Introduction to Economic History : Capital, Inequality, Growth

(Master APE & PPD)

(EHESS & Paris School of Economics)

Thomas Piketty

Academic year 2026-2027

Lecture 3: The Great Divergence: State Formation, Property Rights, Slavery, Colonialism & Unequal Trade

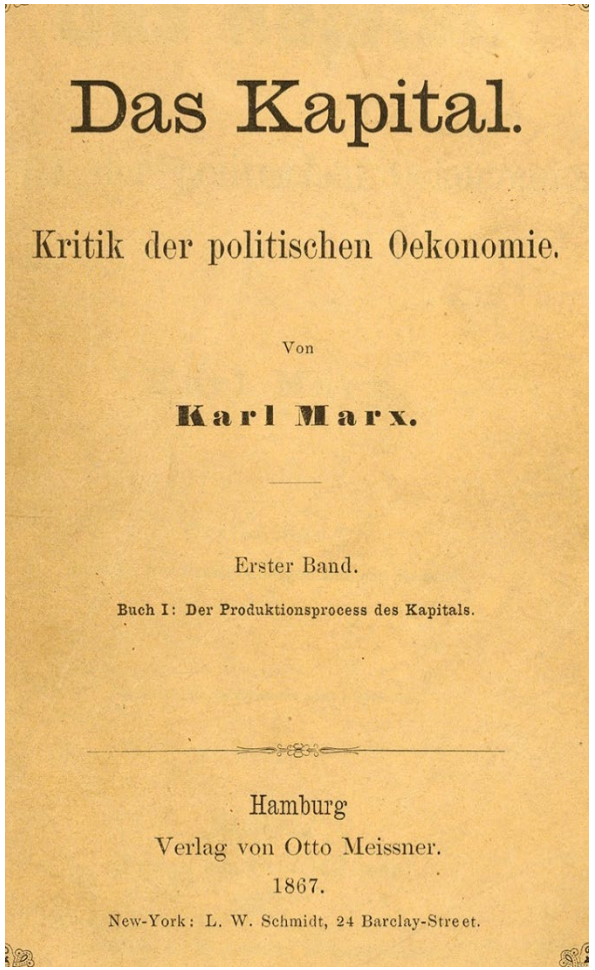
Roadmap of the lecture

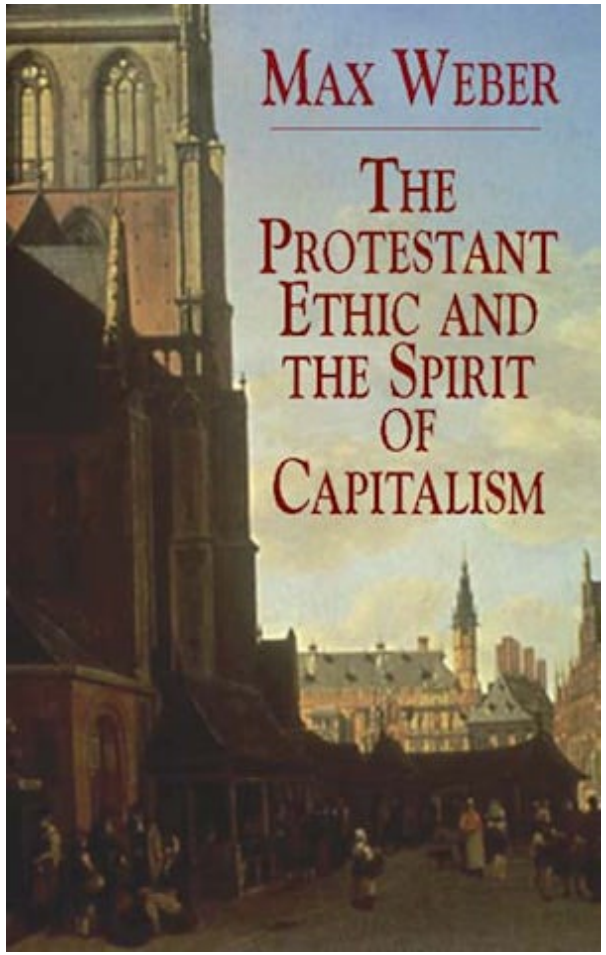
- The New History of Capitalism: A Global & Ecological Perspective on the Great Divergence
- The Rise & Fall of Atlantic Slavery Systems: Abolition & Compensation (UK, France, US, Brasil)
- Inequality & Power Relations in Post-Slavery Colonialism
- The Question of Post-Slavery & Post-Colonial Reparations
- Unequal Exchange & Development: Evidence from Global Trade Flows & the World Balance of Payments 1800-2025

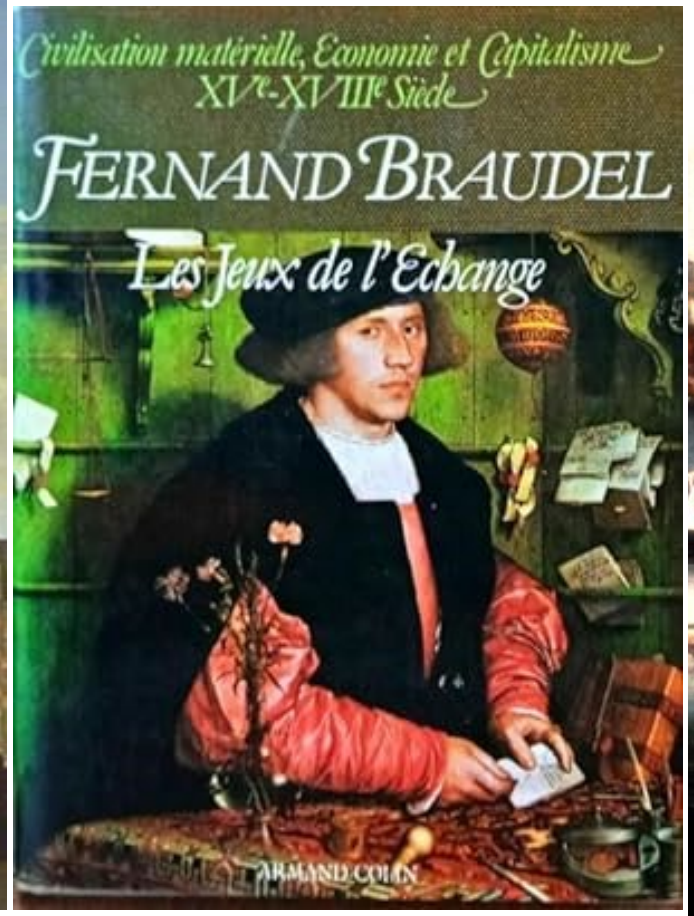
Short Bibliography

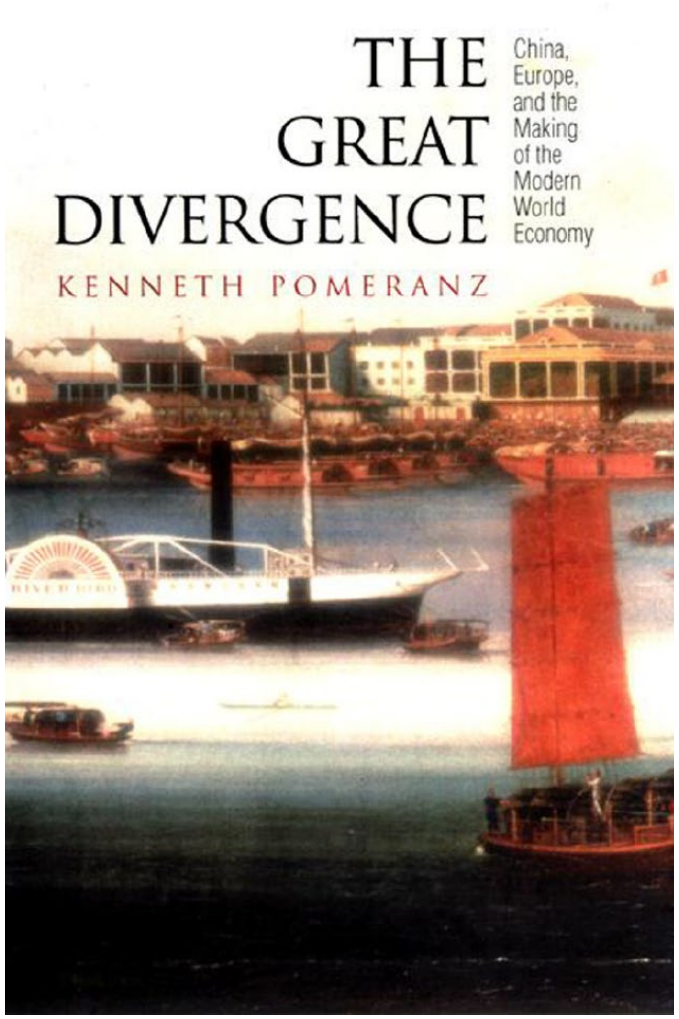
- ***K. Pomeranz, The Great Divergence - China, Europe and the Making of the Modern World Economy**, 2000
- S. Beckert, Empire of Cotton: A Global History, 2014
- K. Karaman, S. Pamuk, Ottoman State Finances in European Perspective, Journal of Economic History 2010
- M. Dincecco, The Rise of Effective States in Europe, JEH 2015
- P. Robinson, C. Bazelon, A. Vargas, R. Janakiraman, M. Olson, Report on Reparations for Transatlantic Chattel Slavery in the Americas and the Caribbean, UWI (CRR) & ASIL, 2023.
- ***G. Nievas, T. Piketty, "Unequal Exchange and North-South Relations: Evidence from Global Trade Flows and the World Balance of Payments 1800-2025", WIL WP 2025** (WBOP.world)

History of Capitalism: From Europe-Centered to Global



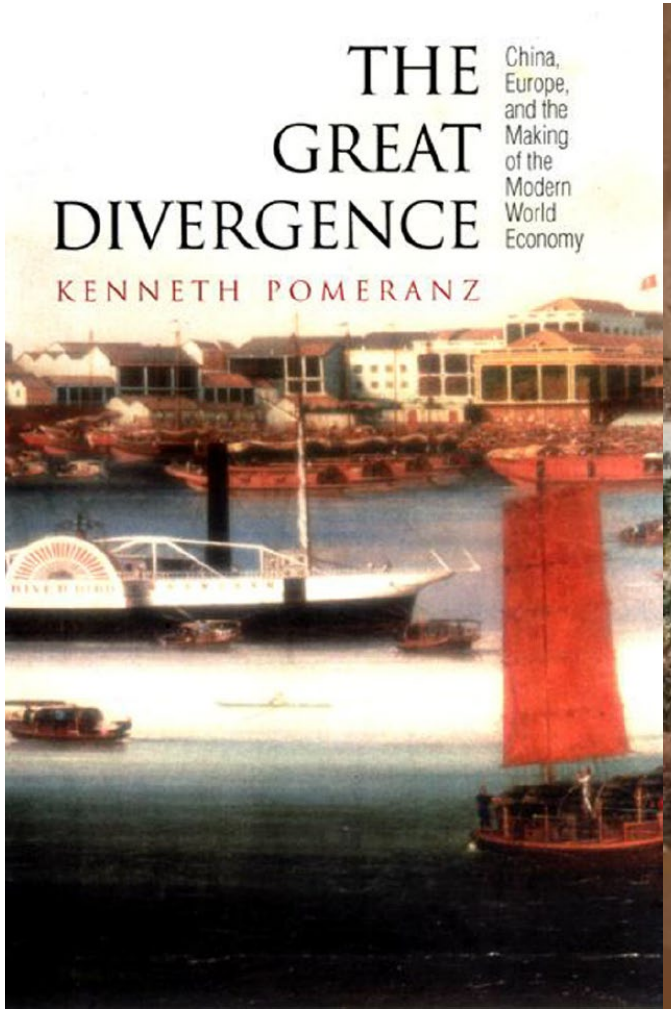


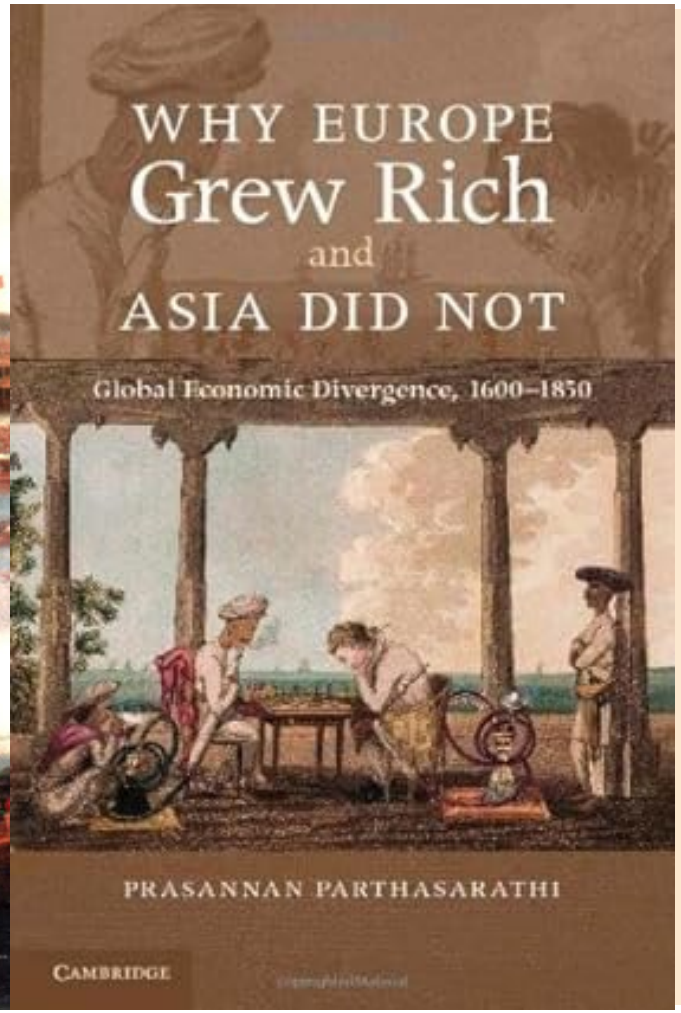


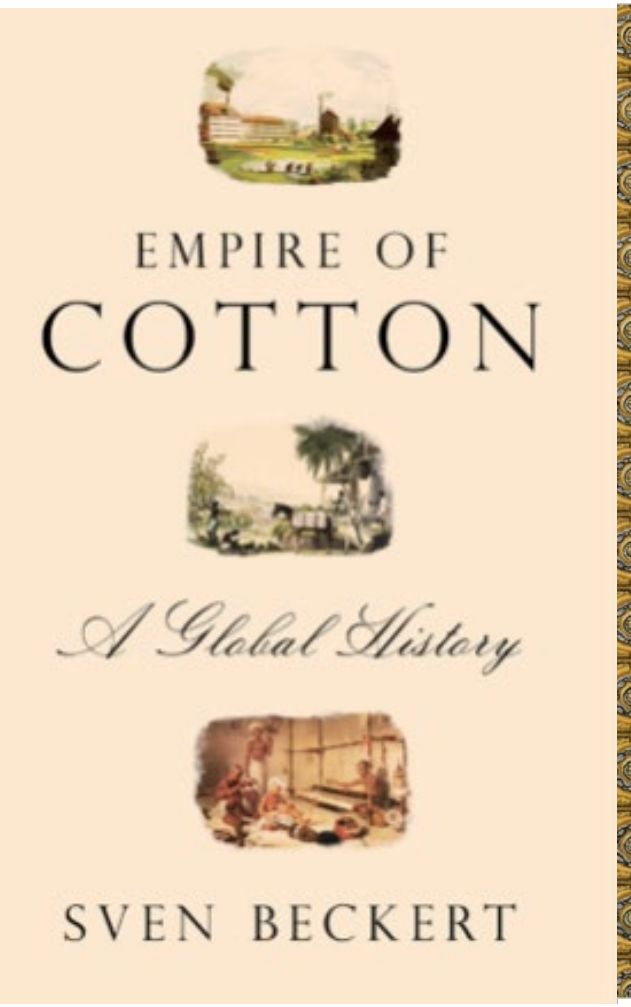


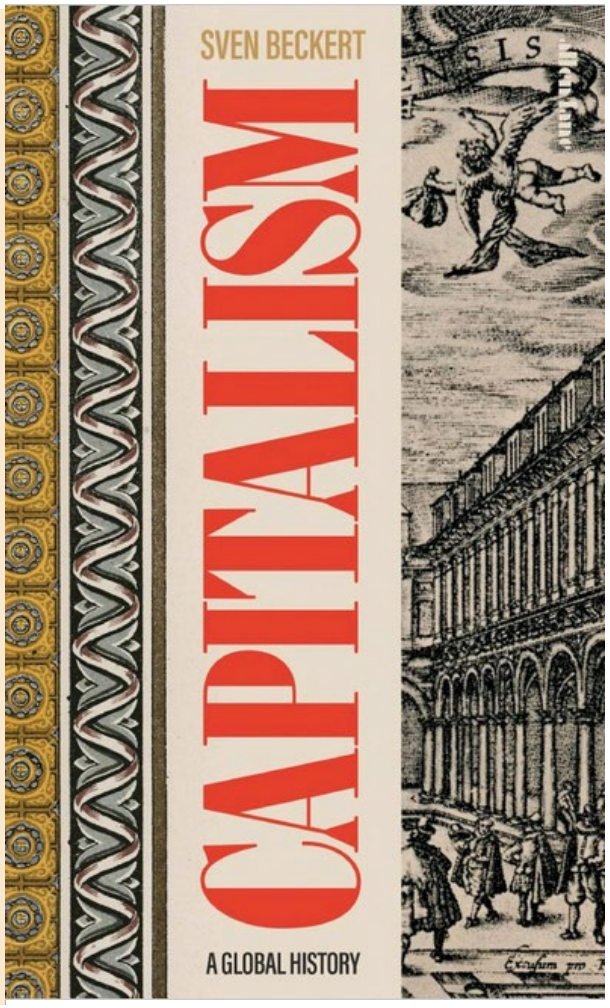
K. Marx, 1867 M. Weber, 1904 F. Braudel, 1979 K. Pomeranz, 2000

