Capital in the 21st Century

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Sao Paulo, 26 November 2014

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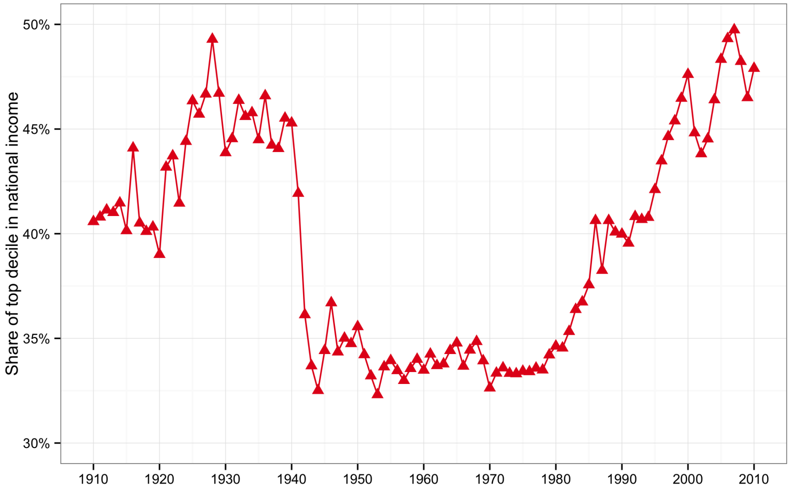
Based on collaborative effort led by Jeff Leek
https://github.com/jtleek/capitalIn21stCenturyinR

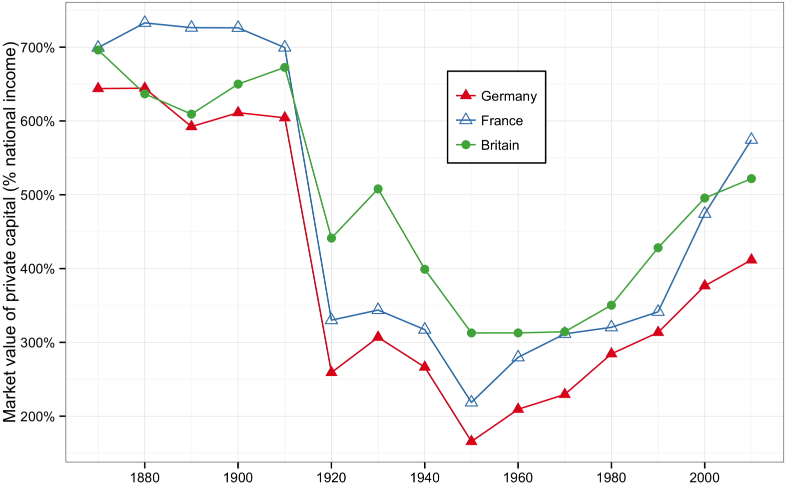
December 2014

Figure I.1: Income inequality in the United States, 1910–2012



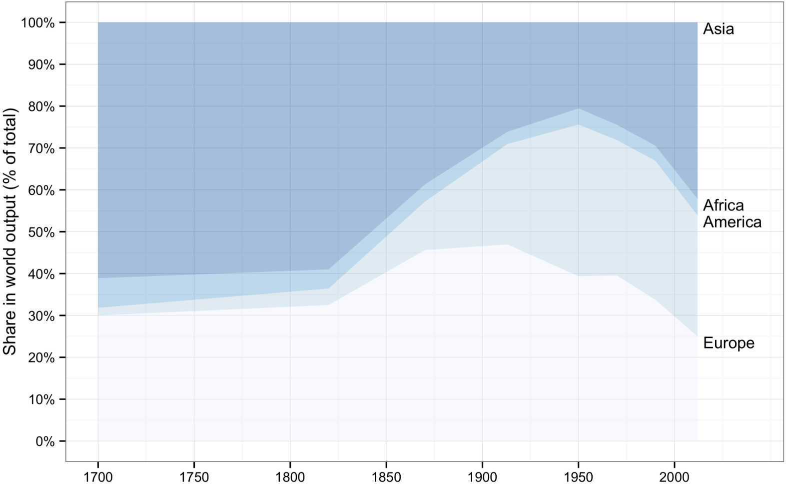
The top decile share in U.S. national income dropped from 45–50% in the 1910s–1920s to less than 35% in the 1950s (this is the 1950 1960 fall documented by Kuznets); it then rose from less than 35% in the 1970s to 45–50% in the 2000s–2010s.

Figure I.2. The capital–income ratio in Europe, 1870–2012



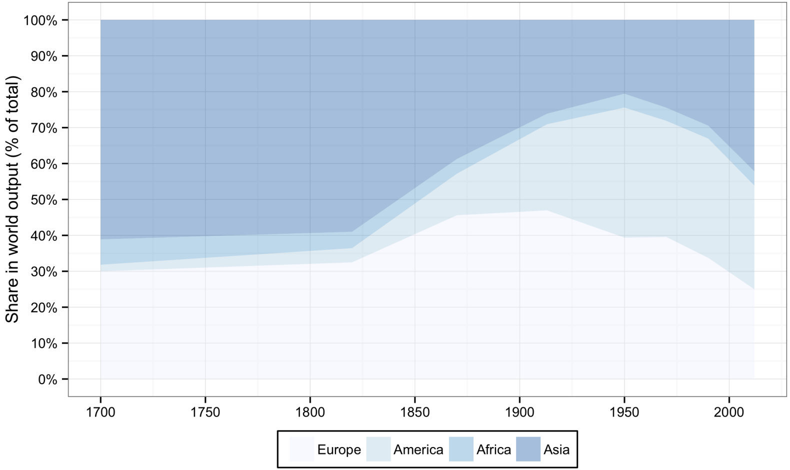
Aggregate private wealth was worth about 6–7 years of national income in Europe in 1910, between 2 and 3 years in 1950, and between 4 and 6 years in 2010.

Figure 1.1: The distribution of world output, 1700–2012



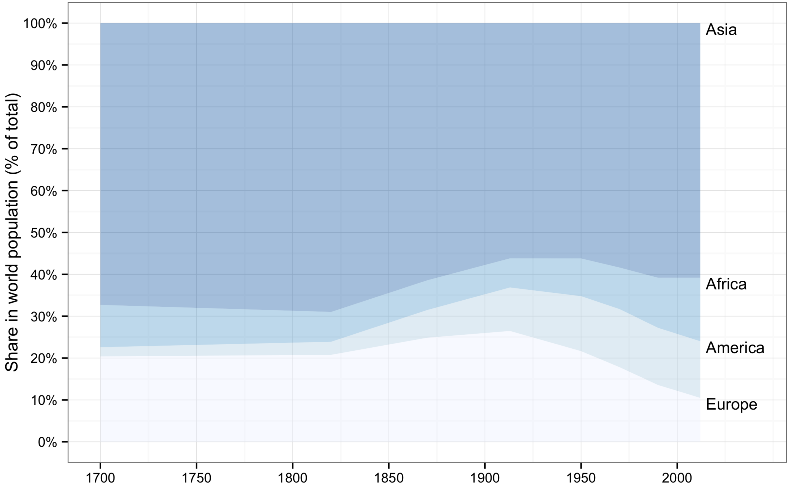
Europe's GDP made 47 percent of world GDP in 1913, down to 25 percent in 2012.

Figure 1.1: The distribution of world output, 1700–2012



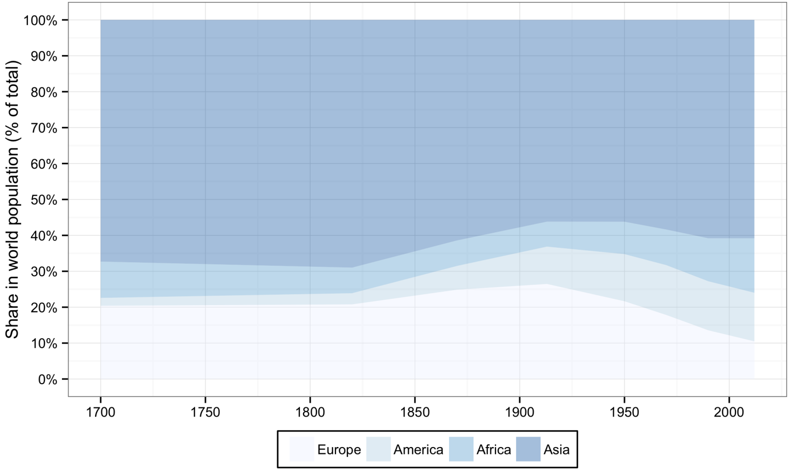
Europe's GDP made 47 percent of world GDP in 1913, down to 25 percent in 2012.

