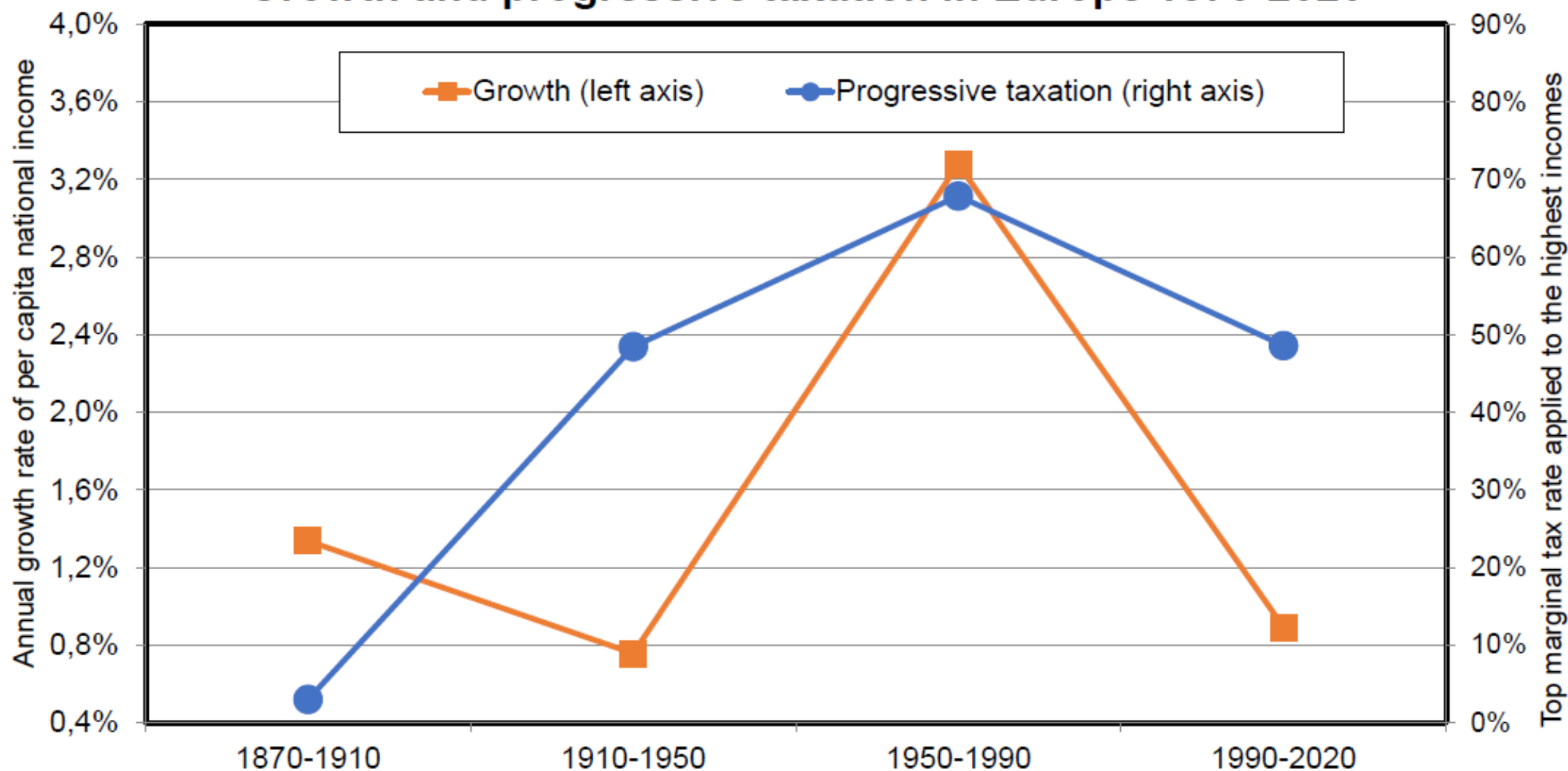
Sources and series: see piketty.pse.ens.fr/ideology (figure 11.13).