Pomeranz 2000 & Beyond: A New Global History of Capitalism







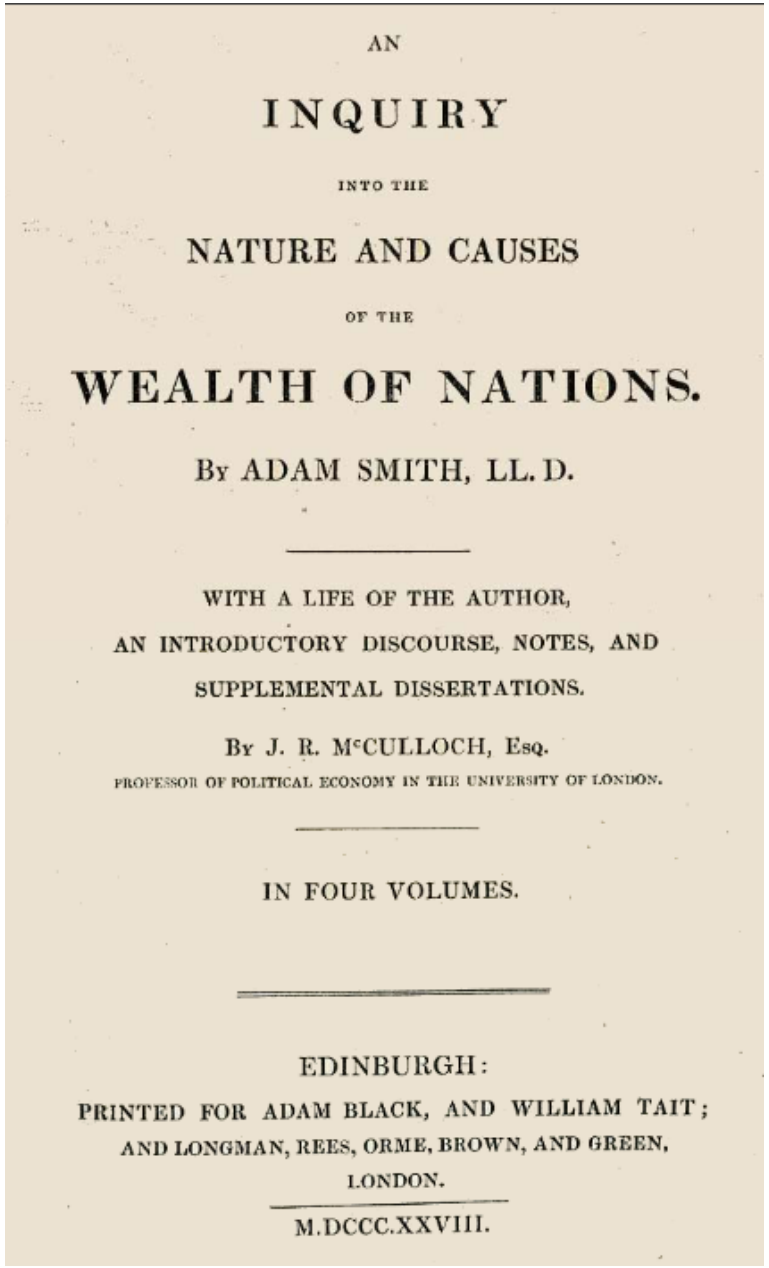


K. Pomeranz, 2000 P. Parthasarathi, 2011 S. Beckert, 2015 S. Beckert, 2025

The Rise of Europe: State Capacity, the Development of Fiscal-Military States, Colonialism & the Ecological Constraint

- **Slavery and colonial domination played a central role in the rise of Europe and the industrial revolution**. In 1860, 75% of cotton used in European textile factories came from US South slavery plantations.
- This does not imply that slavery-colonialism was a necessary condition for industrialization & development, which in principle could also have happened with a more equitable labour regime and a less hierarchical international order (and therefore a different distribution of wealth and well-being beween countries and social classes). But this is the way it happened, largely because of European military domination (& ideology justifying using it).
- See K. Pomeranz, *The Great Divergence - China, Europe and the Making of the Modern World Economy*, PUP 2000
- Until 1750-1800, very comparable development level between the most advanced regions of Europe, China, Japan or India (proto-industrialization)

- Pomeranz rightly stresses the key role of the « **ecological constraint** »
- Very fast deforestation in Europe 1500-1800 (& China-Japan-India)
- The « discovery » of America & the development of Atlantic slavery allowed for large scale imports of raw materials (cotton, wood, sugar, etc.)
- In 1830s, total English imports = equivalent to 10 millions hectares of land, i.e. 1.5-2 additional Britain in land **= the « ghost hectares » of Industrial Revolution**
- **Modern economic developement is the product of globalization and could hardly have happened without it (i.e. without the world division of labour).** The interesting question is to explore the alternative ways globalization could have been organized in past centuries (& could be organized in the future).
- Armed trade and military domination also played key role in **financial innovation**: enormous public debt, violent colonial companies (EIC, VOC, etc.)
- **Not at all the Smithian laissez-faire recipe**: low taxes, no debt, peaceful trade...



AN

INQUIRY

INTO THE

NATURE AND CAUSES

OF THE

WEALTH OF NATIONS.

By ADAM SMITH, LL. D.

WITH A LIFE OF THE AUTHOR,
AN INTRODUCTORY DISCOURSE, NOTES, AND
SUPPLEMENTAL DISSERTATIONS.

By J. R. M'CULLOCH, Esq.
PROFESSOR OF POLITICAL ECONOMY IN THE UNIVERSITY OF LONDON.

IN FOUR VOLUMES.

EDINBURGH:
PRINTED FOR ADAM BLACK, AND WILLIAM TAIT;
AND LONGMAN, REES, ORME, BROWN, AND GREEN,
LONDON.
M.DCCC.XXVIII.

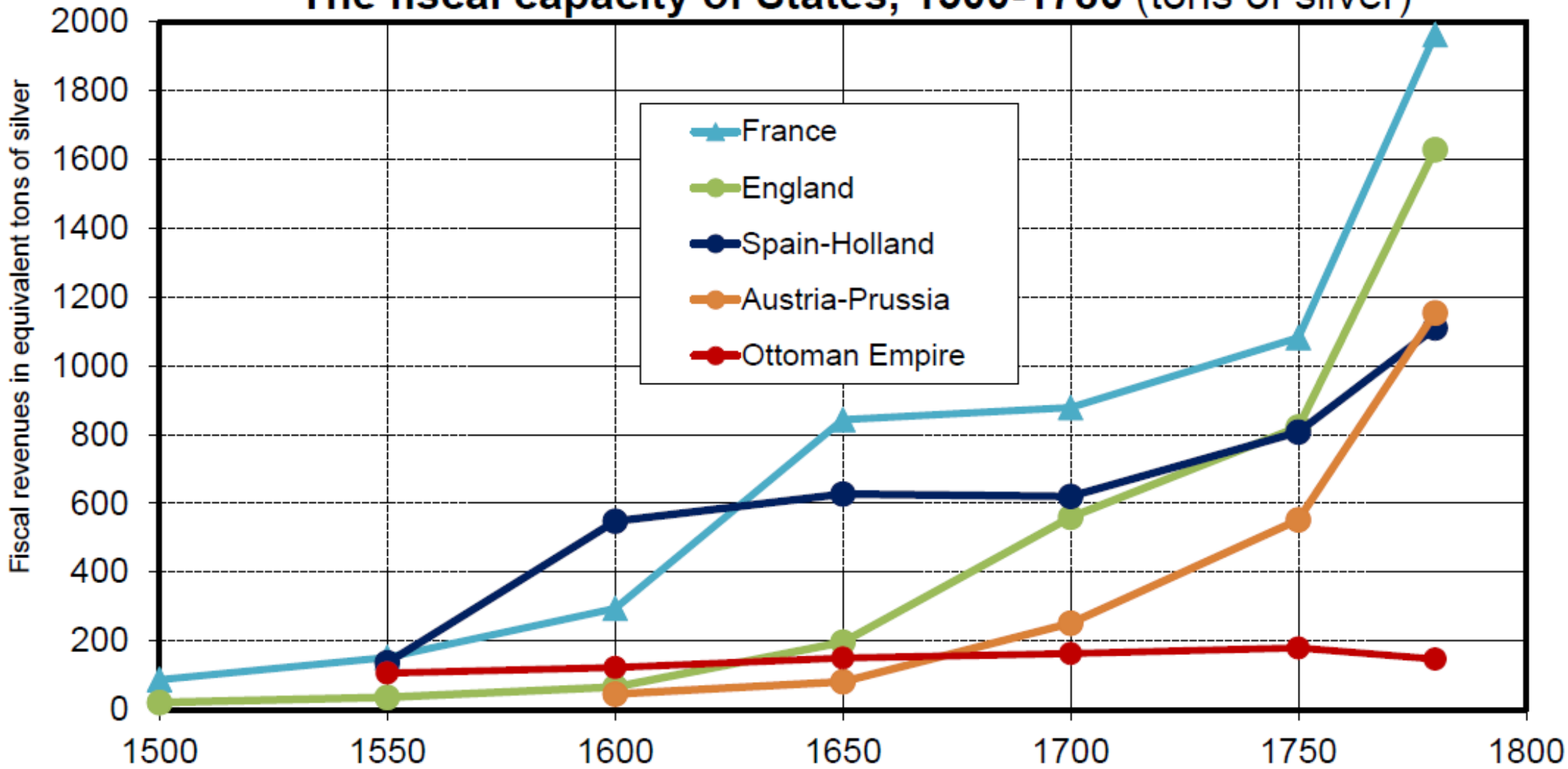
- **A. Smith 1776**: fully aware of the colonial-extractivist nature of the capitalist system of his time, but hopeful that virtuous institutions (the invisible hand) could become self-sustaining in the future
- **North-Weingast 1989**, "Constitutions & Commitment: The Evolution of Institutions Governing Public Choice in 17th Century England" JEH: **standard economist statement on the "1688 miracle" & virtous British institutions** (i.e. well-protected property rights)
- **Acemoglu-Robinson 2012**, Why Nations Fail. The Origins of Power, Prosperity & Poverty
  Broader view of "inclusive institutions" than North-Weingast, but insufficient focus on the key role of extractivist colonial-censitary institutions 16c-19c (& on social state/progressive taxes 20c)

- See **S. Beckert**, ***Empire of Cotton. A Global History***, Penguin 2014
- 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 cottons and finally banned Indian textiles → **by 1800-1850, Europe was able to gradually take control of global textile manufacturing**
- Key role of slavery: half of the slaves transported over the 1492-1888 period were transported after 1780, and especially in 1780-1820; huge acceleration of the slavery system in 1780-1860
- See P. Parthasarathi, *Why Europe Grew Rich and Asia Did Not: Global Economic Divergence 1600-1850*, CUP 2011.
- Key role of British bans on Indian textiles. **Chine-India: 55% of world manufacturing output in 1800, down to 5% by 1900**.

- See also Rosenthal-Wong, *Before and Beyond Divergence: The Politics and Economic Change in China & Europe*, HUP 2011
- They stress the role played by the **size of political communities (polities)**
- **Europe: smaller polities** → more competition between small nations-states, more military innovation → colonial domination, rise of the West.
  But also self-destruction of Europe in 20c, and major coordination pb today within the EU
- **China: larger polity** → less military innovation in 17c-19c, too Smithian (low taxes, no debt, peaceful trade) → defeat in Opium wars 1839-1842 and 1856-1860 against Britain & France → war tributes, unequal treaties.
  But maybe better in the long-run

- **The rise of strong military and fiscal capacity in Europe: consequence of interstate competition.** Until 15c-16c all states in the world were weak (<1%-2% GDP in tax revenues). But in 17c-18c state capacity grew to 6%-8% GDP in Europe, thereby creating a gap with Ottoman or Chinese states (1%-2%)
- Main explanation: long term process of state-building and ideological change (from trifonctional local elites to proprietarian centralized state). **Acceleration of the process due to interstate competition and permanent war in Europe** (90%-95% of the time during 16c-17c, 78% during 18c)
- See K. Karaman, S. Pamuk, Ottoman State Finances in European Perspective, Journal of Economic History 2010
- See also M. Dincecco, The Rise of Effective States in Europe, JEH 2015

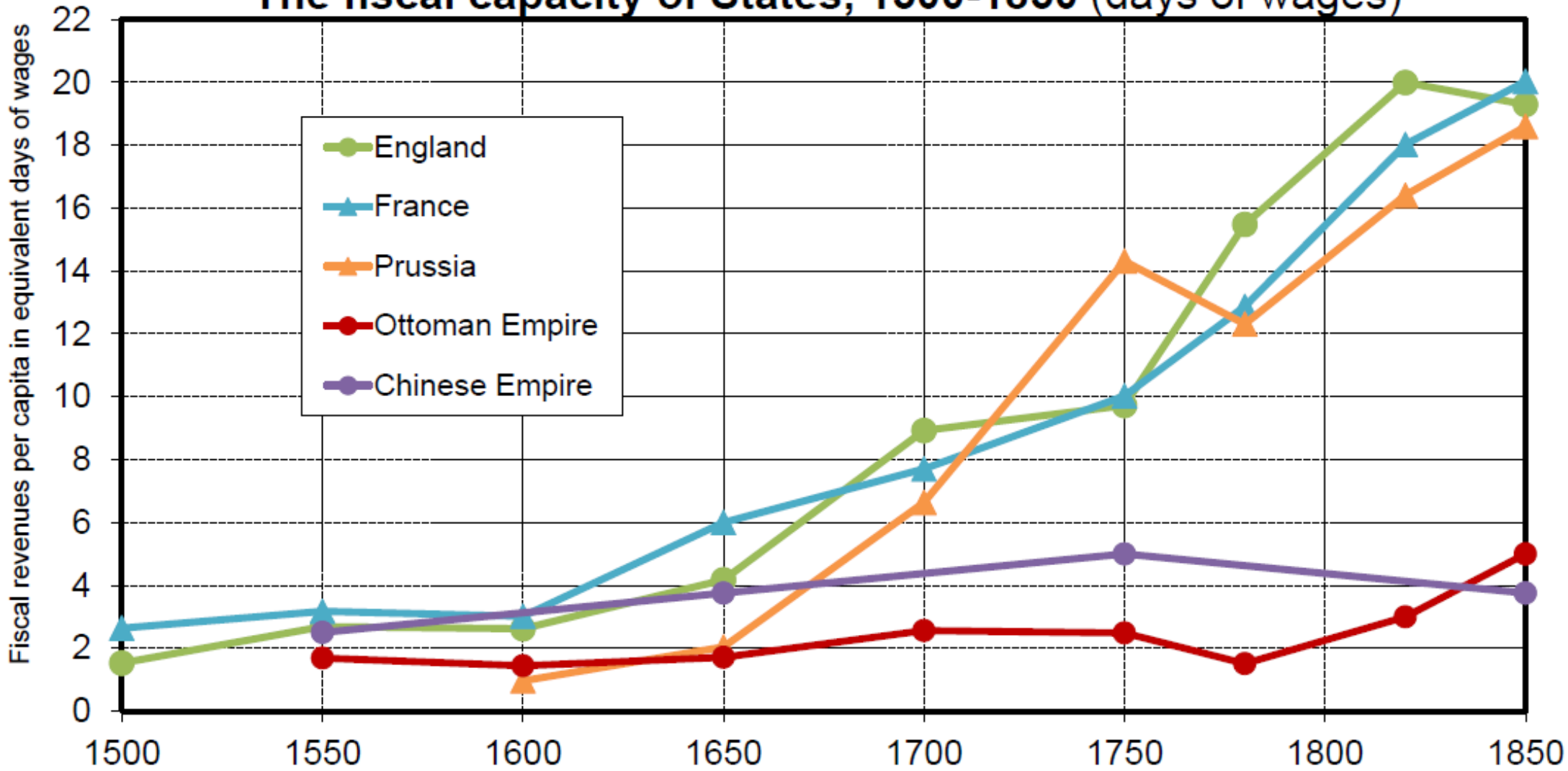
The fiscal capacity of States, 1500-1780 (tons of silver)



Interpretation. Around 1500-1550, the fiscal revenues of the main European States and of the Ottoman Empire were at a level equivalent to about 100-200 silver tons per year. In the 1780s, the fiscal revenus of France and England were between 1600 and 2000 tons of sliver per year, while those of the Ottoman Empire were less than 200 tons.