Figure 1.2: The distribution of world population, 1700–2012



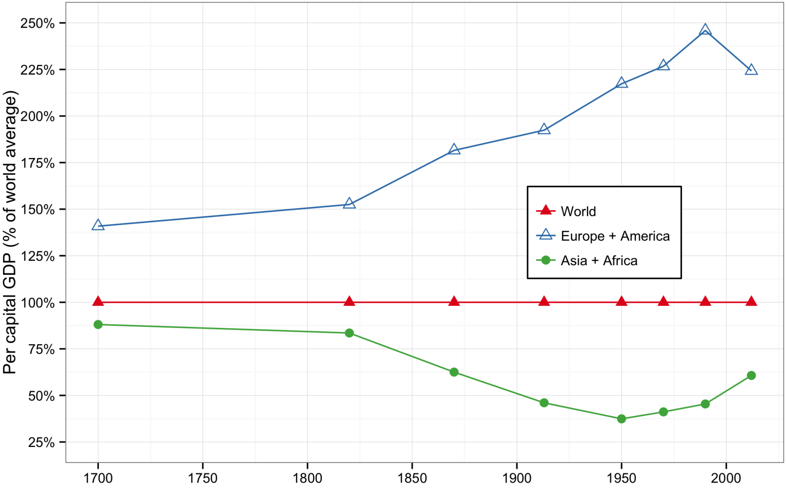
Europe's population made 26 percent of world population in 1913, down to 10 percent in 2012.

Figure 1.2: The distribution of world population, 1700–2012



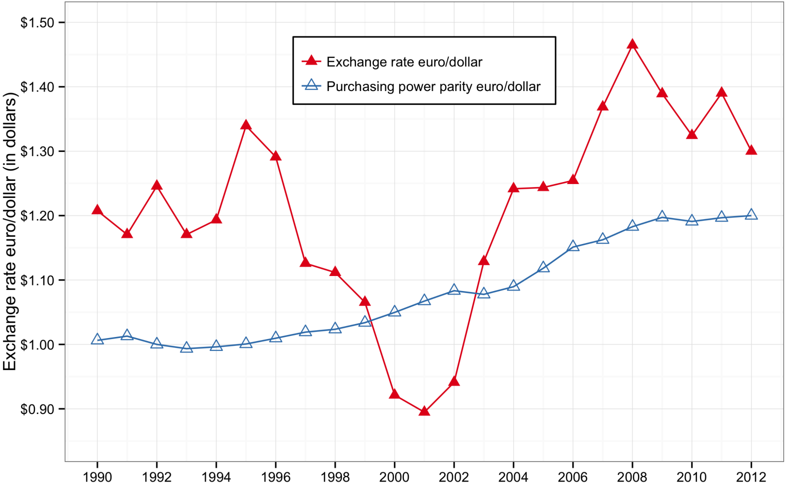
Europe's population made 26 percent of world population in 1913, down to 10 percent in 2012.

Figure 1.3. Global Inequality, 1700–2012



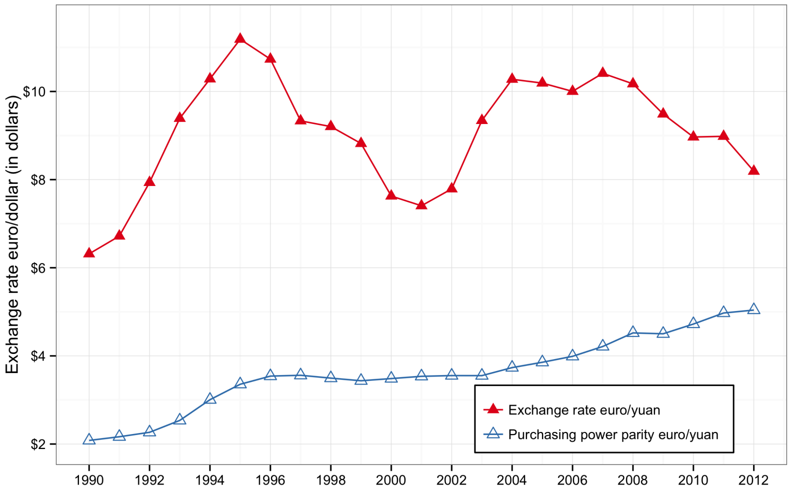
Per capita GDP in Asia–Africa went from 37 percent of world average in 1950 to 61 percent in 2012. Divergence then convergence?

Figure 1.4. Global Inequality, 1700–2012



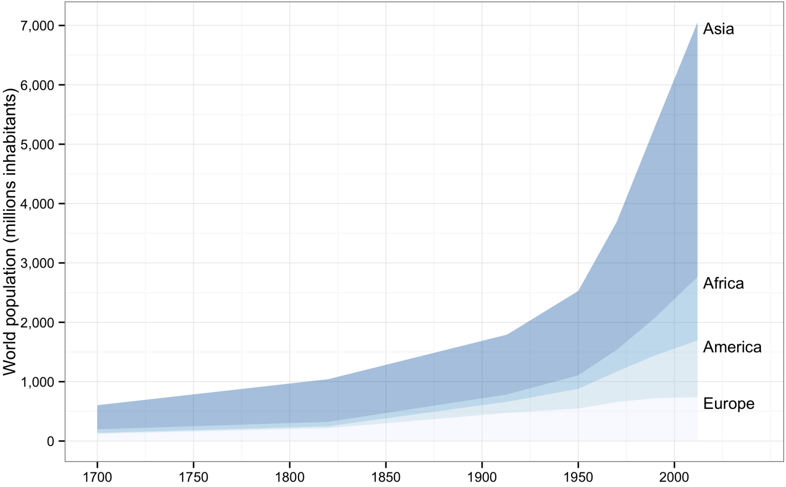
In 2012, 1 euro was worth \$1.30 according to current exchange rate, but \$1.20 in purchasing power parity.

Figure 1.5. Exchange rate and purchasing power parity: euro/yuan



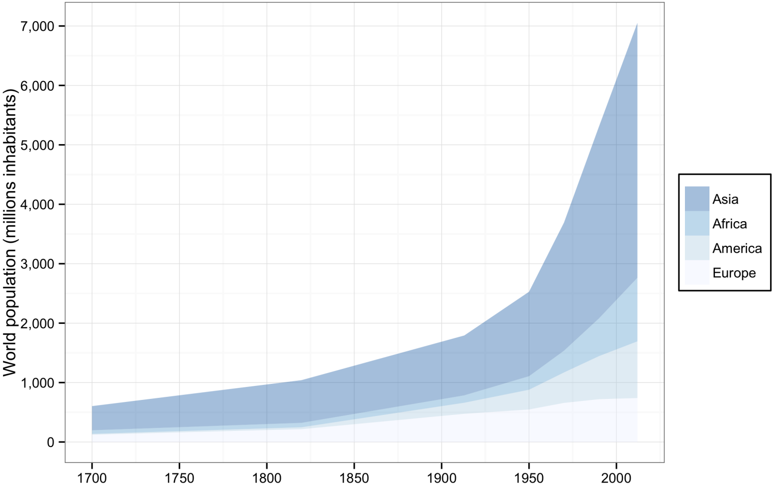
In 2012, 1 euro was worth 8 yuan according to current exchange rate, but 5 yuan in purchasing power parity.

Figure 2.1: The growth of world population, 1700–2012



World population rose from 600 million inhabitants in 1700 to 7 billion in 2012.

Figure 2.1: The growth of world population, 1700–2012



World population rose from 600 million inhabitants in 1700 to 7 billion in 2012.