Growth and inequality in Europe 1870-2020



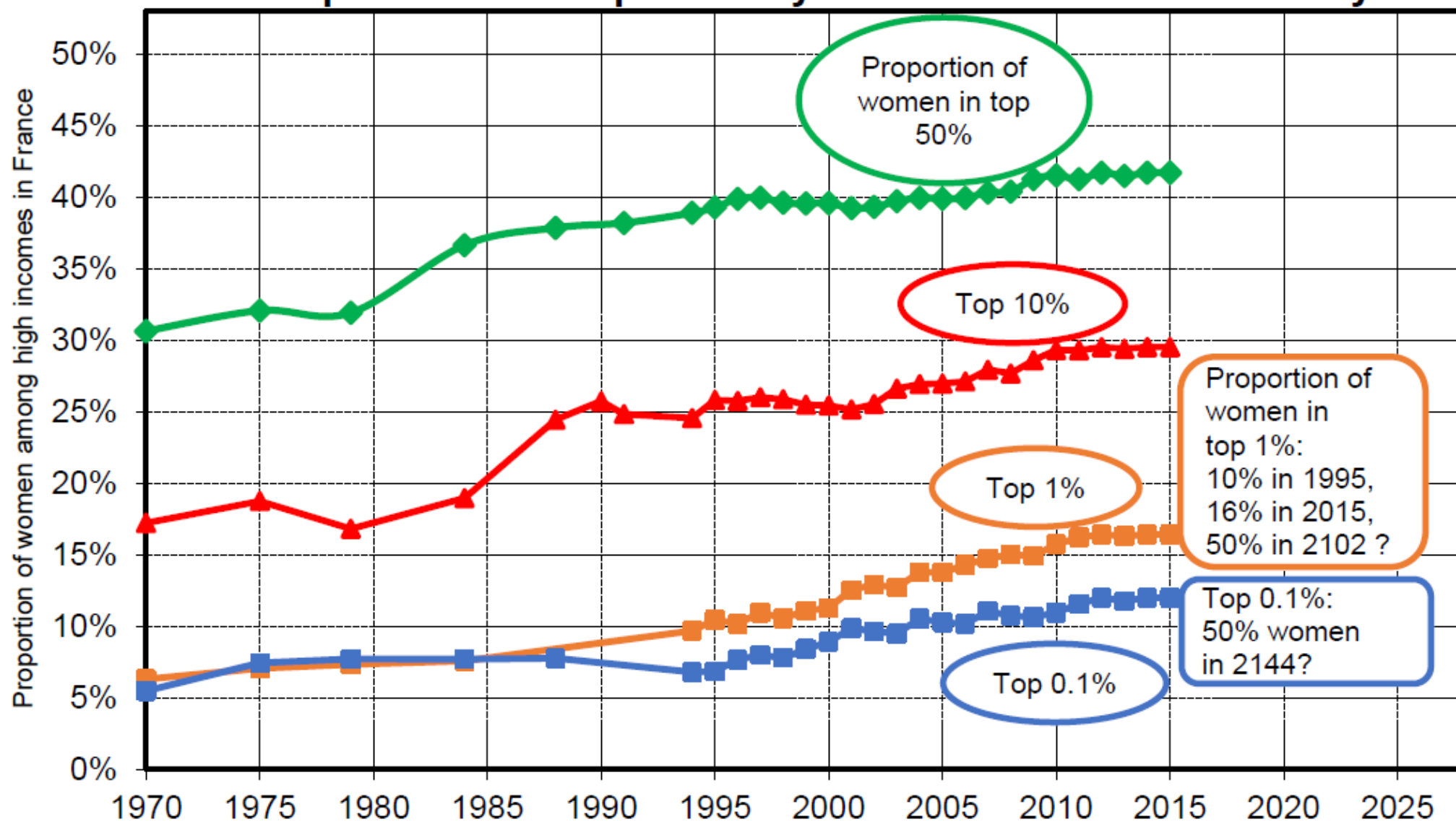
Interpretation. In Western Europe, the growth rate of per capita national income dropped from 3,3% per year between 1950 and 1990 to 0,9% per year between 1990 and 2020, while the share of the top percentile (the 1% highest incomes) in national income rose from 8% to 11% over the same period (average Germany-Britain-France). **Sources and series:** see piketty.pse.ens.fr/ideology (figure 11.14).

