Introduction to Economic History

(Master APE & PPD)
(EHESS & Paris School of Economics)
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Academic year 2018-2018

Lectures 1-2: Income, capital and growth in the long run: how did rich countries become rich ?

*(check on line for updated versions)*

Roadmap of lectures 1-2

- Introduction: three U-shaped curves

- Basic concepts: output, income, capital

- National accounts: the measurement of growth

- Facts and questions about long-run growth

- How did rich countries become rich?

- A quick roadmap of the literature on comparative development and property regimes: Braudel, Pomeranz, Polanyi, and others

Introduction: three U-shaped curves

- **(1) Between-country income inequality 1700-2015**: divergence between Western and other countries during 19c & until mid 20c, convergence since 1980-1990 (reduction of inequality)

- **(2) Within-country income inequality**: in some countries (e.g. US), income inequality rose since 1980 & is now back to levels observed in early 20^c : i.e. about 50% of national income for the top 10%

- **(3) Capital/income ratio**: in Europe & Japan, K/Y is almost back to the level observed in early 20^c : i.e. about 500-600% for K/Y; certainly not bad in itself, but raises new issues

- These three evolutions are partly related (world wars, decolonization, end of communism, globalization), but also invole country specific mechanisms: (1) largely due to internal evolutions of emerging countries ; (2) mostly US trend; (3) mostly Europe and Japan (postwar recovery, demography) ; (2) & (3) could well happen together everywhere in the future - or not

- **One of the key objectives of this course is to better understand these long-run evolutions: how did rich countries get rich, and how do inequality, capital accumulation & development interact?**
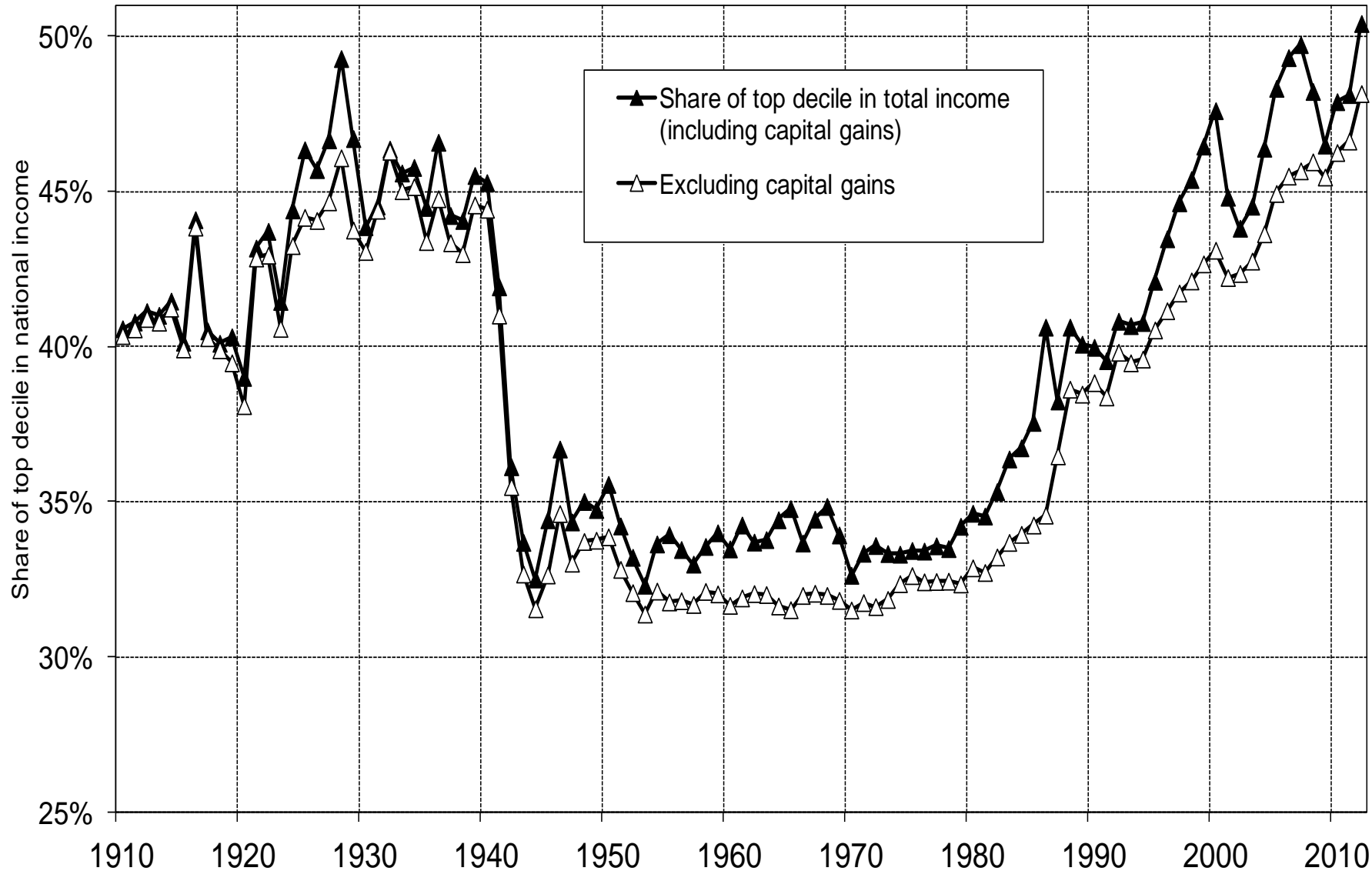
Figure 1.3. Global inequality 1700-2012: divergence then convergence?
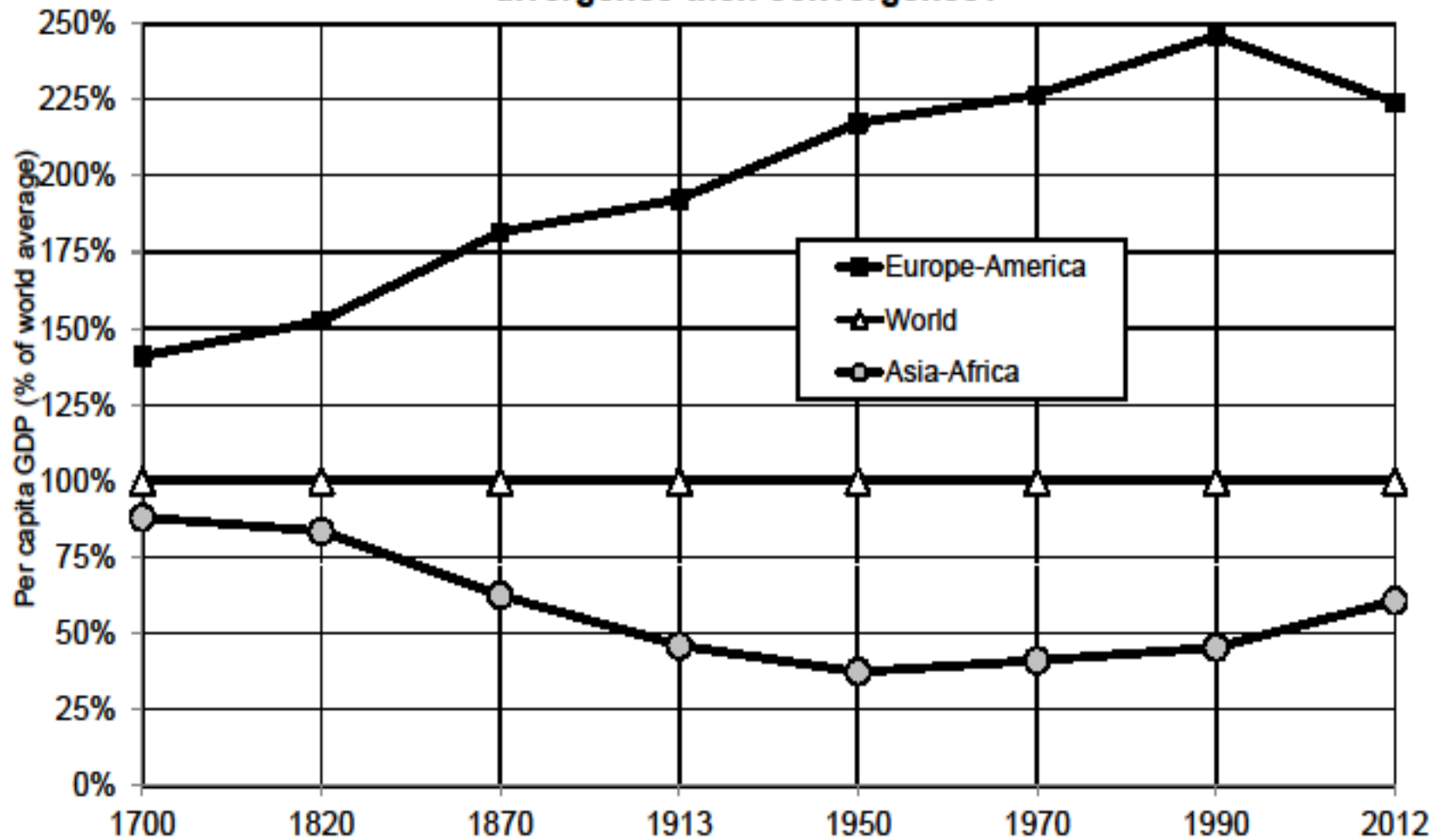
Per capita GDP in Asia-Africa went from 37% of world average in 1950 to 61% in 2012.
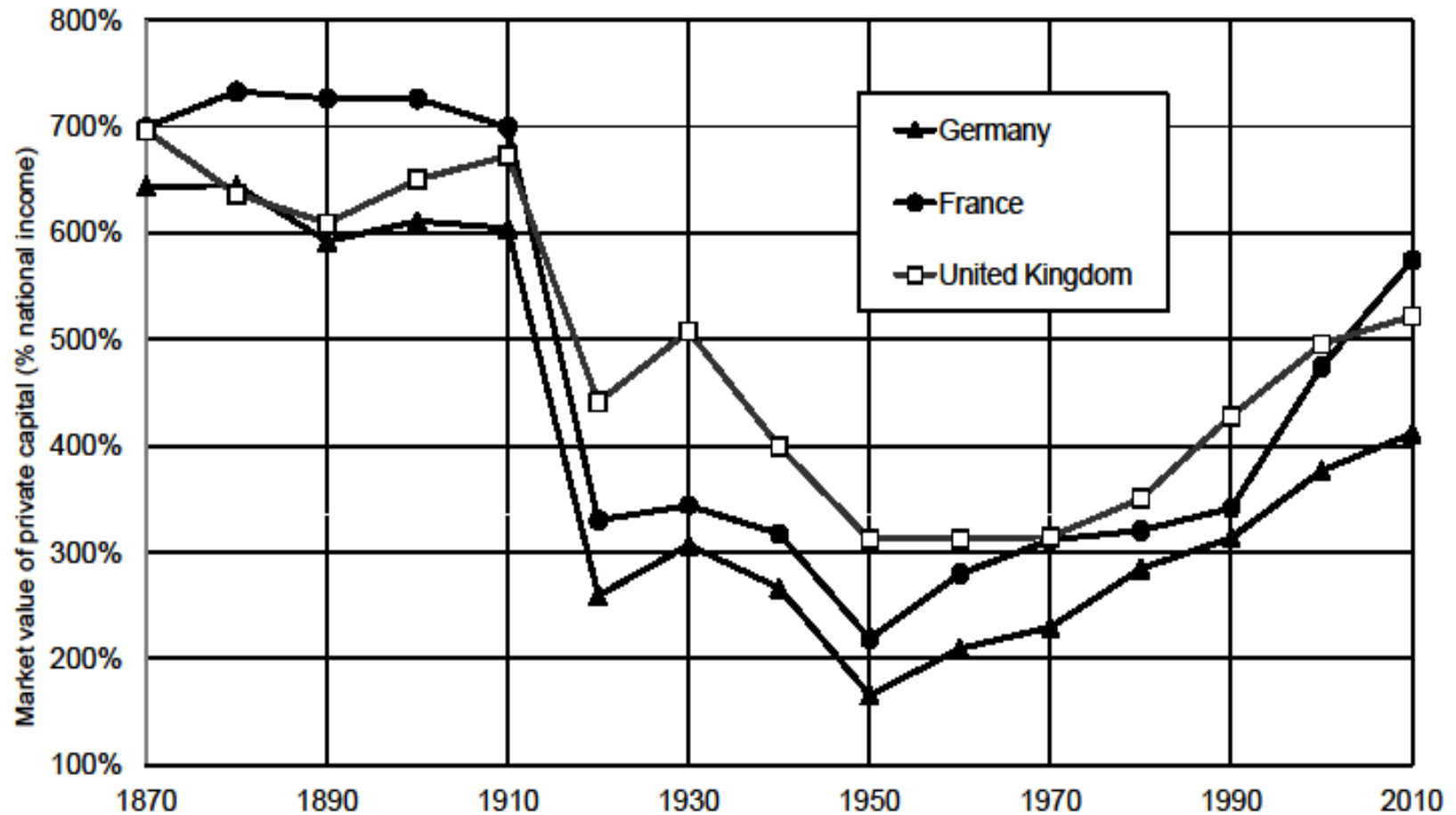Sources and series: see piketty.pse.ens.fr/capital21c.