Figure 2.2a: The growth rate of population from Antiquity to 2100

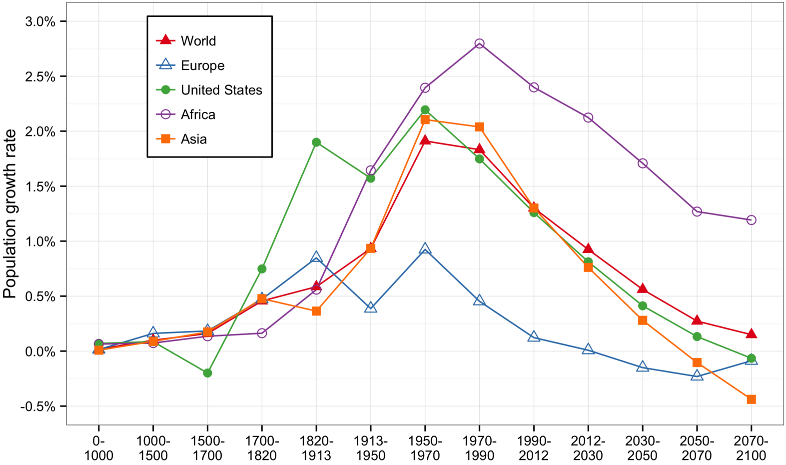


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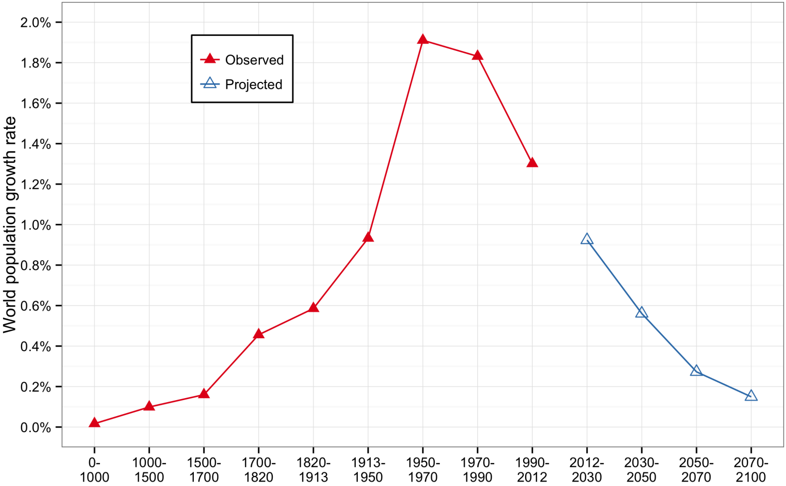
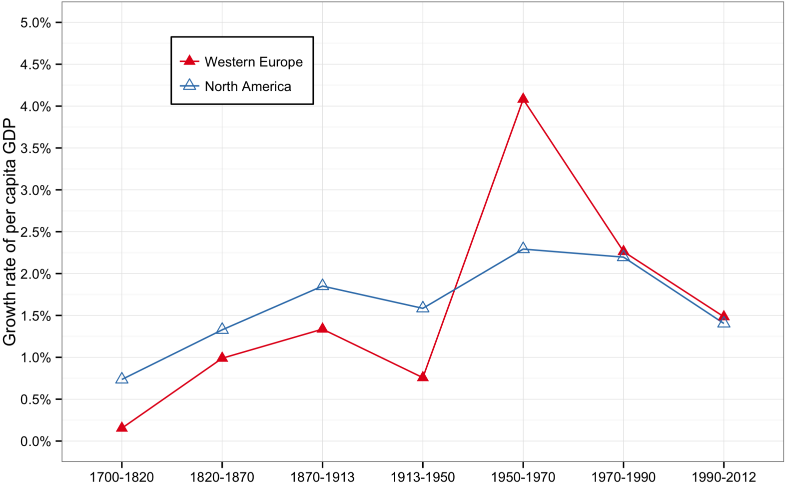
Figure 2.2: The growth rate of world population from Antiquity to 2100



The growth rate of world population was above 1 percent per year from 1950 to 2012 and should return toward 0 percent by the end of the twenty-first century.

Figure 2.3: The growth rate of per capita output since the Industrial Revolution



The growth rate of per capita output surpassed 4 percent per year in Europe between 1950 and 1970, before returning to American levels.

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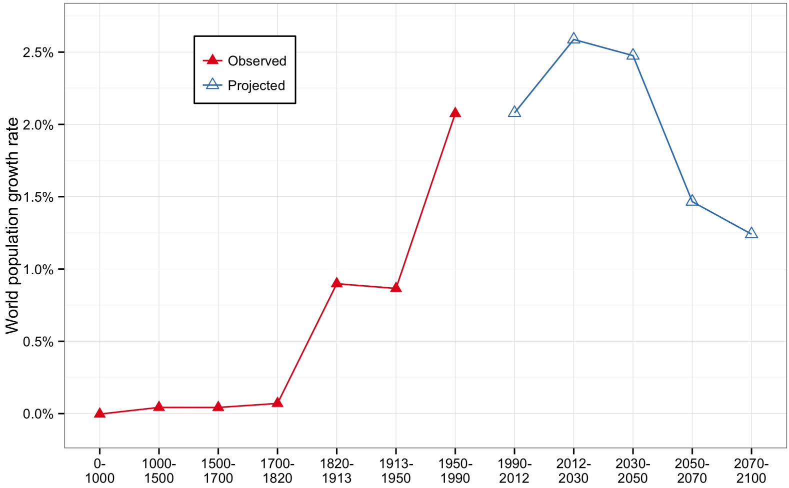
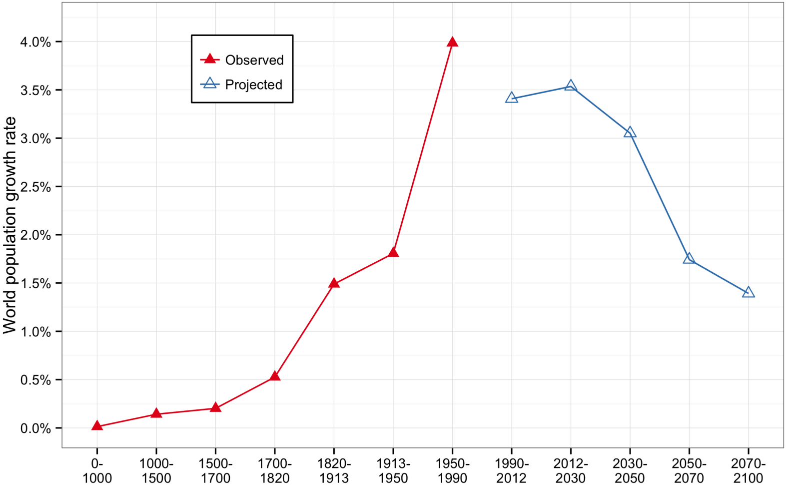
Figure 2.4: The growth rate of world per capita output from Antiquity to 2100



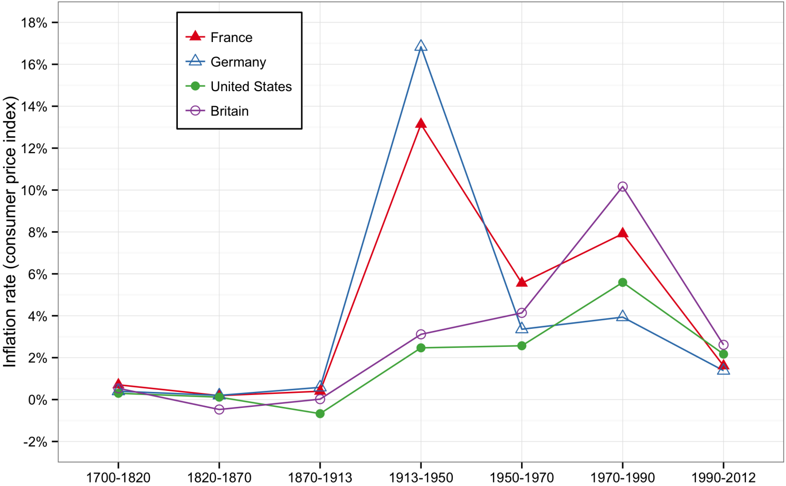
The growth rate of per capita output surpassed 2 percent from 1950 to 2012. If the convergence process goes on, it will surpass 2.5 percent from 2012 to 2050, and then will drop below 1.5 percent.

