Chapter 3 -- The Metamorphoses of Capital

Thomas Piketty, Capital in the 21st Century (Harvard University Press 2014)

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The Transformation of Capital

. Figures 3.1 and 3.2 show the capital structure of the UK and France.

    - 1. The capital/income ratio K/Y followed an inverted-bell curve ('U-shape'). Stable in the 18th and 19th centuries at about 600% or 700%; very large decline to 200% or 300% in the 20th during the depression and WWII; going back to the pre-WWI level after WWII.
    - 2. The composition of capital K has transformed over the very long run: agricultural land has been replaced by buildings, business capital, and financial capital invested in firms and government organizations.

. The depression, the wars, and inflation during 1914-1945 wiped the slate clean and created the illusion of virtuous, merit-based capitalism — the 'myth of the Kuznets curve' debunked by Piketty.

The Structure of Capital

. **3 categories of capital**:

1 farm land; 2 residential land & housing; 3 other types including land and buildings used for business, infrastructure, machinery, computers, patents.

$$\text{National capital} = \text{farmland} + \text{housing} + \text{other domestic capital} + \text{net foreign capital}$$

. In 1700, the total value of farmland represented 400% to 500% of national income, nearly 2/3 of total national capital and 3/4 of all economic activity and employment. The value of housing was 100% of national income; the 'other' category, the same as housing.

. In 2010, farmland is less than 10% of national income, less than 2% of capital. Housing is 300% of national income; like the 'other' category.

The Transformation of Capital

There are 2 main causes behind this structural transformation:

- 1. growing importance of housing quality and value (driven by urbanization and agglomeration for production purposes);
- 2. growing importance of buildings and structures in the production of non-agricultural goods and services (machinery, warehouses, offices).

The Rise and Fall of Foreign Capital

- The role of foreign capital in the economies of the United Kingdom and France follows the ups and downs of their colonial history.
- Foreign possessions first became important around 1750–1800.
- Net assets owned in the rest of the world peaked at high levels in 1914, collapsed during 1914–1945, have since stabilized at a much lower level.
- In 1914, the UK had the largest colonial empire and owned foreign assets worth 200% of national income — 6 times the value of domestic farmland. Foreign assets were yielding 5% a year in dividends, interest, and rent. National income was 10% higher than domestic product.
- France had the 2nd largest colonial empire, owned foreign assets worth more than 100%. National income was 6% higher than domestic product.

The Rise of Foreign Capital

- These very large net foreign assets allowed the UK and France to run structural trade deficits.
- During 1880-1914, both countries' trade deficits averaged 1–2% of national income. That is, both countries imported more goods and services from the rest of the world than they exported.
- Because their income from foreign assets exceeded 5% of national income, their balance of payments was strongly positive and their holdings of foreign assets increased year after year!
- Thus, while the colonial powers consumed more than they produced, the colonized countries increased their debt to the colonies!

The Fall of Foreign Capital

- Following 2 world wars, some local wars, 1 depression, high inflation, the British and French empires lost their colonies and foreign wealth.
- After 1950, their net foreign asset holdings have remained close to zero.
- In 2010, net foreign assets are negligible, as they were in 1700. The ratio of total capital to national income is similar in both periods.
- The most important long-run structural change is the fall of farmland and the rise of real estate and working capital.

Income and Capital Today

- The UK and France are typical rich countries.
- National income per capita is about 30,000 euros per year.
- National capital 180,000 euros per capita — 6 times national income.
- Farmland is a few thousand euros per capita.
- National capital includes about 90,000 euros in housing and 90,000 euros of other domestic capital, such as financial instruments.

Public & Private Capital

- Figures 3.3 and 3.4 shows public assets and public debt in the UK and France, and Figures 3.5 and 3.6 show public and private capital.
- Public capital is the difference between assets and liabilities of the state.
- Private capital is the difference between assets and liabilities of people.
- National capital is the sum of public capital and private capital.
- Public assets include non-financial wealth (public buildings such as schools, universities, hospitals) and financial wealth (stocks of private corporations, foreign currencies, gold).
- Public assets (financial and non-financial) are about 100% of national income in the UK and 150% in France.
- Public debt are about 100% of national income in both countries.
- Net public wealth is close to zero in the UK, about 30% in France.