Sources and series: see piketty.pse.ens.fr/ideology (figure 9.1).

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 incime 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).

Of course there are many other possible explanations for the rise of Europe:

- **See Lecture 2 on role of Christian property-owning organizations & property law**

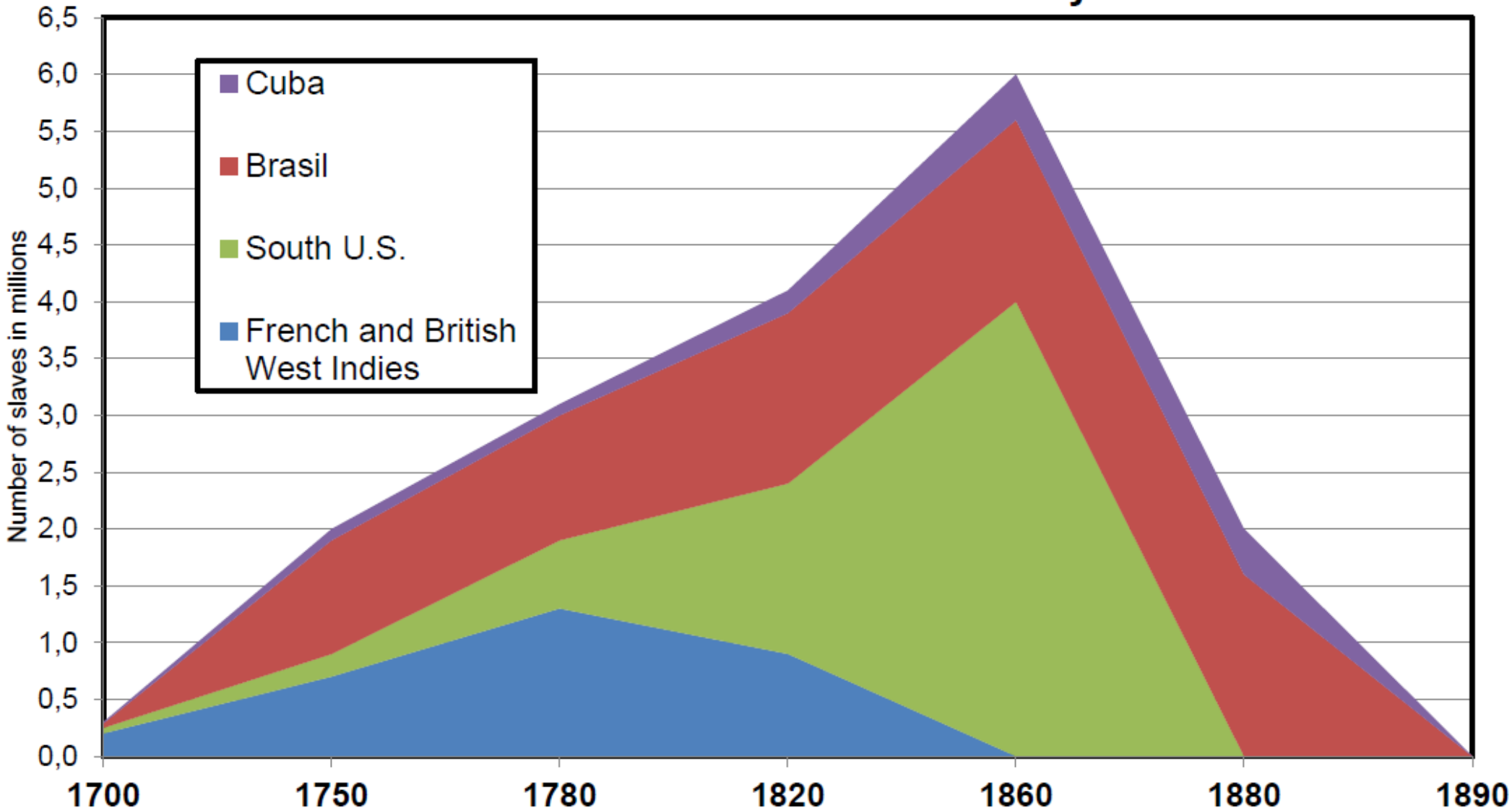
Other mechanisms:

- According to J. Mokyr, « The Intellectual Origins of Modern Economic Growth », JEH 2005; A Culture of Growth. The Origins of the Modern Economy, PUP, 2015, **Europe's political fragmentation made easier for scientists & inventors to escape from conservative rulers** & to gradually create a European Republic of Letters & Sciences over the 1500-1800 period, when then paved the way for « practical knowledge »
- According to R. Brenner, « Agrarian Class Structure and Economic Development in Pre-Industrial Europe », Past and Present, 1976 ; E. Meiksins Wood, The Origin of Capitalism. A Longer View, Verso, 2002, **radically new capitalist property relations developed in Europe over the 1500-1800 period (especially in England following the Expropriation of Monastries in 1535), leading to the rise an agrarian capitalist class (enclosures, intensification of production, expulsion of vagrants, etc.)**
- OK but these works are Europe-centered and use little comparative evidence from China, India, etc. **At this stage, the Pomeranz thesis seems to be better established: little divergence until 1750 & the rise of Europe's military domination**

The Rise & Fall of Atlantic Slavery Systems

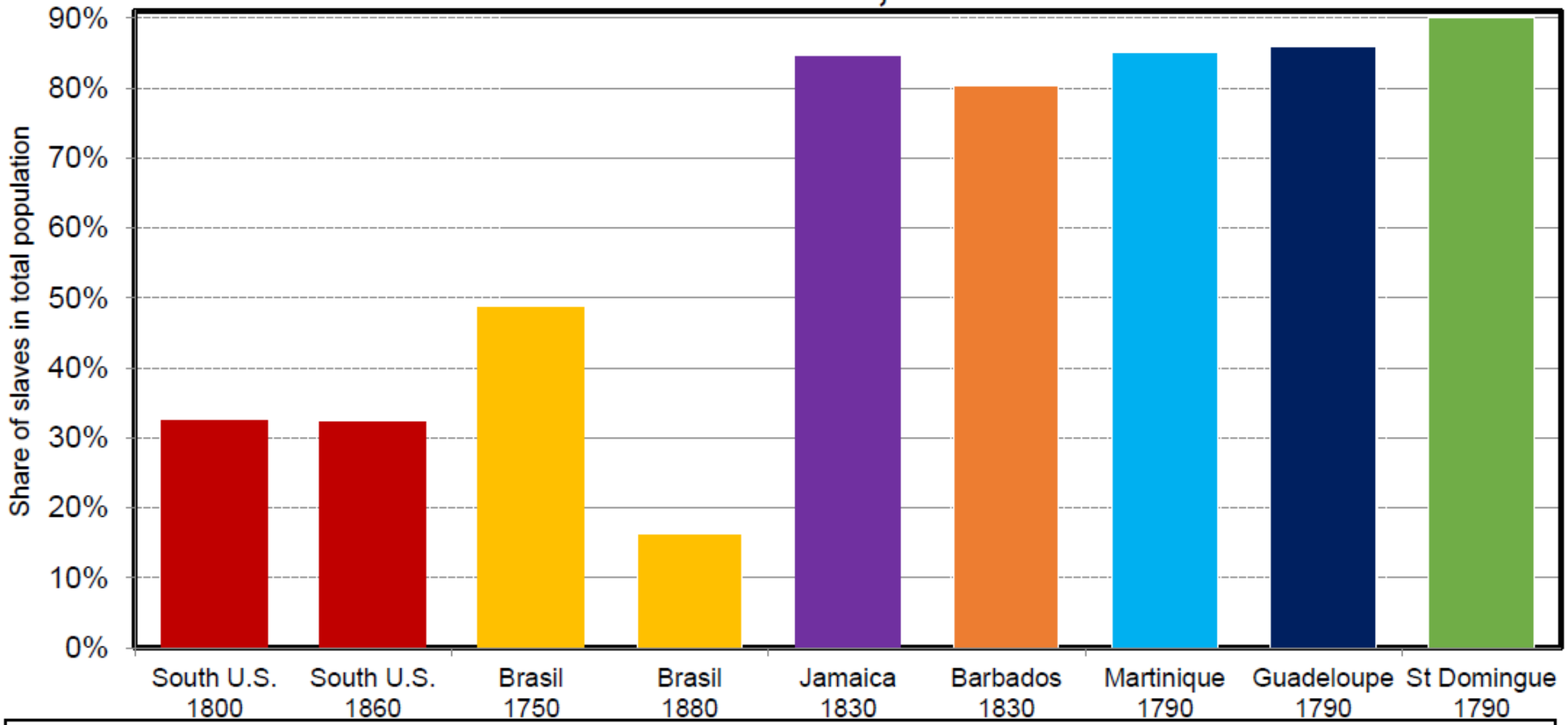
- **The largest rise of Atlantic slavery occurred in 1750-1860 (with absolute peak in 1860), first with slave trade (until 1810-1820) and then with self-reproduction of slaves (until 1860 in the US & 1880-1890 in Brasil-Cuba)**
- Right at the same time as the onset of Industrial Revolution. Not a coincidence: most of the cotton used in European textile manufacturing (=key sector of Industrial revolution) until 1860 came from slave plantations. Other forms of labour exploitation after 1860 (India, Egypt, etc.).
- Cheap cotton & other raw materials was not necessarily a prerequisite for industrial revolution, but it did help, and in any case different terms of exchange would have led to very different development patterns and distributions of wealth & well-being.

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 folowing 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).

Atlantic slave societies, 18th-19th societies



Interpretation. Slaves made about one third of the popultion in south U.S. between 1800 and 1860. This proportion dropped from about 50% to less than 20% in Brasil from 1750 to 1850. It was higher than 80% in the slave islands of the British and French West Indies in 1780-1830, and exceeded 90% in Saint-Domingue (Haïti) in 1790. **Sources and series**: see piketty.pse.ens.fr/ideology (figure 6.1).

Societies with slaves vs slave societies

- **Slavery = most extreme form of inequality; forced labour: widespread in all premodern societies; there's a continuum between different forms of forced labour**
- The notion of « slave society » (M. Finley, *Ancient Slavery & Modern Ideology*, 1979)
- « **Societies with slaves** » (i.e. societies where slavery exists but plays minor role: typically, slaves = a few % of total pop)

≠ « **Slave societies** » : societies where slaves play a major role in the overall structure of population, production & property: say, societies where slaves make between 25% and 50% of total population

- According to Finley, slave societies are relatively rare in history: the main exemples are **ancient Greece** and **Rome** (slaves = 30-50% of total pop), **southern United States** (slaves = 40% of total pop until 1865), **Brasil** (slaves = 30-35% of total pop until 1888)
  (+ **British and French slave islands** : slaves = up to 90% of pop until abolition/compensation 1833-1848) (Haïti revolt 1791 → public debt 1825-1950
- Recent research: other slave societies = Kongo 15-16^{c}, Sokoto 18-19^{c}, Sumatra 17^{c} (30-50%) (also, in most societies, slaves are part of a graduated serfs-elites inequality regimes)

Britain: the abolition-compensation of 1833-1843

- Slave trade ended in 1807 by Britain; slavery abolished in 1833-1843 in British colonies
- Abolition law voted in 1833 but applied gradually: sophisticated system of compensation to slave owners
- Key role played by bloody slave revolts in Jamaica 1831, following Guyana 1815, Guadeloupe 1802, Haiti 1791
- Total emancipated in 1833-1843: about 800,000 slaves (incl. about 700,000 in West Indies)

- Main concentrations of slaves within British Empire 1780-1840:

- British Caribbean (« West Indies »): Jamaica, Trinidad & Tobago, Barbados, Bahamas, etc.

  [≠ French Antilles: Martinique, Guadeloupe, etc.]

  [≠ two largest Caribbean islands: Cuba (Spain, slave trade until 1867, slavery until 1886) & Hispaniola (Haiti/Dominican Rep.)]

- Indian Ocean: Mauritius (« Ile de France » until 1810, then became British) [≠ Reunion, « Ile Bourbon », remained French]

- Cape colony (South Africa)

- **1833 law** introduced financial compensation for slave owners (not for slaves!) **= an extreme illustration of the 19^{c} regime of private property sacralization**
- 20 million £ were paid to 3000 slave owners: about 5% of British GDP of the time, financed by increased public debt, i.e. by British tax revenues (mostly indirect taxation). Equivalent to 10 years of education budget of the time!
- Equivalent to about 100 billions euros today (5% GDP), i.e. average payment of about 30 million euros to each of the 3000 slave owners.
- Complete list of recipients and historical analysis on "The Legacies of British Slave-ownership" website (UCL history dept project) (released in 2013, big public scandal, several well-known British families were on the list, including a cousin of Conservative PM Cameron)
- See N. Draper, *The Price of Emancipation: Slave-Ownership, Compensation and British Society at the End of Slavery*, CUP 2010; C. Hall et al, *Legacies of British Slave-Ownership: Colonial Slavery and the Formation of Victorian Britain*, 2014

- **Basic justification of compensation to slave-owners during 1831-33 debates**: if slave-owners loose entirely their property, with no compensation, then what about those who sold their slaves a few weeks or years before and now possess financial assets or real estate?
- I.e. if we expropriate slave owners without a proper compensation, then we are going to open the Pandora's box of property rights in general, and we will never know where to stop; therefore we should have full compensation
- **Same basic « Pandora's box » argument as during the French Revolution about « corvées » and during the Irish debate about land redistribution**: do not question property rights acquired in the past, otherwise you'll end up with a complete destruction of proprietarian prosperity and social order

- **Same arguments in France during the 1843-1848 debates about abolition: for « liberal » thinkers like Tocqueville or Schoelcher, it was unthinkable to expropriate slave owners without a fair compensation** (given that slaves were acquired in a legal way in the past)
- 1848 abolition: compensation at half of market price + former slaves were forced to produce a long term labor contracts as plantation workers or domestic servants (otherwise arrested for vagrancy)