Figure 2.5: The growth rate of world output from Antiquity to 2100



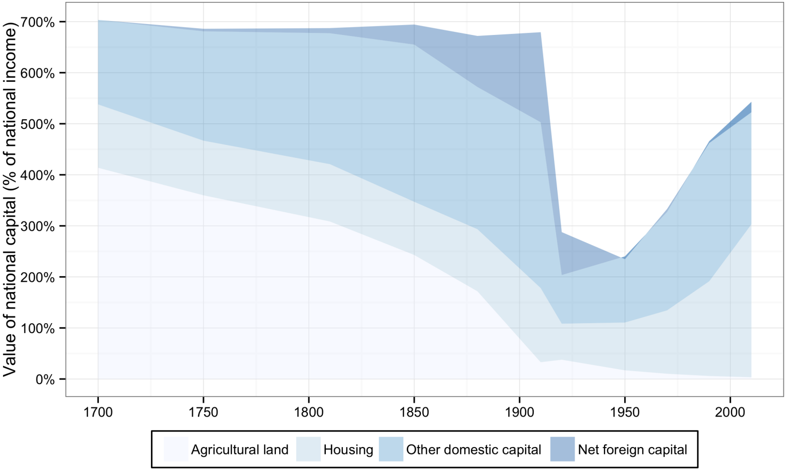
The growth rate of world output surpassed 4 percent from 1950 to 1990. If the convergence process goes on, it will drop below 2 percent by 2050.

Figure 2.6. Inflation since the Industrial Revolution



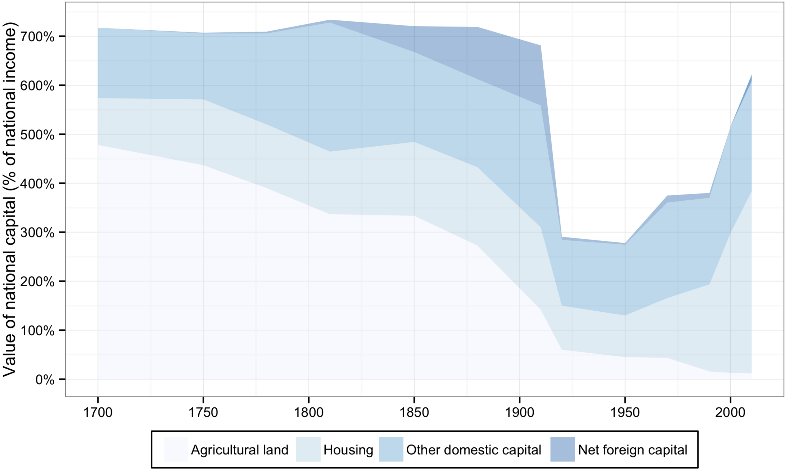
Inflation in the rich countries was zero in the eighteenth and nineteenth centuries, high in the twentieth century, and roughly 2 percent a year since 1990.

Figure 3.1: Capital in Britain, 1700–2010



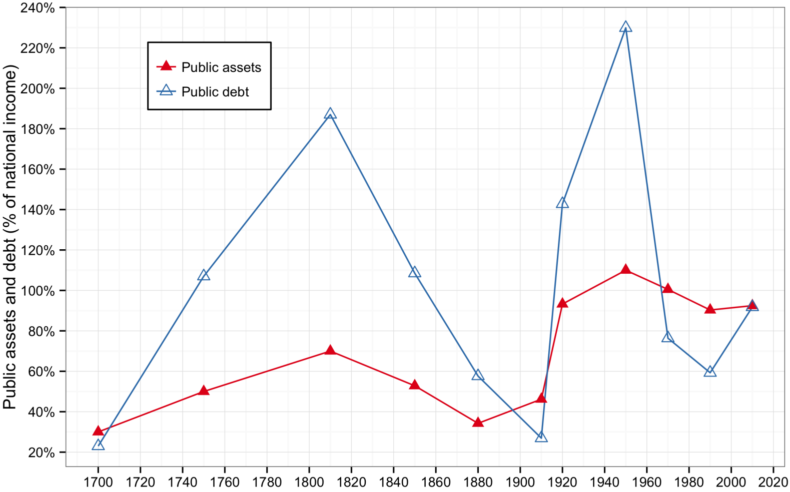
National capital is worth about seven years of national income in Britain in 1700 (including four in agricultural land).

Figure 3.2: Capital in France, 1700–2010



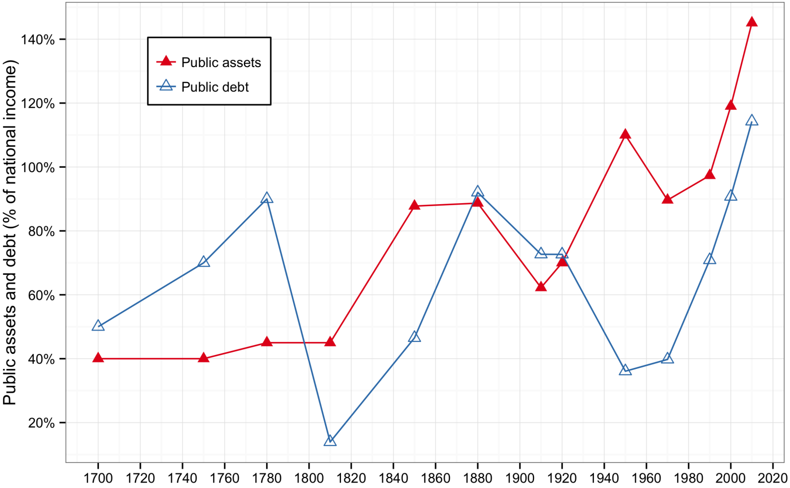
National capital is worth almost seven years of national income in France in 1910 (including one invested abroad).

Figure 3.3: Public wealth in Britain, 1700–2010



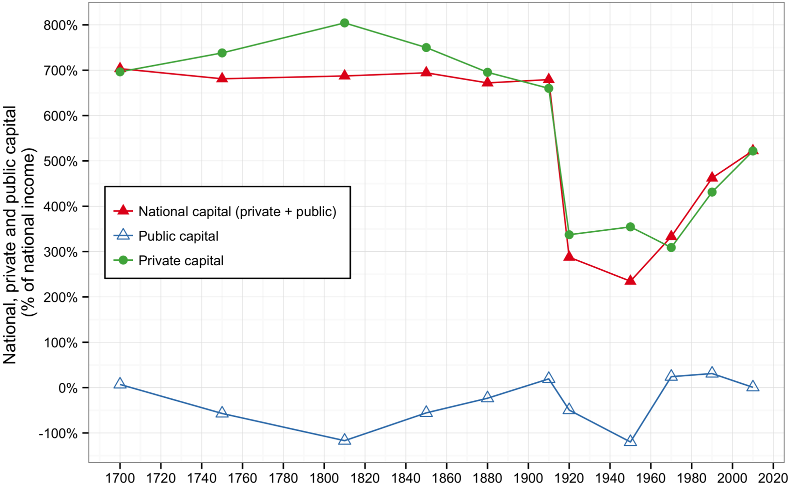
Public debt surpassed two years of national income in 1950 (versus one year for public assets).

Figure 3.4: Public wealth in France, 1700–2010



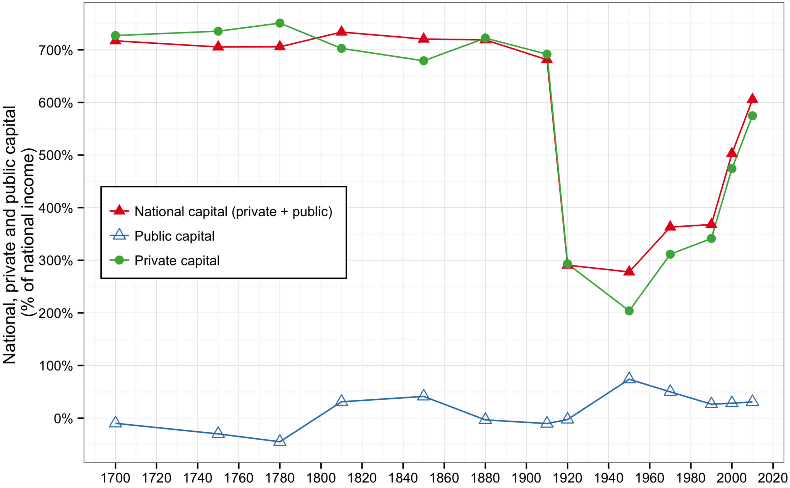
Public debt is about one year of national income in France in 1780 as well as in 1880 and in 2000–2010.

Figure 3.5: Private and public capital in Britain, 1700–2010



In 1810, private capital is worth eight years of national income in Britain (versus seven years for national capital).