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 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.

Basic concepts: output, income, capital

- National income Y = domestic output Y_d (NDP)

  + net foreign factor income

- Domestic output Y_d (NDP = Net domestic product)

  = GDP (Gross domestic product) – capital depreciation

- Typically Y and Y_d = about 85-90% GDP in rich countries today

- I.e. capital depreciation = about 10-15% GDP
  (but can be <5% in agrarian societies: low land depreciation rates as compared to buildings, equipment, computers, etc.)

- Net foreign factor income can be >0 (typically in countries with net foreign asset position > 0), or <0 (typically in countries with net foreign asset position < 0)

- Net foreign asset position (NFA) = gross foreign assets (gross assets owned by the residents of a country in the rest of world) – gross foreign liabilities (debt) (gross assets owned by rest of the world in the country)

- Net foreign capital income = close to 0% of Y_d in most rich countries (between +1-2% & -1-2% Y_d) : right now, rich countries own approximately as much foreign assets in rest of the world as rest of the world owns in home assets, so that national income ≈ domestic output

- But this has not always been like this (colonial times); and it could change again: Germany and Japan – and China and oil producing countries – are currently accumulating large NFA, while NFA of Africa (or Greece) is v. negative >> see lecture 3

- **At the world level, net foreign income flows cancel out, so that national income Y = domestic output Y_d**

- National income $Y = Y_d + r \, NFA$
- Private capital (or private wealth) W = non-financial assets (real estate, family firms,..) + financial assets (equity, bonds, life insurance, deposits, cash, pension funds,..) – financial liabilities (debt) held by private individuals (households) (+non-profit inst.)
- Public capital (or public wealth) W_g = non-fin + fin assets – liabilities held by the government (all levels)
- National capital (or national wealth) $W_n = W + W_g$
- National capital W_n = domestic capital K + net foreign assets NFA
- Domestic capital K = agricultural land + housing + other domestic capital (=structures, equipment, patents,.. used by firms & govt)
- Note that firms are valued at market prices through equity
- Private wealth/national income ratio $\beta = W/Y$
- National wealth/national income ratio $\beta_n = W_n/Y$
- Domestic capital/output ratio $\beta_k = K/Y_d$
- **At the world level, national wealth/national income ratio = domestic capital/output ratio; but at the country level, it can differ**

- Basic orders of magnitude in rich countries today
- National wealth W_n ≈ private wealth W
  (i.e. public wealth W_g ≈ 0) (or <0..)
- National wealth W_n ≈ domestic capital K
  (i.e. net foreign asset NFA ≈ 0) (but large gross foreign positions)
- **National wealth W_n ≈ 500-600% of national income Y**

  ≈ residential housing + other domestic capital (≈ 50-50) (but with large variations between the poor, the middle and the top)
- Typically, in France, UK, Germany, Italy, US, Japan:

Per capita average income Y ≈ 30 000€ (= national income/population)

Per capita aver. wealth W ≈ 150 000-180 000€ (=private wealth/pop)

- **I.e. β = W/Y ≈ 500-600%**
- Y_K = capital income = rent, dividend, interest, profits,..
- α = Y_K/Y = capital share in national income ≈ 25-30%
- I.e. average rate of return r = α/β = 4-5%
- **Basic accounting law: α = r x β →** on dynamics of β and α

Asset composition by wealth level, France 2012
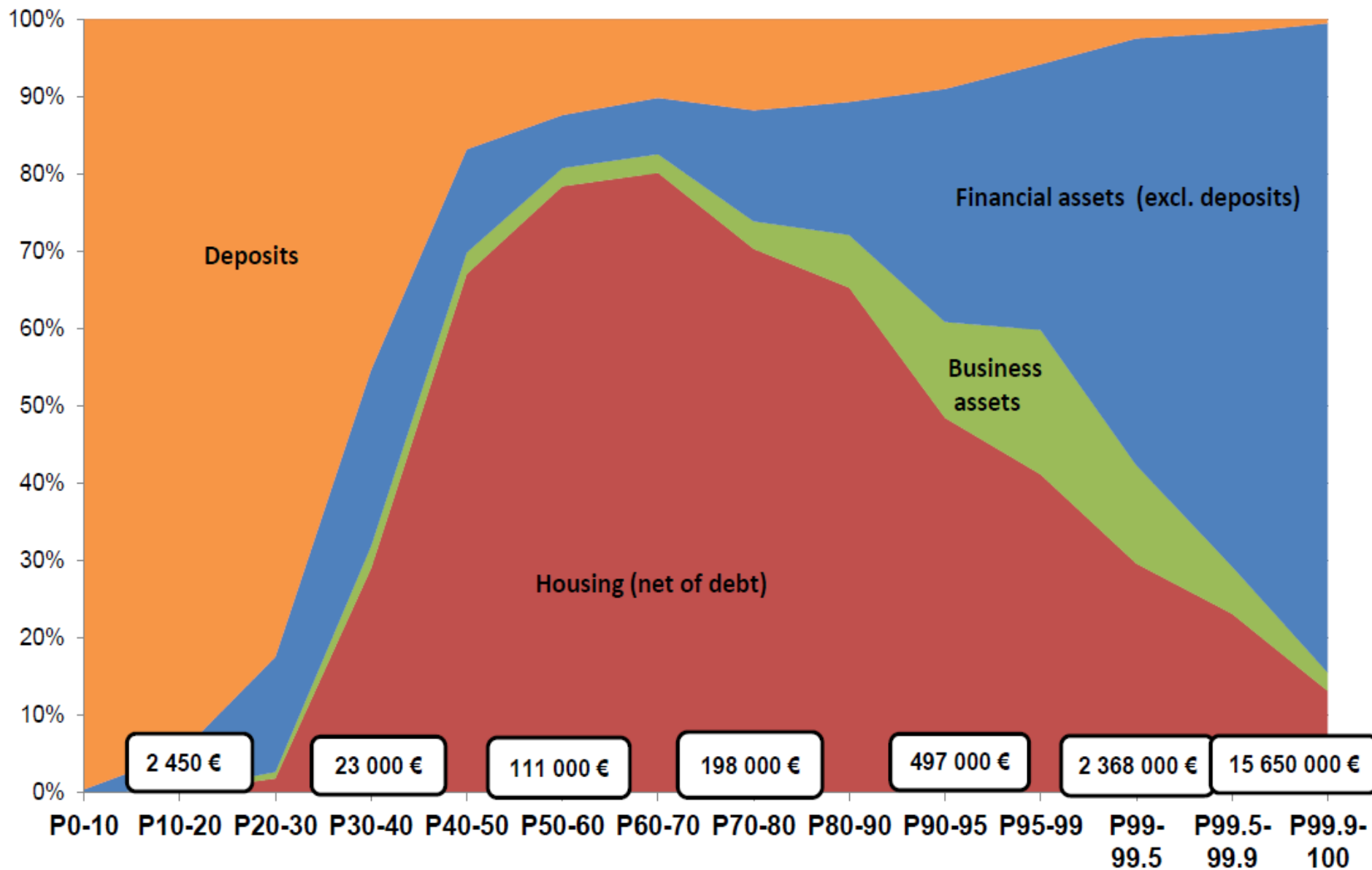
National accounts: the measurement of growth

- [Maddison 2008 database](#) = the most extensive compilation of historical national accounts (*The World Economy...* 2001, [appendix](#))

- See this **excel file** for a combination of Maddison series and official [UN population series](#) and [WB GDP series](#) for recent decades; see also [Capital...](#),chap.1-2, & on-line appendix tables for [chapter 1](#))

- On the history of national accounts, see R. Stone, "The accounts of society", [Nobel lecture 1984](#), and A. Vanoli, *Une histoire de la comptabilité nationale*, 2002

- Since the 1930s-40s and until recently (≈ btw 1929 and 2008), national accounts were mostly about flows of output, income and consumption/invt, and not about stock of capital, assets & liabilities

- Maddison: no data on capital stock (only GDP and population)

- See [lecture 3](#) on the history of measurement of capital and wealth; recent return to stock measurement (back to 18c-19c and to an earlier tradition of national accounts)

Facts & questions about long-run growth

- **Fact 1: Convergence**
- Convergence between poor and rich countries now seems well under way; but not over yet (?)

- **Fact 2: Global growth slowdown in 21^c**
- Productivity growth is always slow for countries at the world technological frontier; once global catch-up process is over, growth might be low everywhere (?)
- Population growth seems to be →0 (or <0) (?)