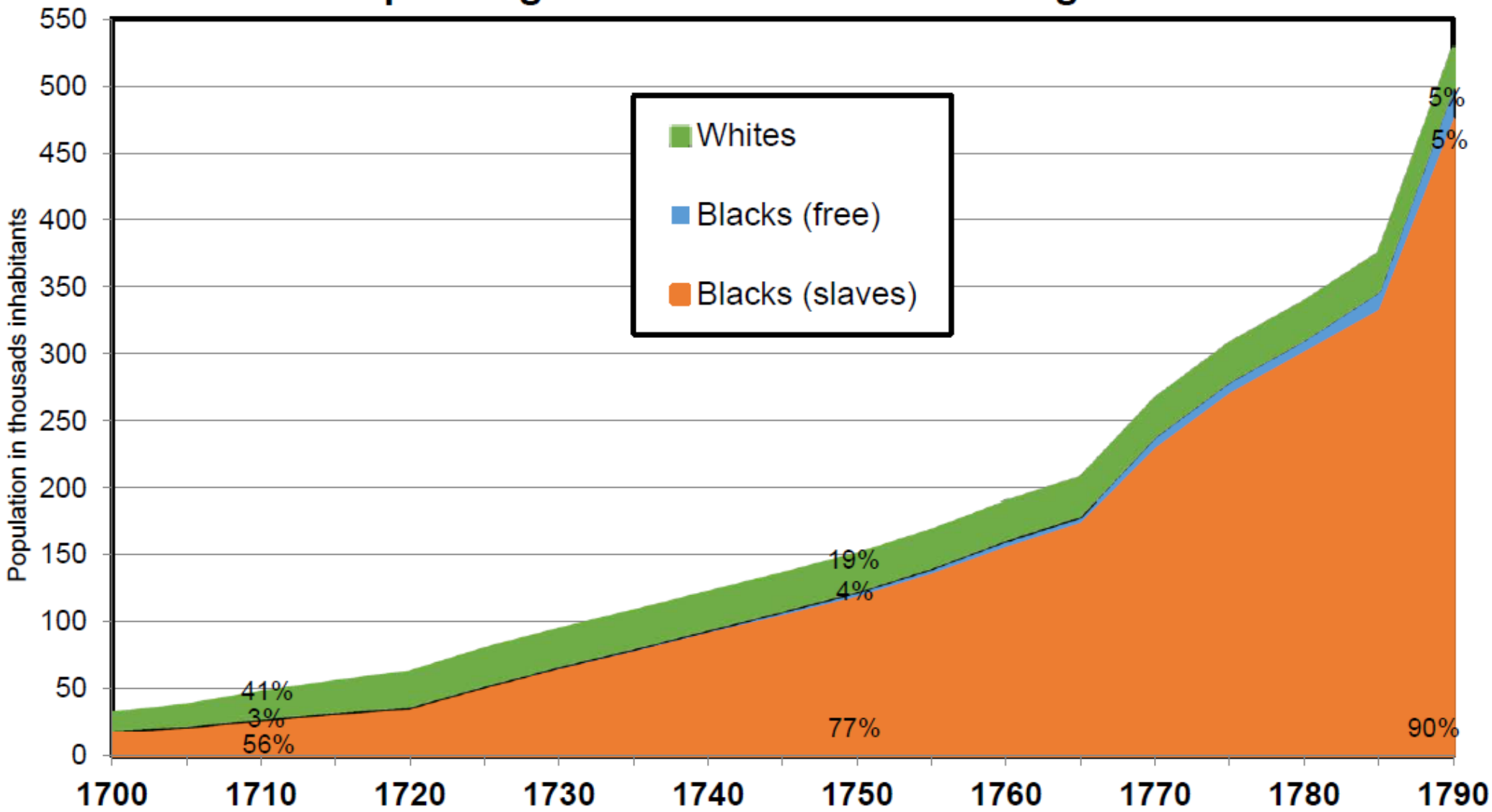
(≠ Condorcet 1781, who was proposing land transfer or pension payment to former slaves, paid by progressive taxes on all wealth owners) (Paine 1775)

- On post-abolition labor regimes, see Stanziani "Beyond colonialism: servants, wage earners and indentured migrants in rural France and on Reunion Island (c. 1750–1900)", *Labor History 2013;* Allen, « Slaves, Abolitionism & the Global Origins of the Post-Emancipation Indentured Labor System », *Slavery & Abolition 2014.* In effect, indentured labor = quasi-forced labour.

France: the two-step abolition of 1794-1848 & the case of Haïti

- French Revolution abolished slavery in 1794, after a major slave revolt in Saint Domingue (Haïti) (=the largest world concentration of slaves at the time)
- But slavery was re-established in 1802; finally abolished in 1848
- In Haïti, slaves took seriously the French revolution: Haïti revolt 1791, independance 1804 → in 1825, France finally « accepts » Haïti independance, but imposes a large public debt on Haïti as the price for their freedom (150 millions Francs or about 2% French GDP of the time)
- **Haïti had to repay this huge public debt (about 300% of Haïti's GDP 1825) until the 1950s in order to compensate former French slave owners for lost profits due to emancipation**
- The compensation was paid to Caisse des Dépôts (French govt bank) and then distributed to slave owners. See Repairs Database on 1825 & 1848 transfers collected by Bessone, Cottias et al (2018). Closely related to British Database.

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).

- Modern debates about compensation to Haiti: in 2004, French president did not attend bicentennial ceremonies for Haiti's independance in order to avoid financial claims. In 1904, French authorities also did not attend because they felt Haiti was not paying fast enough!
- In 2001 French law recognizing slavery as crime against mankind, Taubira tried to introduce an article 5 on reparations and land reform in former French slave islands (so that descendants of slaves stop paying rent to descendants of slave-owners). But it was not adopted. New failed attempt by Taubira to raise the issue in 2015.
- US 1988 law: 20 000$ compensation to Japanese-Americans detained during World War 2. But no compensation was ever paid to former slaves (Africans-Americans), or for expelled Mexicans-Americans during 1930s.

USA: abolition through war (1861-1865)

- Abolition of slave trade in 1807, but US slavery system prospered until Civil War 1861-1865 & abolition of slavery in 1865.
  Legal racial discrimination for school, transport, housing, jobs, voting rights etc. in Southern US until 1960s.
- **1800: total pop US South 2,6 millions**

  = 1,7m whites + 0,9m slaves (33%)

  (+ US North 2,6m = total US pop 5,2m)
- **1860: total pop US South 12,2 millions**

  = 8,1m whites + 4,1m slaves (33%)

  (+ US North 18,9m = total US pop 31,2m)
- No slave trade, but large natural reproduction: n. slaves multiplied by >4

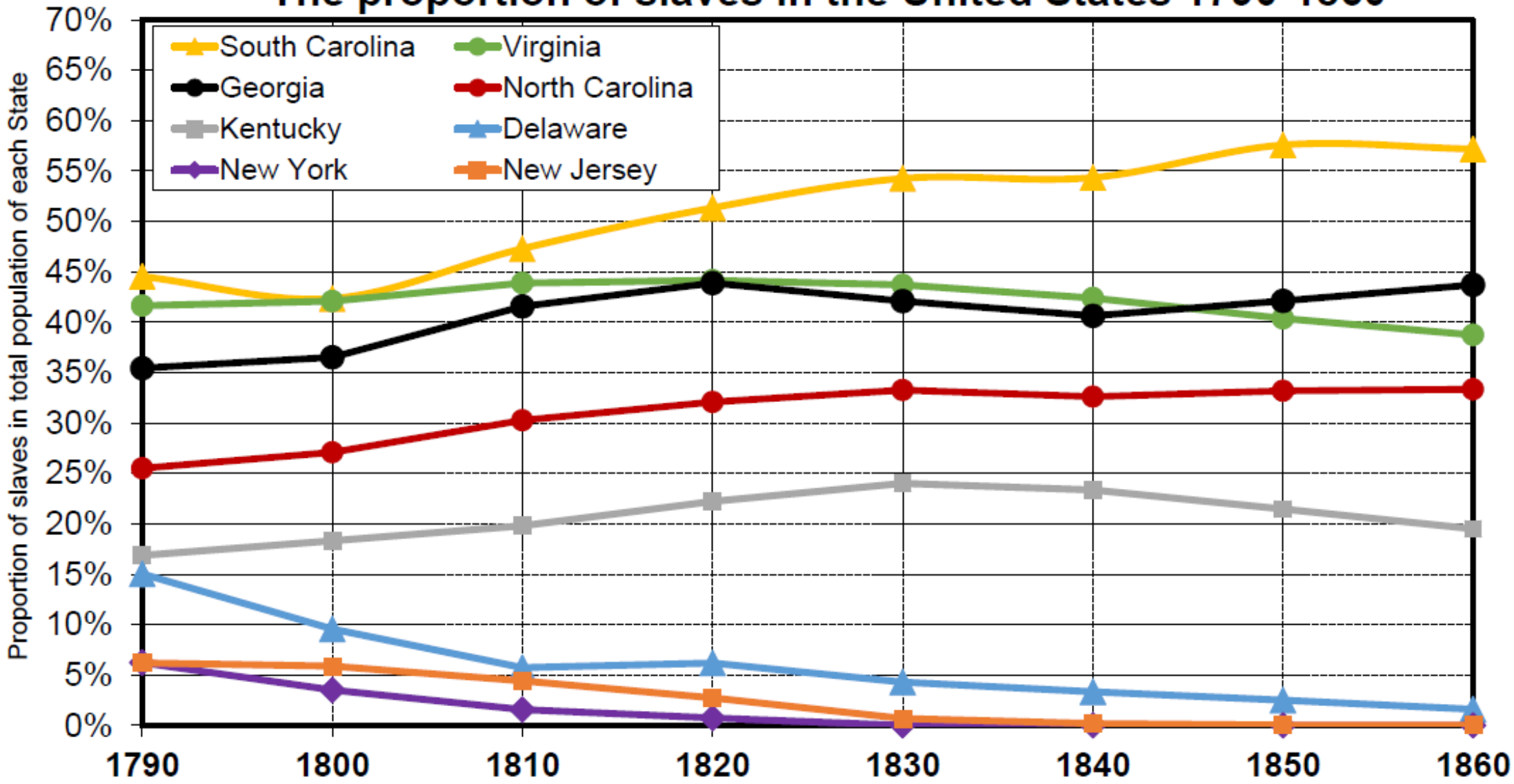
- **Key role of slavery in US history**: out of the 15 first presidents, 13 were slave owners (including Washinton, Jefferson, etc.)
- Slaves very well recorded in US censuses because they give more seats in US Congress: three-fifths rule
- Virginia: largest slave state, and by far largest US state in 1800
- In the 1850s, 75% of cotton used in European textile factories comes from US south → **key role in the overall industrialization process**
- In some states (e.g. South Carolina), the proportion of slaves rose up to 55%-60% in the 1850s. In Virginia, stable around 40%.
- Very large slave concentrations, but less extreme that in Caribbean islands
- Very strong repression: laws in the 1830s-1850s putting in jail those who teach reading/writing to slaves and those who help fugitives
  → rising tensions between slave states and free states

The structure of slave and free population in the United States (1800-1860)

	Total (thousands)	Blacks (slaves)	Blacks (free)	Whites	Total (%)	Blacks (slaves)	Blacks (free)	Whites
Total United States 1800	**5 210**	**880**	**110**	**4 220**	**100%**	**17%**	**2%**	**81%**
Northern States	2 630	40	80	2 510	100%	2%	3%	95%
Southern States	2 580	840	30	1 710	100%	33%	1%	66%
Total United States 1860	**31 180**	**3 950**	**490**	**26 740**	**100%**	**13%**	**2%**	**85%**
Northern States	18 940	0	340	18 600	100%	0%	2%	98%
Southern States	12 240	3 950	150	8 140	100%	32%	1%	67%

Interpretation. The number of slaves was multiplied by more than 4 in the United States between 1800 and 1860 (from 880 000 to 3,950 millions), while at the same time representing an approximately fixed fraction of total population of Southern States (about one third), and a declining fraction of total U.S. population (given the even faster rise of the population of Northern States). **Note**: all slave States as of 1860 were classified as Sourthern States: Alabama, Arkansas, North and South Carolina, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississipi, Missouri, Tennessee, Texas, Virginia. **Sources and series**: voir piketty.pse.ens.fr/ideology (table 6.1).

The proportion of slaves in the United States 1790-1860



Interpretation. The proportion of slaves in total population rose or remained stable at a high level in the main southen slave States between 1790 and 1860 (between 35% and 55% in 1850-1860, up to 57%-58% in South Carolina), while slavery dropped or disappeared in Northern States. **Sources and series**: voir piketty.pse.ens.fr/ideologie (figure 6.3).

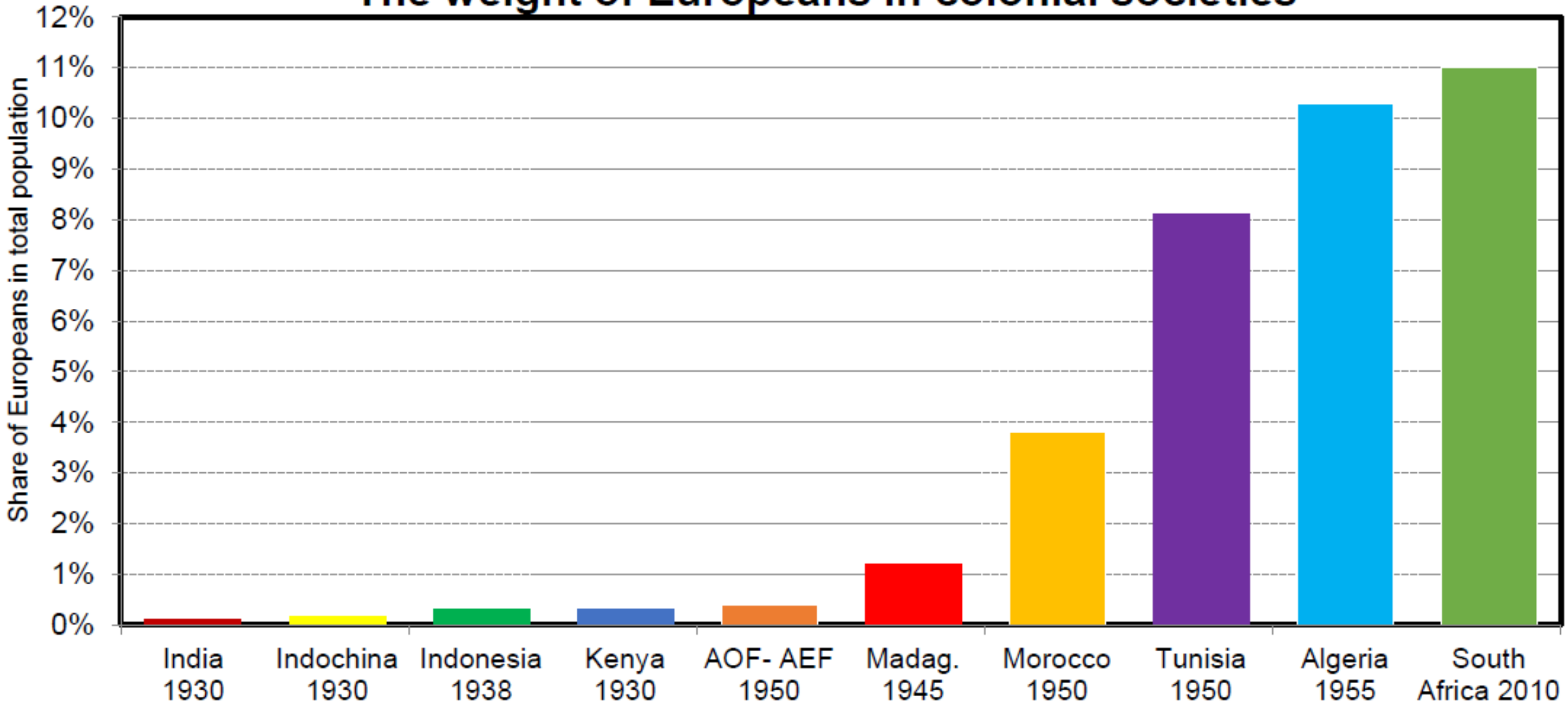
- **Was a peaceful end to US slavery possible?**
- Total market value of slaves in 19c US: about 100% of US national income (and >250% of South US national income)
- By comparaison, UK compensation to slave owners: 5% national income in 1833-43. Total public debt due by US Civil war 1861-65: <30% national income
- In 19c US, slave-owners and Democratic party leaders (Jefferson, Monroe, etc.) made such computations and started to draft plans about massive land transfers from new western states to former slave-owners. But the scale of the wealth transfer to compensate slave-owners was unrealistic (& unfair).