Figure 3.6: Private and public capital in France, 1700–2010



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

Figure 4.1: Capital in Germany, 1870–2010

National capital is worth 6.5 years of national income in Germany in 1910 (including about 0.5 year invested abroad).

Figure 4.2: Public wealth in Germany, 1870–2010

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Public debt is worth almost one year of national income in Germany in 2010 (as much as assets).

Figure 4.3: Private and public capital in Germany, 1870–2010

In 1970, public capital is worth almost one year of national income, versus slightly more than two for private capital.

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Figure 4.6: Capital in the United States, 1770–2010

National capital is worth three years of national income in the United States in 1770 (including 1.5 years in agricultural land).

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Figure 4.9: Capital in Canada, 1860–2010

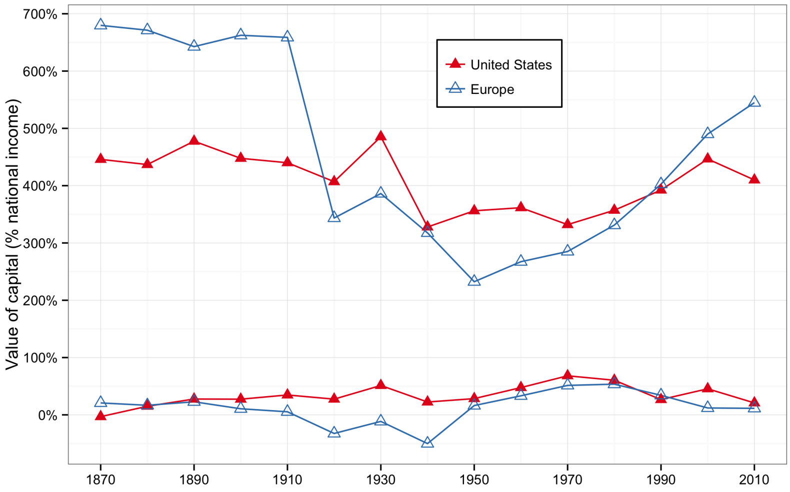
In Canada, a substantial part of domestic capital has always been held by the rest of the world, so that national capital has always been less than domestic capital.

Figure 4.10: Capital and slavery in the United States

The market value of slaves was about 1.5 years of US national income around 1770 (as much as land).

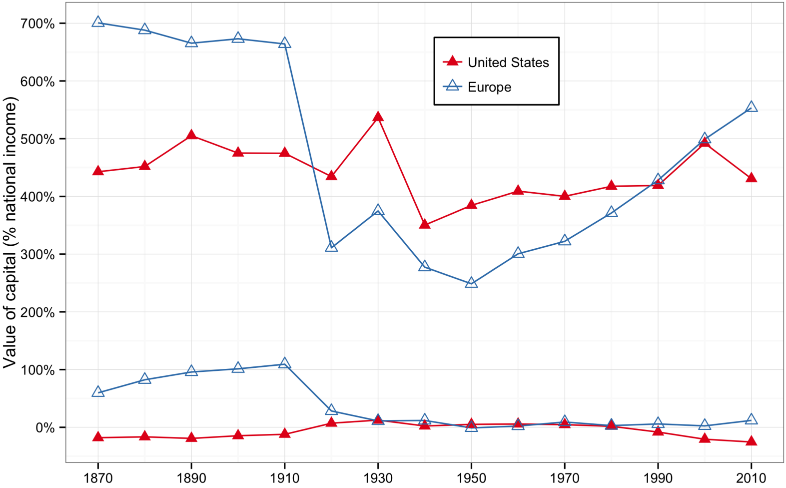
Figure 4.11:

Figure 5.1: Private & public capital in Europe & United States, 1870–2010



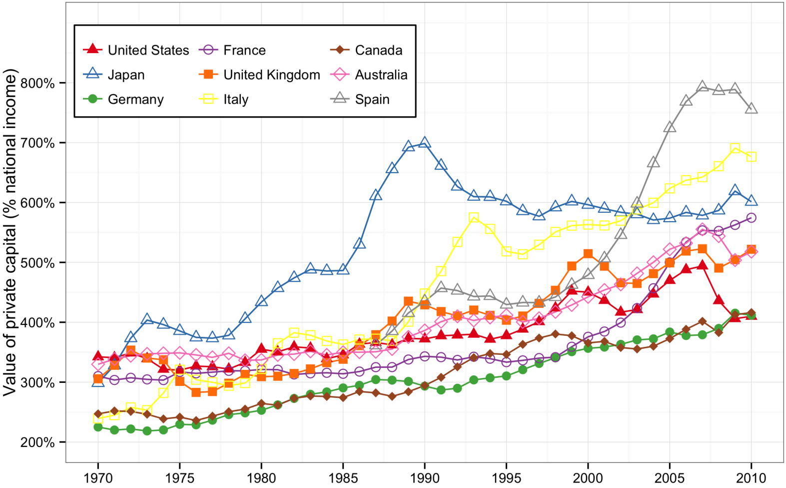
The fluctuations of national capital in the long run correspond mostly to the fluctuations of private capital (both in Europe and in the United States).

Figure 5.2: National capital in Europe & United States, 1870–2010



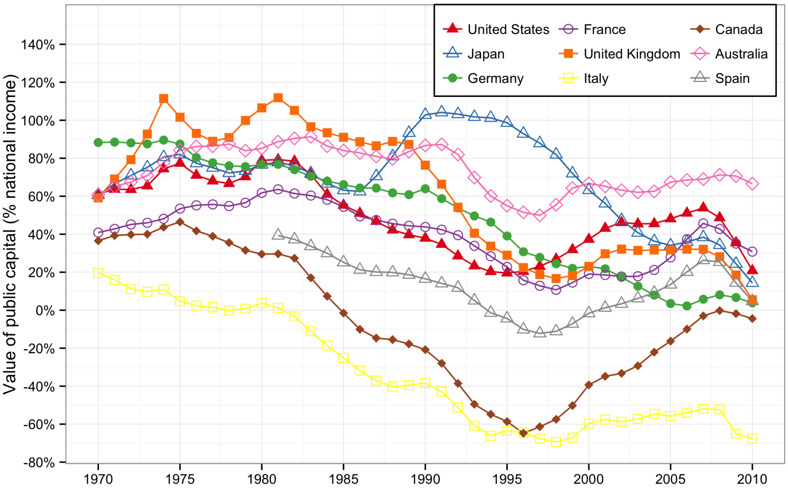
National capital (public and private) is worth 6.5 years of national income in Europe in 1910, versus 4.5 years in the United States.

Figure 5.3: Private capital in rich countries, 1970–2010



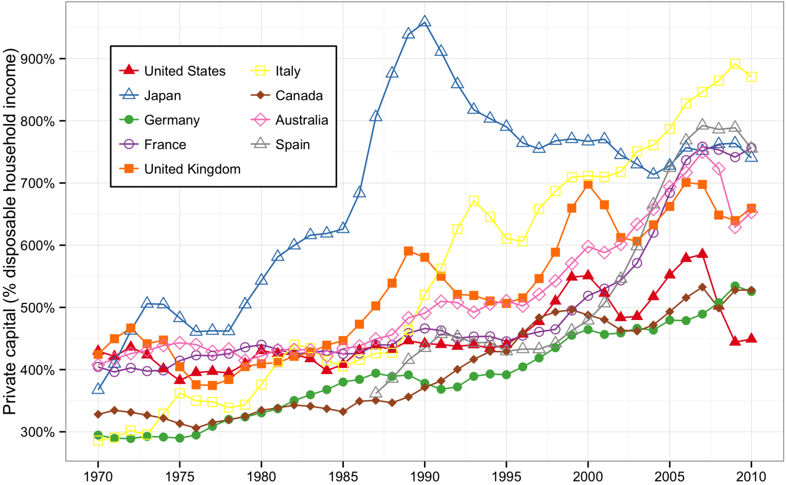
Private capital is worth between 2 and 3.5 years of national income in rich countries in 1970, and between 4 and 7 years of national income in 2010.

Figure 5.3a: Public capital in rich countries, 1970–2010



In France, Britain, Germany, and the United States, government deficits exceeded public investment by 2–3% of national income on average over the period 1970–2010, compared with more than 6% in Italy.

Figure 5.4: Private capital in rich countries (ratio), 1970–2010



Expressed in years of household disposable income (about 70–80% of national income), the capital/income ratio appears to be larger than when it is expressed in years of national income.