Fact 1. Convergence

- Between 1900 and 1980, Europe + America ≈ 70-80% world GDP
- In 2013: down to about 50% (as in 1860)
- At some point during 21^c: down to 20-30%, i.e. to the share of Europe + America in world population = convergence in per capita output and income
- But will convergence be over in 2030, 2060 or 2090? Nobody knows. Probably closer to 2040 in East Asia, and closer to 2090 in South Asia and Africa.
- Convergence occured mostly through domestic investment (not so much through foreign investment: emerging countries are not owned by rich countries... except Africa)
- Economic openness had a critical impact on development via free trade (specialization effect) and via diffusion of technology and know-how; but maybe not so much via free capital flows
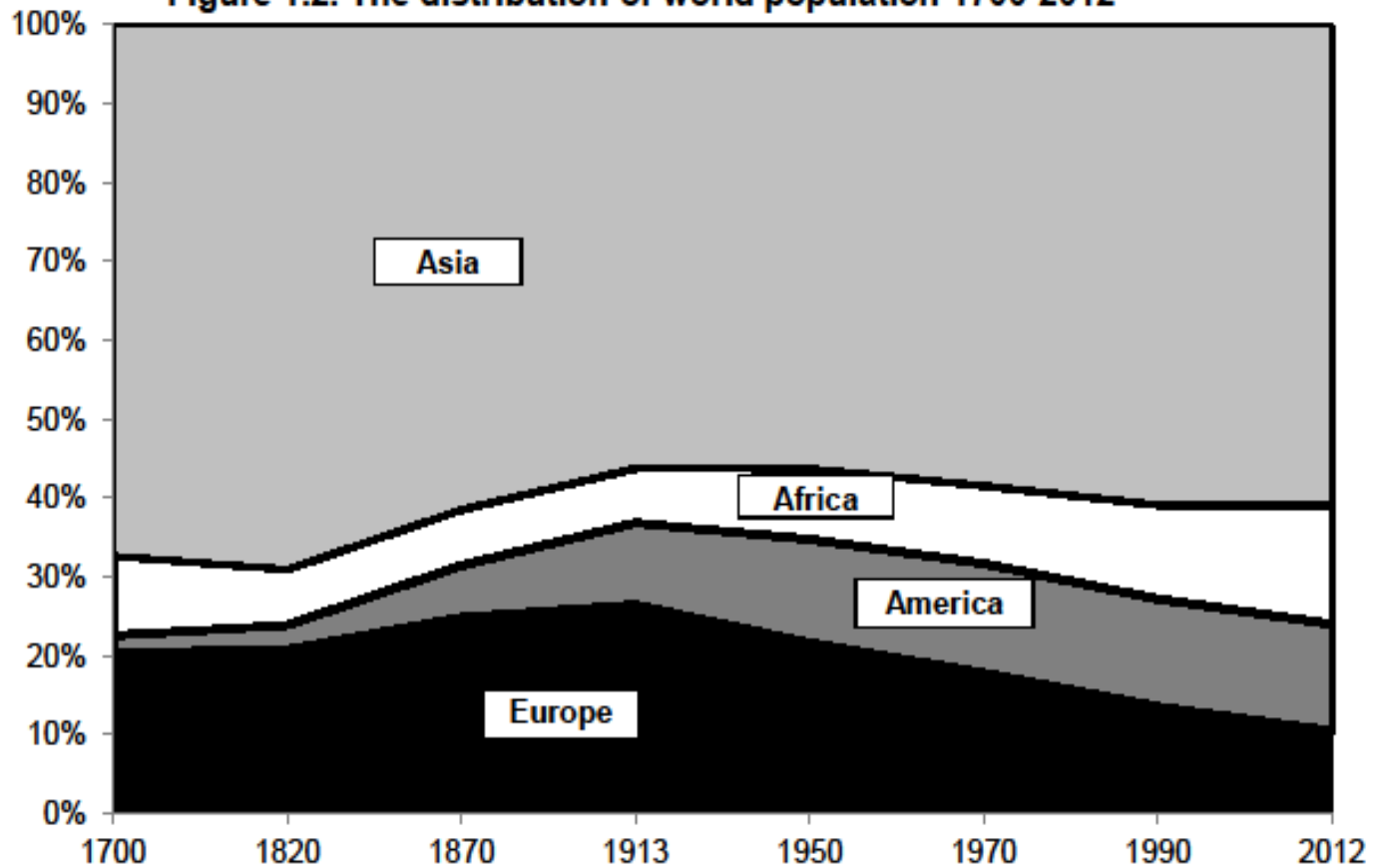
Figure 1.1. The distribution of world output 1700-2012
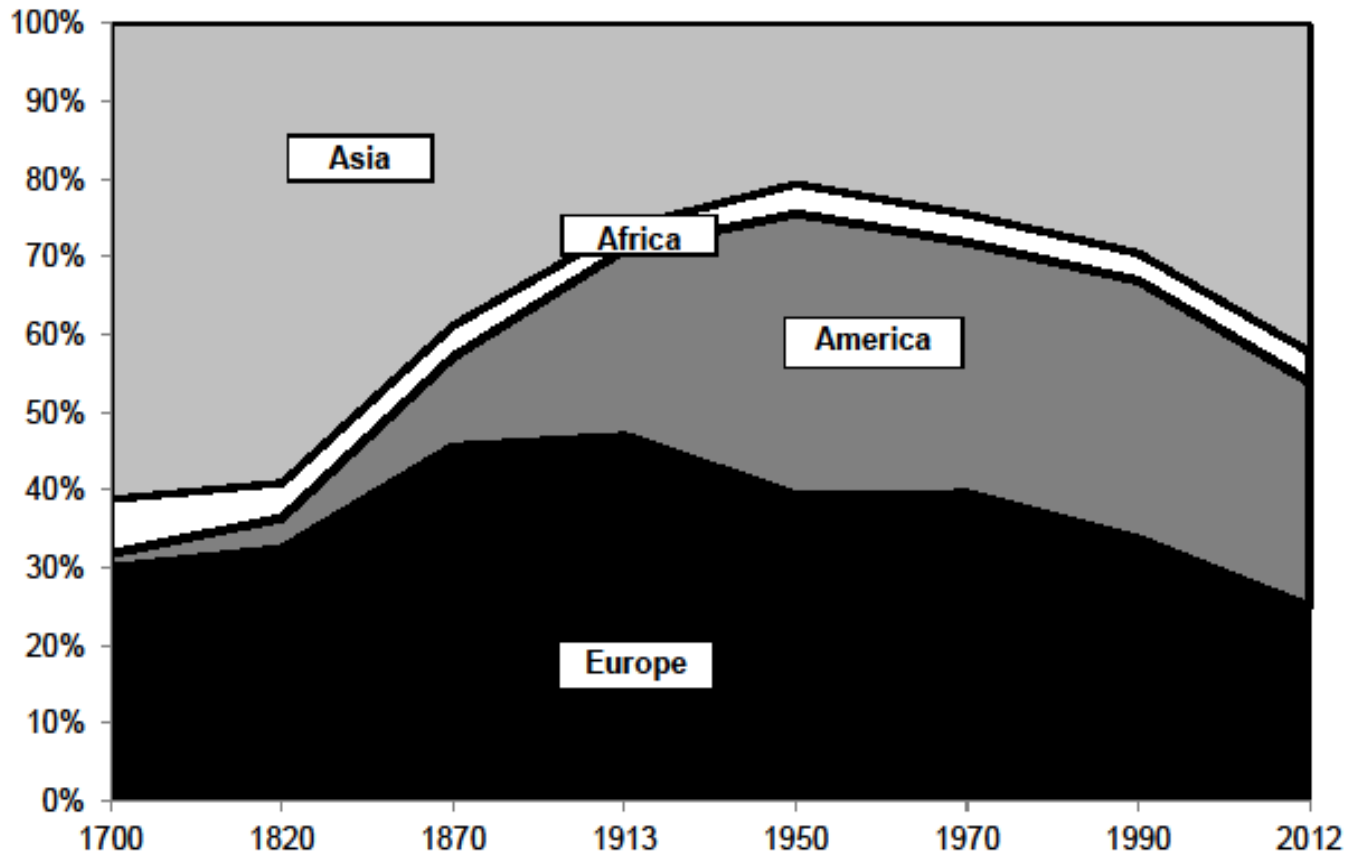
Europe's GDP made 47% of world GDP in 1913, down to 25% in 2012.

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

Figure 1.2. The distribution of world population 1700-2012

Europe's population made 26% of world population in 1913, down to 10% in 2012.
Sources and series: see piketty.pse.ens.fr/capital21c.

Figure 1.3. Global inequality 1700-2012:
divergence then convergence?

Per capita GDP in Asia-Africa went from 37% of world average in 1950 to 61% in 2012.
Sources and series: see piketty.pse.ens.fr/capital21c.

Figure S1.3. Global inequality 0-2012: divergence then convergence?

Per capita GDP in Asia-Africa went from 37% of world average in 1950 to 61% in 2012.
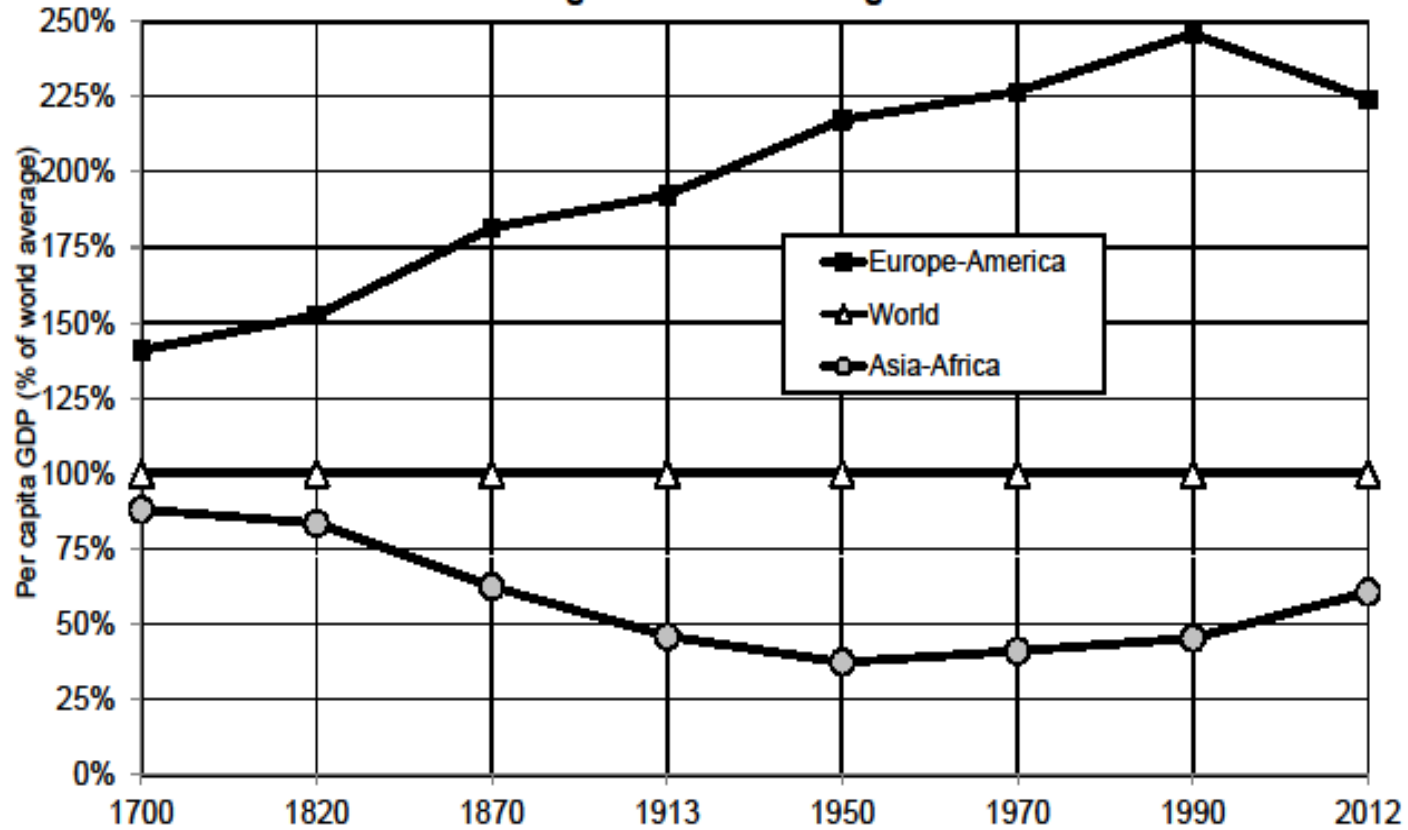Sources and series: see piketty.pse.ens.fr/capital21c.

Figure S1.2. The distribution of world population 0-2012
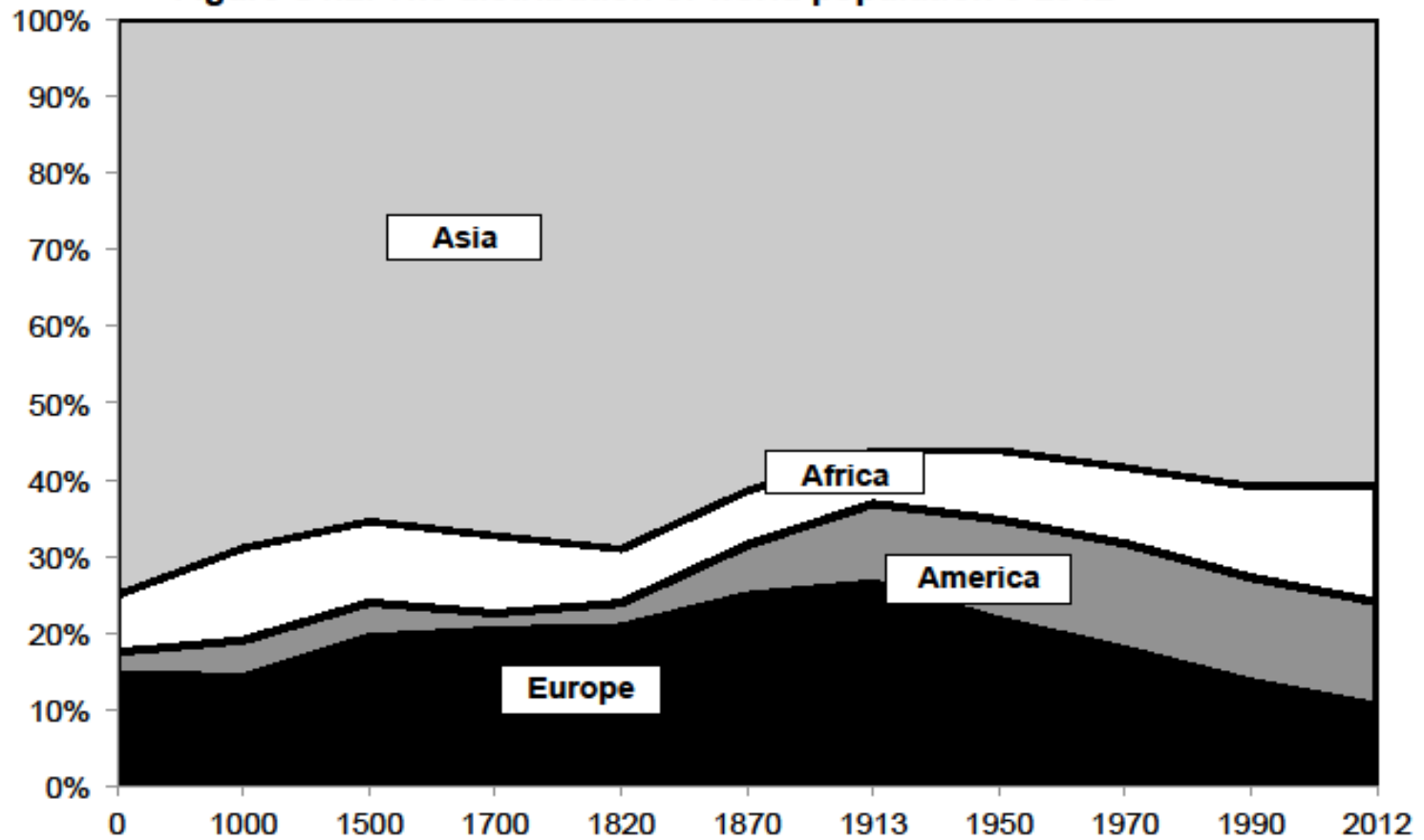
Europe's population made 26% of world population in 1913, down to 10% in 2012.
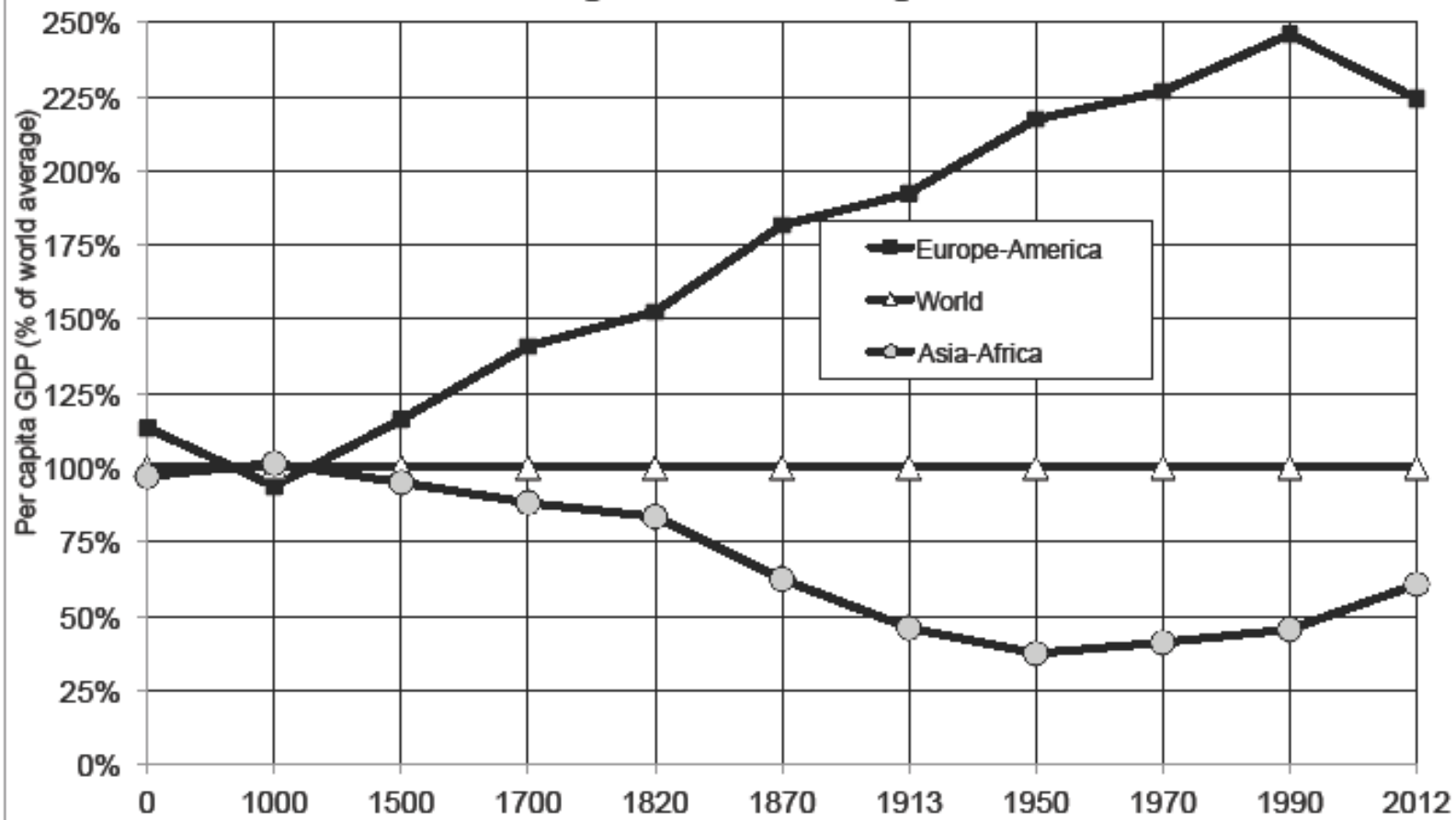
Sources and series: see piketty.pse.ens.fr/capital21c.

