# Reflections on Inequality and Capital in the 21$^{st}$ century

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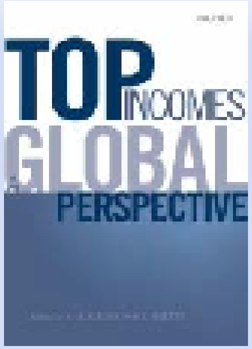
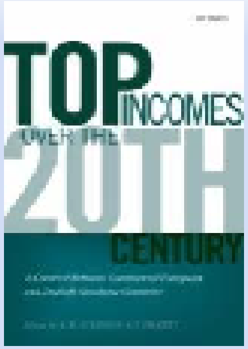
- This presentation is partly based upon my book ***Capital in the 21st century*** (HUP, 2014)
- In this book, I study the global dynamics of income and wealth distribution since 18c in 20+ countries. I use historical data collected over the past 15 years with Atkinson, Saez, Postel-Vinay, Rosenthal, Alvaredo, Zucman, and 30+ others. Aim is to put distribution back at the center of political economy.
I attempt to develop a multidimensional approach to capital ownership and property relations, and to study beliefs systems about inequality

- **Today I will present a number of selected historical evolutions & attempt to draw lessons for the future**
- All series available at [http://piketty.pse.ens.fr/capital21c](http://piketty.pse.ens.fr/capital21c) & the World Top Incomes Database

# The World Top Incomes Database

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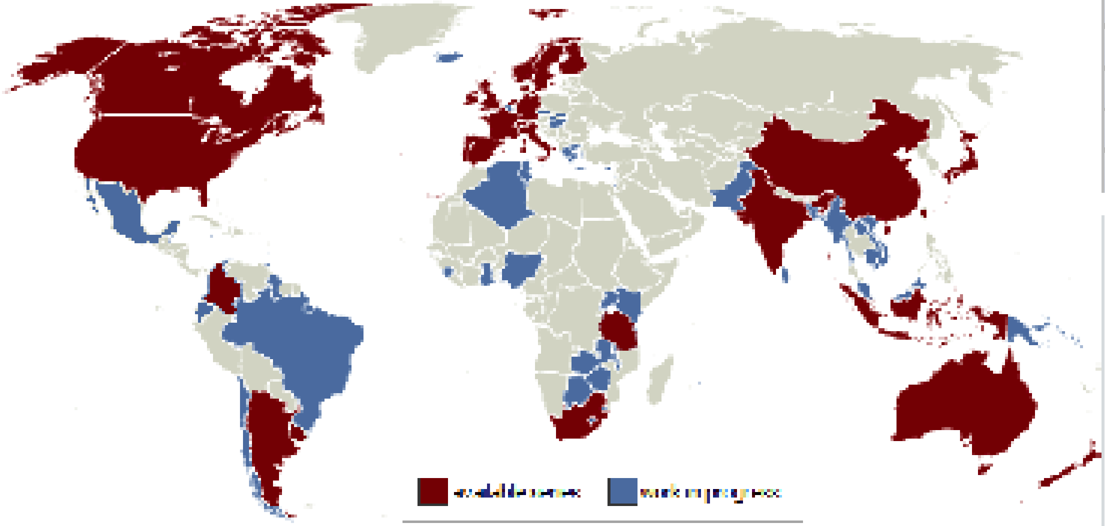


# This presentation: three points

- **1. The long-run dynamics of income inequality**. The end of the Kuznets curve, the end of universal laws. Institutions and policies matter: education, labor, tax, etc.

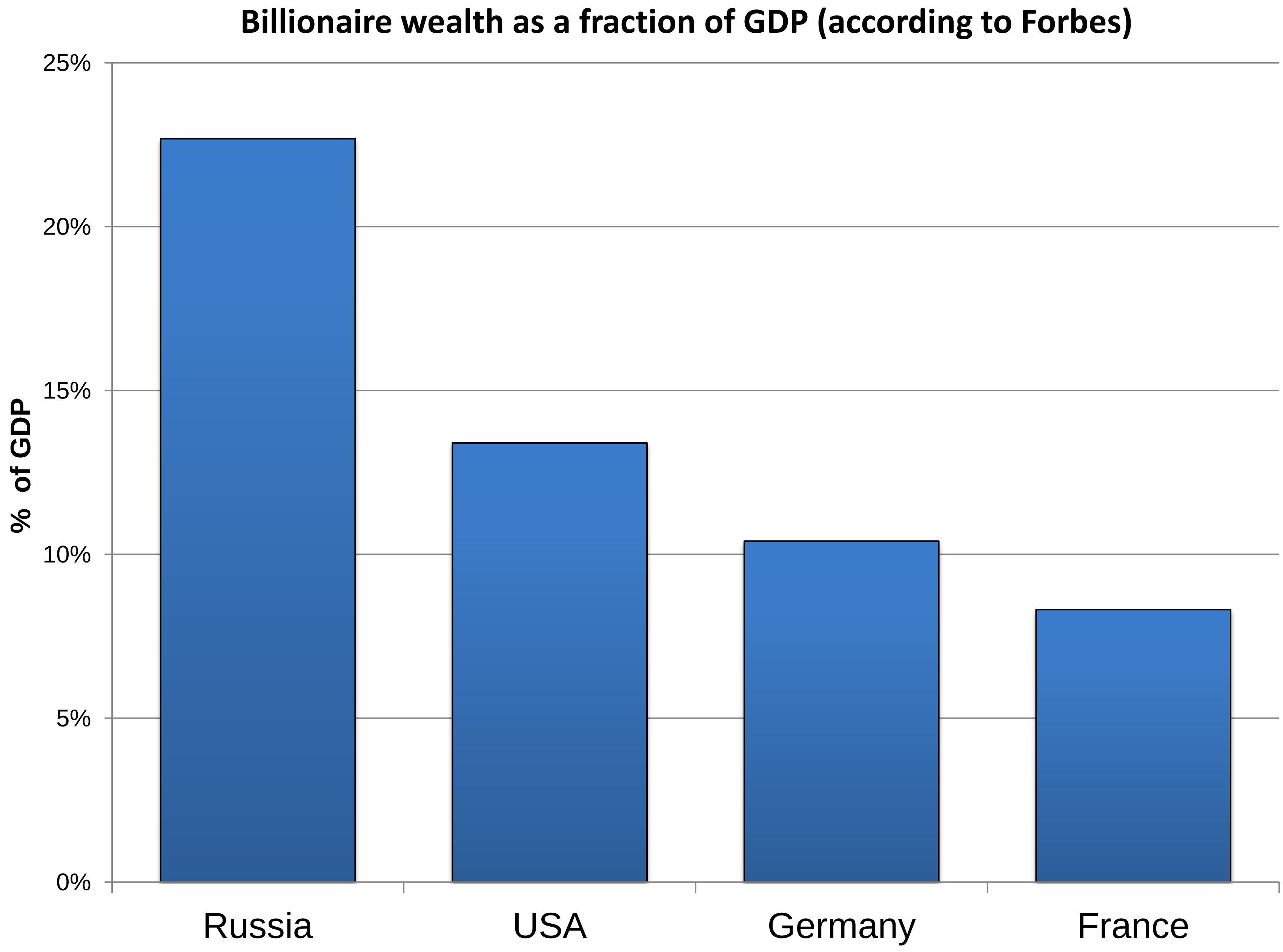
- **2. The return of a patrimonial (or wealth-based) society**. Wealth-income ratios seem to be returning to very high levels in rich countries. **The metamorphosis of capital.**

- **3. The future of wealth concentration**. With high r - g during 21$^c$ (r = net-of-tax rate of return, g = growth rate), then wealth inequality might rise again. Need for more transparency.

# Inequality in Russia

- **Income & wealth concentration in Russia today** = probably extremely high by international and historical standards.
  Billionaire wealth 2014: 20-25% of GDP in Russia,
  vs. 10-15% in USA and 5-10% in Europe

- **However we do not really know. Extreme lack of transparency.**
- **Impossible to access income tax data.** Not even simple tabulations indicating number of taxpayers by income brackets.
- **No inheritance tax at all**. So there is no data on inherited wealth.
- **Capital flight**. Huge trade surplus 2000-2015 (≈ 10% GDP/year). But foreign reserves are only 30% GDP. Huge missing wealth.
- **Like other countries, & probably even more than others, Russia needs more transparency about income and wealth dynamics.** Progressive taxation = powerful way to produce information, fight corruption & limit concentration of property.
  Household surveys vastly underestimate inequality.