- Lincoln 1860: elected on a platform putting an end to the extension of slavery in the West, and proposing a gradual emancipation (with compensation) to the South. But everybody knew that a full compensation was impossible, and that the South was becoming a shrinking minority within the US Congress → secession attempt by Southern states, Civil War 1861-65
- **A fair and peaceful end would have required a radical rethinking of property regime, with large transfers both to former slaves and poor Southern whites, so as to create common interest between them (not easy)**
- In 1863-1864, a transfer to former slaves (« 40 acres of land and a mule ») was promised by Northern troops in order to mobilize African Americans, but the promise was quickly forgotten after the war

Inequality & Power Relations in Post-Slavery Colonialism

- Two main stages in European colonialism:
- From 1500 to about 1800-1850: massive use of slavery, forced labour, population displacement (stage 1)
- From about 1800-1850 to 1960s: post-slavery colonialism, less violent forms of domination, but over much larger territories (stage 2)
- During stage 2, very sophisticated forms of administrative organization allowed European powers to control empires with very small population of settlers: 0,1%-0,4% of total population in India, Indochina, most of Africa
- Main exceptions: North Africa (especially Algeria) and South Africa, with as much as 10%-15% European population

The weight of Europeans in colonial societies

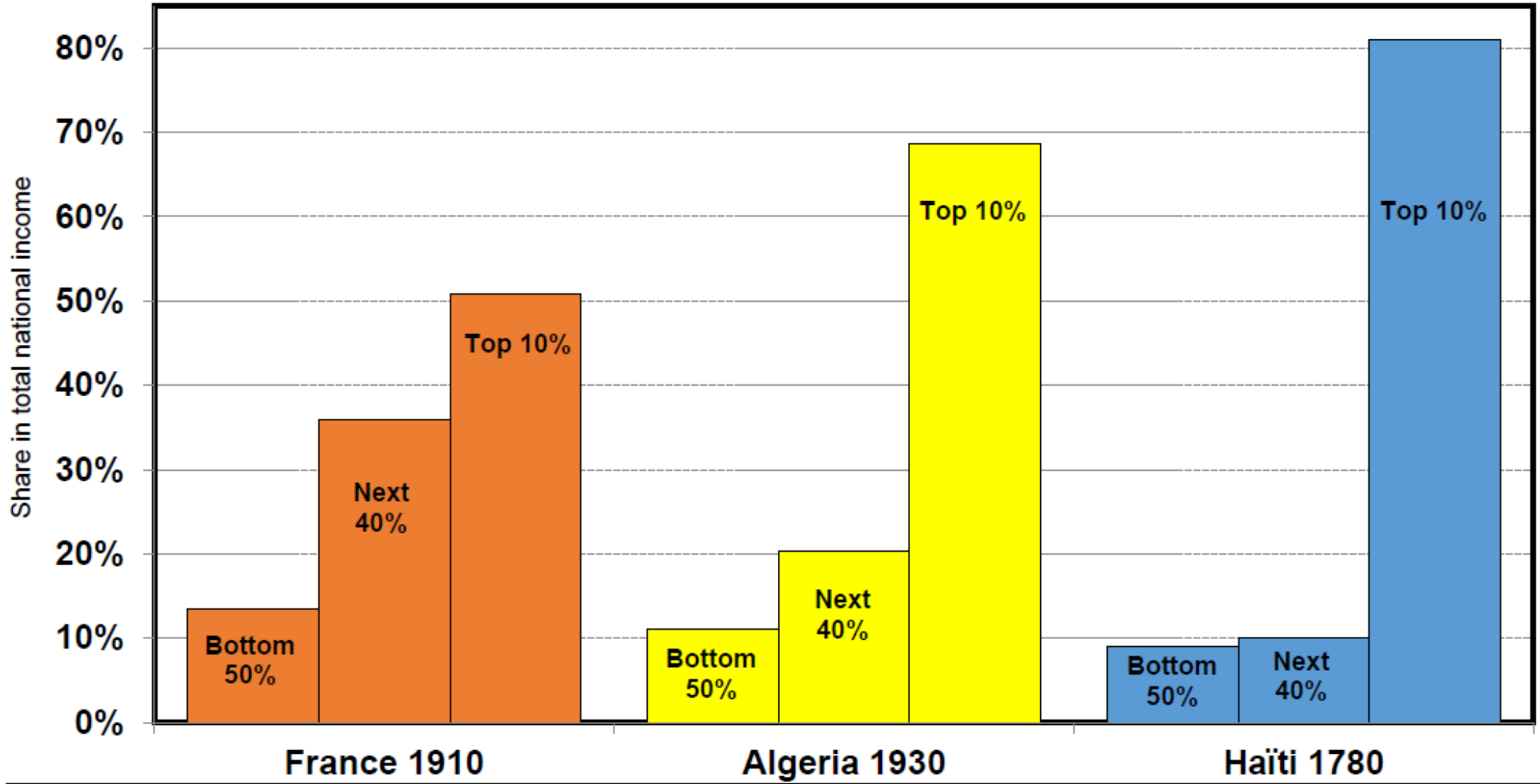


Interpretation. Between 1930 and 1955, the share of Europeans in colonial societies was 0,1%-0,3% of total population in India, Indochina and Indonesia, 0,3%-0,4% in Kenya, in AOF (Afrique occidentale française, West French Africa) and AEF (Afrique équatoriale française, Equatorial French Africa), 1,2% in Madagascar, 4% in Marocco, 8% in Tunisia, 10% in Algeria (13% in 1906, 14% in 1931). Whites made 11% of South African population in 2010 (it was between 15% and 20% from 1910 to 1990). **Sources and series**: see piketty.pse.ens.fr/ideology (figure 7.1).

- Inequality can reach extreme levels in colonial societies, especially when the share of settlers is substantial
- In colonial Algeria or in South Africa under Apartheid, the top 10% income share can be as large as 70%
- In slave societies like Saint-Domingue, it can be larger than 80%: highest inequality level ever observed

- Generally speaking, the concentration of income and consumption cannot be as extreme as the concentration of property: the bottom 50% can live without property, but not without minimal consumption

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% Europeans 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).

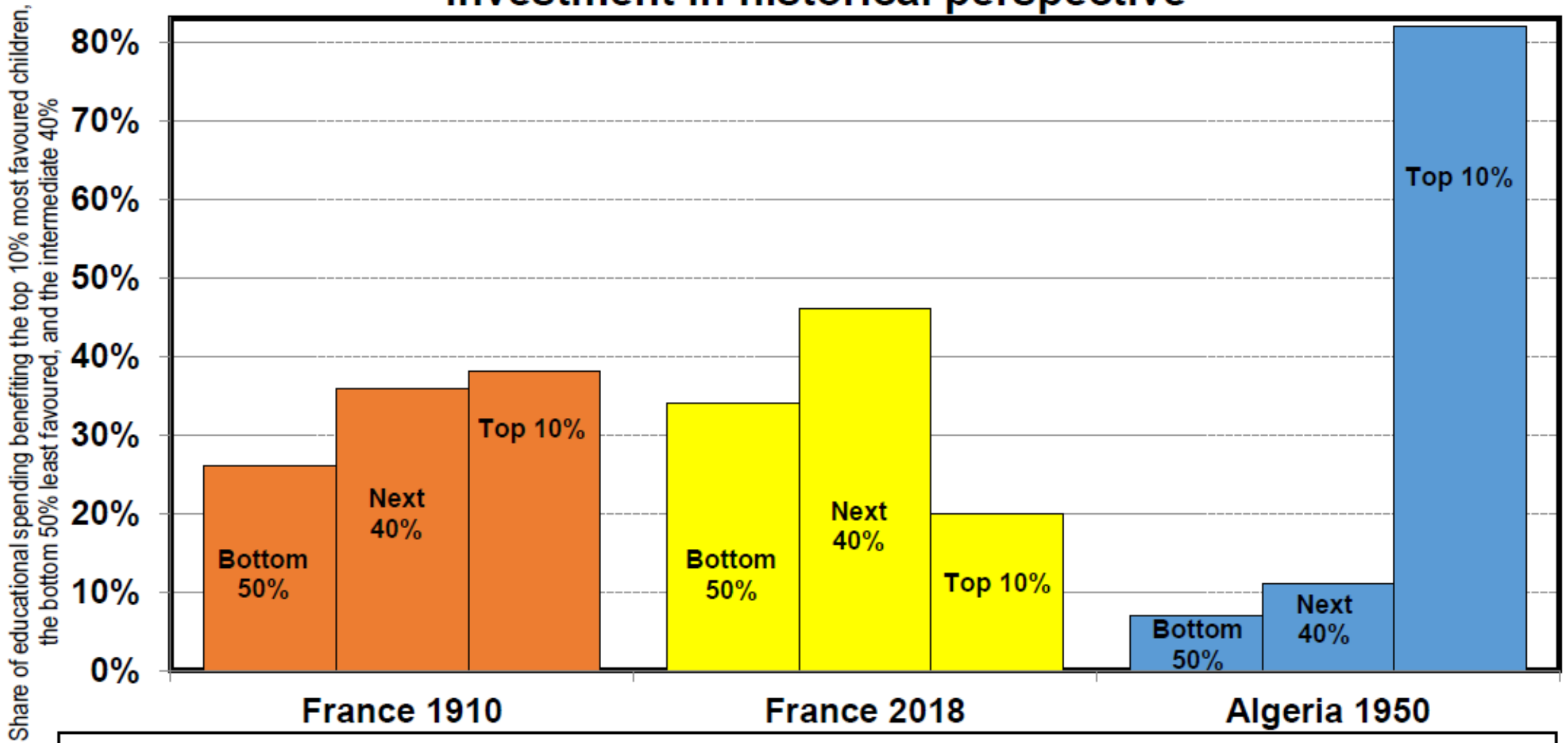
Colonies for colonizers: recent research on colonial finances

- Why so much inequality in the colonies?
- The entire legal and fiscal system was strongly biased in favour of the colonizers
- E.g. there is forced labour in French colonies until 1946 (« prestations » according to 1912 legalization decree) (≈ « corvées »)
- See M. Van Waijenburg, « Financing the African Colonial State: The Revenue Imperative and Forced Labour », JEH 2018
- During the 1920s-1930s, France refuses to ratify ILO charter in order to keep using forced labour for public works in Africa (railways in Congo, etc.)

- More generally, colonial finances were strongly biased in favour of colonizers: taxes paid by the colonized, but spending for the benefit of the colonizers
- See D. Cogneau, Y. Dupraz, S. Mesplé-Somps, "Fiscal Capacity and Dualism in Colonial States: The French Empire 1830-1962", PSE 2018
- E.g. in Algeria, over 80% of total education budget is spent on schools only open to European settlers (10% of the population) in 1930-1950
- Education system was also very elitist in metopolitan France in 19c or early 20c, but not nearly much (<40% total spending for top 10%)

- The military costs of colonization were also very small (<0,5% GDP in 1830-1940) (up to 2% in 1945-1960 during independance wars)

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

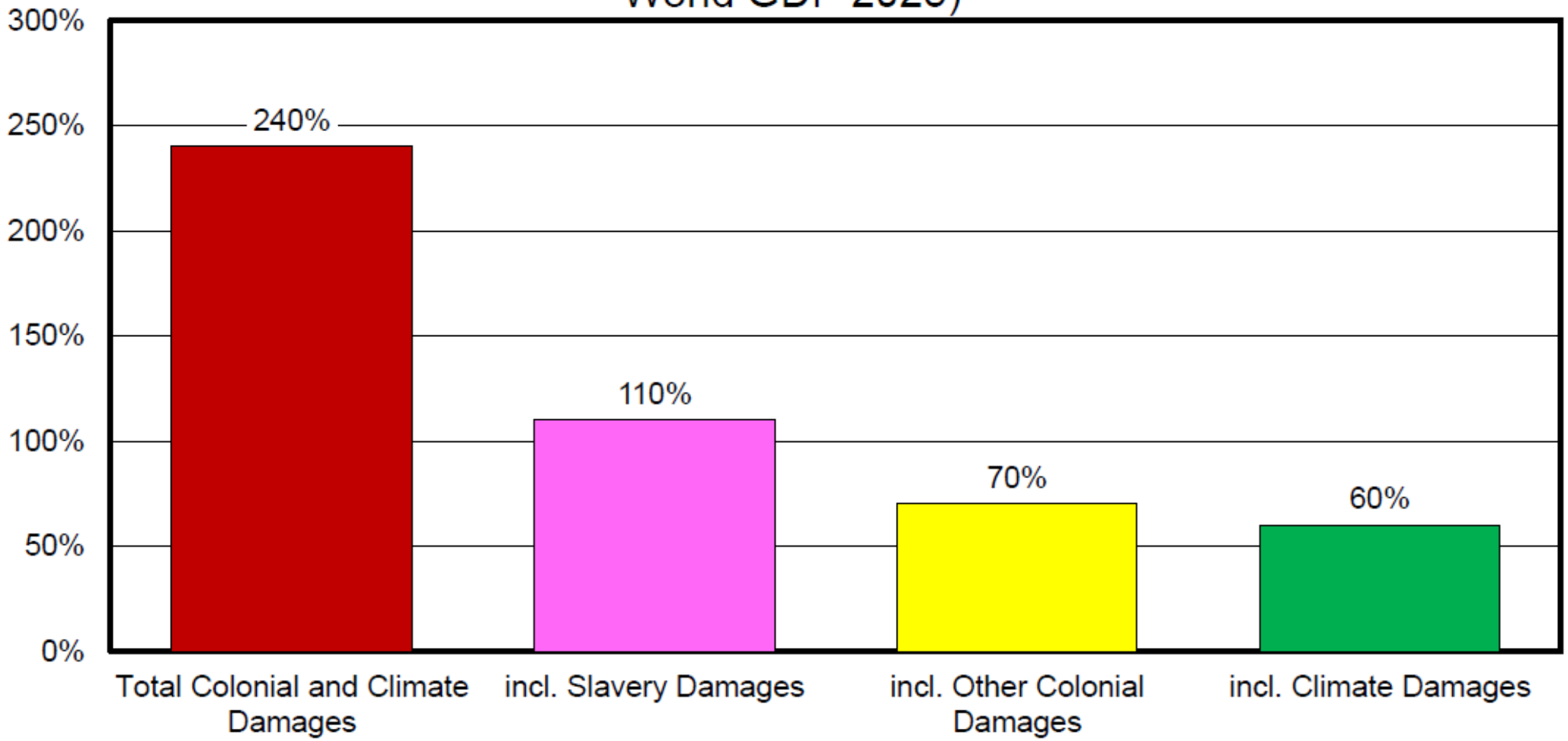


Interpretation. In Algeria in 1950, the 10% the most favoured (the settlers) benefited from 82% of total educational spending. By comparison, the share of total educational spending benefiting the top 10% of the population which benefited from the highest educational investement (i.e. those children which did the longest and most expensive studies) was 38% in France in 1930 and 20% in 2018.
Sources and series: voir piketty.pse.ens.fr/ideology (figure 7.8).