Growth and progressive taxation in Europe 1870-2020



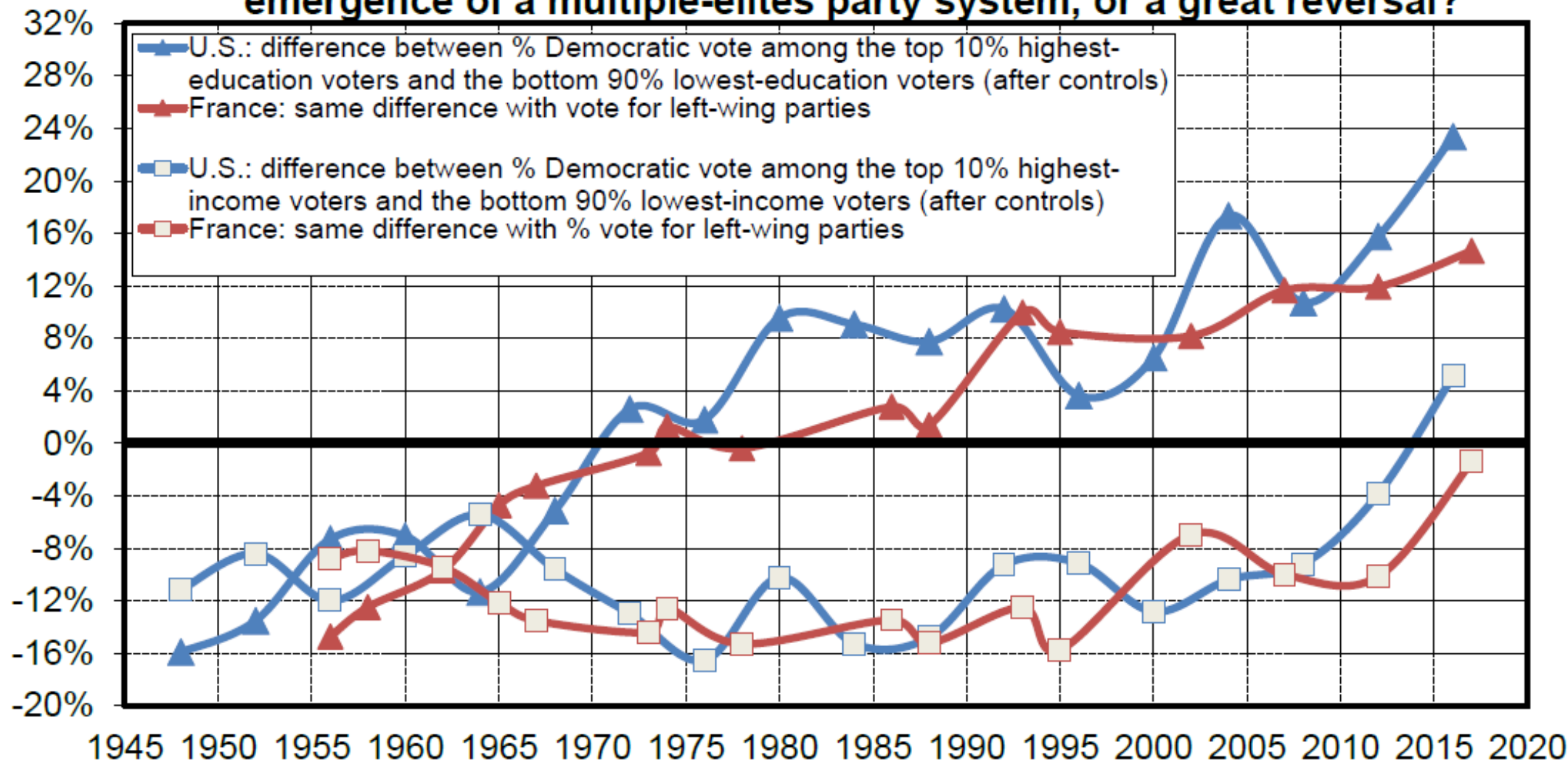
Interpretation. In Western Europe, the growth rate of per capita national income dropped from 3,3% per year between 1950 and 1990 to 0,9% per year between 1990 and 2020, while the top marginal tax rate applied to the highest incomes dropped from 98% to 49% over the same period (average Germany-Britain-France). **Sources and series:** see piketty.pse.ens.fr/ideology (figure 11.15).