Billionaire wealth as a fraction of GDP (according to Forbes)
% of GDP
25%
20%
15%
10%
5%
0%
Russia
USA
Germany
France

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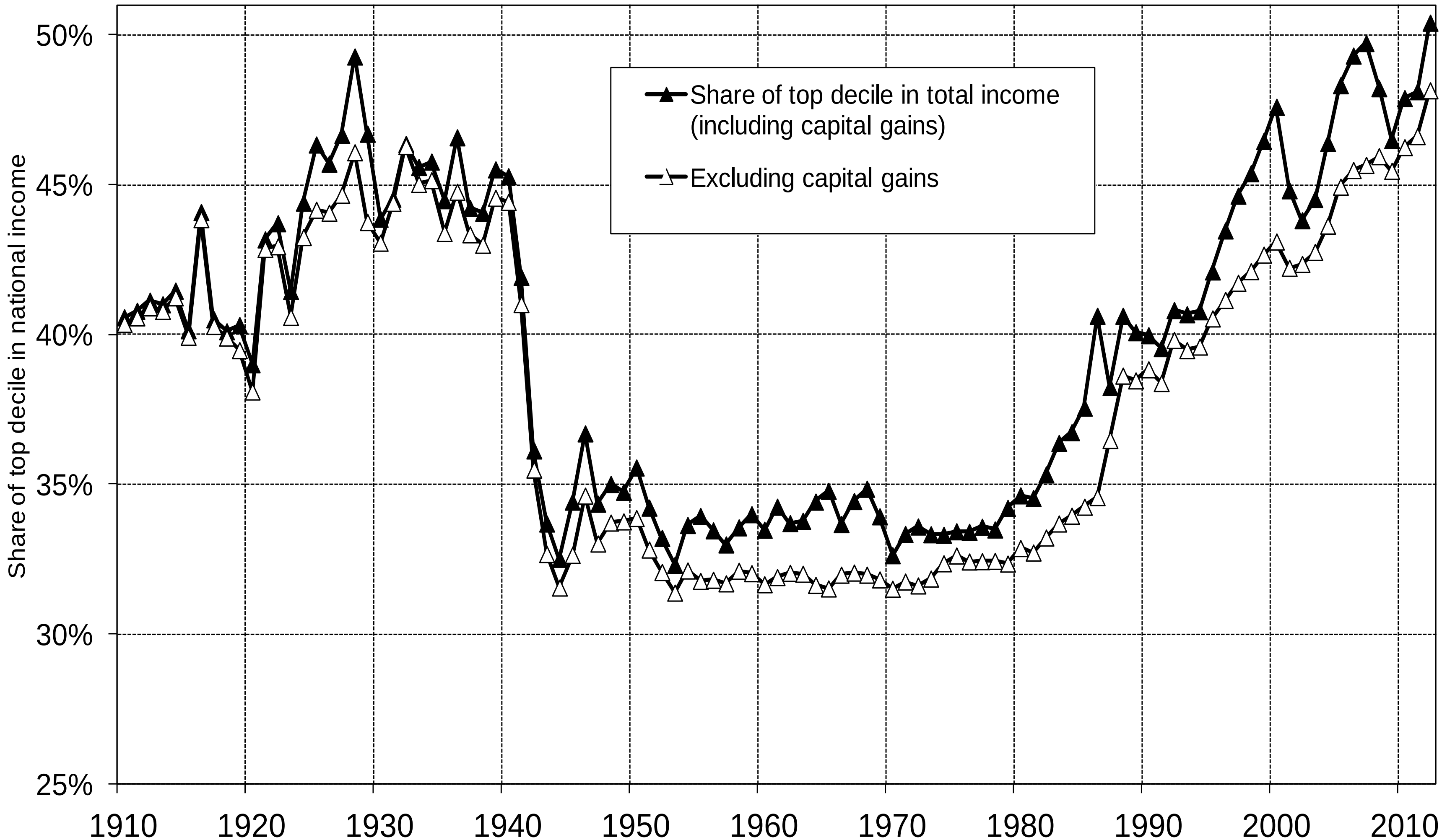
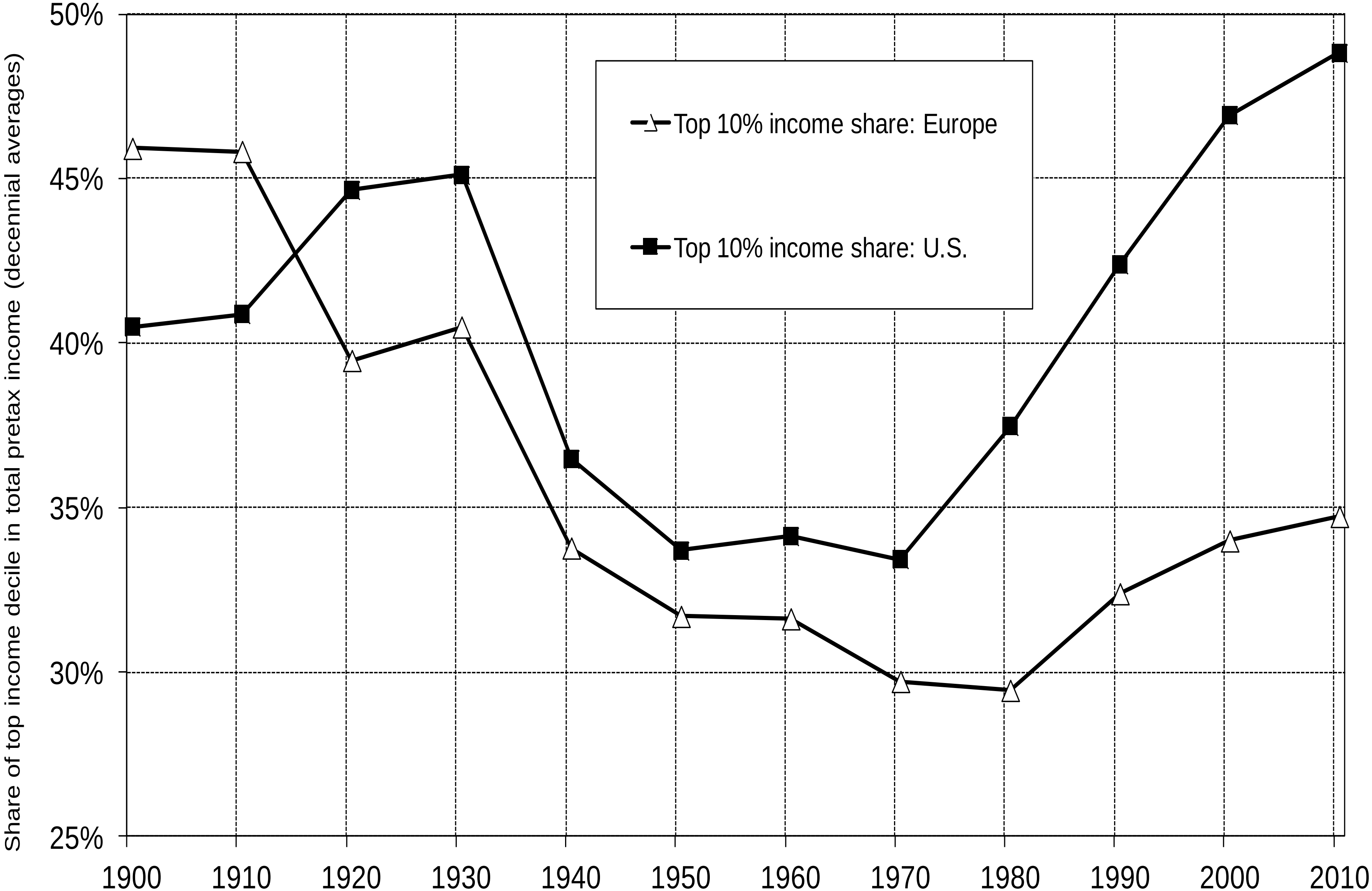
- **1. The long-run dynamics of income inequality**.
  The end of the Kuznets curve, the end of universal laws.
  Institutions and policies matter: education, labor, tax, etc.