Figure S1.1. The distribution of world output, 0-2012
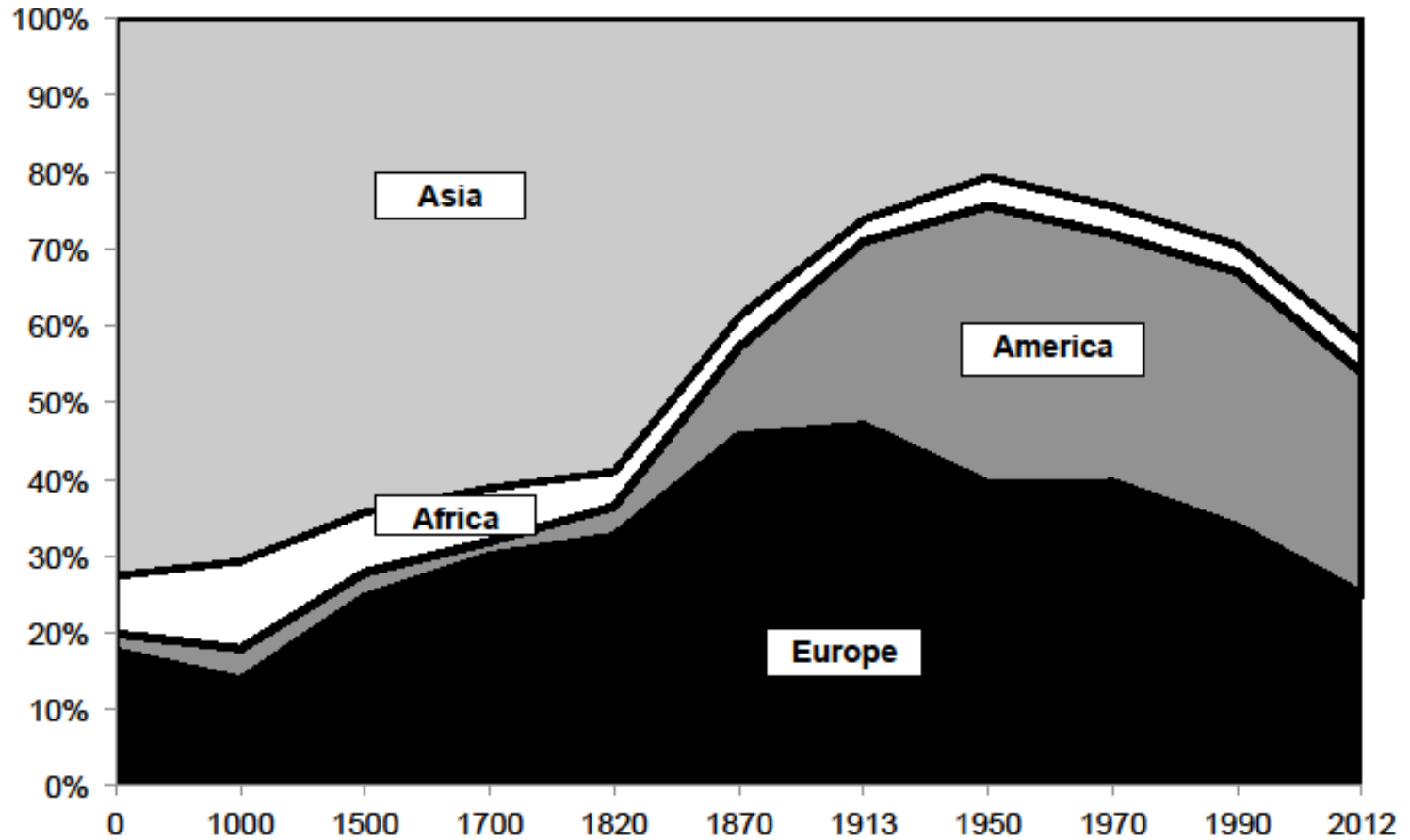
Asia

Africa

America

Europe

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

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

- Basic orders of magnitude to remember:
- World GDP 2016 = about 80 trillions €
    (i.e. 80 000 billions €)
- World population = about 7 billions
- Per capital GDP = about 11 000€
- Per capital income = about 900€/month
- Rich countries = about 2000-3000€/month
- Poor countries = about 200-300€/month
- More inequality in income than in output, and in market exchange rates than in PPP

Table 1.1: Distribution of world GDP, 2012

|	Population (millions inhabitants)		GDP (billions euros 2012)		Per capita GDP	Equivalent per capita monthly income
					(euros 2012)	
World	**7 050**	*100%*	**71 200**	*100%*	10 100 €	760 €
Europe	**740**	*10%*	**17 800**	*25%*	24 000 €	1 800 €
incl. European Union	540	*8%*	14 700	*21%*	27 300 €	2 040 €
incl. Russia/Ukraine	200	*3%*	3 100	*4%*	15 400 €	1 150 €
America	**950**	*13%*	**20 600**	*29%*	21 500 €	1 620 €
incl. United States/Canada	350	*5%*	14 300	*20%*	40 700 €	3 050 €
incl. Latin America	600	*9%*	6 300	*9%*	10 400 €	780 €
Africa	**1 070**	*15%*	**2 800**	*4%*	2 600 €	200 €
incl. North Africa	170	*2%*	1 000	*1%*	5 700 €	430 €
incl. Subsaharan Africa	900	*13%*	1 800	*3%*	2 000 €	150 €
Asia	**4 290**	*61%*	**30 000**	*42%*	7 000 €	520 €
incl. China	1 350	*19%*	10 400	*15%*	7 700 €	580 €
incl. India	1 260	*18%*	4 000	*6%*	3 200 €	240 €
incl. Japan	130	*2%*	3 800	*5%*	30 000 €	2 250 €
incl. Other	1 550	*22%*	11 800	*17%*	7 600 €	570 €

World GDP, estimated in purchasing power parity, was about 71 200 billions euros in 2012. World population was about 7.050 billions inhabitants, hence a per capital GDP of 10 100€ (equivalent to a monthly income of about 760€ per month). All numbers were rounded to the closed dozen or hundred