The persistence of patriarchy in France in the 21st century



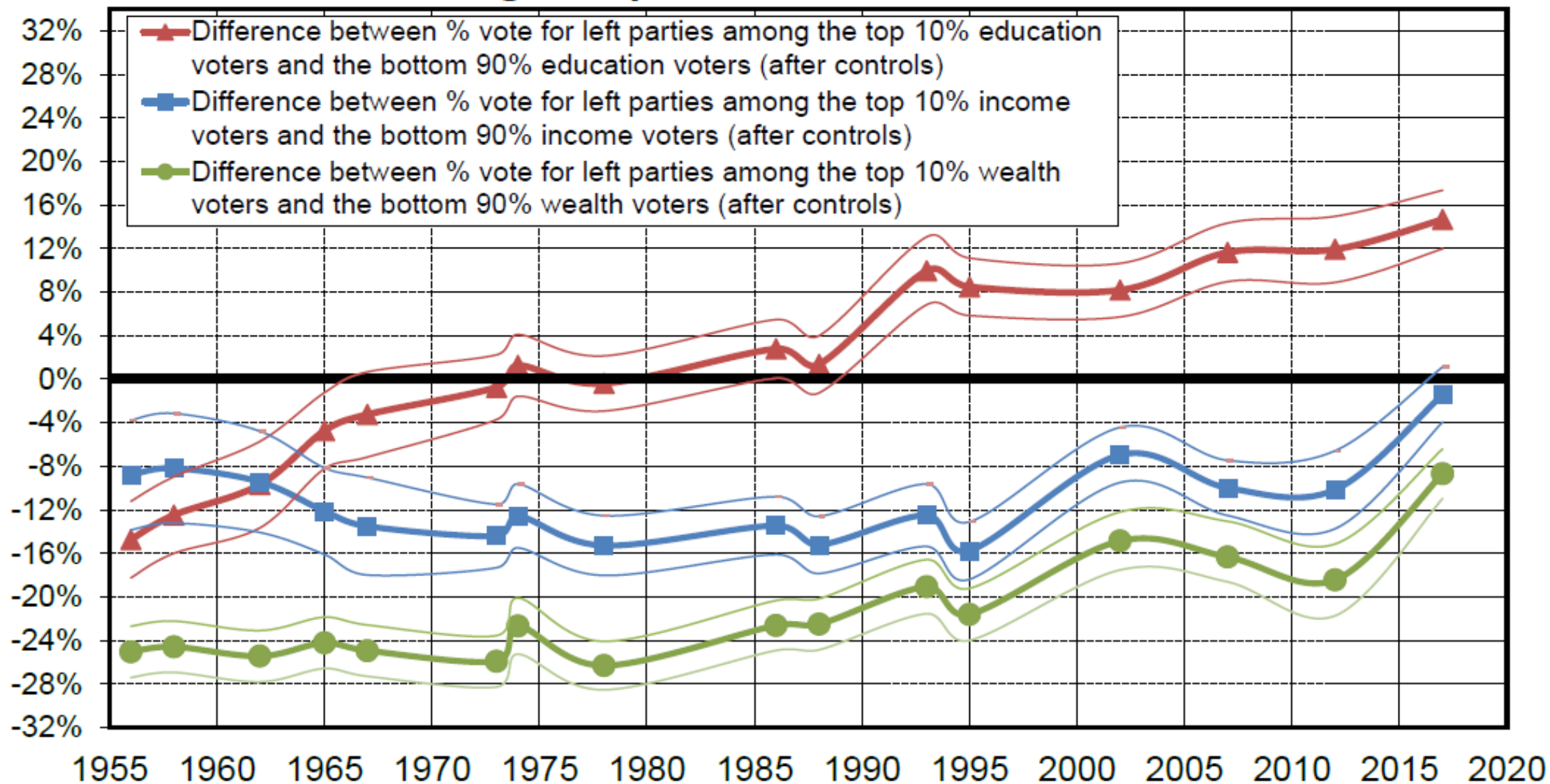
Interpretation. The proportion of women in the top percentile (top 1%) of the distribution of labour income (wages and self-employment income) increased from 10% in 1995 to 16% in 2015, and should reach 50% by 2102 if the trend continues at the same speed as during the 1995-2015 period. For the top 0,1%, parity could wait until 2144. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 13.11).

Transformation of political and electoral conflict 1945-2020: emergence of a multiple-elites party system, or a great reversal?