# Figure I.1. Income inequality in the United States, 1910-2012



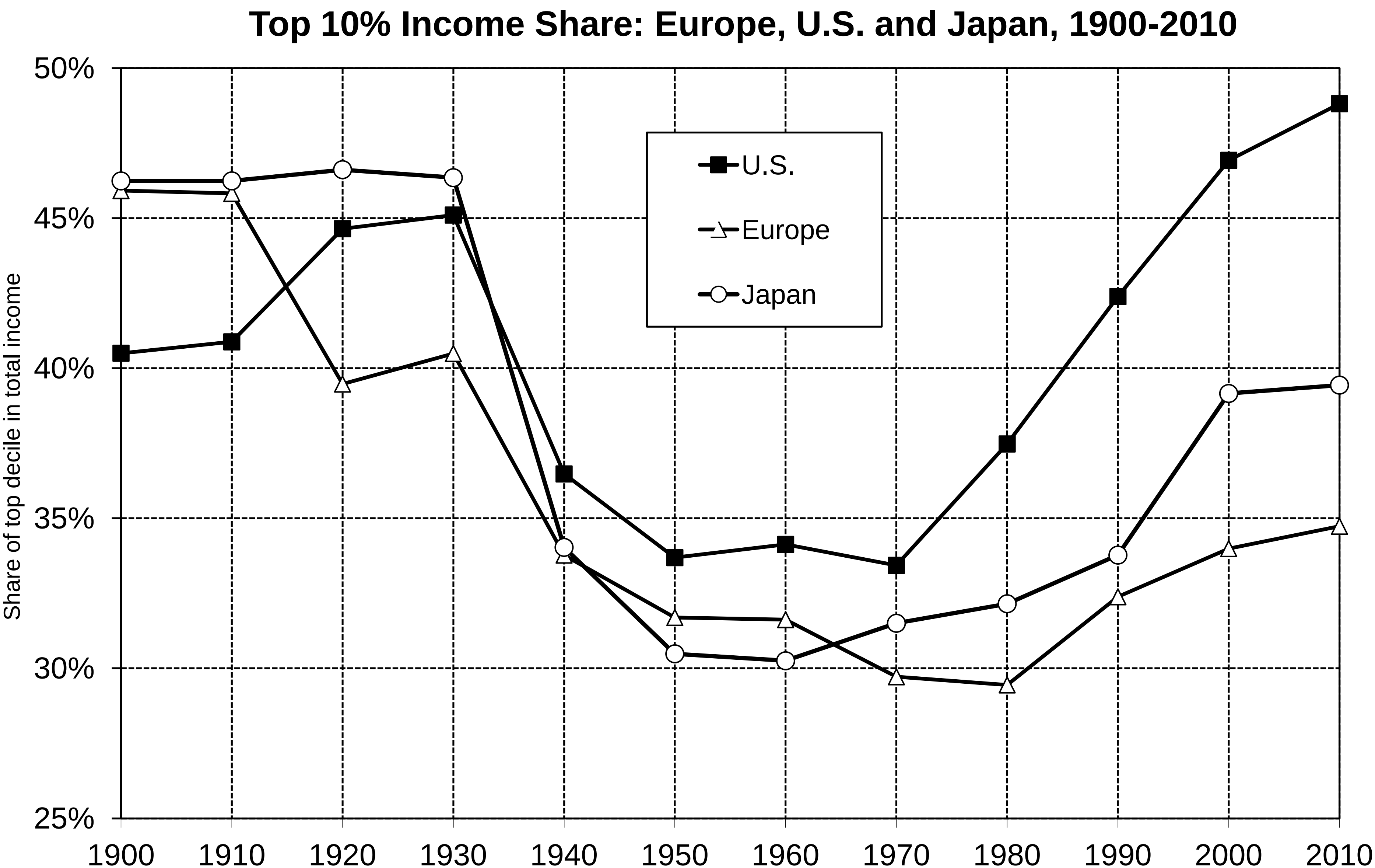

The top decile share in U.S. national income dropped from 45-50% in the 1910s-1920s to less than 35% in the 1950s (this is the fall documented by Kuznets); it then rose from less than 35% in the 1970s to 45-50% in the 2000s-2010s.
Sources and series: see

# Figure 1. Income inequality: Europe and the U.S., 1900-2010




The share of total income accruing to top decile income holders was higher in Europe than in the U.S. around 1900-1910; it is a lot higher in the U.S. than in Europe around 2000-2010.

Sources and series: see piketty.pse.ens.fr/capital21c (fig.9,8)



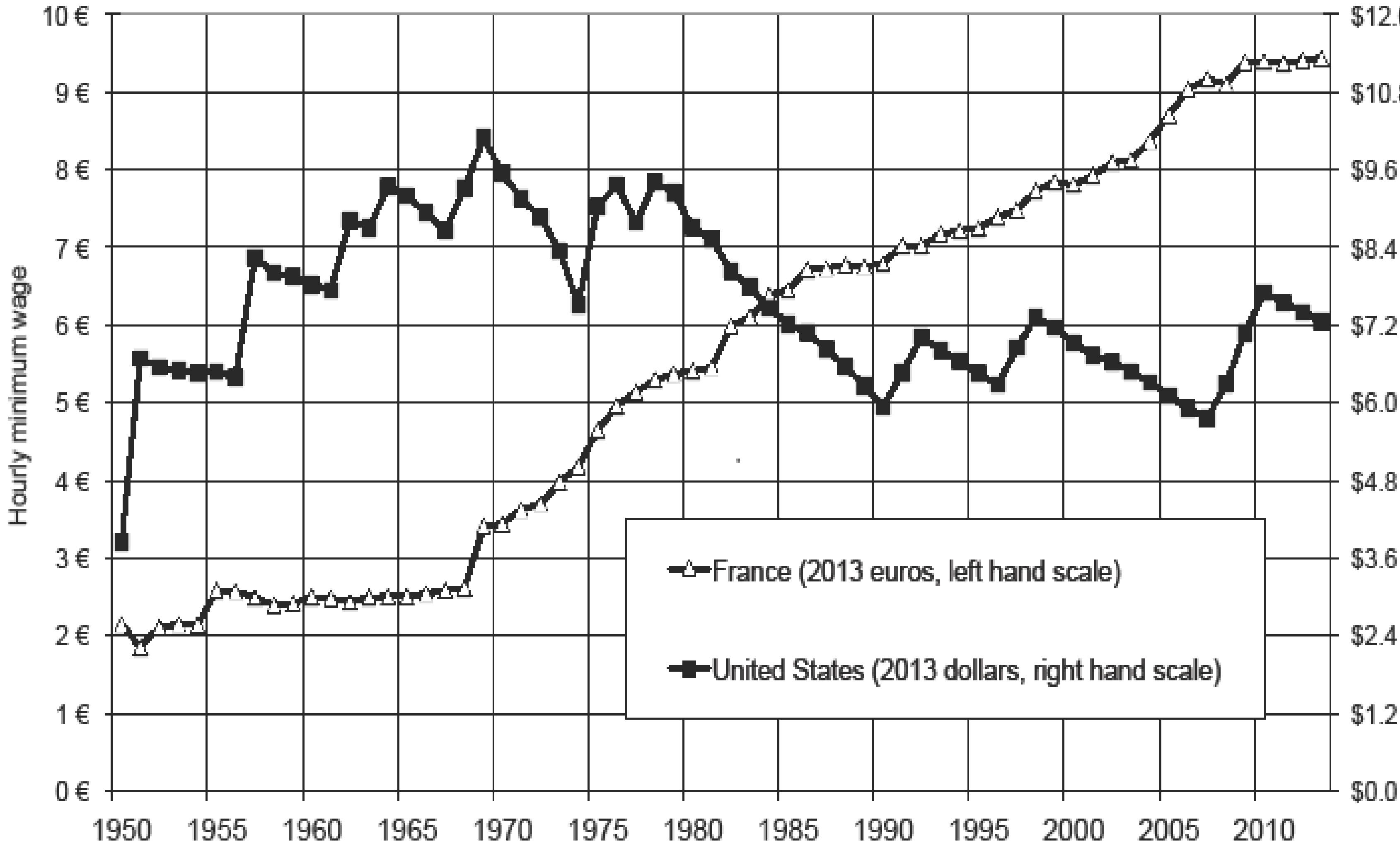

The top decile income share was higher in Europe than in the U.S. in 1900-1910; it is a lot higher in the U.S. in 2000-2010. Sources and series: see piketty.pse.ens.fr/capital21c.