Net Public Wealth

- If the French and British governments decided to sell off all their assets and pay off their debts, there would be 'nothing' left.
- But these estimates are imprecise. It is not easy to set a precise market value on schools and hospitals, on railway lines, on highways.
- The difference between financial and non-financial assets can be arbitrary.
- When the French government privatized 'France Telecom' and the Post Office, the buildings and structures previously treated as non-financial assets became classified as financial assets.
- Private wealth accounts for 95-99% of national wealth in both countries. These are 'capitalist' — not communist — economies.

Public Debt in British History

- The United Kingdom has a long history of borrowing 'to the hilt.'
- During 1700–1720, public debt reached 50% of national income. During 1760–1770, 100%. After the Napoleonic wars and after WWII, it has exceeded 200% of GDP.
- The large rise in public debt of 1770–1810 was financed largely by a rise in private saving, so that national capital remained stable at around 700% of national income.
- The deficits raised demand for private wealth and bid up its return, making government bonds attractive relative to other assets.
- The public debt did not 'crowd out' private investment. There was no perceived conflict of interest between the public and private sectors.

Public Debt in British History

- It took a century of budget surpluses to gradually reduce public debt — to below 30% by 1914 — successive government did not repudiate it.
- From 1815 to 1914 — a century! — the UK government paid 5% of GDP every year to their (wealthy, willing and happy) creditors, financing this transfer of wealth with 'primary' surpluses (the primary surplus is tax revenue minus non-interest government spending).
- Public debt lost its significance because national income outgrew it, mostly because of strong economic growth.

Public Default in History

- Following the 1789 Revolution and 'terreur', France defaulted on 2/3 of public debt ('banqueroute des deux tiers'), resorted to high inflation (episode of the 'assignats'), and by 1815 the public debt accumulated by the 'Ancien Régime' had fallen below 20% of national income.
- Revolutions are often followed by a default on public debt: the confederate states in 1865 (end of the American civil war), the Russian 'Soviets' in 1917 and Chinese 'Maoists' in 1949 (communist revolutions).
- Another form of default is 'surprise' inflation. Inflation in 1913–1950 averaged 13% a year (prices multiplied by 100) in France — 3% a year (prices multiplied by 3) in the UK. In 1950-1980 inflation averaged 6% (prices multiplied by 6) in the UK, 10% in the 1970s alone. Inflation shrunk the real value of debt and 'solved' the debt problem.

Who's Afraid of the Public Debt?

- Europe, America, Japan are heavily in debt. A government bond is a claim of one segment of the population (those who receive interest) on another (those who pay taxes). Why should debt matter?
- In the 19th century, Marx observed rising interest rates and saw public debt as a 'lever' of the accumulation of private capital — a tool of the rich
- Friedman saw public debt as a 'lever' of public spending and wealth redistribution — a tool of the poor.
- Ronald Reagan and G.W.Bush saw public debt as a 'lever' to force (on future administrations) cuts in public spending and 'kill the Leviathan'.
- The value of the interest paid on public debt and the use of the public funds matter in the perception of debt as a necessary 'good' or 'evil.'

'Ricardian Equivalence'

- In 1817, David Ricardo suggested that public debt need not always 'crowd out' private capital — that it is no more than a claim of one group of people on another.
- While British public debt was 200% of GDP, private investment was healthy — the public debt was financed by a rise in private saving. The gigantic public debt had no effect on national wealth.
- In 1936, John Maynard Keynes felt that the 'euthanasia of the rentier' would be the simplest way to reduce the burden of the public debt.
- 'Ricardian Equivalence' was revived by Robert Barro in the 1970s, to promote the use of 'representative agent' models of rational, forward-looking agents, and the prescription that debt should be issued to smooth taxes over time and would be ineffective as a redistribution tool.

Who's Afraid of Inflation?

- Inflation is a powerful tool for wealth redistribution.
- It destroys the value of bonds more than other forms of wealth.
- It destroys the purchasing power of cash for rich and poor alike.
- It works only by surprising bond holders, who then learn to distrust government and demand higher nominal interest rates to compensate for inflation and its risk.
- Once built into expectations inflation becomes persistent and costly.
- Eliminating inflation requires banking reforms and a strong recession.
- The Germans are afraid of inflation, very afraid. So are the French.

Who's Afraid of Government?