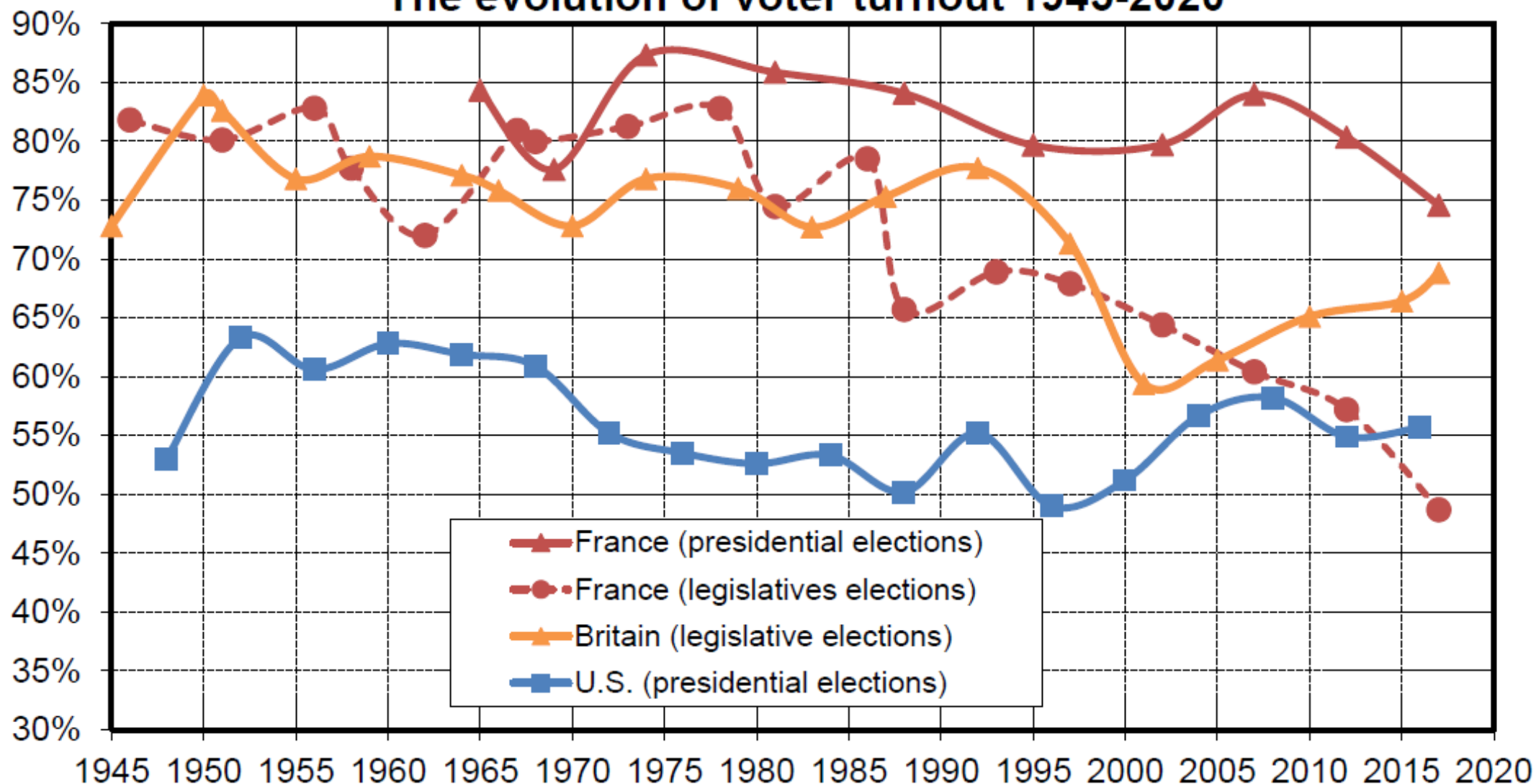
Interpretation. In the period 1950-1970, the vote for the Democratic party in the U.S. and for left-wing parties (Socialists, Communists, Radicals, Ecologists) in France was associated to voters with the lowest educational degrees and income levels; in the period 1980-2000, it became associated with the voters with the highest degrees; in the period 2010-2020, it is also becoming associated with the voters with the highest incomes (particularly in the U.S.). **Sources and series:** see piketty.pse.ens.fr/ideology (figure 0.9).