- The rise in US inequality in recent decades is mostly due to rising inequality of labor income

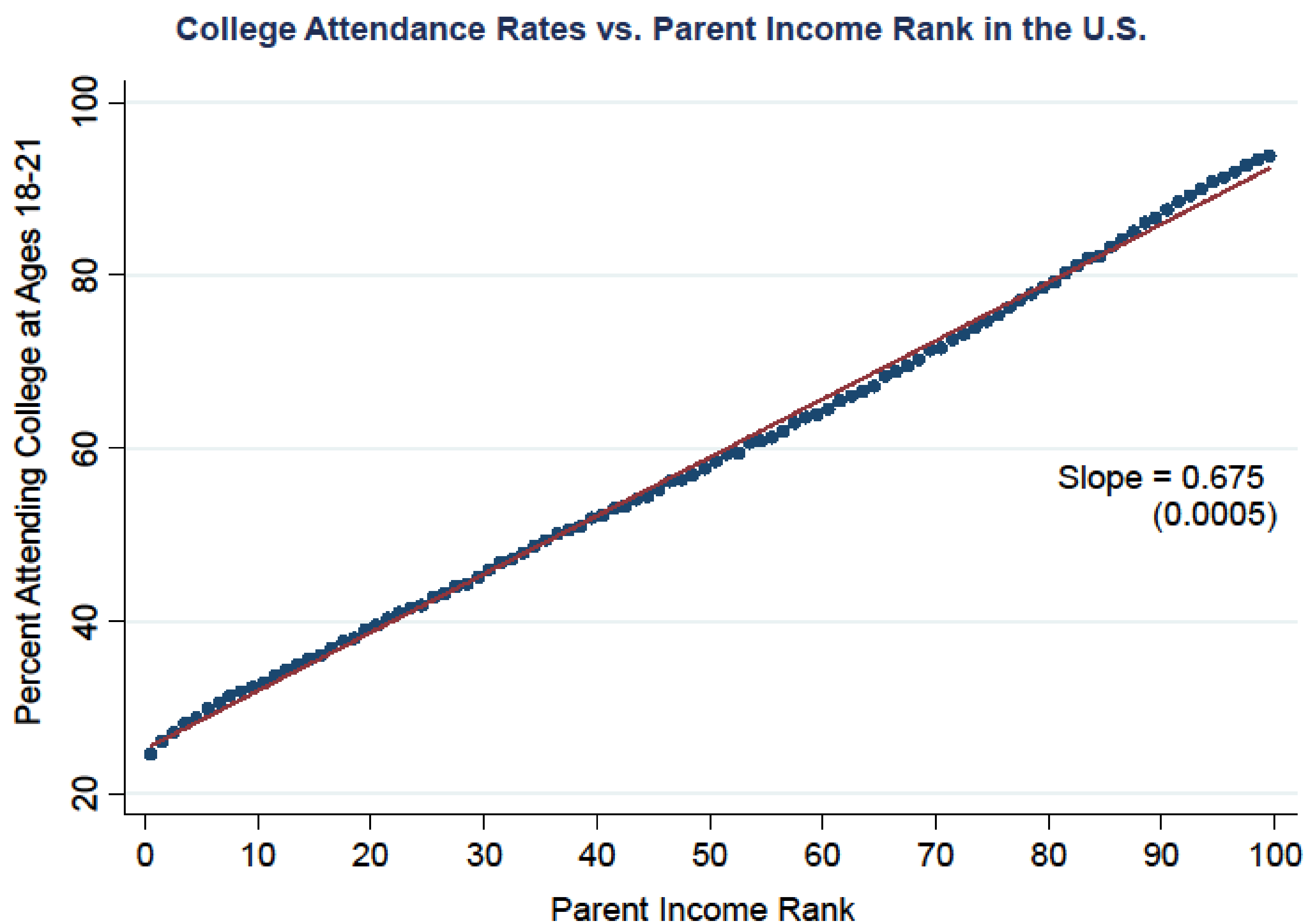
- It is due to a mixture of reasons: changing supply and demand for skills; race between education and technology; globalization; more unequal to access to skills in the US (rising tuitions, insufficient public investment); unprecedented rise of top managerial compensation in the US (changing incentives, cuts in top income tax rates); falling minimum wage in the US

  ➔ institutions and policies matter

**Figure 9.1. Minimum wage in France and the U.S., 1950-2013**

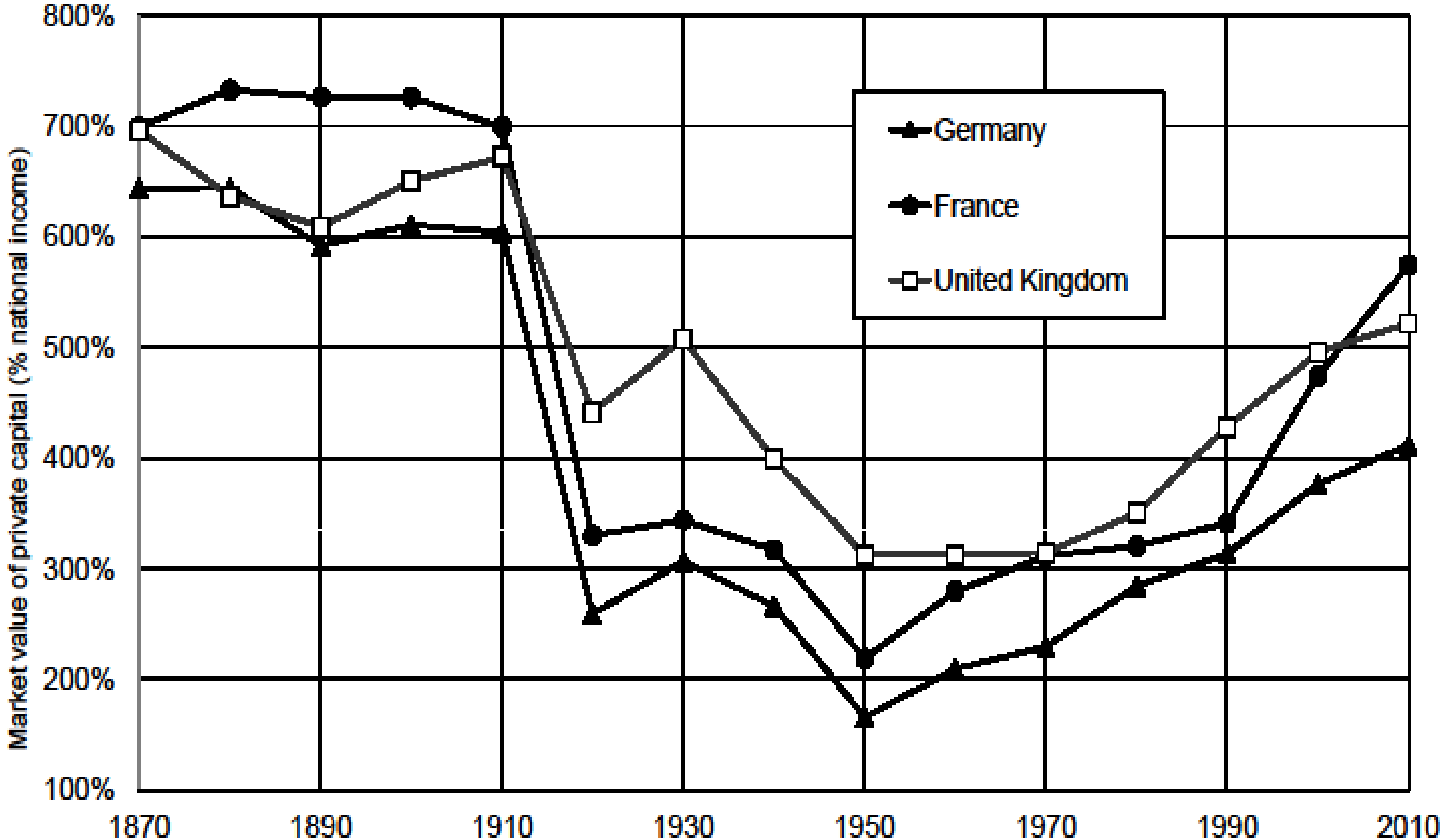



Expressed in 2013 purchasing power, the hourly minimum wage rose from $3.8 to $7.3 between 1950 and 2013 in the U.S., and from €2.1 to €9.4 in France. Sources and series: see piketty.pse.ens.fr/capital21c.