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

Figure 1.4. Exchange rate and purchasing power parity: euro/dollar
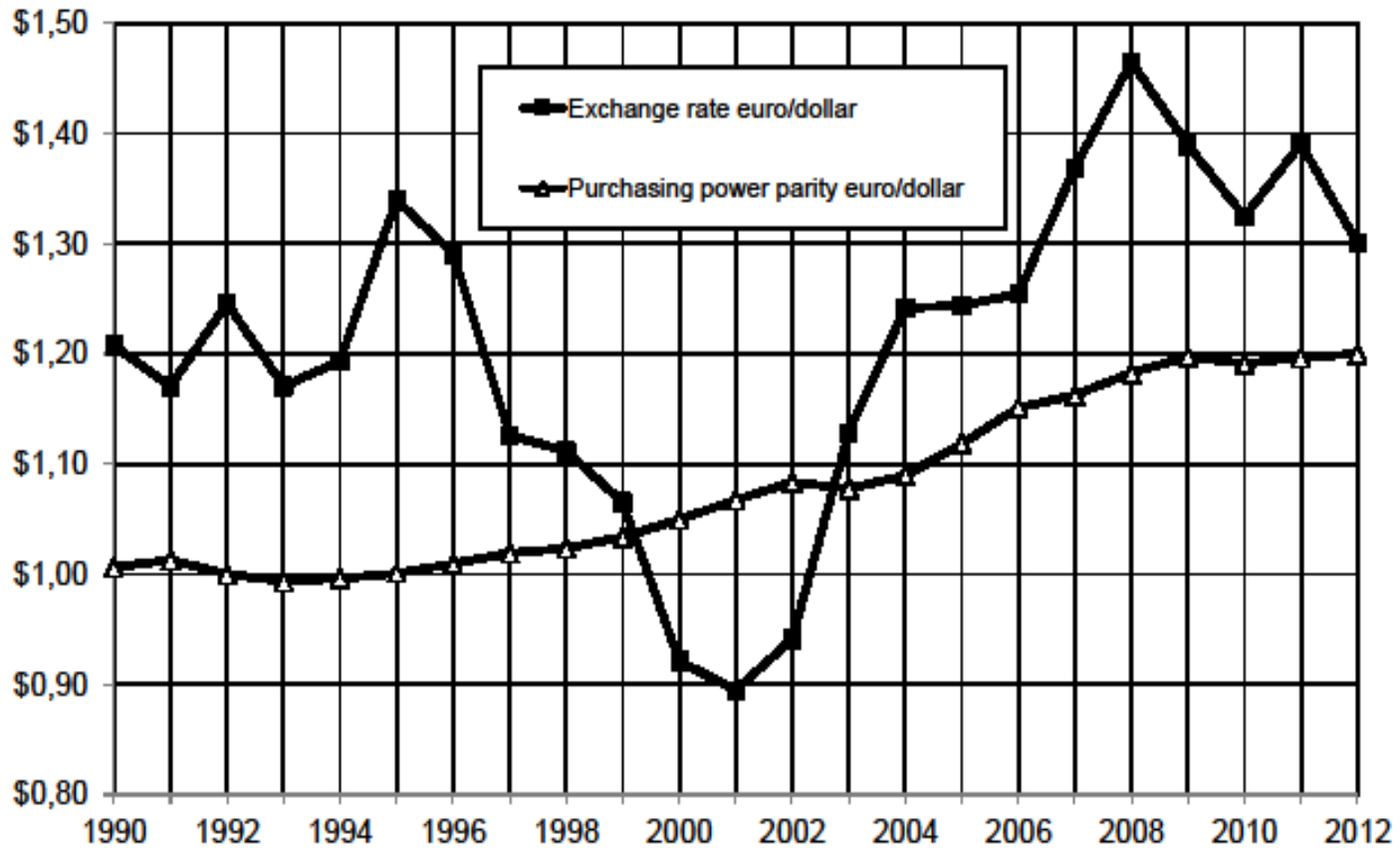
In 2012, 1 euro was worth 1,30 dollars according to current exchange rate, but 1,20 dollars in purchasing power partity.   Sources and series: see piketty.pse.ens.fr/capital21c.
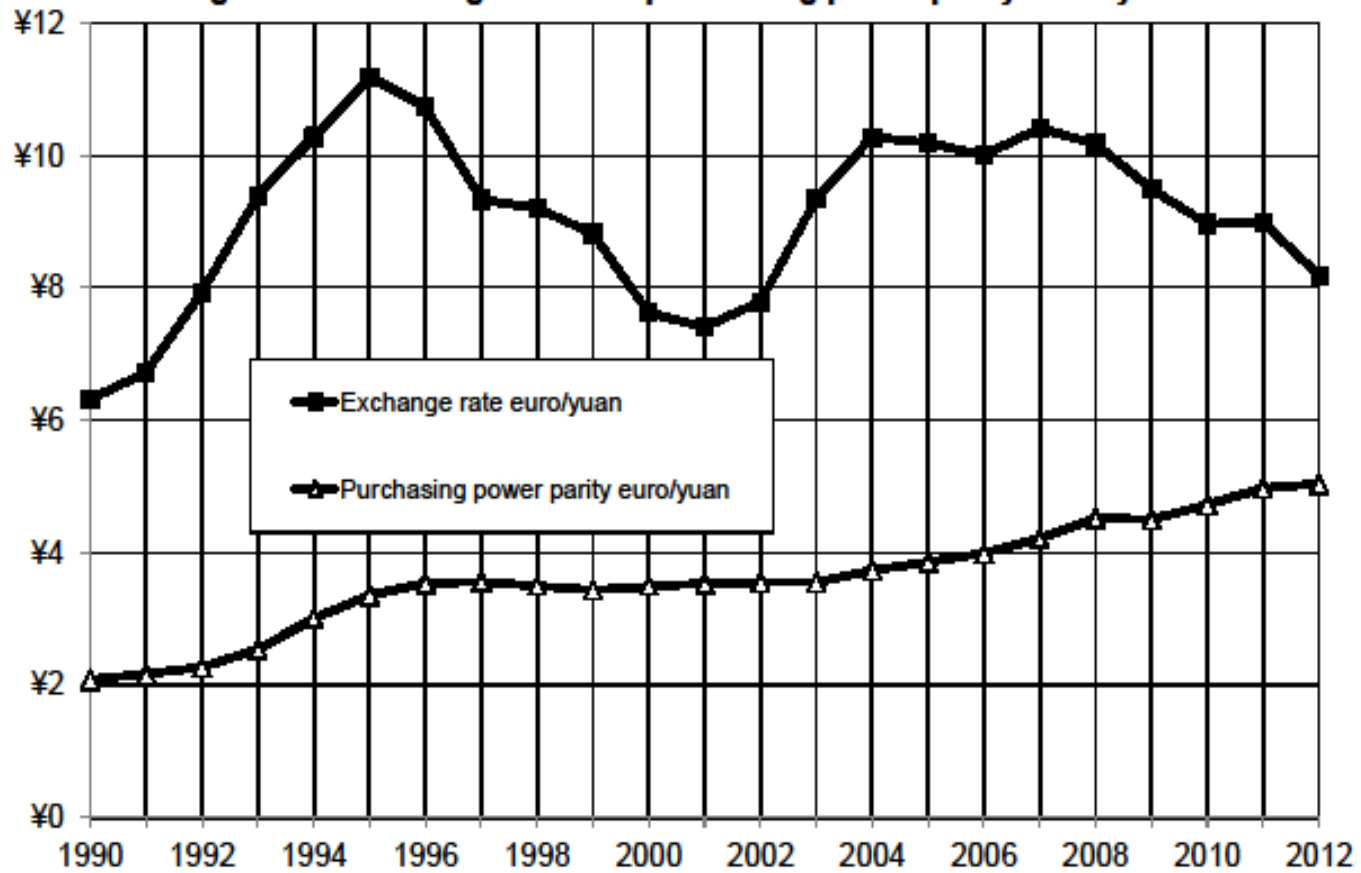
Figure 1.5. Exchange rate and purchasing power parity: euro/yuan

In 2012, 1 euro was worth 8 yuans according to current exchange rate, but 5 yuans in purchasing power parity. Sources and series: see piketty.pse.ens.fr/capital21c.

Fact 2. Growth slowdown

- Productivity growth is always slow for countries at the world technological frontier; once global catch-up process is over, growth might be low everywhere

- Population growth seems to be →0 (or <0)

- Average world growth 1700-2012: g=1,6%, including n=0,8% for population and h=0,8% for per capita output

- But 0,8% per year was enough to multiply world population (and average income) by a factor of 10

- g = n + h with n = population growth

  and h = productivity growth

- In the very long run, maybe n ≈ 0% and h ≈ 1-1,5%, so that g=n+h≈1-1,5%

- Some economists are even less optimistic: long-run g<1% according to Gordon 2012 and secular stagnation debate

Table 2.1: World growth since the industrial revolution

Average annual growth rate	World output	World population	Per capita output
0-1700	0,1%	0,1%	0,0%
1700-2012	1,6%	0,8%	0,8%
incl.: 1700-1820	0,5%	0,4%	0,1%
1820-1913	1,5%	0,6%	0,9%
1913-2012	3,0%	1,4%	1,6%

Between 1913 and 2012, the growth rate of world GDP was 3,0% per year on average. This growth rate can be broken down between 1,4% for world population and 1,6% for per capita GDP.
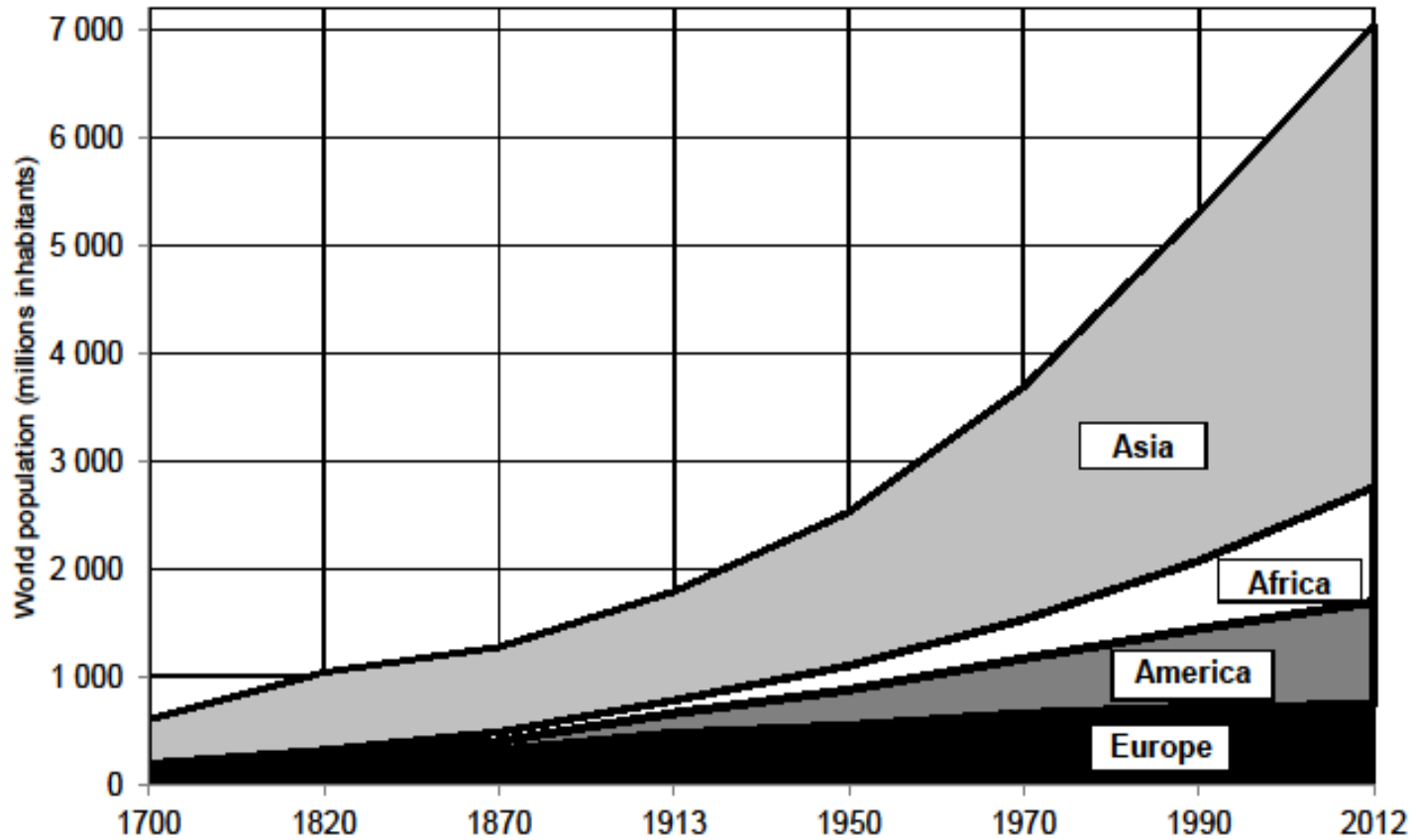
Sources: see piketty.pse.ens.fr/capital21c.

Table 2.2. The law of cumulated growth

An annual growth rate equal to…	.. is equivalent to a generational growth rate (30 years) of…	…i.e. a multiplication by a coefficient equal to…	…and a multiplication after 100 years by a coefficient equal to…	…and a multiplication after 1000 years by a coefficient equal to…
0,1%	3%	1,03	1,11	2,72
0,2%	6%	1,06	1,22	7,37
0,5%	16%	1,16	1,65	147
1,0%	35%	1,35	2,70	20 959
1,5%	56%	1,56	4,43	2 924 437
2,0%	81%	1,81	7,24	398 264 652
2,5%	110%	2,10	11,8	52 949 930 179
3,5%	181%	2,81	31,2	…
5,0%	332%	4,32	131,5	…

An annual growth rate of 1% is equivalent to an annual growth rate of 35% per generation (30 years), a multiplication by 2,7 every 100 years, and by over 20 000 every 1000 years.

Figure 2.1. The growth of world population 1700-2012

World population rose from 600 millions inhabitants in 1700 to 7 billions in 2012.
Sources ans series: see piketty.pse.ens.fr/capital21c.