The Question of Post-Slavery & Post-Colonial Reparations

- **Discussions about post-slavery & post-colonial reparations have become more & more important in recent decades**, and are often linked to discussions about climate damages and reparations
- One possible evaluation of the damages due to slavery: **unpaid wages + evaluation of additional well-being costs (bad treatment)**
- See P. Robinson, C. Bazelon, A. Vargas, R. Janakiraman, M. Olson, Report on Reparations for Transatlantic Chattel Slavery in the Americas and the Caribbean, UWI (CRR) & ASIL, 2023
- Estimates of unpaid wages for 20m slaves 1450-1888 (mostly 1780-1860) + bad treatment (about 50-50) → **≈100-120% world GDP 2025** (with r ≈ g)
- Up to 600% of GDP for the UK & 300% for France
- **This may seem very large, but these are damages spanning over long period & should be compared to cumulated GDP over long periods**: in effect, this makes only 2-3% of cumulated world GDP over the 1800-2025 period (and 13% for the UK)

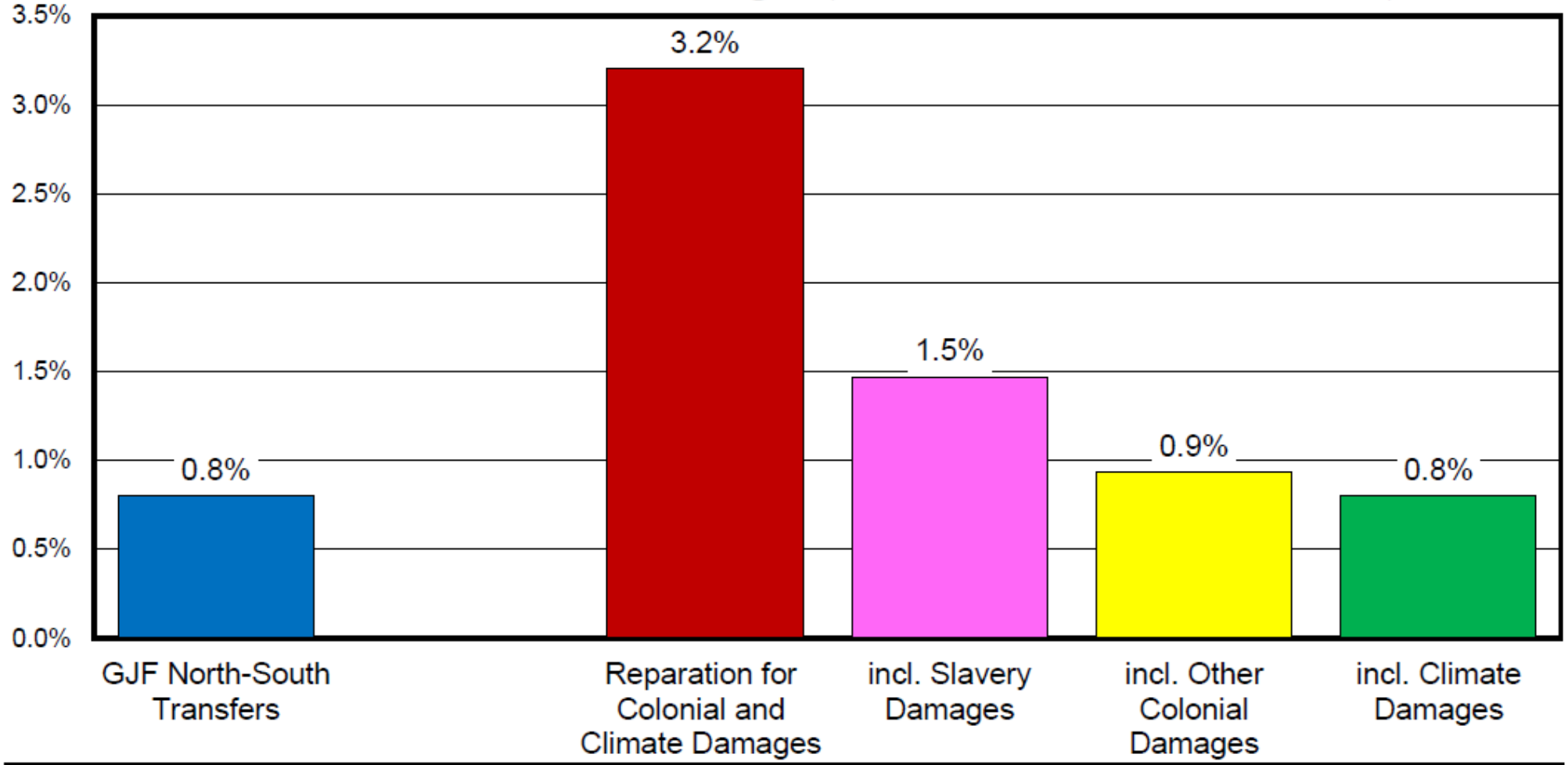
Cumulated Colonial and Climate Damages 1800-2025 (% World GDP 2025)



Interpretation. Cumulated colonial and climate damages between 1800 and 2025 are estimated to be around 240% of world GDP in 2025, including 110% for the damages induced by slavery (unpaid wages and mistreatments), 70% for other colonial damages (transfers and war tributes imposed by Britain to India, the Netherlands to Indonesia, France to Haïti, etc.) and 60% for climate damages (computed as income and welfare losses from the excess warming that would have been avoided had high-emitter countries - those whose historical per-capita emissions since 1850 exeeded 60% of the world average - converged to world per-capita average emissions between 1970 and 2025.

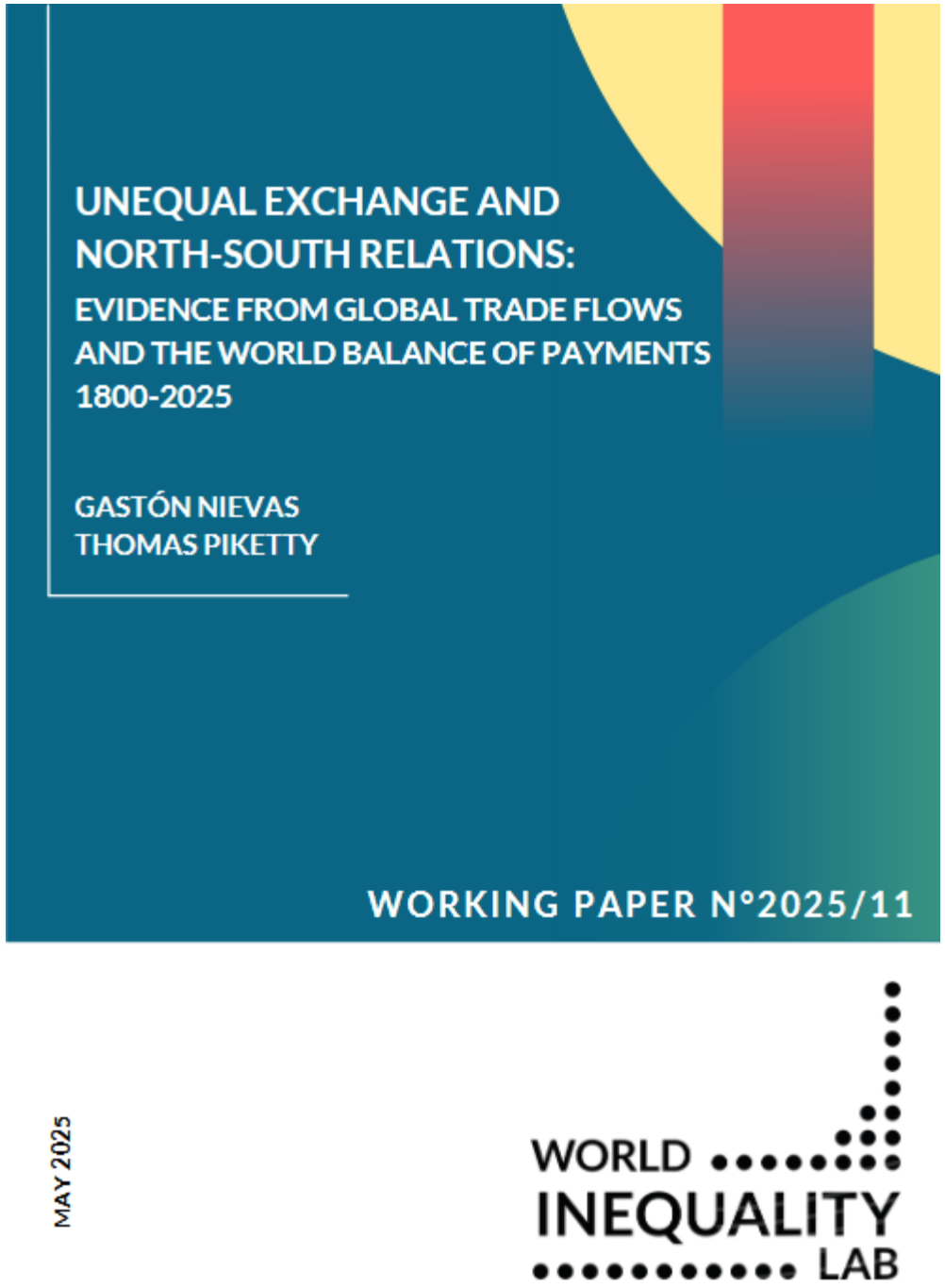
Sources and series: gjp.wid.world (F4.1)

Global Justice Fund North-South Transfers Are Smaller Than Colonial and Climate Damages (Annual Transfers 2026-2100, % World GDP)



Interpretation. The North-South transfers induced by the Global Justice Fund (i.e. the extra wealth and income taxes paid and lower country dividends received by Europe and North America/Oceania) represent about 0.8% of world GDP on average between 2026 and 2100. This is significantly smaller than the corresponding annual transfers which should have been paid over the same period in order to compensate for the cumulated colonial and climate damages imposed by Europe and North America/Oceania between 1800 and 2025.

Sources and series: gjp.wid.world (F4.2)



Unequal Exchange & Development

A new database on global trade flows and the world balance of payment (including goods, services, income and transfers) over 1800-2025 period

This allows us to construct consistent global series on world trade imbalances, current account surplus/deficit and net foreign wealth over two centuries+

View of Buenos Aires from the new customs dock, Louis Le Breton (Circa 1860)

A new global dataset covering international transactions from 1800 to the present.

Developed by Gastón Nievas and Thomas Piketty, WBOP harmonizes balance of payments data across time and countries, enabling long-run comparative analysis of trade, capital flows, and foreign wealth accumulation.

Sources/methods and contribution to the literature

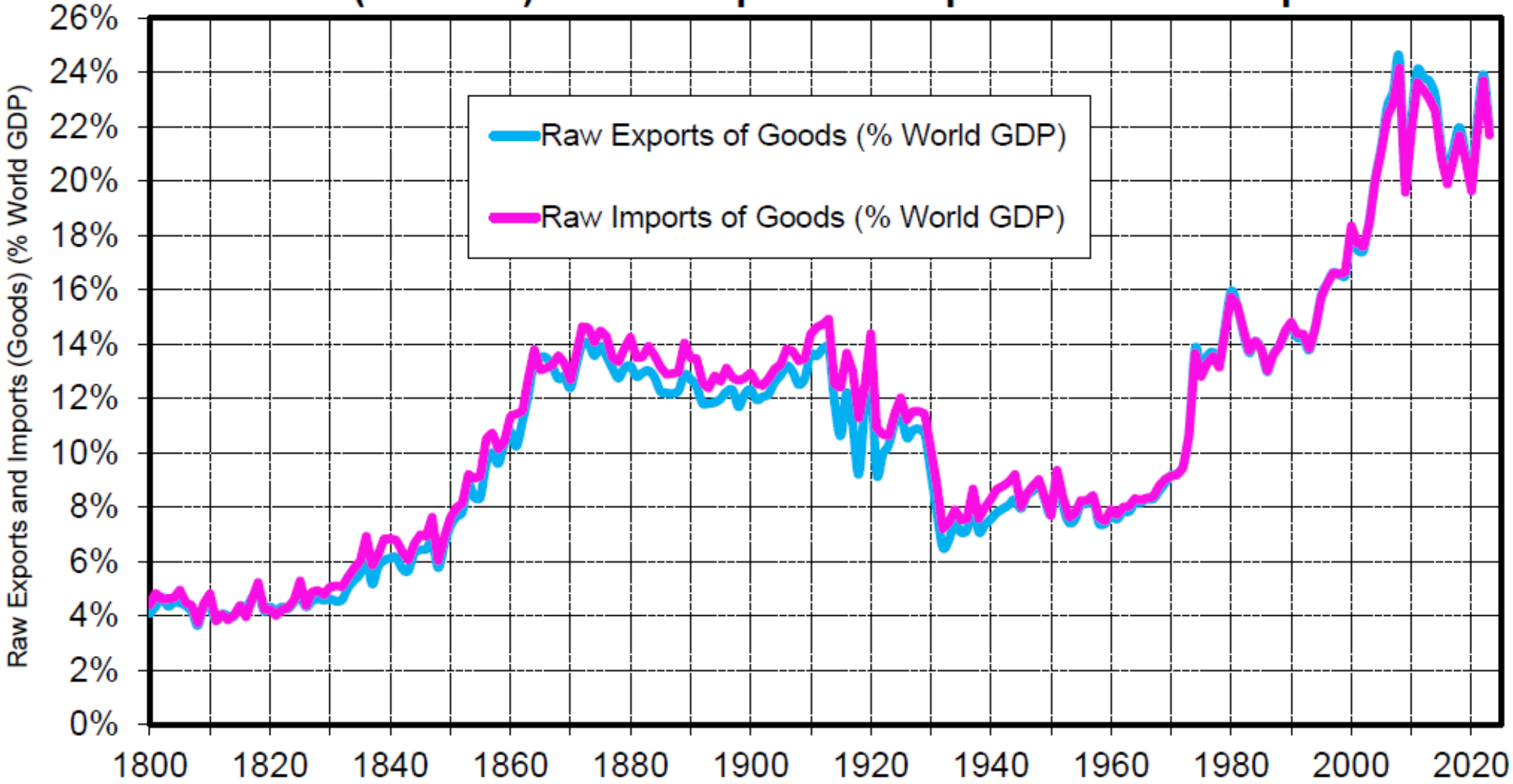
(1) We start from official IMF BoP concepts & series 1970-2025:
Current account surplus/deficit CA_{it}
= Net trade balance in **goods** (excl. freight/insurance etc.)
+ Net trade balance in **services** (incl. freight/insurance etc.)
+ Net **income** inflows (mostly capital income)
+ Net **transfer** inflows (remittances, public aid, war tributes, etc.)

(& **Net foreign asset position NFA_{it}** = cumulated sum of past current account surpluses/deficits CA_{is} for $s<t$)

(2) We use historical trade data (goods only) 1800-2023 in order to complete IMF (which offer full world coverage for 1990- only):
WTO/UNComTrade (trade series 1948-2023)
Frederico-Tena 2016 (Historical Trade Database, 1800-1938)
Conte-Cotterlaz-Mayer 2023 (Gravity, 1948-2021)
Fouquin-Hugot 2017 (TradeHist, 1827-2014)
Deninger-Girard 2017 (RICardo, 1800-1938)

→ **we harmonize these sources** in order to construct consistent global series for **exports and imports of goods 1800-2025, with breakdown primary commodities vs manufactured goods**

The (Limited) Trade Gap: Raw Exports vs Raw Imports



Interpretation. Total world exports and imports of goods are never exactly equal in raw trade data, but the gap is usually relatively small (generally less than 0.5% of world GDP in 1800-1950 & less than 0.2% in 1950-2023). In this research, we apply a proportional adjustment factor to all country exports and imports so that by construction world exports and imports are always exactly equal to each other (= average of raw world exports and imports). We also try other adjustment methods and check that our results are unaffected. **Sources and series**: see wid.world

(3) We estimate global BoP missing items 1800-1990 (services, income, transfers) ("**invisible flows**") using various historical sources:

LoN (League of Nations) **1920-1938**: first official BoP (BIS)
IMF official BoP **1950-1990** (incomplete)

Country studies for historical BoP in large economies:
Imlah 1952, 1958 UK 1800-1950, **North 1960** US 1800-1955, **Levy-Leboyer 1977** FR 1827-1914, **Nogues-Marco 2021** IN 1800-1950, **Smits et al 2000** NL 1800-1998, **Van der Eng 1998** ID 1800-1950, **Francos 1987** BR 1876-1970, **Ferreres 2010** AR 1901-1970, **Gregory 1979** RU 1881-1914, **Yan-Xin 2023** CN 1800-1950, etc.