College Attendance Rates vs. Parent Income Rank in the U.S.
Percent Attending College at Ages 18-21
20
40
60
80
100
0
10
20
30
40
50
60
70
80
90
100
Parent Income Rank
Slope = 0.675
(0.0005)

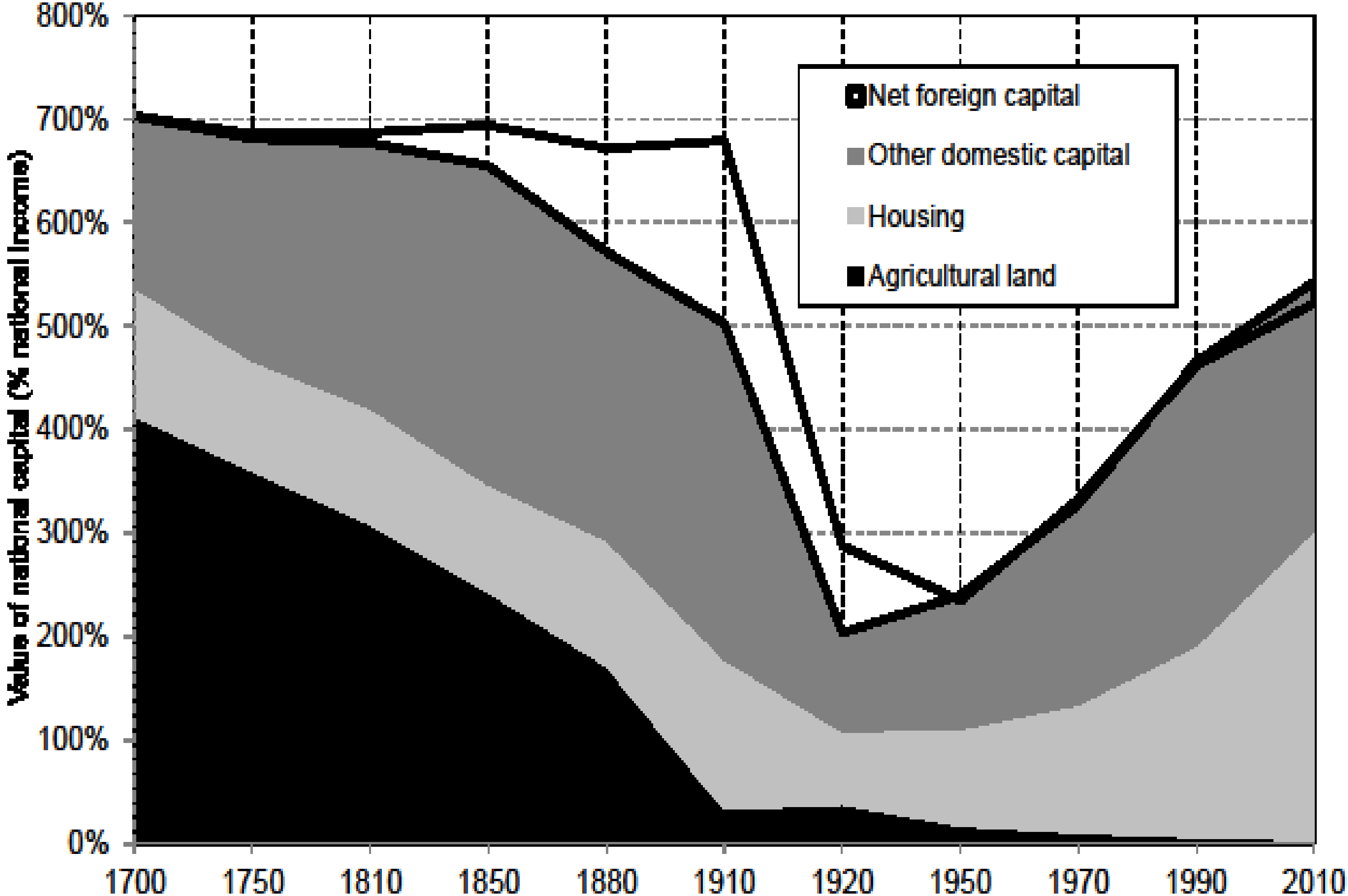
- **2. The return of a patrimonial (or wealth-based) society**. Wealth-income ratios seem to be returning to very high levels in rich countries. Intuition: in a slow-growth society, wealth accumulated in the past can naturally become very important. In the very long run, this can be relevant for the entire world. Not bad in itself, but new challenges. **The metamorphosis of capital call for new regulations of property relations**. The key role of the legal and political system. Democratizing capital: worker codetermination, patent laws, etc.

**Figure I.2. The capital/income ratio in Europe, 1870-2010**



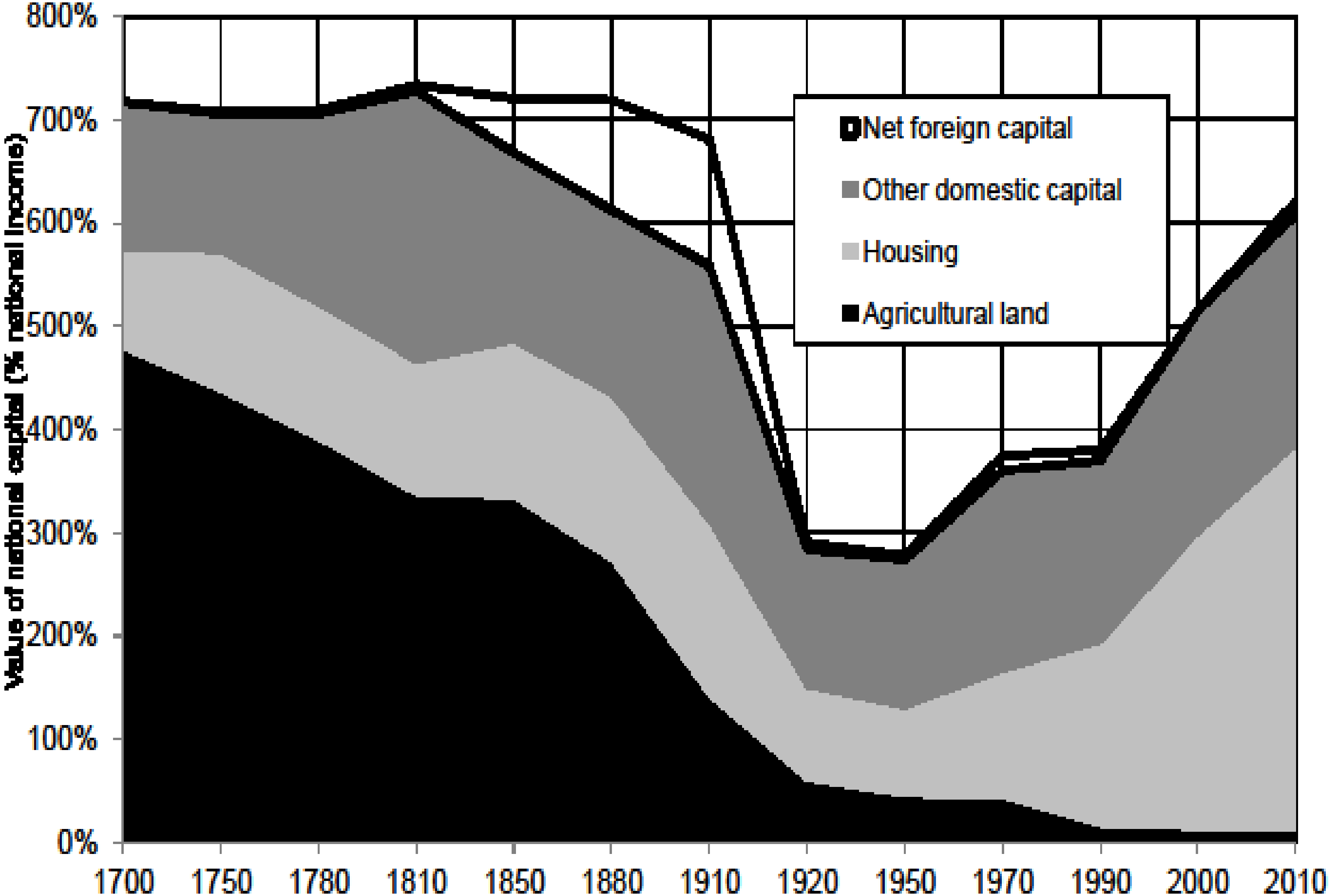

Aggregate private wealth was worth about 6-7 years of national income in Europe in 1910, between 2 and 3 years in 1950, and between 4 and 6 years in 2010. Sources and series: see piketty.pse.ens.fr/capital21c.