Figure 2.2. The growth rate of world population from Antiquity to 2100
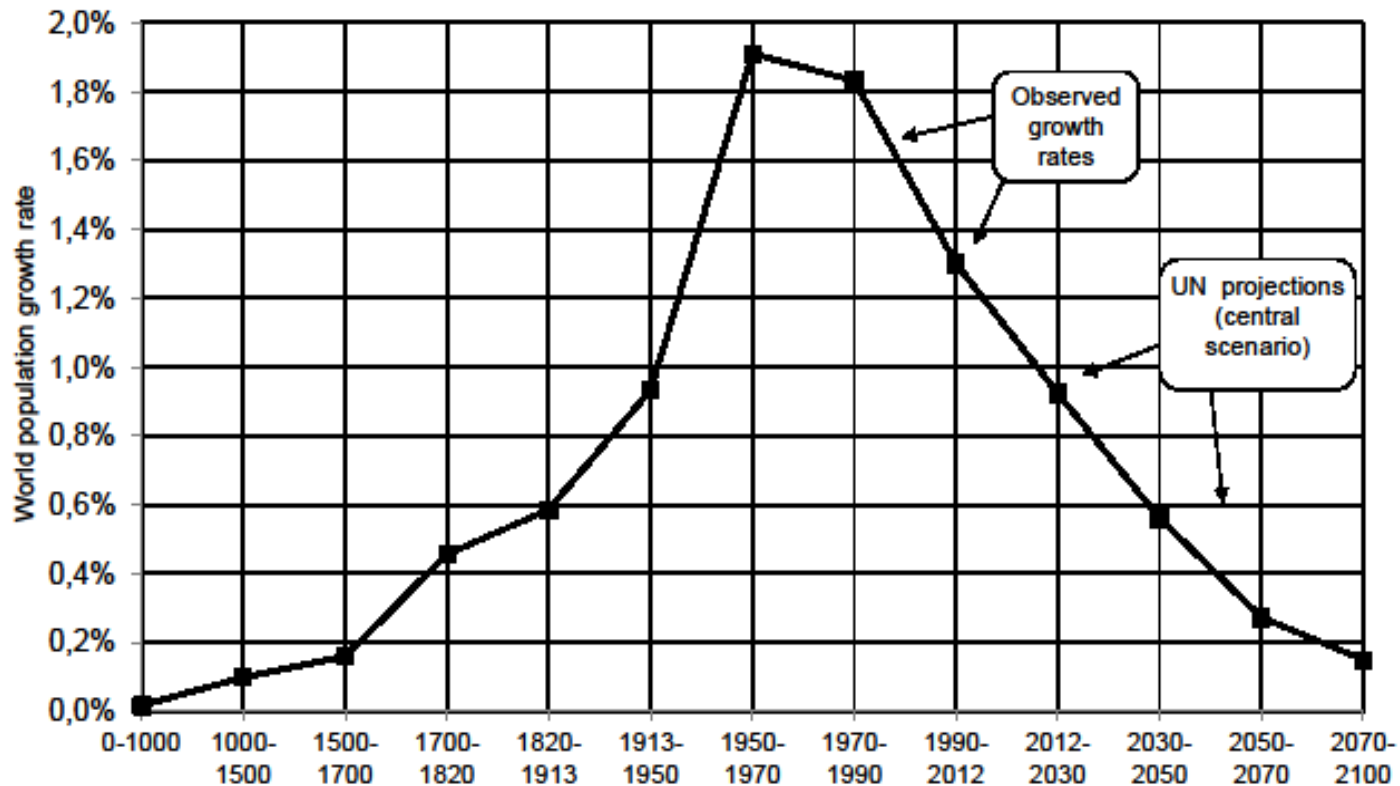
The growth rate of world population was above 1% per year from 1950 to 2012 and should return toward 0% by the end of the 21st century. Sources and series: see piketty.pse.ens.fr/capital21c.

Table 2.3: Demographic growth since the industrial revolution

Average annual growth rate	World population	Europe	America	Africa	Asia
0-1700	**0,1%**	0,1%	0,0%	0,1%	0,1%
1700-2012	**0,8%**	0,6%	1,4%	0,9%	0,8%
incl: 1700-1820	**0,4%**	0,5%	0,7%	0,2%	0,5%
1820-1913	**0,6%**	0,8%	1,9%	0,6%	0,4%
1913-2012	**1,4%**	0,4%	1,7%	2,2%	1,5%
Projections 2012-2050	**0,7%**	*-0,1%*	*0,6%*	*1,9%*	*0,5%*
Projections 2050-2100	**0,2%**	*-0,1%*	*0,0%*	*1,0%*	*-0,2%*

Between 1913 and 2012, the growth rate of world population was 1,4% per year, including 0,4% for Europe, 1,7% for America, etc.

Sources: see piketty.pse.ens.fr/capital21c. Projections for 2012-2100 correspond to the UN central scenario.

- Per capita (per inhabitant) growth was exceptionally high in Europe and Japan in the 1950-1980 period (h=4-5% per year) because of a catch-up process with the US; but since 1980, per capital growth rates have been low in all rich countries

- In the very long, h=1% is already quite fast and requires permanent reallocation of labor (about one third of the economy is being renewed at each generation)

Table 2.5: Per capita output growth since the industrial revolution

Average annual growth rate	Per capita world output	Europe	America	Africa	Asia
0-1700	0,0%	0,0%	0,0%	0,0%	0,0%
1700-2012	0,8%	1,0%	1,1%	0,5%	0,7%
incl.: 1700-1820	0,1%	0,1%	0,4%	0,0%	0,0%
1820-1913	0,9%	1,0%	1,5%	0,4%	0,2%
1913-2012	1,6%	1,9%	1,5%	1,1%	2,0%
1913-1950	0,9%	0,9%	1,4%	0,9%	0,2%
1950-1970	2,8%	3,8%	1,9%	2,1%	3,5%
1970-1990	1,3%	1,9%	1,6%	0,3%	2,1%
1990-2012	2,1%	1,9%	1,5%	1,4%	3,8%
1950-1980	2,5%	3,4%	2,0%	1,8%	3,2%
1980-2012	1,7%	1,8%	1,3%	0,8%	3,1%

Between 1910 and 2012, the growth rate of per capita output was 1,7% per year on average at the world level, including 1,9% in Europe, 1,6% in America, etc.

Figure 2.3. The growth rate of per capita output since the industrial revolution
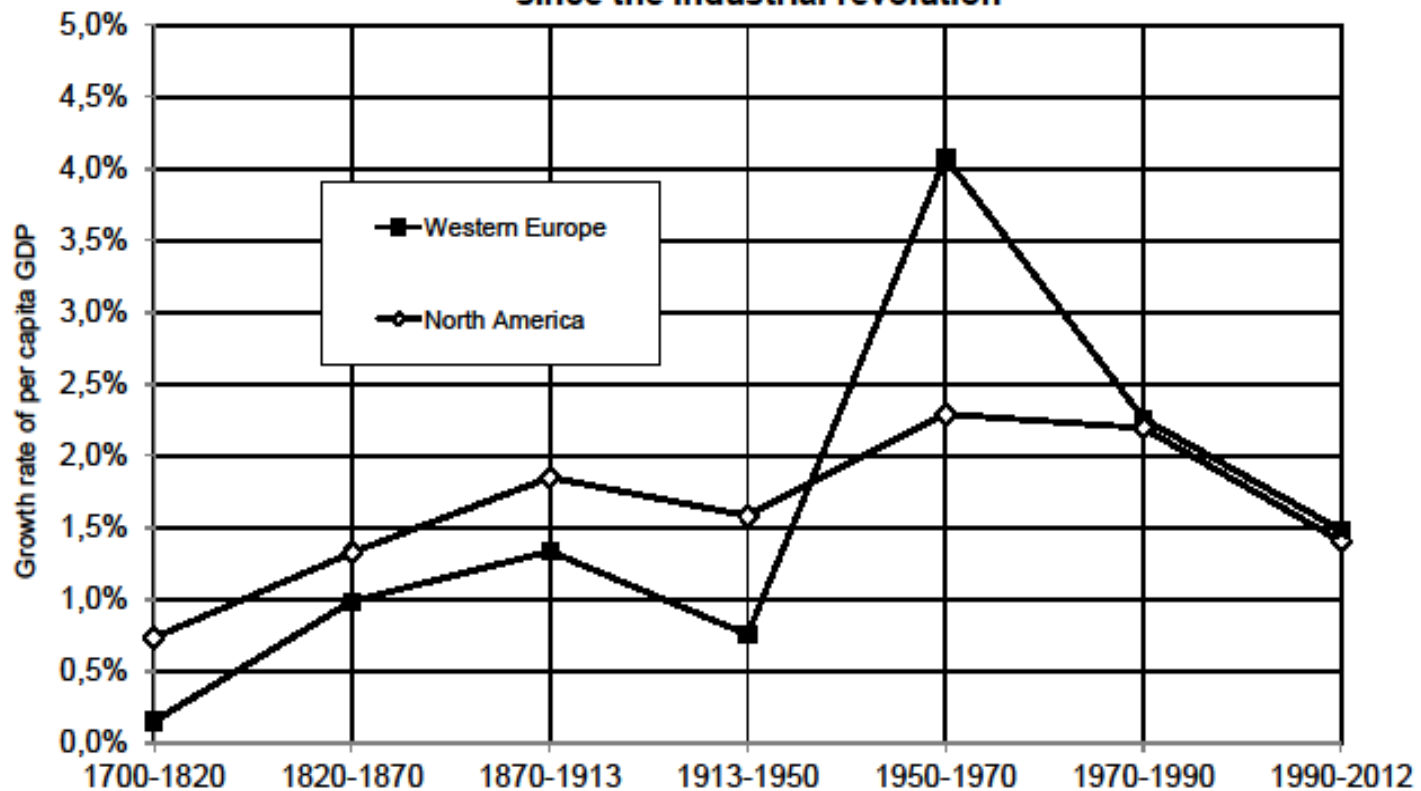
The growth rate of per capita output surpassed 4% per year in Europe between 1950 and 1970, before returning to American levels. Sources and series: see piketty.pse.ens.fr/capital21c

Figure 2.4. The growth rate of world per capita output since Antiquity until 2100
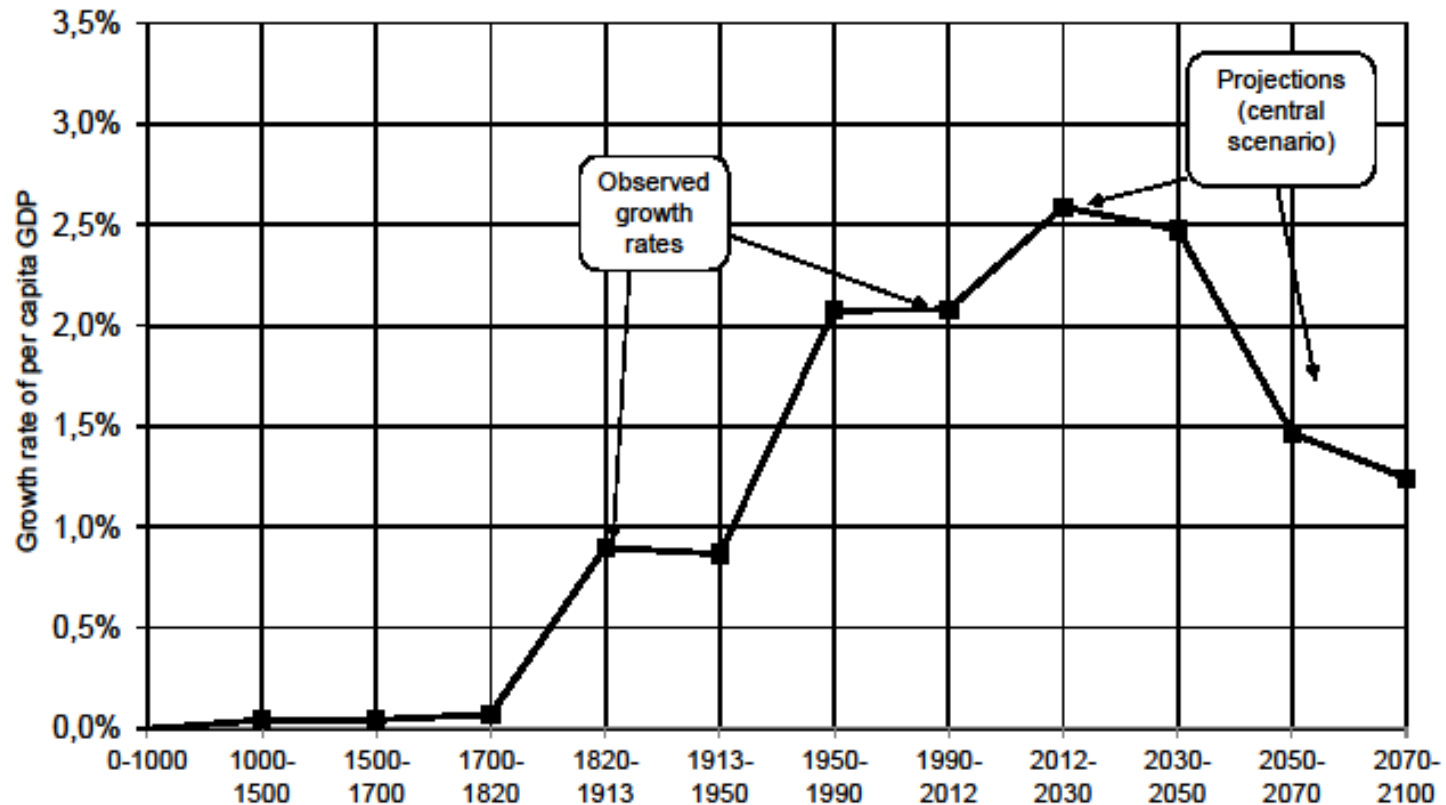
The growth rate of per capita output surpassed 2% from 1950 to 2012. If the convergence process goes on, it will surpass 2,5% from 2012 to 2050, and then will drop below 1,5%.
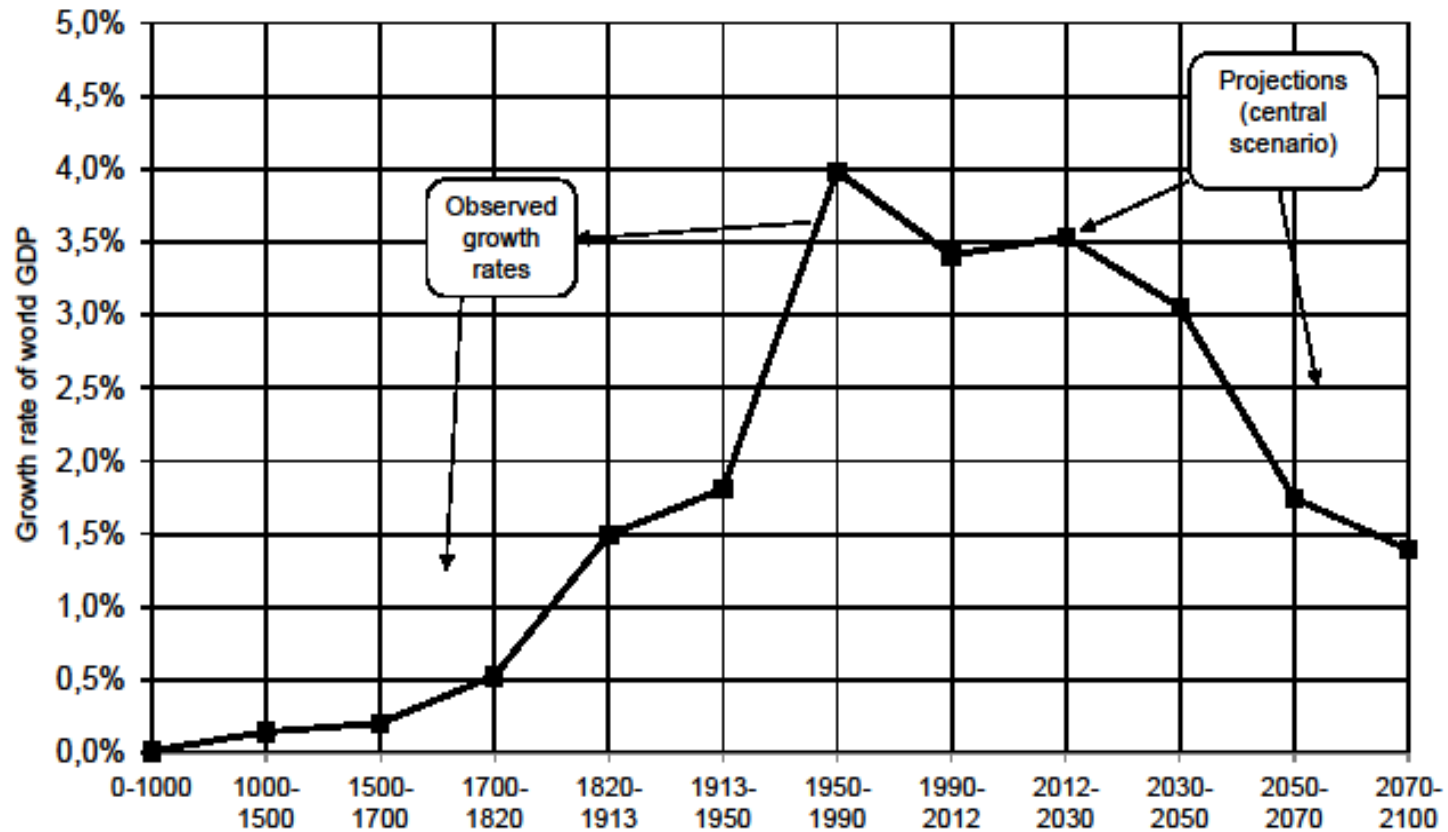
Sources and series : see piketty.pse.ens.fr/capital21c.