For other countries-years we make assumptions about missing BoP items on the basis of similar countries & in order to insure **global consistency** (net zero for each item: services, income, transfers)

Consistency check: by cumulating current account surpluses/deficits ($NFA_{it+1}=NFA_{it}+CA_{it}$), we are able to approximately match **stock-based estimates of net foreign assets in 1880-1914** (using financial data on foreign portfolio & major assets: railways, canals, banks, public debt, etc.)(**Giffen 1889, Foville 1893, Colson 1903, Hobson 1902, Hilferding 1910, Lenin 1916,** Twomey 2000) & net foreign assets in 1970-2023 (IMF, WID, Lane-Milesi-Ferretti 2018, Nievas-Sodano 2024)

Our series are not frozen in stone: they will be updated as new country studies on historical BoP become available

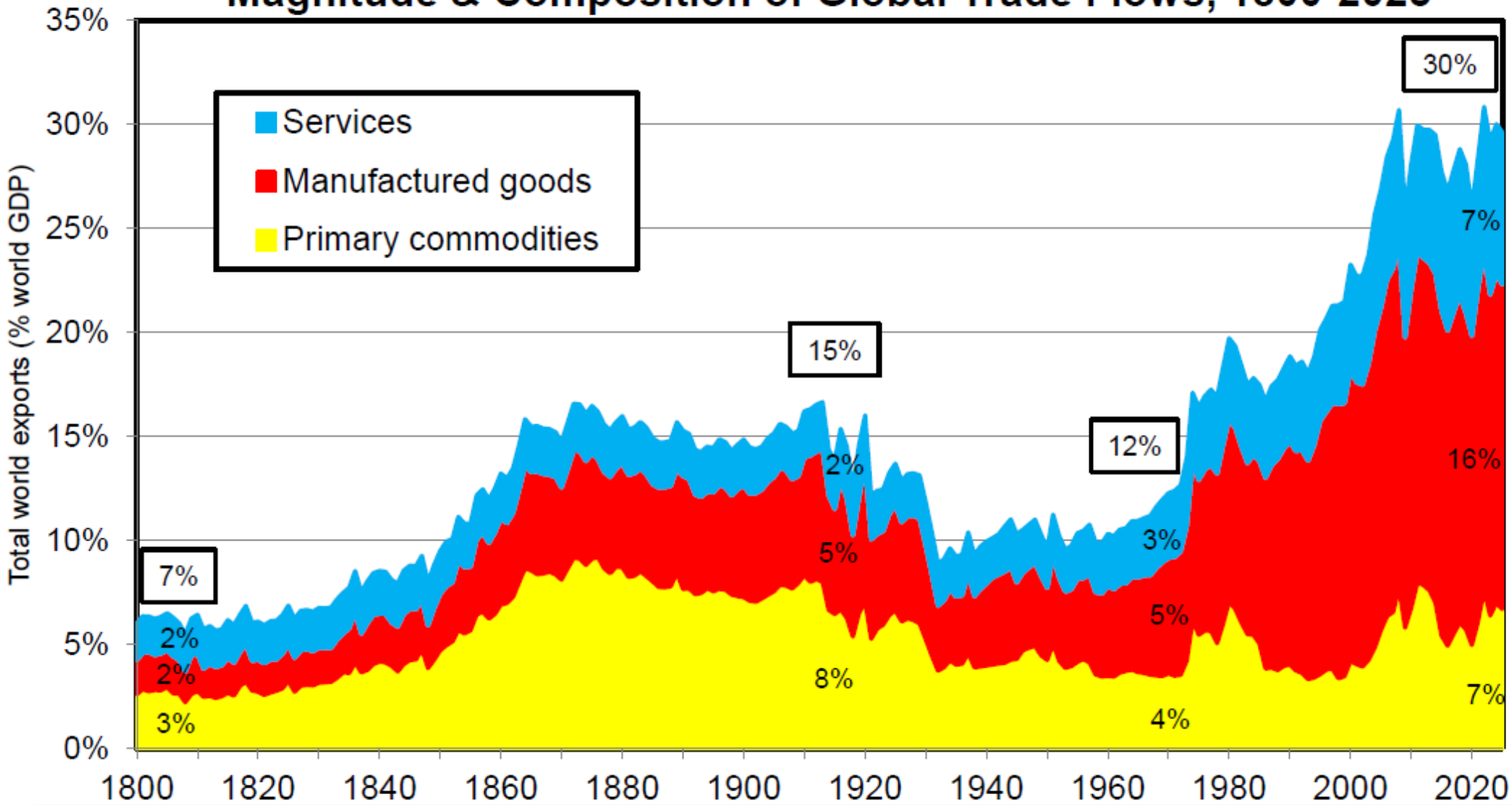
Magnitude & composition of global trade and BoP flows 1800-2025

The **U-shaped pattern of global trade**:
1800-1914 ↑, 1914-1970↓, 1970-2025↑

The **changing composition** of global trade: **primary commodities**, **manufactured goods**, **services**

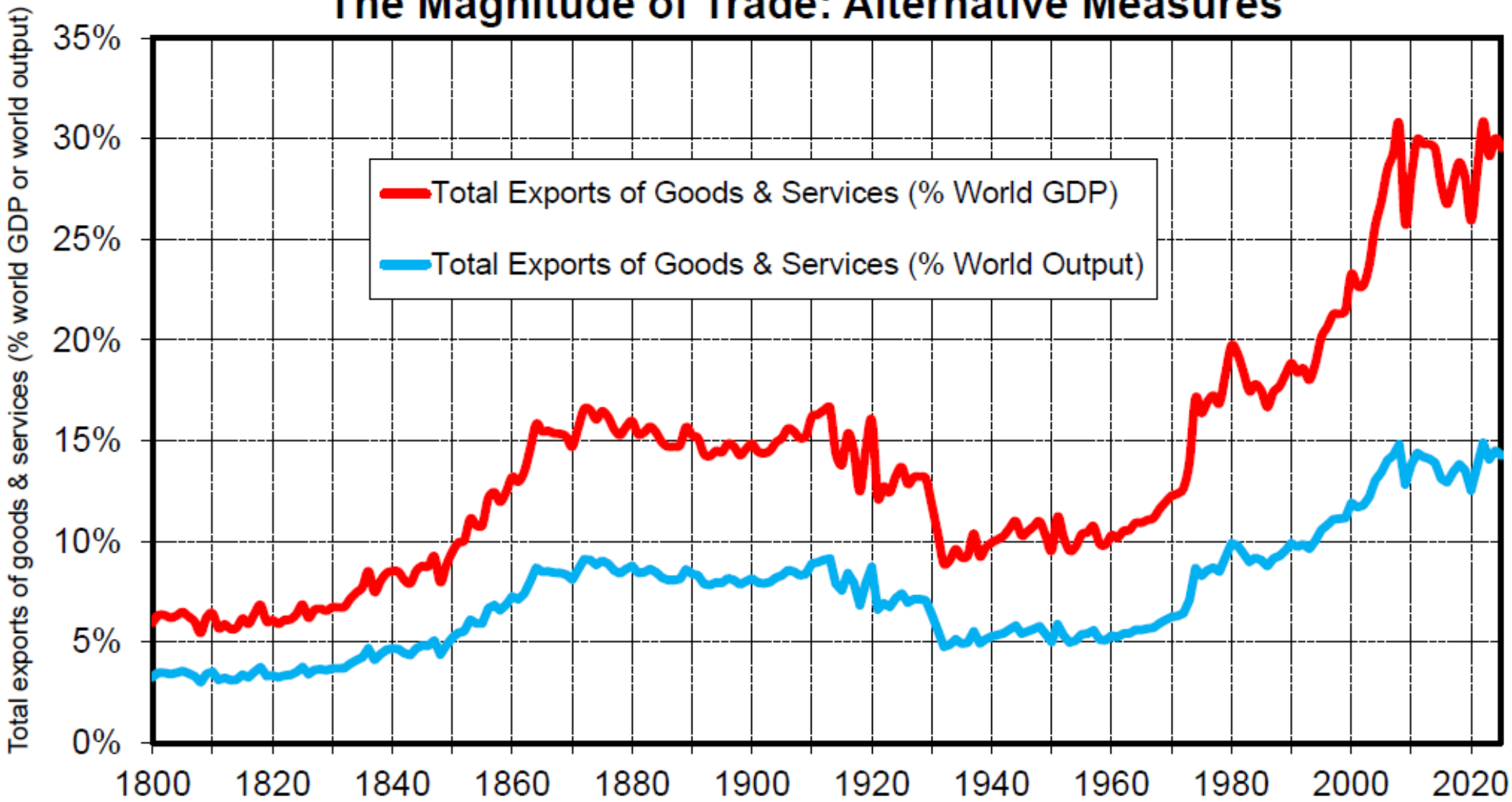
The changing magnitude and composition of **foreign income flows** and **foreign transfer flows**

Magnitude & Composition of Global Trade Flows, 1800-2025



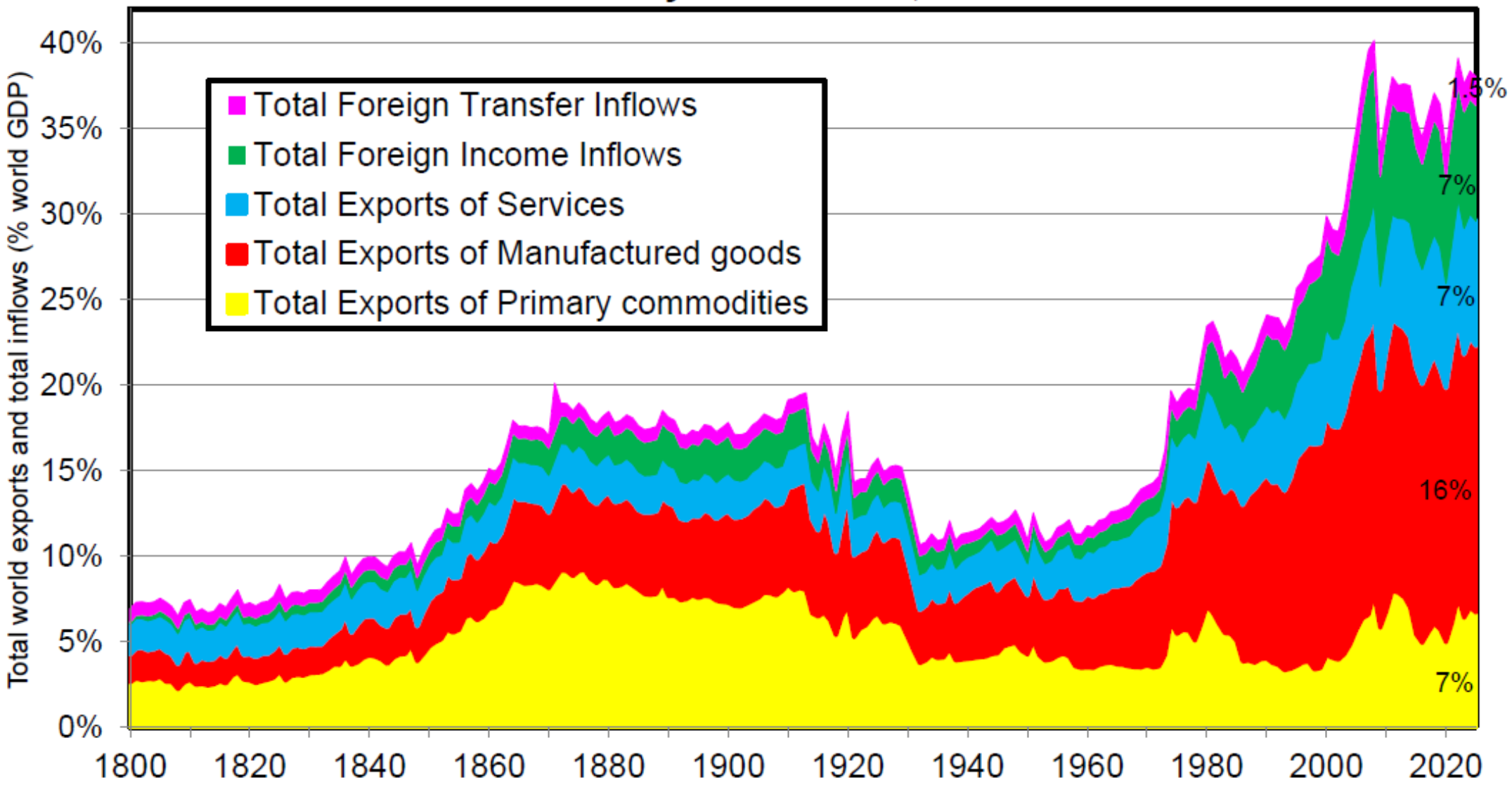
Interpretation. Total world exports have risen from about 7% of world GDP in 1800 to about 15% in 1914, 12% in 1970 and 30% in 2025, with a collapse in the 1930s, a steep rise in the 1970s (oil price shock) and a plateau since the 2008 financial crisis. Primary commodities include agricultural products, fuels and mining products (SITC 0-4 + 68). Manufactured goods include all other goods. Services include transport/freight (about 1.5% of world GDP in 2025, vs 1% in 1970), travel/tourism (about 1.5% in 2025, vs 1% in 1970) and other services (insurance, banking, consulting, digital, etc) (about 4% in 2025, vs 1% in 1970). **Sources and series**: wid.world

The Magnitude of Trade: Alternative Measures



Interpretation. If we divide total exports by world output rather than by world GDP, then the magnitude of trade is approximately divided by two. This comes from the fact that world output is about twice as large as world GDP (i.e. about 50% of total output is used as intermediate input to produce other goods and services, with relatively little change over time). If we are interested in the fraction of productive inputs (labour and capital) that is used for exports, then it is arguably more justified to use total output as denominator. **Sources and series**: see wid.world

The World Balance of Payment: Trade, Income & Transfer Flows



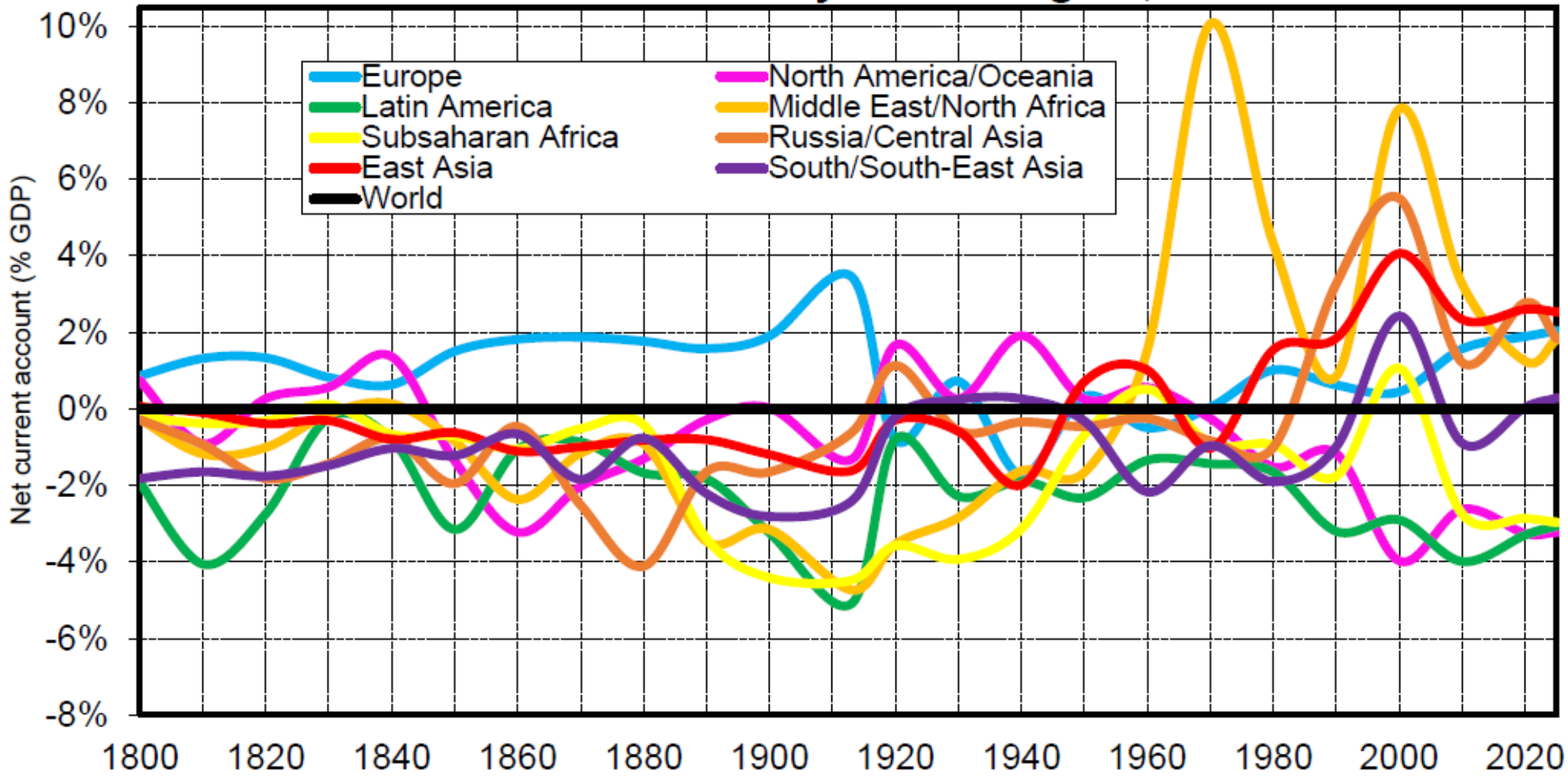
Interpretation. Gross flows of foreign income (in practice mostly capital income) and foreign transfers (private and public) have always been smaller in magnitude than gross trade flows, but they have increased over time. Income flows now make about 7% of world GDP (vs 0.1% in 1800, 2% in 1914 & 1% in 1970), reflecting an enormous rise in gross foreign assets and liabilities (cross-border ownership). Transfer flows now make about 1.5% of world GDP (mostly private remittances going from North to South, and to a lesser extent public aid), vs 0.5-1% in 1800-1914 (mostly public colonial transfers from South to North) and in 1970 (mostly private remittances). **Sources and series**: wid.world

Global pattern of current account surpluses/deficits and foreign wealth accumulation across world regions 1800-2025

In 1800-1914 Europe accumulates large current account surpluses and foreign wealth holdings in the rest of the world