# Figure 3.1. Capital in the United Kingdom, 1700-2010




National capital is worth about 7 years of national income in the United Kingdom in 1700 (including 4 in agricultural land). Sources and series: see piketty.pse.ens.fr/capital21c.

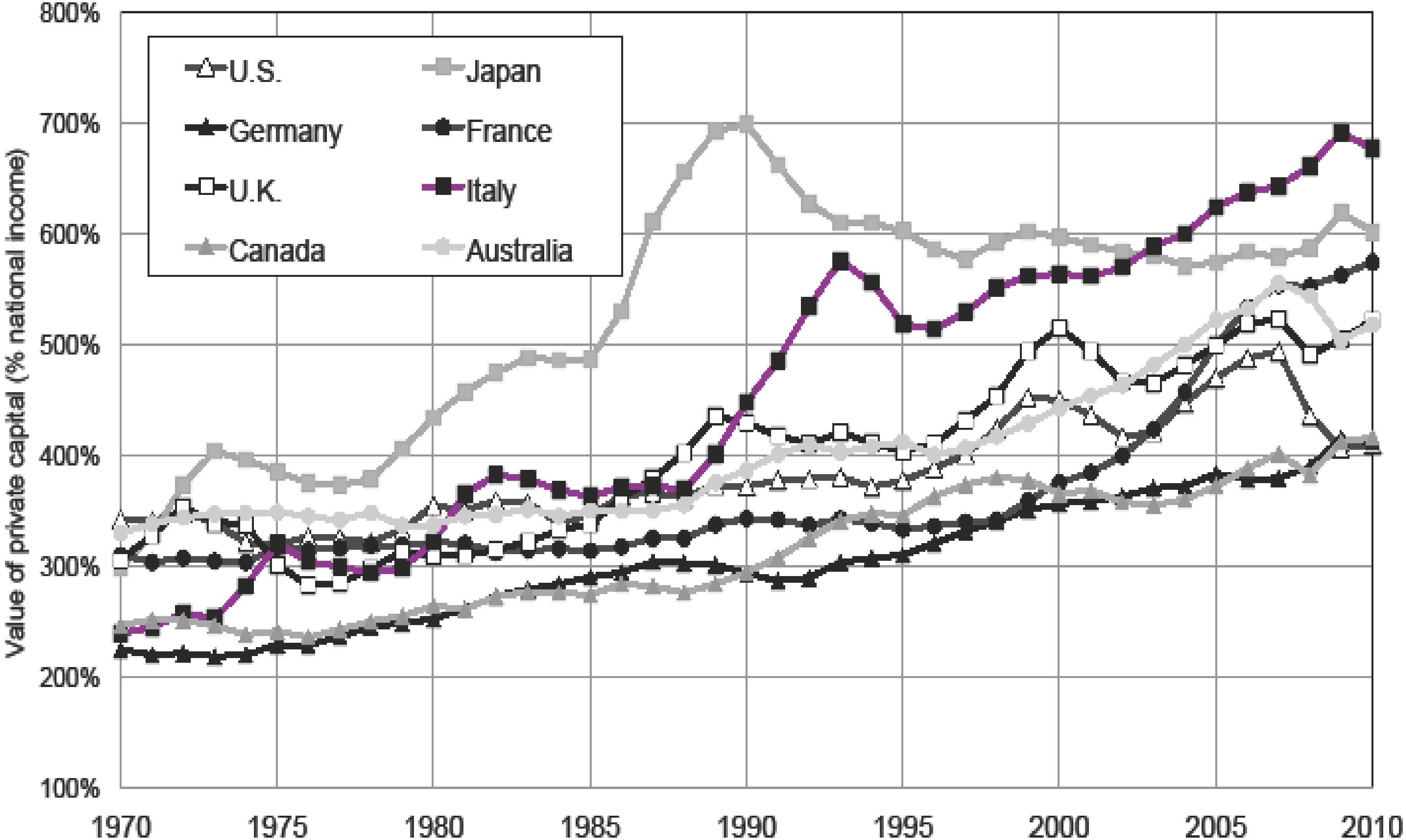
# Figure 3.2. Capital in France, 1700-2010




National capital is worth almost 7 years of national income in France in 1910 (including 1 invested abroad).

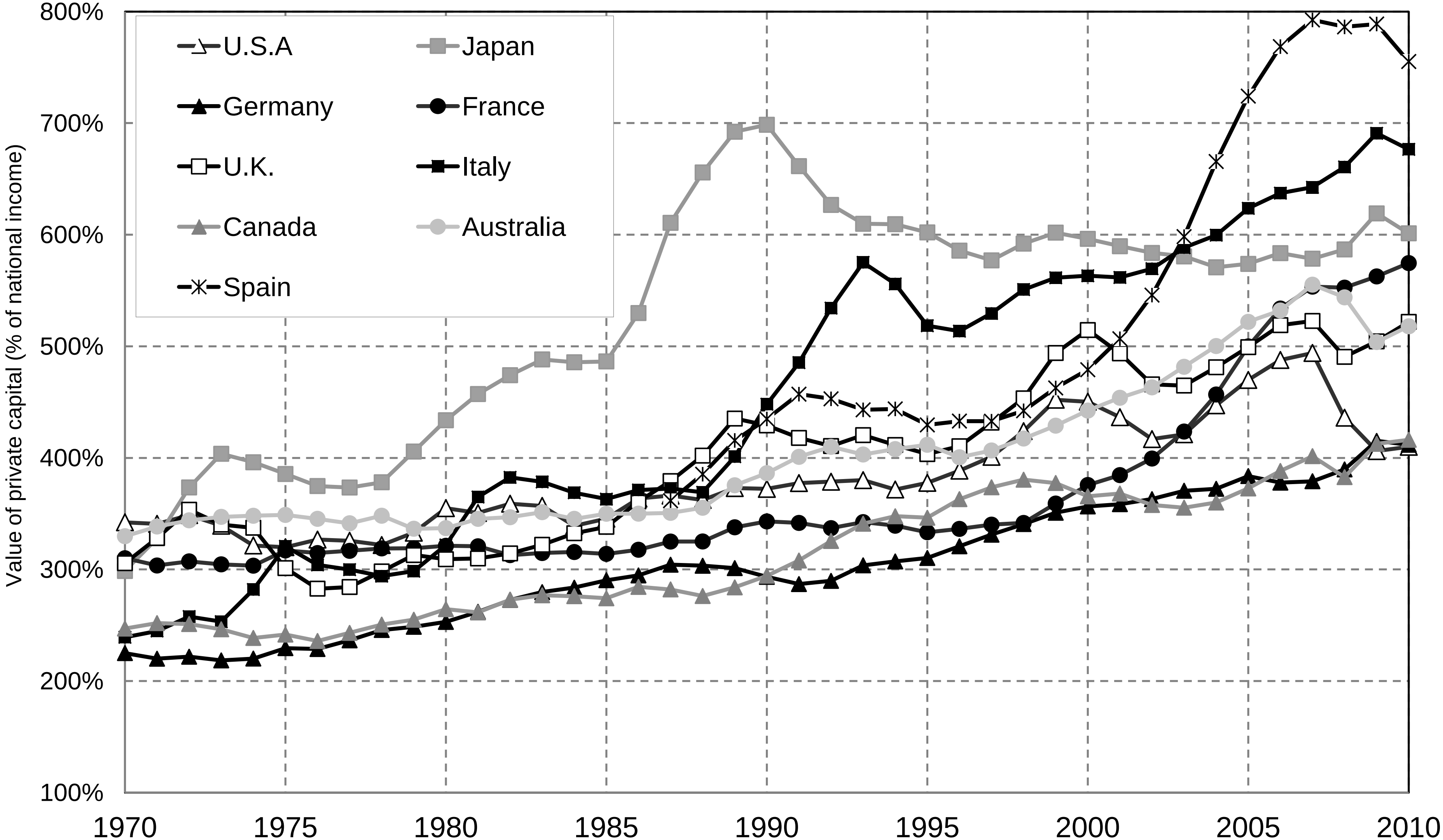
Sources and series: see piketty.pse.ens.fr/capital21c.