Figure 2.5. The growth rate of world output from Antiquity until 2100

The growth rate of world output surpassed 4% from 1950 to 1990. If the convergence process goes on it will drop below 2% by 2050. Sources and series: see piketty.pse.ens.fr/capital21c.

Table 2.4: Employment by sector in France and the United States, 1800-2012

(% of total employment)	France			United States		
	Agriculture	Manufacturing	Services	Agriculture	Manufacturing	Services
1800	64%	22%	14%	68%	18%	13%
1900	43%	29%	28%	41%	28%	31%
1950	32%	33%	35%	14%	33%	50%
2012	3%	21%	76%	2%	18%	80%

In 2012, agriculture made 3% of total employment in France, vs. 21% in manufacturing and 76% in the services. Construction - 7% of employment in France and the U.S. in 2012 - was included in manufacturing.

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

How did rich countries become rich, and how did convergence happen?

- (0) One possible view: with free markets & private property, everybody should become rich. The West first adopted these « institutions » (rule of law, well-protected property rights, freedom, democracy,…) and became rich. If the rest of the world follows this strategy, then everybody will become rich.

- A bit simplistic & western-centric:

- (1) Rise of the West over 1500-1900 period came with a lot of violence: key role of armed trade, slavery, colonization, military domination. Not really peaceful institutions and the rule of law.

- (2) Rising living standards in 20c came with the rise of government (tax revenues: 10% Y before WW1; 30-50% Y in all developed countries today). In order to understand development, one needs a broader view of institutions : public infrastructures, education, social welfare, economic and political democracy. Not just property rights.

- (3) Free markets and private property sacralization during 19c and early 20c led to extreme inequality and social tensions   >>> nationalism, wars, communism >> the elites finally accepted public regulation, welfare state, progressive taxation >>> reduction of inequality = the « Great Transformation » of the 1914-1945 period

- But complex legacy of 20c shocks: different memories of post-WW2 exceptional period:

- high-growth egalitarian ideal in western Europe (Trente glorieuses)

- mixed memory in US/UK (relative decline; Reagan-Thatcher reaction)

- negative memory for ex-communist countries (Russia/China/East.Eur.)

>> pro-market reaction, back to private property sacralization

- Third world: decolonization period, mixed experience with state

intervention; European colonial power replaced by US power system…

until today and the rise of China (pluto-communism?)

➔ interaction between domestic inequality, international power relations, national identities & development narratives plays a key role

- (4) Rise of emerging countries certainly benefited from market openess, but did not come simply from market forces; in particular, foreign investment played a relatively minor role: convergence came from domestic saving and investment, public infrastructures and education, the diffusion of knowledge and state formation; e.g. bigger govt and public spend. in China than India, & higher growth; there are different ways to organize economic & political institutions

- The standard growth model predicts output convergence, not income and convergence; if we simply rely on market forces (rather than investment in productivity, knowledge and education), we can end up with permanent wealth inequality, foreign-owned countries, political instability and redistribution cycles (Africa, South America)
- International property relations are particularly complicated to regulate peacefully
- Learning to live with inequality, collective learning about the ideal compromise & institutions: the dimensions of political conflict

A quick roadmap of the global history/ comparative development literature

- Hundreds of authors have written about comparative development (why some countries develop and not others) since 18^c : Montesquieu 1748 (climate), Smith 1776 (markets), Marx 1867 (primitive accumulation, colonial extraction), Weber 1904 (protestant ethic), etc.

- Impossible to summarize everything; here I give a very quick overview and introduction; I will return to several themes later

- **Braudel 1979 *Civilisation and capitalism*** (3 vol.): the first global, multidimensional history of capitalism 1500-1800; much broader than Weber; enormous influence on subsequent research and the rise of « world history »

- **Pomeranz 2000 *The Great Divergence: China and Europe in the Making of the Modern World Economy*** (see also AHR 2002)

  = possibly the most important book in global history since Braudel

- **K. Pomeranz 2000**: btw 1500 and 1750-1800, (the most advanced regions of) China/Japan and Europe followed more or less the same devt path: slow but positive population growth, agriculture/textile domestic proto-industrialisation

- If anything, China/Japan had more « Smithian » market institutions than Europe until 1800: more unified land and grain markets (less church property, more political unity, fewer wars), more labor mobility (less serfdom & labor control)

- The Great Divergence only begins with armed trade & military domination of the West around 1750-1850; in effect, this allowed the West to escape the proto-industrialization « ecological constraint » (massive deforestation in 18c): coal, slaves, New World

- National accounts of colonial extraction are highly uncertain (Williams 1944 vs O'Brien 1982); Pomeranz innovation is to use land accounts: btw 1500 & 1800, share of forested land goes from 30-40% to 5-10% in Europe; by 1830, British imports of cotton/timber/sugar ≈ 1.5-2 additional Britain in arable land

- **S. Beckert 2014, *Empire of Cotton – A Global History***:
until 1500-1600, cotton and textiles had always been produced locally; things started to change with the Great Discoveries and the military expansion of Europe: the West appropriated land in America, sent slaves from Africa in order to produce raw cotton, and finally banned Indian textiles → by 1750-1850, Europe controlled global textile manufacturing
(= complementary to Pomeranz 2000)

- Key role of slavery: half of all slaves transported over 1492-1887 period were transported after 1780; huge acceleration 1780-1860; it is only after US Civil War that Indian cotton rises again

- « 18c-19c were the age of barbarity and catastrophe; one has to be very eurocentric to view 20c as the age of catastrophe: it is the age of independance and end of slavery; global capitalism today is still shaped by the struggles for independance, and for a fair empire of cotton »

- **Rosenthal-Wong 2011**, *Before and Beyond Divergence: The Politics of Economic Change in China and Europe*: stress on size of political communities (polities); Europe = smaller polities → more competition between small nation-states, more military innovation (and war-&-public-debt-incuded financial innovation) → rise of the West; but also self-destruction of Europe during 20c, and major coordination problems today within EU…; China = larger polity, less military innovation during 17c-19c, but probably better in the long run

- During 17c-18c, China not only had more Smithian market institutions than Europe, but also more Smithian governement: no war, low taxes, development-friendly spending, no public debt… until Western indemnities and war tributes imposed by the West during 19c (key role of public debt in colonial coertion: China, Turkey, Morroco,…)

- See also P. Hoffman, « Prices, the military revolution, and western Europe's comparative advantage in violence », *EHR* 2011; "Why Was It Europeans Who Conquered the World?", *JEH* 2012 ; R. Allen 2007, *The British Industrial Revolution in Global Perspective;* Tilly, C., *Coercion, Capital and European States, AD 990-1990*, 1990; R. Findlay, K. O'Rourke, *Power and Plenty. Trade, War, and the World Economy in the Second Millenium*, Princeton UP 2007; Diamond, J., *Guns, Germs and Steel: The Fate of Human Societies*, 1997; etc.

→ **key role of military coercion is now well established & recognized**

- **J. Goody 2006, *The Theft of History*** : analysis of Western-centric bias in some of the main writings in modern social sciences; see also **E. Saïd, *Orientalism*, 1978 → colonial coercion may be over, but Western discriminatory narratives & practices are still active**

World systems, power and ideology

- **K. Polanyi, *The Great Transformation*, 1944**: 19^c capitalist system was inherently unstable, which led to its own destruction in 1914-1945

- Sacralization of private property + generalized competition between individuals and nations = v. unequal & unstable system, both within and between countries → wars, monetary chaos, revolutions, fascism

- Key pb = myth of self-regulated markets for labor, land and money; solution is democratic socialism; over-optimistic view of pre-industrial restrictions on labor mobility?