- The history of public assets is less erratic than that of public debt.
- The value of public assets rose from 50% of national income in the 17th century to 150% in France and 100% in the UK today.
- This reflects the expansion of the state, in particular in the areas of health, education, transportation, and communication.
- Periods of privatization and nationalization have alternated. Reagan and Thatcher initiated a wave of privatization in the 1980s. France, Japan, and of course the former Soviet Union also privatized on a grand scale.
- Famous British corporations privatized since the 1980s: British Petroleum, British Aerospace, British Gas, British Steel, British Telecom, Sealink ferries, Rolls-Royce, British Rail.

TABLE 3.1.

Public wealth and private wealth in France in 2012

	Value of capital (% national income)[a]		Value of capital (% national capital)	
National capital (public capital + private capital)	605		100	
Public capital (net public wealth: difference between assets and debt held by government and other public agencies)	31		5	
	Assets 145%	Debt 114%	Assets 24%	Debt 19%
Private capital (net private wealth: difference between assets and debt held by private individuals [households])	574		95	
	Assets 646%	Debt 72%	Assets 107%	Debt 12%

Note: In 2012, the total value of national capital in France was equal to 605% of national income (6.05 times national income), including 31% for public capital (5% of total) and 574% for private capital (95% of total).

a. National income is equal to GDP minus capital depreciation plus net foreign income; in practice, it is typically equal to about 90% of GDP in France in 2012; see Chapter 1 and the online technical appendix.