Figure 5.3. Private capital in rich countries, 1970-2010



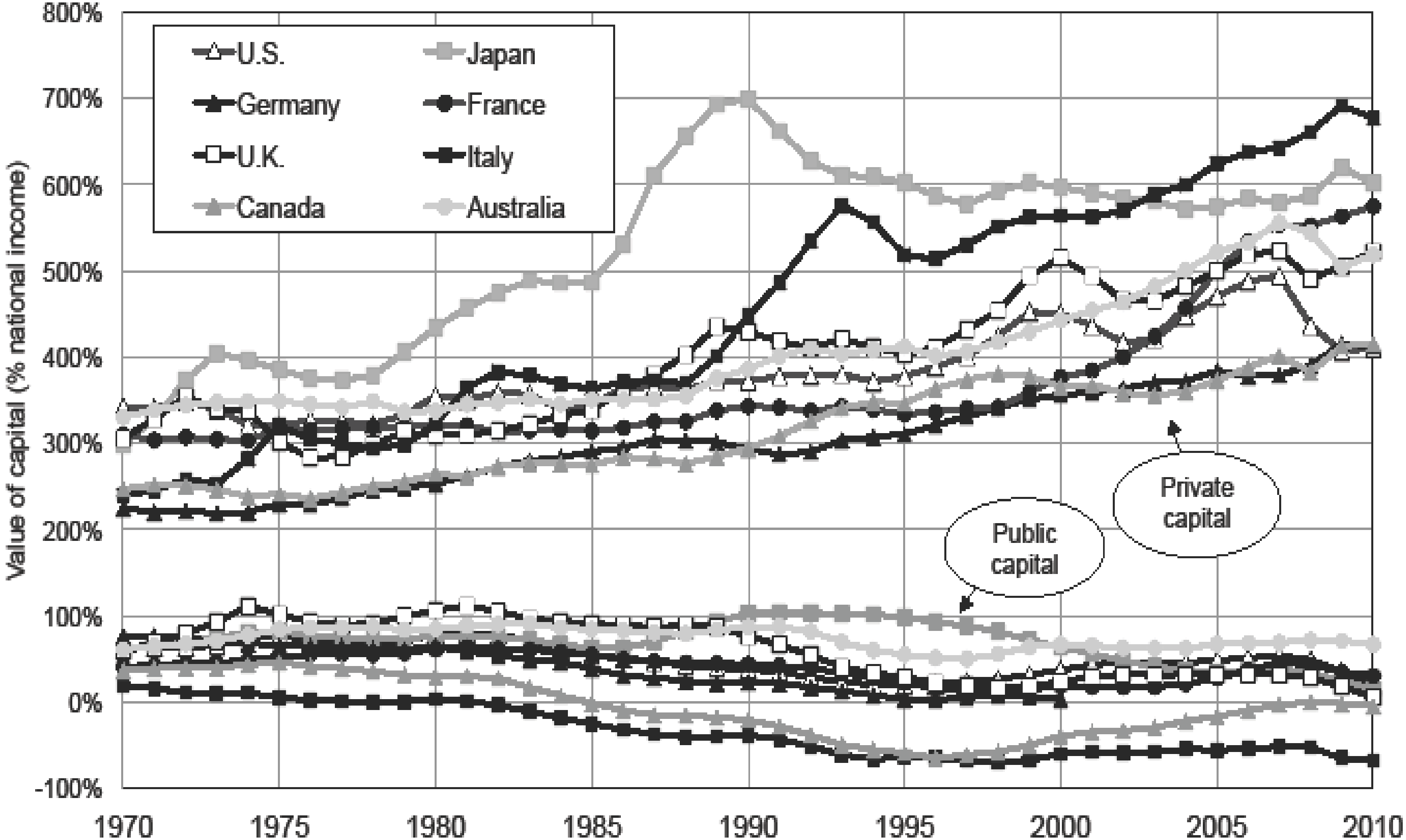

Private capital is worth between 2 and 3.5 years of national income in rich countries in 1970, and between 4 and 7 years of national income in 2010. Sources and series: see piketty.pse.ens.fr/capital21c.

## Figure S5.2. Private capital in rich countries: from the Japanese to the Spanish bubble




Private capital almost reached 8 years of national income in Spain at the end of the 2000s (ie. one more year than Japan in 1990). Sources and series: see piketty.pse.ens.fr/capital21c.

# Figure 5.5. Private and public capital in rich countries, 1970-2010




In Italy, private capital rose from 240% to 680% of national income between 1970 and 2010, while public capital dropped from 20% to -70%. Sources and series: see piketty.pse.ens.fr/capital21c.

- **3. The future of wealth concentration**. With high r - g during 21$^{c}$ (r = net-of-tax rate of return, g = growth rate), then wealth inequality might reach or surpass 19$^{c}$ oligarchic levels. Need for more transparency about wealth. Need for progressive taxation of net wealth.

**Table 12.1. The growth rate of top global wealth, 1987-2013**

| *Average real growth rate per year* *(after deduction of inflation)* | 1987-2013 |
|---|---|
| The top 1/(100 million) highest wealth holders (about 30 adults out of 3 billions in 1980s, and 45 adults out of 4,5 billions in 2010s) | 6,8% |
| The top 1/(20 million) highest wealth holders (about 150 adults out of 3 billions in 1980s, and 225 adults out of 4,5 billions in 2010s) | 6,4% |
| Average world wealth per adult | 2,1% |
| Average world income per adult | 1,4% |
| World adult population | 1,9% |
| World GDP | 3,3% |