- Compare with **H. Arendt, The Origins of Totalitarianism 1951; On Revolution 1963**: same basic premises as Polanyi (generalized market competition 1815-1914 led to self-destruction of European nation-states 1914-1945), but somewhat different conclusions: Arendt stresses the need for post-national political organizations (=what Bolsheviks and Nazis did in a totalitarian manner; what the US do in a constitutional, democratic manner; Arendt fairly pessimistic about Europe…)

World systems, power and ideology

- See I. Wallerstein, *The Modern World System*, 1974-1989
- **G. Arrighi, *The Long Twentieth Century*: *Money, Power and the Origins of our Times* , 1994**; global history = succession of world systems, or core-periphery systems: Genoa 1400-1600, Holland 1600-1750, UK 1750-1920, US 1910-?, China: ?-?
- On core-periphery growth models: see Krugman-Venables QJE 1995 : a decline in transport costs can make big parts of the world worst off
- Arrighi : power = military dominance + moral/ideological leadership; "power = the grey zone between coercion and consent"
- See also Frank, A., B. Gills, *The World System. Five hundred years or Five thousands ? ,* Routledge 1993

State formation and the rise of government

- **P. Lindert, *Growing Public- Social Spending and Economic Growth since the 18th Century*, Oxford UP 2004**
- Very interesting and detailed history of the rise of modern government and social spendings (taxes: 10% Y during 18c-19c & until WW1; 30-50% Y in all developed count. today)
- Rising living standards during 20c came with the rise of governement and the modern fiscal and social state
- Rise of fiscal and social state was not bad for growth and development because public spendings were for the most part growth-enhancing: public infrastructures, education, health, etc. → post-WW2 rise of govt was good for growth
- Up to a point, there is no equity/efficiency trade-off
- **Key role of education for comparative devt: US vs Europe, UK vs Germany-Sweden vs France, Asia today; govt policies and institutions are very important to explain cross-country differences** (culture, family structures and values, religion also played large historical roles; see Todd, lecture 6)
- Key role of education also implies that excessive inequality is not good for development (infinite education cannot accumulate in one individual…)

Long run negative impact of extreme inequality on development

- **Sokoloff- Engerman**, "Institutions, Factor Endowments, and Paths of Development in the New World", 1997 ; *JEP* 2000 : more initial inequality in South America than in North America (colonial extraction vs settlers colonies) → more instability, less development

- J.S. You, "Land reform, inequality and corruption: a comparative historical study of Korea, Taiwan and the Philippines", 2014 : less inequality in Korea/Taiwan than in the Philipinnes (particularly due to more ambitious land reform in 1950 and more egalitarian social and education services) → more growth in Korea/Taiwan in 1950-2000 than in the Philipinnes, although the starting points were not very different in terms of per capita GDP (see also China vs India)

→ extreme inequality is not good for growth & development, both because of inequality-induced political instability, and because high inequality tends to come with low mobility (high mobility and inclusive investment in social and educational services are good for growth)

- **How my book fits into this: <u>Capital in the 21st century</u>** is an attempt to put the study of the long-run evolution of income and wealth inequality (main novelty is systematic data collection) at the center of economics/economic history/political economy

- Main finding: key role of 1914-1945 political shocks in historical reduction of inequality → it is critical to draw lessons from historical experience and to design appropriate policies to avoid the return to extreme inequality and political unstability; relying on self-regulated market forces is not sufficient

- General conclusion: how each country deals with inequality & property relations is central for the construction of a legitimate government, state formation, and the development of broad-based democratic, educational and fiscal institutions; pb = each country tends to be self-centered + power of self-serving ideology

- I should make clear that my book is a very, very incomplete attempt to move in this direction, particularly regarding the study of beliefs systems and politics; a bit too data-sources-driven

- See "About Capital in the 21st Century", AER 2015
«Putting Distribution Back at the Center of Economics», JEP 2015
« Vers une économie politique et historique », Annales – Histoire, sciences sociales 2015
(english version: « Toward a Political and Historical Economics »)
and other debates and symposia here

- Please do not hesitate to ask any question about these debates! Today or in the following lectures.

- **Basic theoretical idea behind the book**: even with perfect markets, there's no reason to expect a spontaneous reduction of inequality levels

- In particular, it is worth stressing that **the standard neoclassical growth model predicts convergence in output levels, but never in income or wealth levels**; very trivial result, but important

- **Basic logic of the convergence model**: if capital can freely flow from rich to poor countries, and if labor productivity is the same everywhere, then per capita output will be the same everywhere = « convergence »

- This result requires strong assumptions: perfect competition, one-good model, no specialization effect (core/periphery models), no colonial extraction, etc.

- **But even if these strong assumptions are all satisfied, the point is that that the standard growth model predicts output cv, not income or wealth cv: one can end up with permanently high wealth inequality, within countries as well as between countries** (foreign-owned countries, political instability and redistribution cycles: Africa, South America), and even more so if the gap r-g is important

- Asian miracles were induced by domestic saving, diffusion of knowledge and education, pro-development policies and public investment, not by capital flowing from rich to poor countries

- See Course notes on standard models of growth and wealth accumulation

The property-rights/western-centric viewpoint

- **North-Weingast**, « Constitutions and commitment », EHR 1989 : British 1688 parliamentary miracle → financial & industrial devlopt

- **Acemoglu-Robinson**, *Why nations fail*, 2012; AER 2001; *AER 2005* ; *AER 2011* : « if property rights are well protected (small risk of expropriation, nationalization, etc) & small government (=« good institutions »), then development occurs »

- Very interesting, but (**in my view**):

- Somewhat narrow approach to « institutions »: too much centered on the protection of private property rights

- Somewhat too vague and ahistorical: AR refer to « inclusive vs extractive institutions », but they are not very precise; v. little on specific institutions/policies such as education systems, welfare state, fiscal systems, etc. ; almost nothing on 20c state formation

- Somewhat too Western-centered (or US-centered): « if western settlers impose the right institutions, then devlopment occurs »
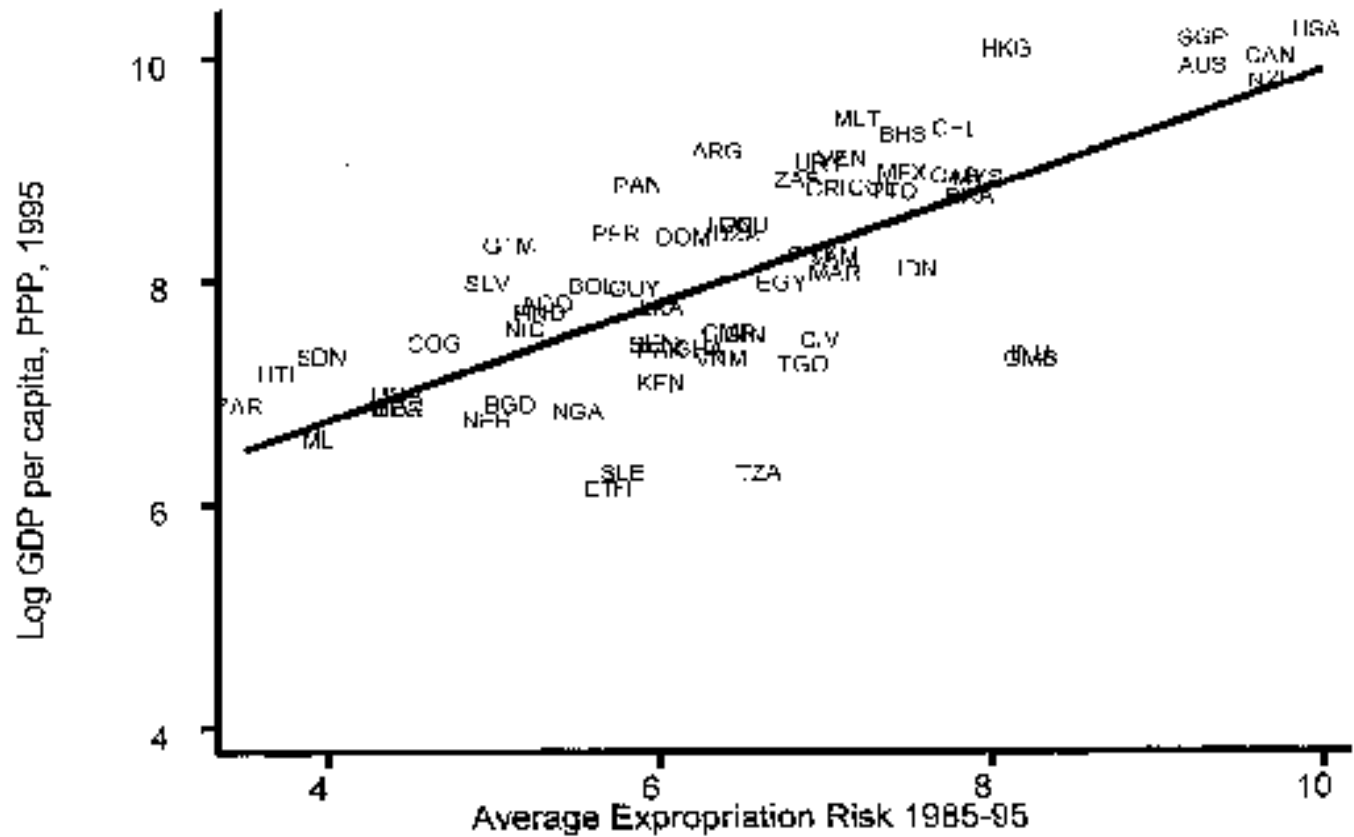
- Read them & make your own mind !

OLS

FIGURE 2. OLS RELATIONSHIP BETWEEN EXPROPRIATION RISK AND INCOME

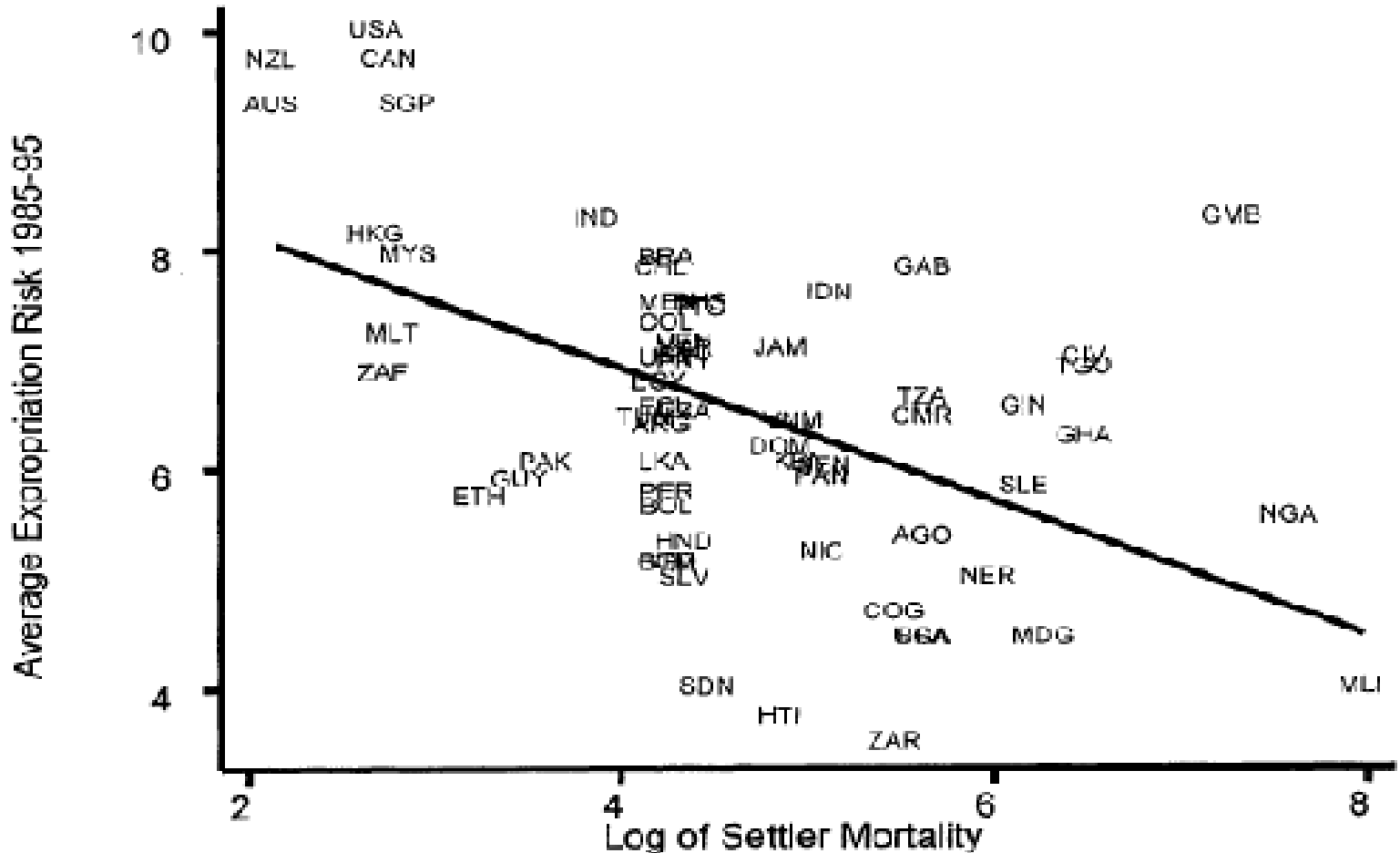From: AJR, "The Colonial Origins of Comparative Development"

FIGURE 3. FIRST-STAGE RELATIONSHIP BETWEEN SETTLER MORTALITY AND EXPROPRIATION RISK

From: AJR, "The Colonial Origins of Comparative Development"

Other version of the property-rights/western-centric/colonial viewpoint: **Niall Ferguson**, *Virtual Histories*, 1997; *Empire – How Britain Made the Modern World*, 2003; *Civilisation – The West and the Rest*, 2011

- ="Huge positive impact of colonialism, in particular of British colonialism, on world development"

(≠ Acemoglu-Robinson, who stress positive colonial impact only for settlement colonies, i.e. only if locals disappear...)

- Ferguson's virtual history: "If Britain had sided with Germany in 1914, then we would have had a sustainable British world empire together with a German-European empire (instead of a US and Russian empires), and the world would have been much better"

- See also S. Huntington, The Clash of Civilisations, 1996 (Equivalent for Trump 2016 as Friedman 1963 for Reagan 1980?)

- Pretty reactionary (=post-post-colonial reaction) (**in my view**)

- But please make your own mind! Books and ideas matter