Capital in the United Kingdom

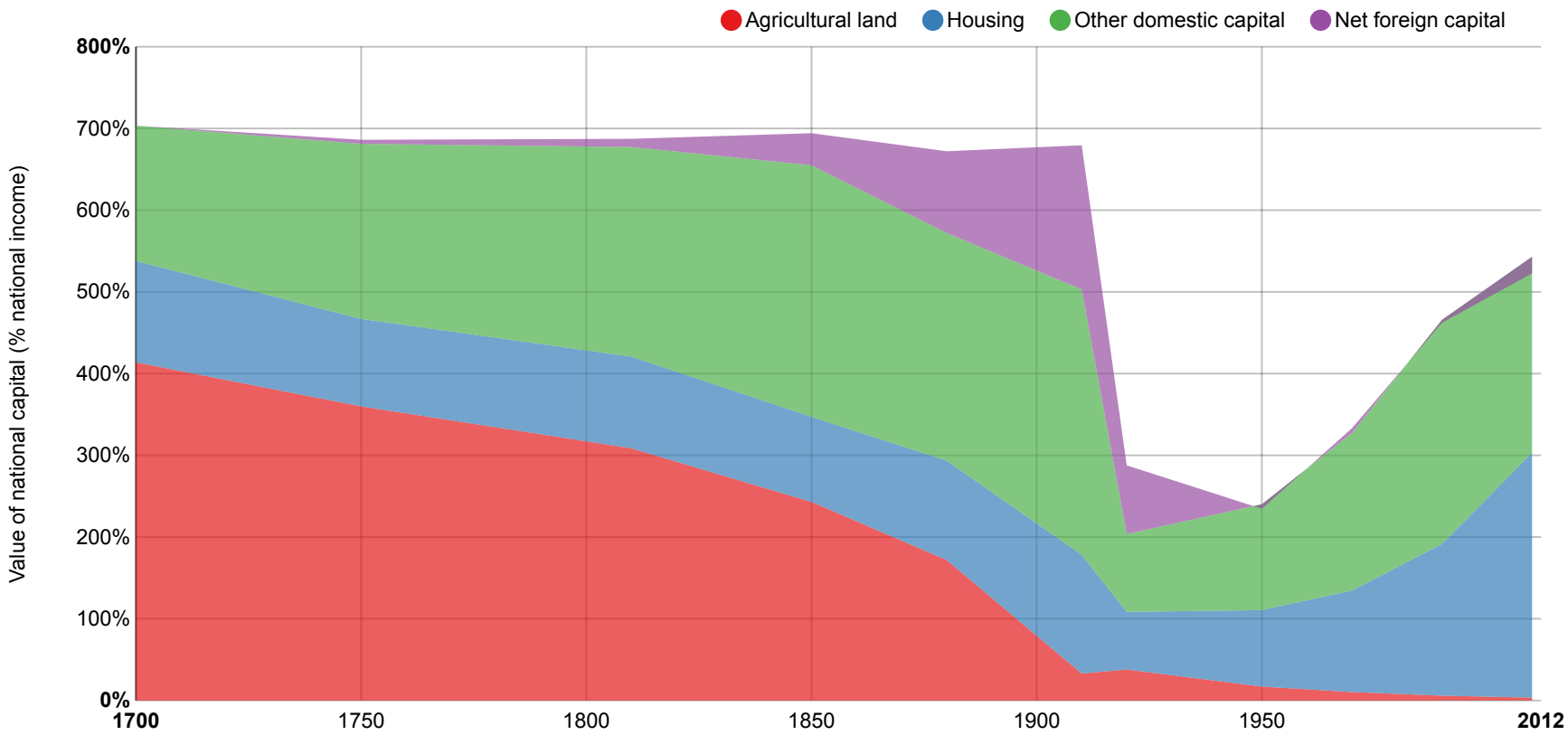

Figure 3.1. National capital is worth about seven years of national income in the United Kingdom in 1700 (including four in agricultural land).

Concept and data: Thomas Piketty. Chart created with `rCharts` (author: Ramnath Vaidyanathan)