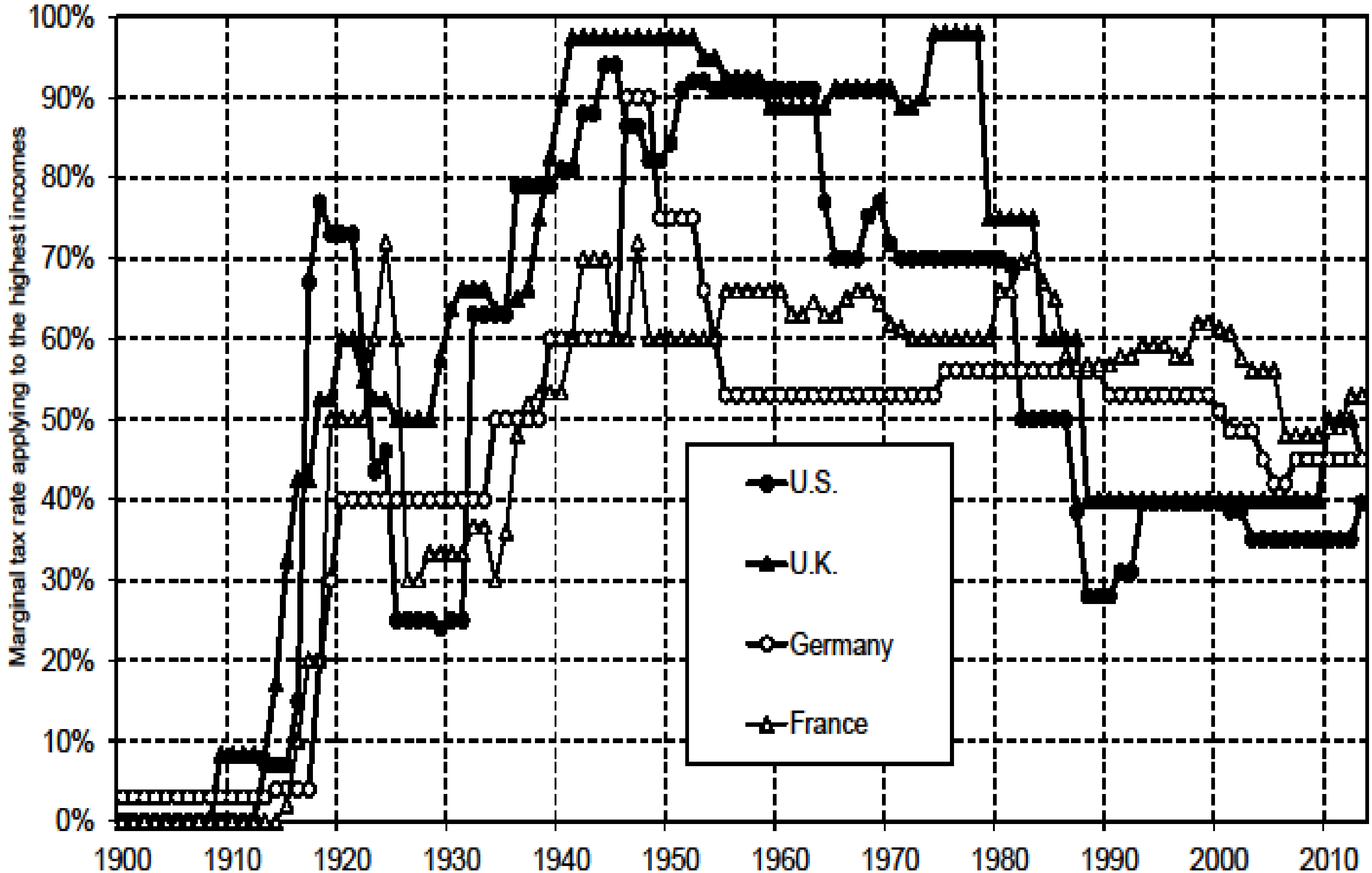
Between 1987 and 2013, the highest global wealth fractiles have grown at 6%-7% per year, vs. 2,1% for average world wealth and 1,4% for average world income. All growth rates are net of inflation (2,3% per year between 1987 and 2013). Sources: see piketty.pse.ens.fr/capital21c.

**Table 12.2. The return on the capital endowments of U.S. universities, 1980-2010**

| *Average real annual rate of return* *(after deduction of inflation and all administrative costs and financial fees)* | Période 1980-2010 |
|---|---|
| All universities (850) | 8.2% |
| incl.: Harvard-Yale-Princeton | 10.2% |
| incl.: Endowments higher than 1 billion $ (60) | 8.8% |
| incl. Endowments between 500 millions and 1 billion $ (66) | 7.8% |
| incl. Endowments between 100 and 500 million $ (226) | 7.1% |
| dont: Endowments less than 100 million $ (498) | 6.2% |

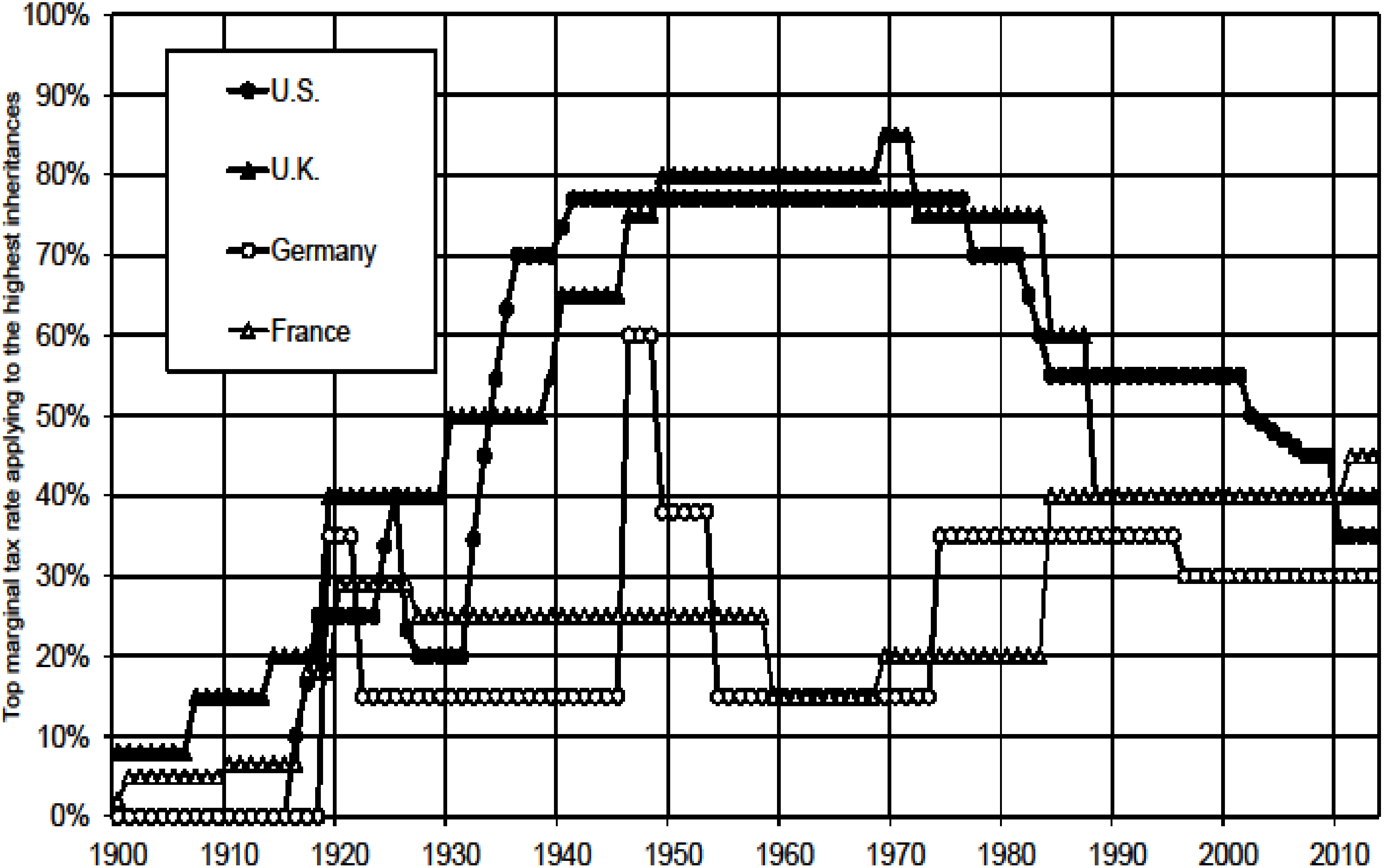
Between 1980 and 2010, U.S. universities earned an average real return of 8.2% on their capital endowments, and all the more so for higher endowments. All returns reported here are net of inflation (2.4% per year between 1980 and 2010) and of all administrative costs and financial fees.
Sources: see piketty.pse.ens.fr/capital21c.

**Figure 14.1. Top income tax rates, 1900-2013**




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. Sources and series: see piketty.pse.ens.fr/capital21c.

# Figure 14.2. Top inheritance tax rates, 1900-2013




The top marginal tax rate of the inheritance tax (applying to the highest inheritances) in the U.S. dropped from 70% in 1980 to 35% in 2013. Sources and series: see piketty.pse.ens.fr/capital21c.

# Conclusions

- **The history of income and wealth inequality is deeply political, social and cultural; it involves beliefs systems, national identities and sharp reversals**
- In a way, both Marx and Kuznets were wrong: there are powerful forces pushing in the direction of rising or reducing inequality; which one dominates depends on the institutions and policies that different societies choose to adopt
- High r-g can push toward high wealth concentration, but many other forces are also important
- The ideal solution involves a broad combination of inclusive institutions, including progressive taxation of income, wealth and carbon; education, social & labor laws; financial transparency; economic & political democracy