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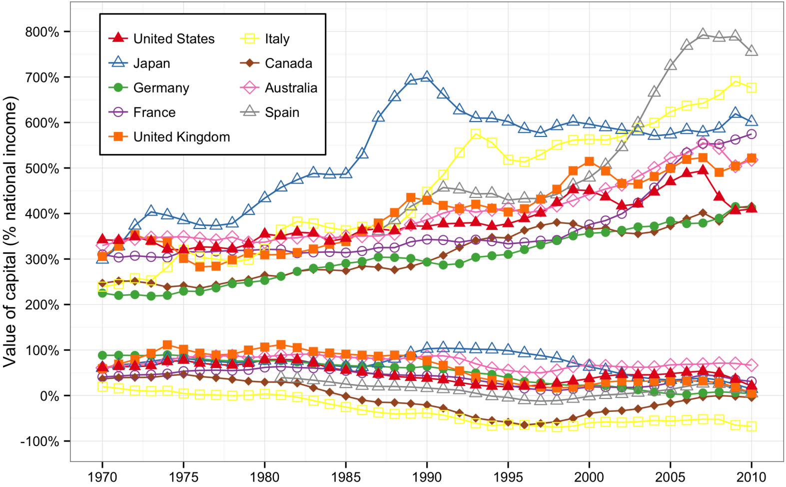
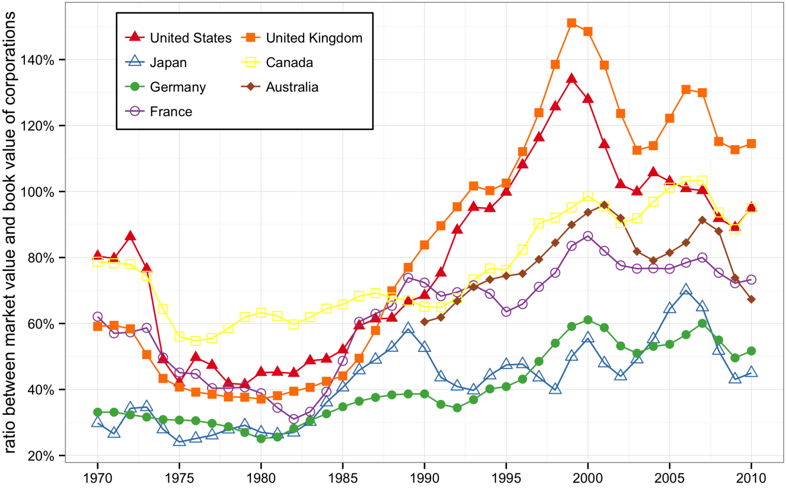
Figure 5.5: Private and public capital in rich countries, 1970–2010



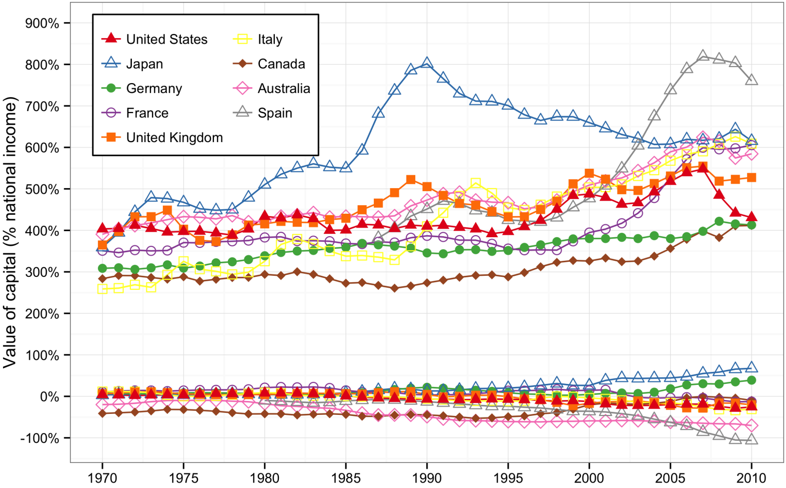
In Italy, private capital rose from 240% to 680% in national income between 1970 and 2010, while public capital dropped from 20% to -70%.

Figure 5.6: Market value and book value of corporations, 1970–2010



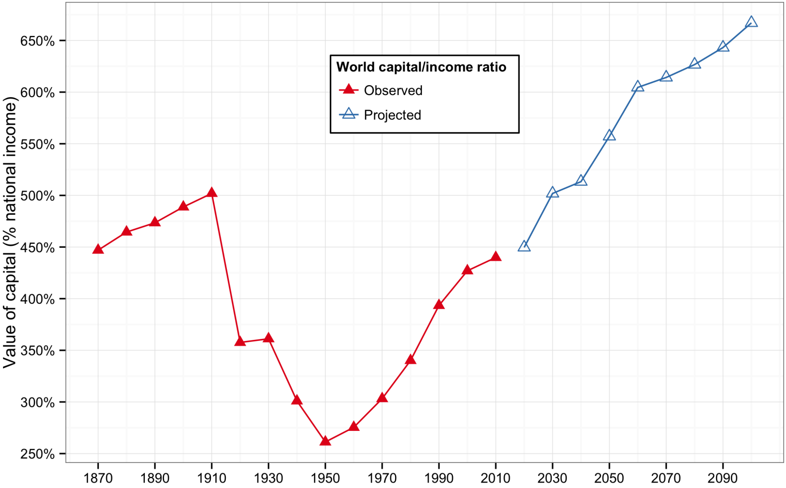
Tobin's Q (i.e. the ratio between market value and book value of corporations) has risen in rich countries since the 1970s–1980s.

Figure 5.7: National capital in rich countries, 1970–2010



Net foreign assets held by Japan and Germany are worth between 6 months and one year of national income in 2010.

Figure 5.8: The world capital/income ratio, 1870–2100



According to simulations (central scenario), the world capital/income ratio could be close to 700 percent by the end of the twenty-first century.

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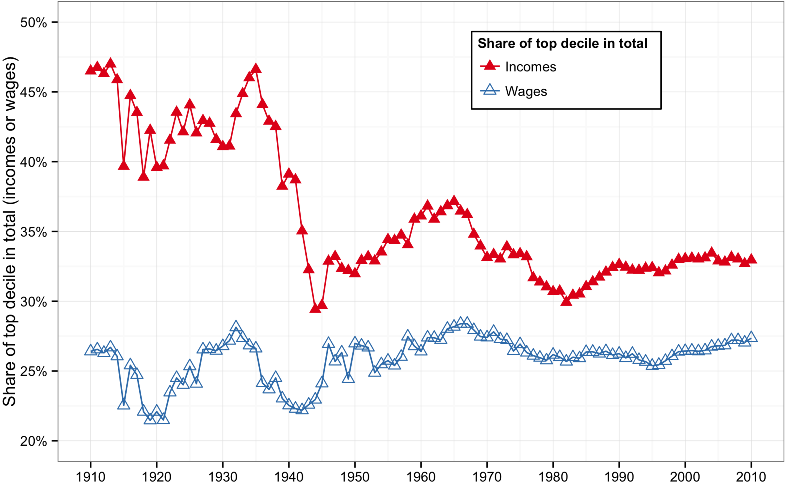
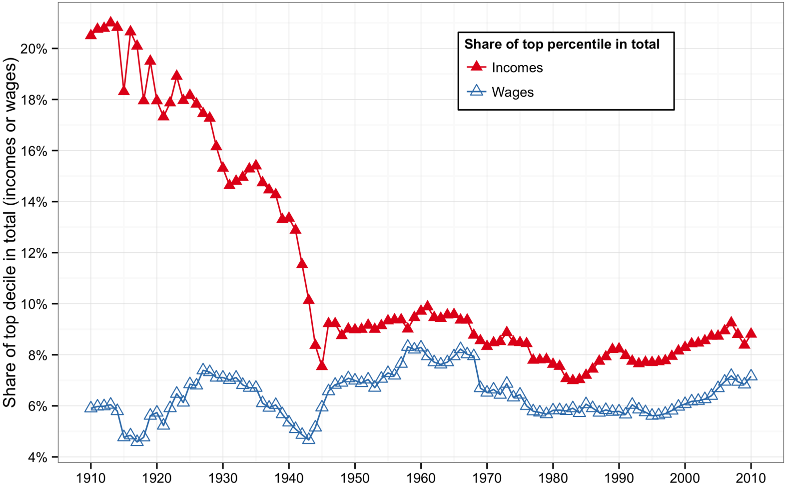
Figure 8.1. Income inequality in France, 1910–2010