Capital in France

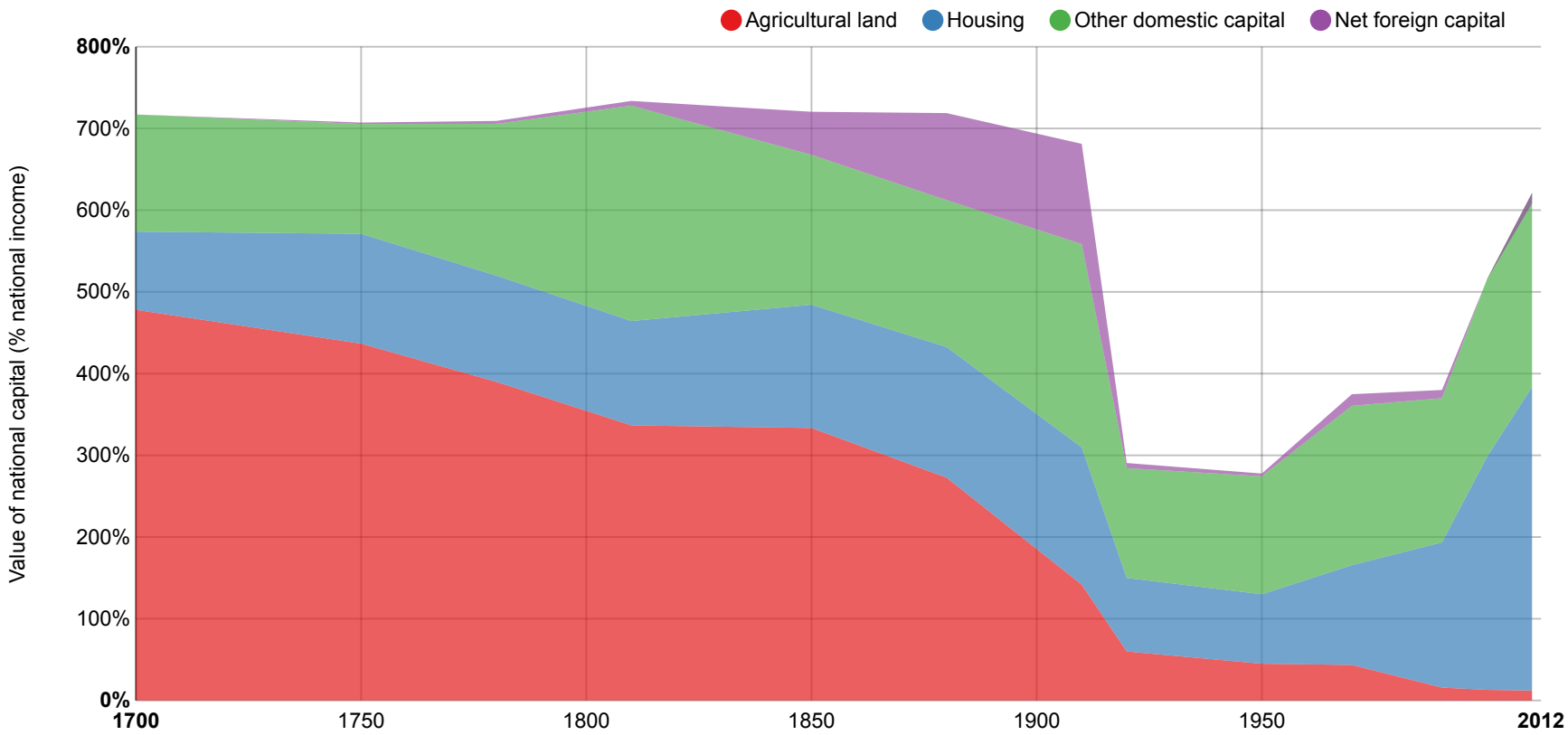

Figure 3.2. National capital is worth almost seven years of national income in France in 1910 (including one invested abroad).

Concept and data: Thomas Piketty. Chart created with `rCharts` (author: Ramnath Vaidyanathan)

Public wealth in the United Kingdom

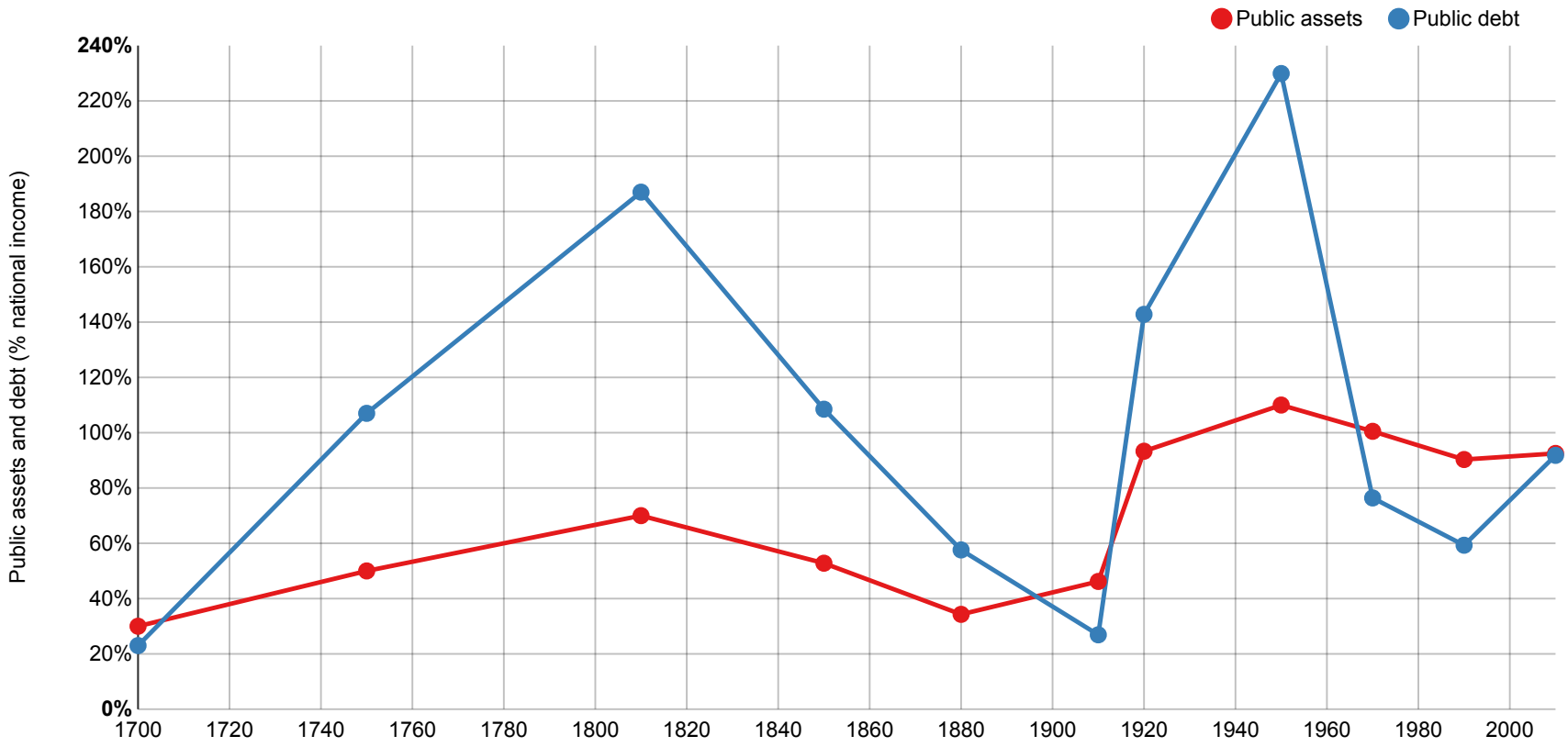

Figure 3.3. Public debt surpassed two years of national income in 1950 (versus one year for public assets).