Social cleavages & political conflict in France 1955-2020



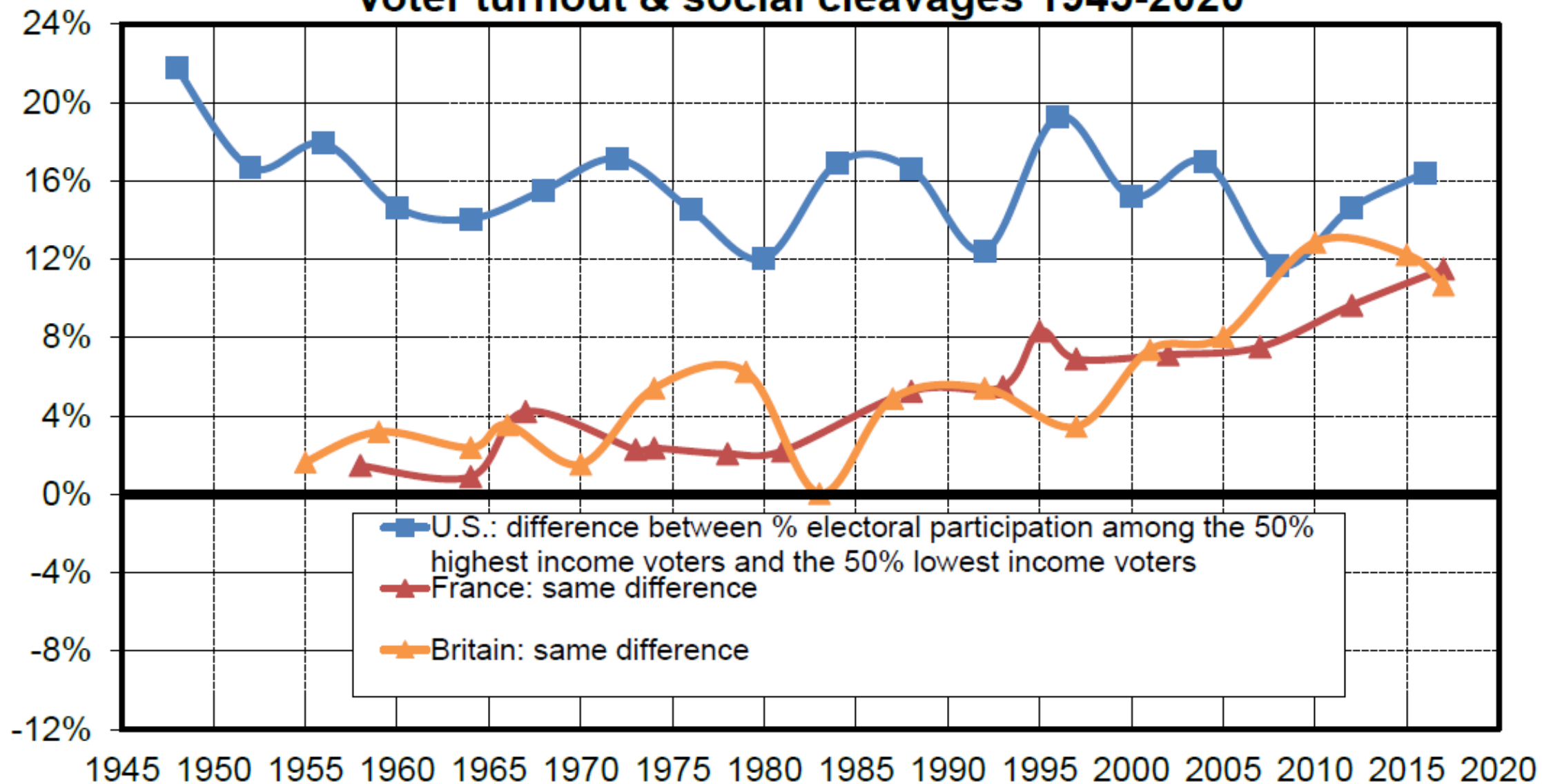
Interpretation. In the 1950-1970 period, the vote for left-wing parties (socialists-communists-radicals-greens) was associated to voters with the lowest education degrees and the lowest levels of income and wealth; in the 1990-2010 period, it became associated to the voters with the highest education degrees. **Note:** fine lines indicate 90% confidence intervals. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 14.1).

The evolution of voter turnout 1945-2020



Interpretation. Voter turnout has been relatively stable around 80%-85% in French presidential elections since 1965 (with however a small fall to 75% in 2017). The fall has been much stronger in legislative elections, which was around 80% until the 1970s, and was less than 50% in 2017. Electoral participation dropped in Britain before rising again since 2010. In the U.S., it has generally fluctuated around 50%-60%. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 14.7).

Voter turnout & social cleavages 1945-2020



Interpretation. During the 1950-1980 period, electoral participation in France and Britain was at most 2%-3% higher among the 50% highest income voters than among the 50% lowest income voters. This gap rose significantly since the 1980s and reached 10%-12% in the 2010s, thereby approaching the levels historically observed in the U.S. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 14.8).