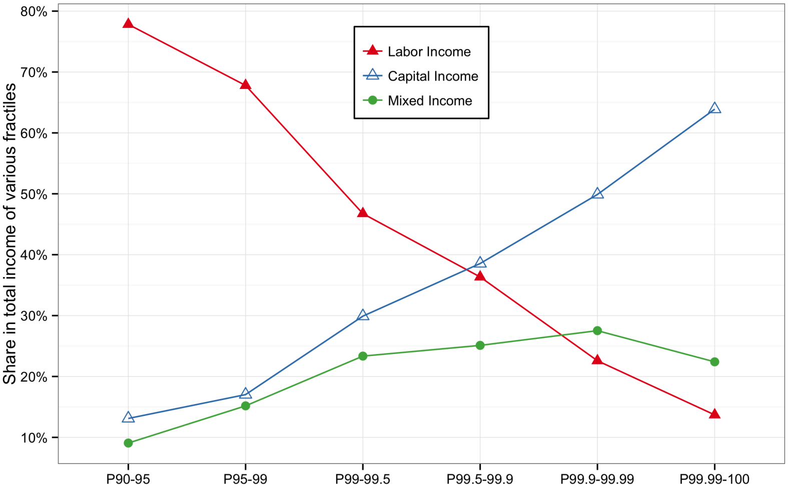
Inequality of total income (labor and capital) has dropped in France during the twentieth century, while wage inequality has remained the same.

Figure 8.2. The fall of rentiers in France, 1910–2010



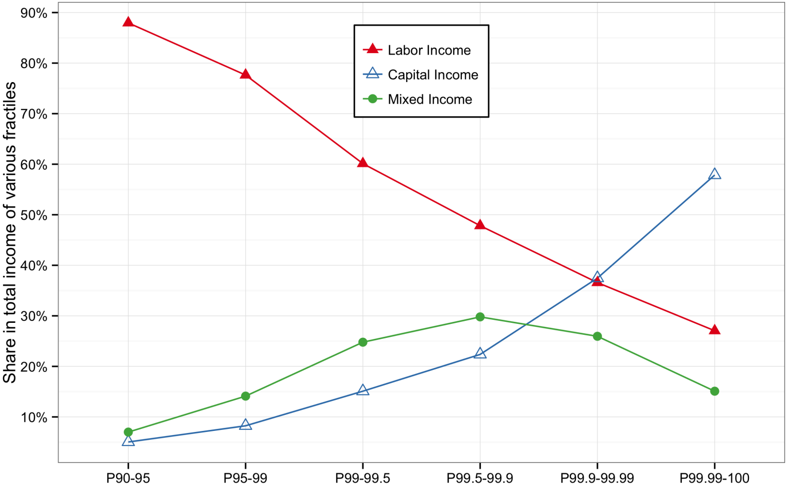
The fall in the top percentile share (the top 1 percent highest incomes) in France between 1914 and 1945 is due to the fall of top capital incomes.

Figure 8.3. The composition of top incomes in France in 1932



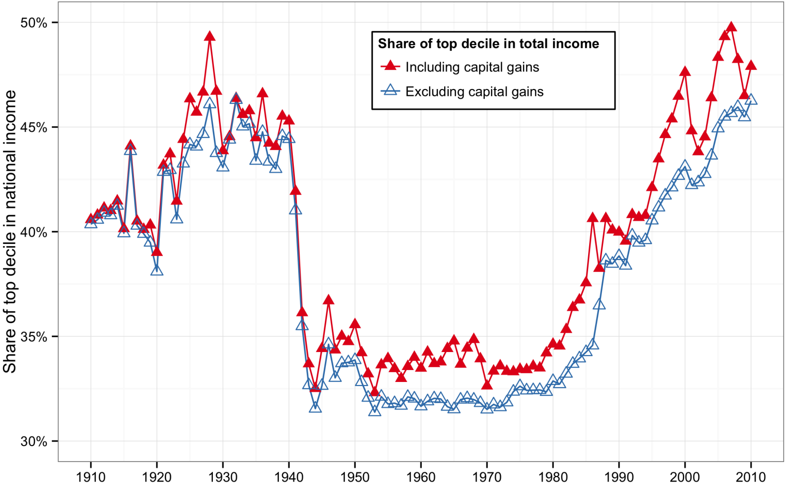
Labor income becomes less and less important as one goes up within the top decile of total income. Notes: (i) "P90–95" includes individuals between percentiles 90 to 95, "P95–99" includes the next 4 percent, "P99–99.5" the next 0.5 percent, etc.; (ii) Labor income: wages, bonuses, pensions. Capital

Figure 8.4. The composition of top incomes in France in 2005



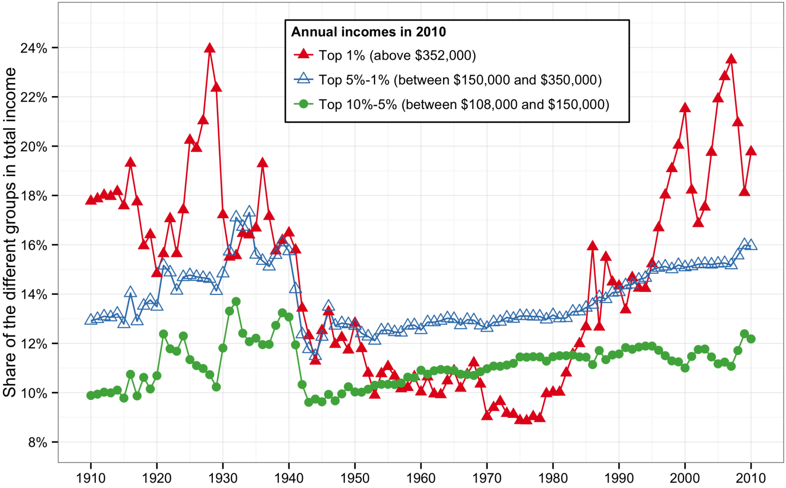
Capital income becomes dominant at the level of the top 0.1 percent in France in 2005, as opposed to the top 0.5 percent in 1932.

Figure 8.5. Income inequality in the United States, 1910–2010



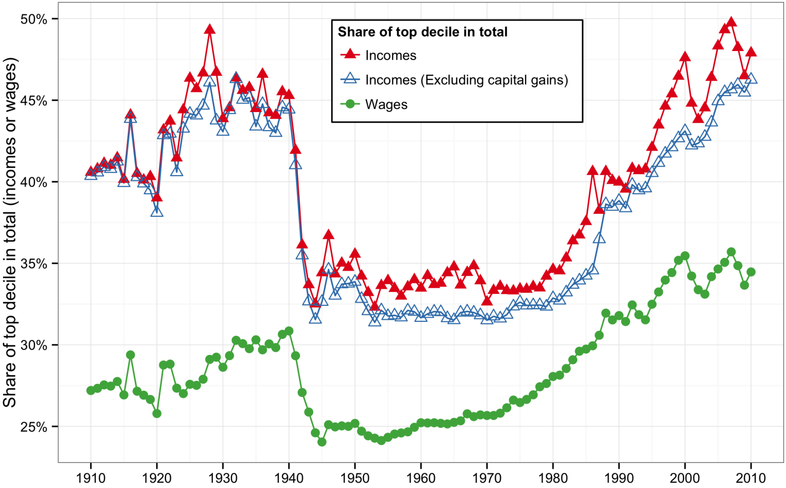
The top decile share in U.S. national income dropped from 45–50% in the 1910s–1920s to less than 35% in the 1950s (this is the 1950 1960 fall documented by Kuznets); it then rose from less than 35% in the 1970s to 45–50% in the 2000s–2010s.