Concept and data: Thomas Piketty. Chart created with `rCharts` (author: Ramnath Vaidyanathan)

Public wealth in France

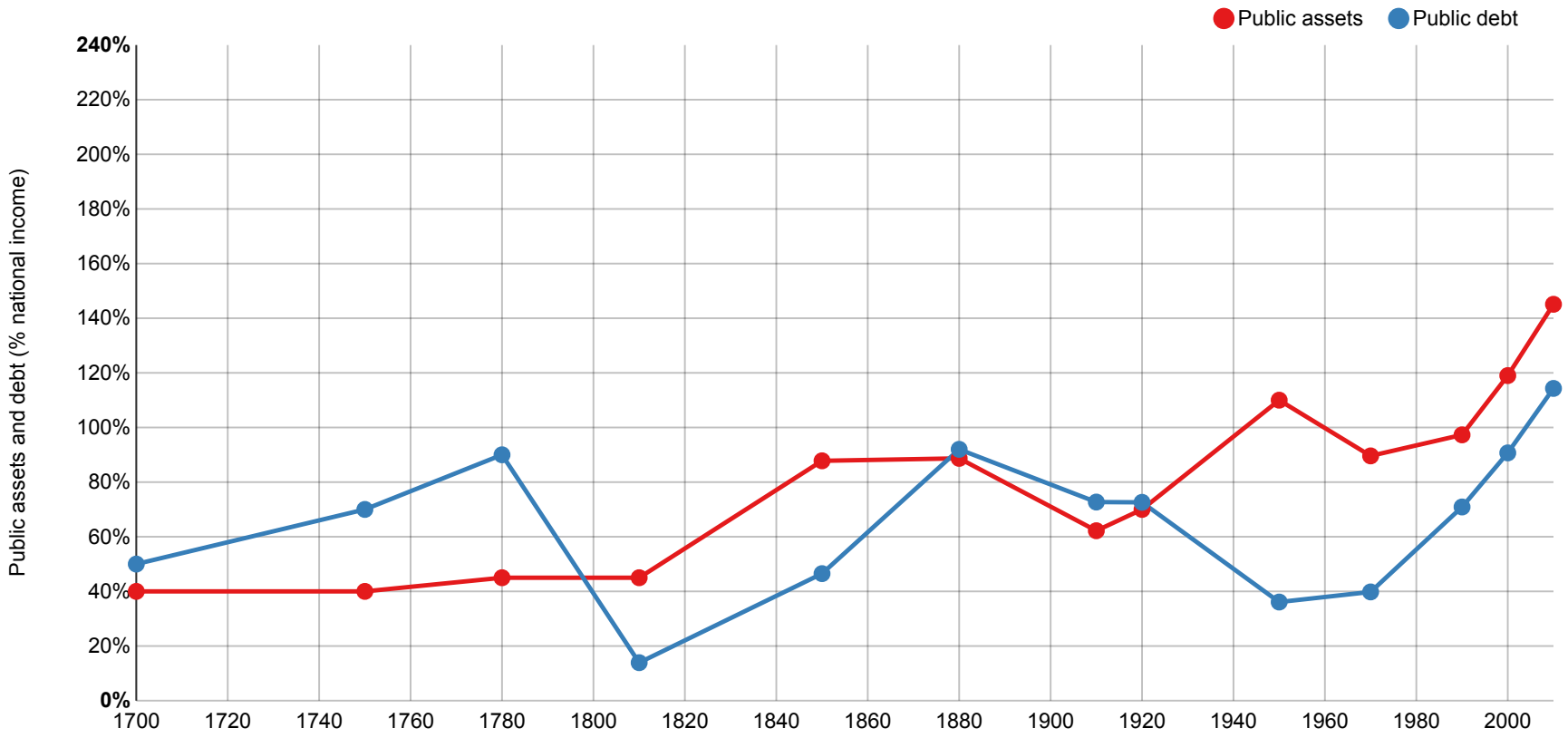

Figure 3.4. Public debt is about one year of national income in France in 1780 as well as in 1880 and in 2000-2010.

Concept and data: Thomas Piketty. Chart created with `rCharts` (author: Ramnath Vaidyanathan)

Private and public capital in the United Kingdom

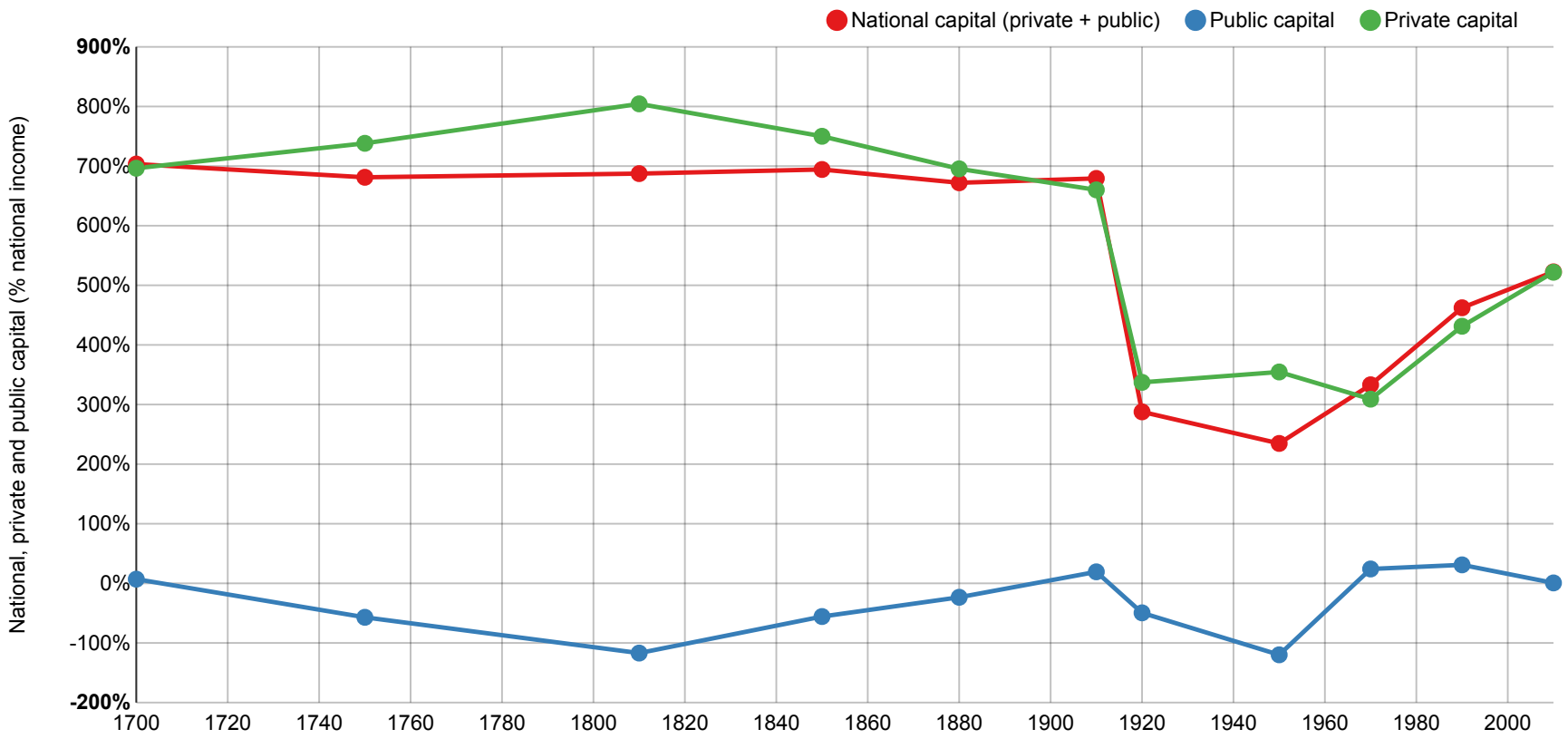

Figure 3.5. In 1810, private capital is worth eight years of national income in the United Kingdom (versus seven years for national capital).