Figure 8.6. Decomposition of the top decile, United States, 1910–2010



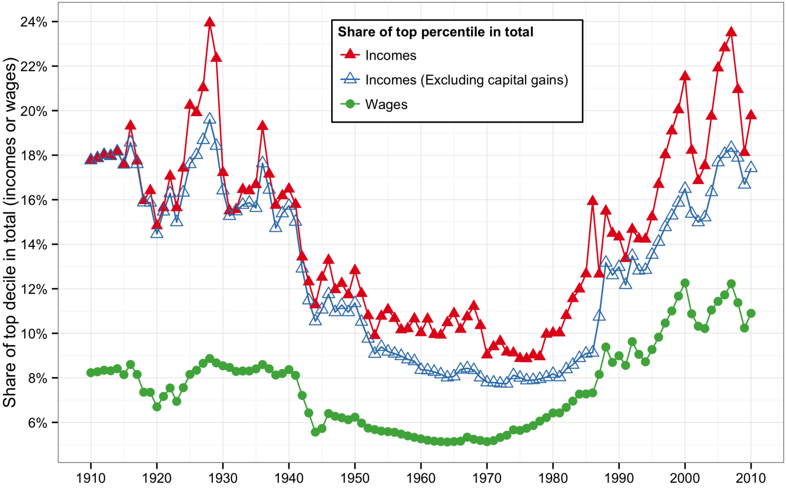
The rise of the top decile income share since the 1970s is mostly due to the top percentile.

Figure 8.7. High incomes and high wages in the United States, 1910–2010



The rise of income inequality since the 1970s is largely due to the rise of wage inequality.

Figure 8.8. The transformation of the top 1 percent in the United States, 1910–2010



The rise in the top 1 percent highest incomes since the 1970s is largely due to the rise in the top 1 percent highest wages.

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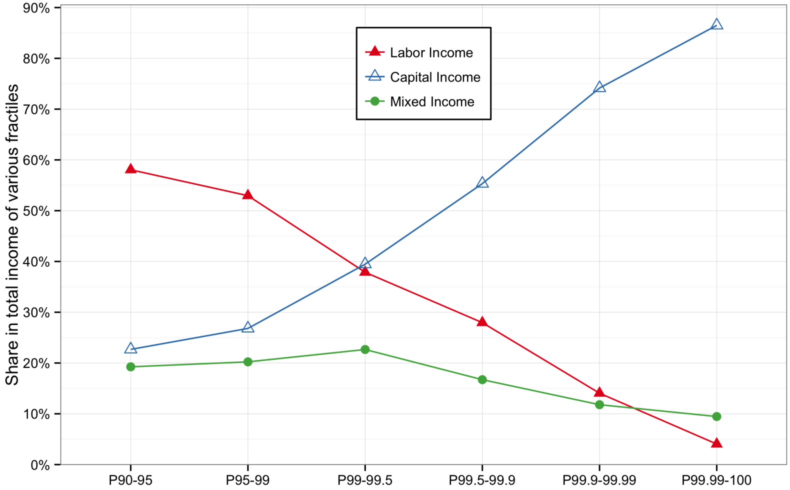
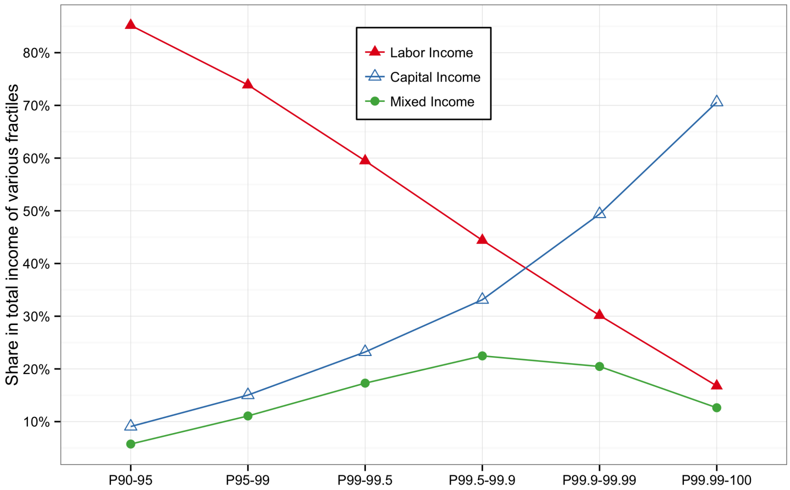
Figure 8.9. The composition of top incomes in the United States in 1929



Labor income becomes less and less important as one moves up within the top income decile.

Figure 8.10. The composition of top incomes in the United States in 2007



Capital income becomes dominant at the level of top 0.1 percent in 2007, as opposed to the top 1 percent in 1929.

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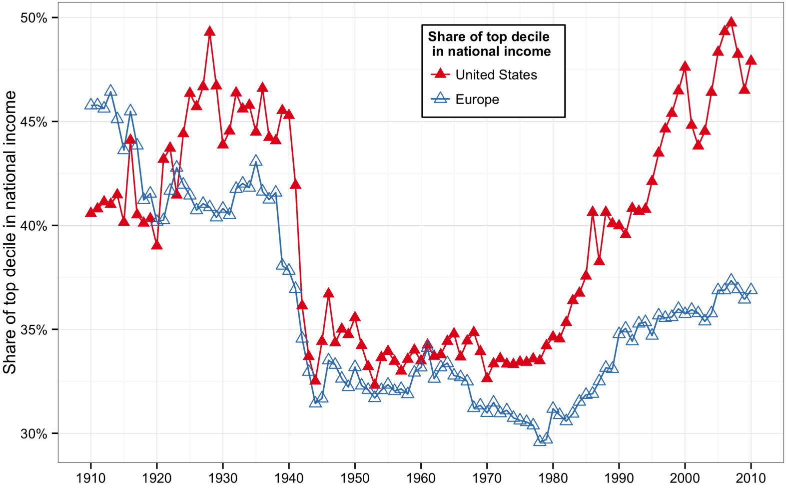
Figure 9.8: Income inequality: Europe vs. United States, 1900–2010



The top decile income share was higher in Europe than in the U.S. in 1900–2010. It is much higher in the U.S. in 2000–2010.

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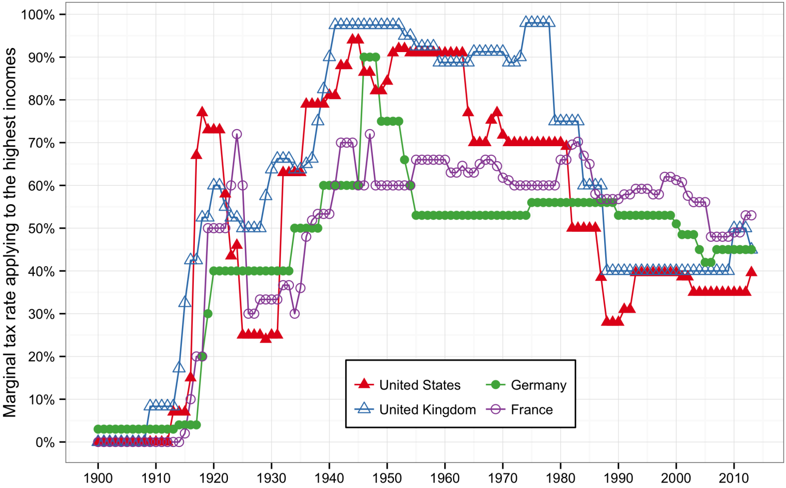
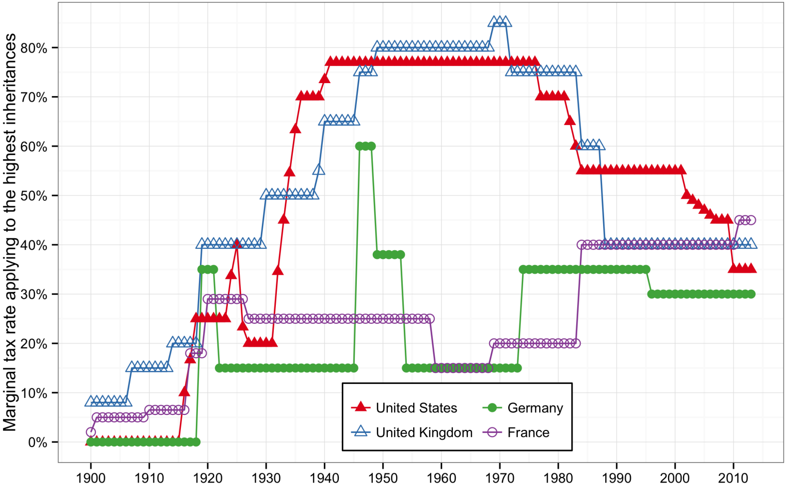
Figure 13.1:

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.

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.

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