Concept and data: Thomas Piketty. Chart created with `rCharts` (author: Ramnath Vaidyanathan)

Private and public capital in France

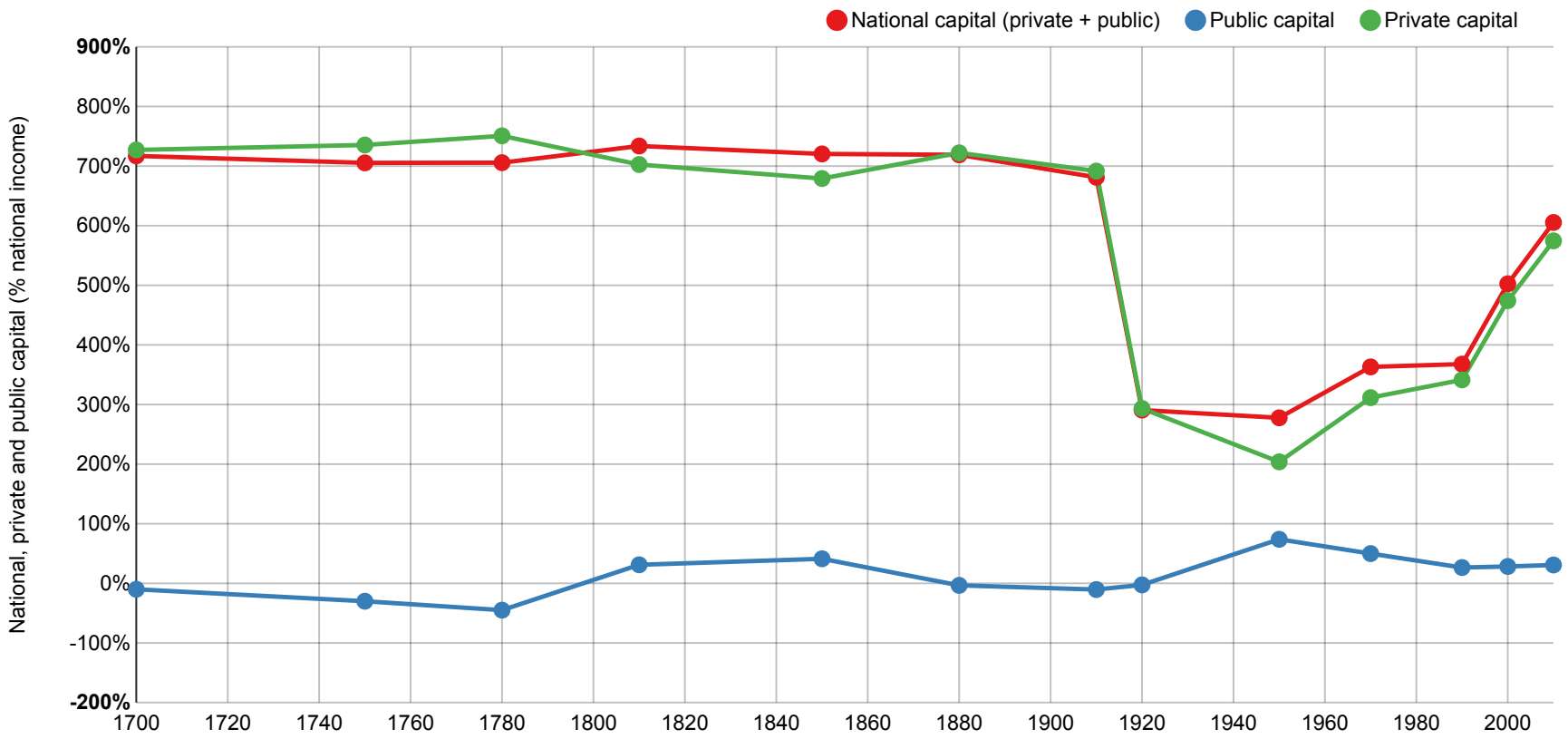

Figure 3.6. In 1950, public capital is worth almost one year of national income versus two years for private capital.

Concept and data: Thomas Piketty. Chart created with `rCharts` (author: Ramnath Vaidyanathan)