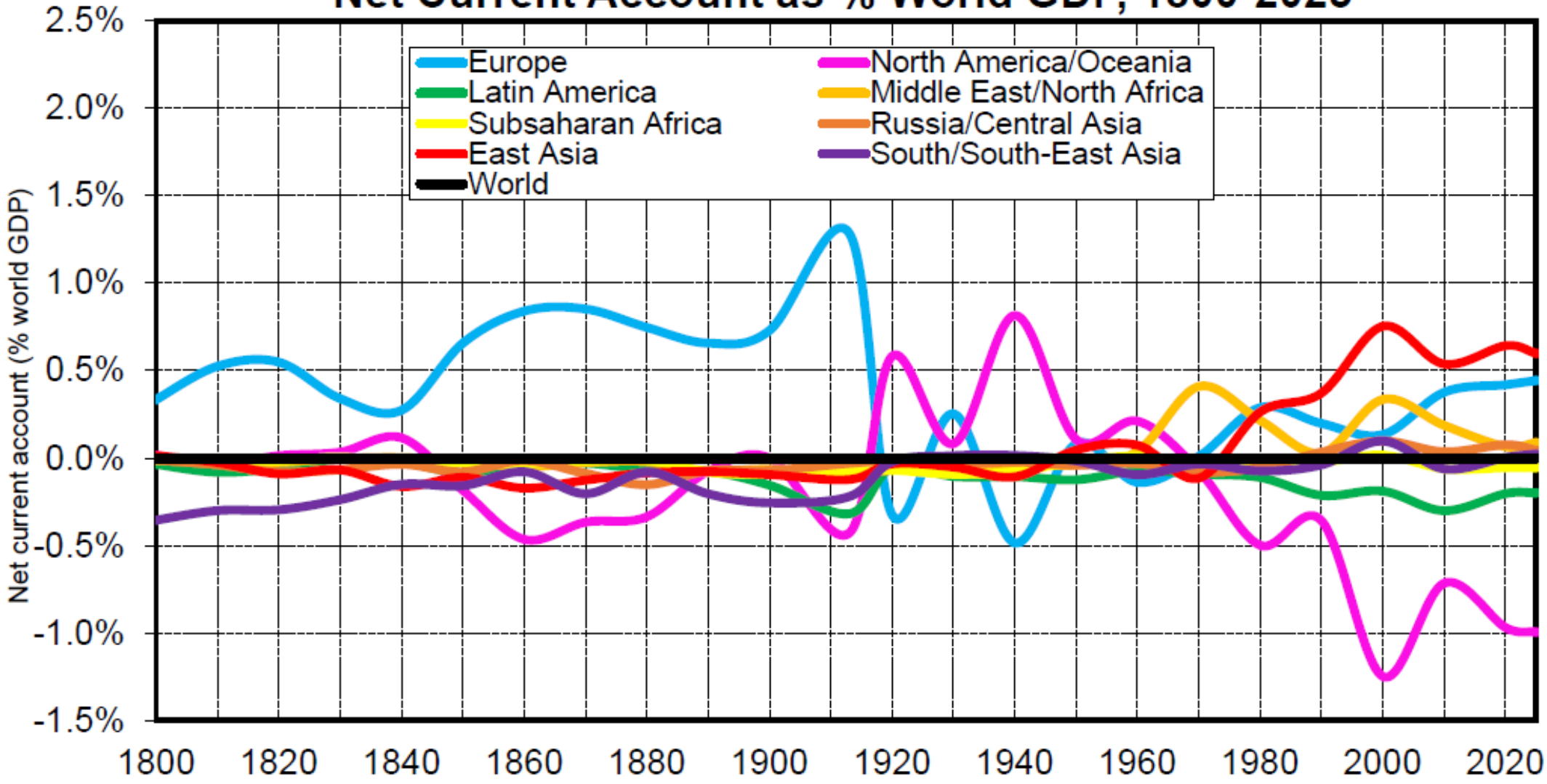
Like East Asia (and oil countries) **in 1970-2025**, but with a much larger magnitude relative to world GDP, and a very diversified world portolio in 1914

Net Current Account by World Region, 1800-2025



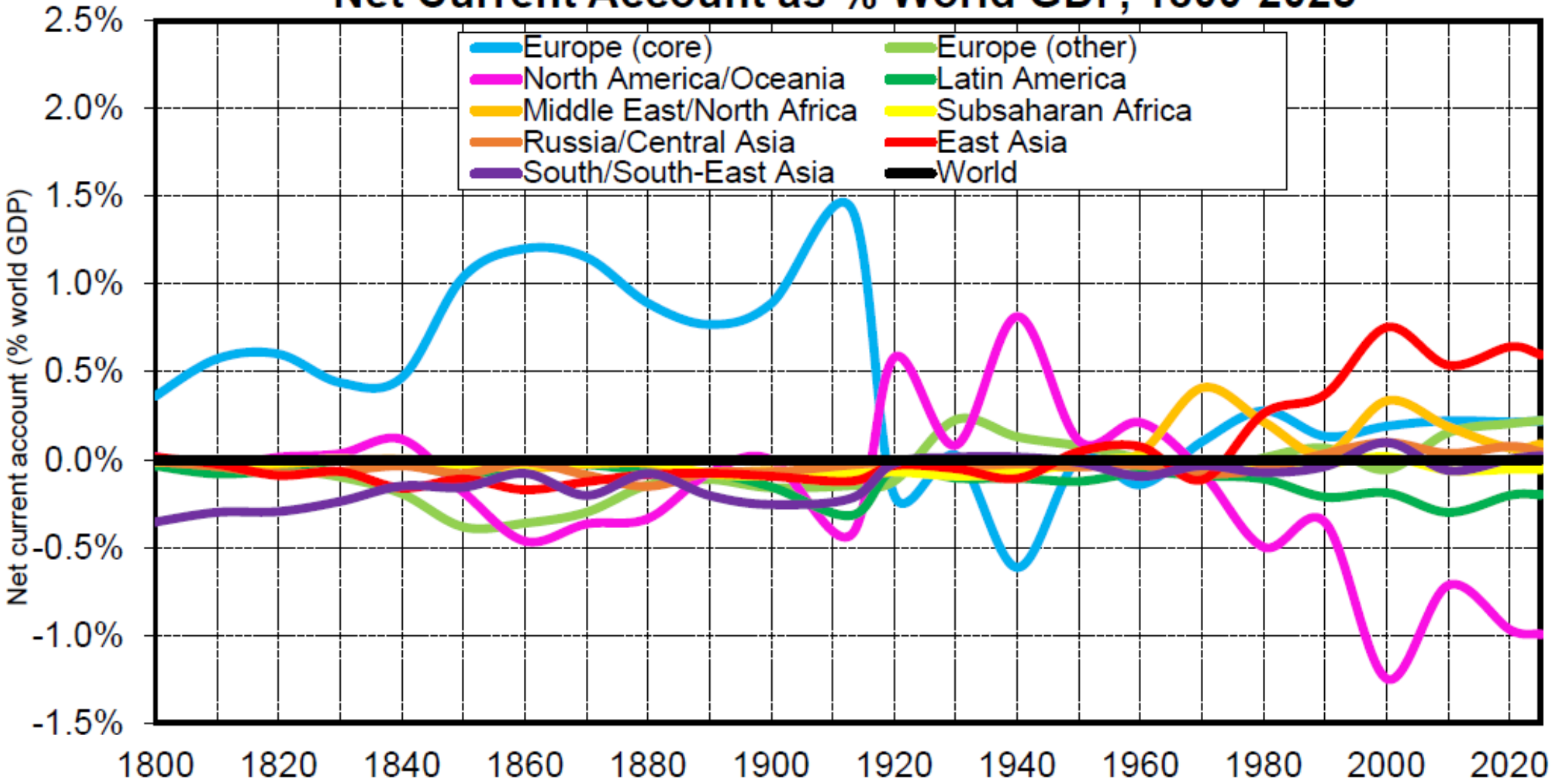
Interpretation. Between 1800 & 1914, Europe has a permanent current account surplus (close to 2% of its GDP on average, and rising over time) while the rest of the world has a permanent deficit. Since the 1970s-1980s, the main surpluses come from oil countries (Middle East, Russia) and East Asia. **Note**. The values reported here are decennial averages: 1800 refers to 1800-1809, 1810 to 1810-1819, etc. **Sources and series**: see wid.world

Net Current Account as % World GDP, 1800-2025



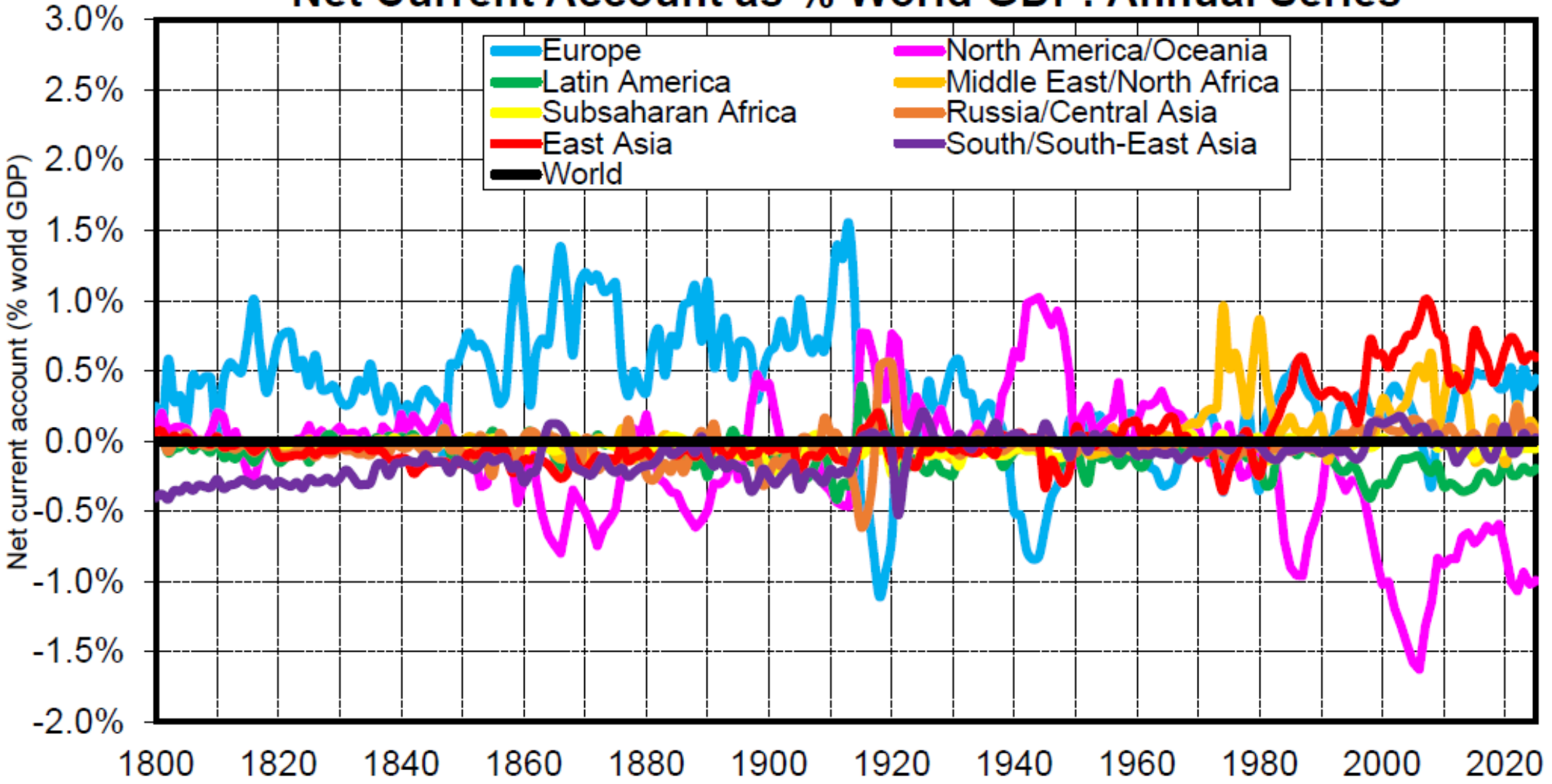
Interpretation. If we express current account as a fraction of world GDP (rather than as a fraction of the GDP of each country or region), we find that Europe's current account surplus between 1800 and 1914 was substantially larger than the surpluses of Middle East or Easr Asia since the 1970s-1980s. **Note**. The values reported here are decennial averages: 1800 refers to 1800-1809, 1810 to 1810-1819, etc. **Sources and series**: see wid.world

Net Current Account as % World GDP, 1800-2025



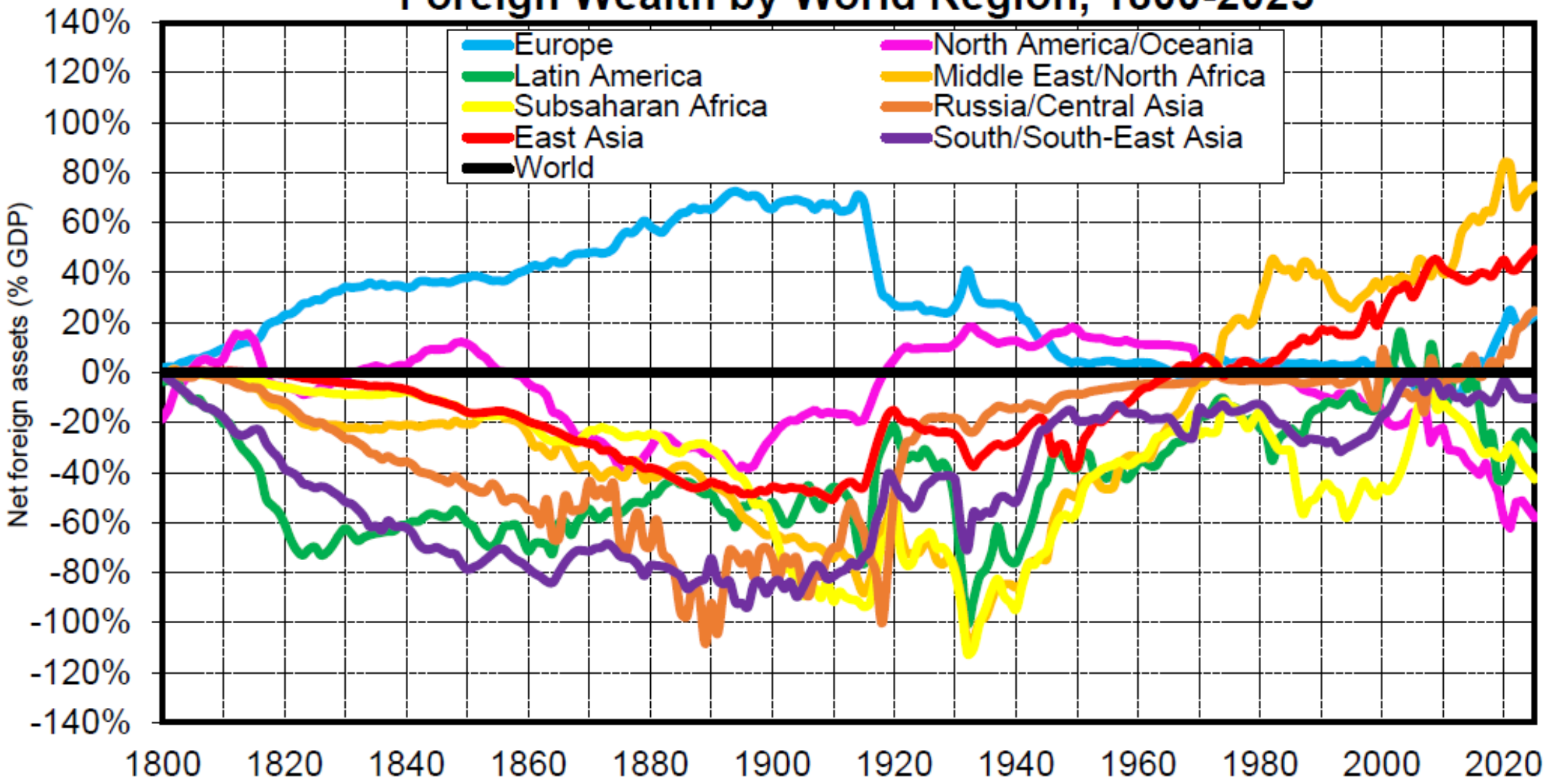
Interpretation. If we concentrate on core European colonial powers (Britain, France, Germany, Netherlands), we find that Europe's current account surplus between 1800 and 1914 looks even larger as compared to the surplus of East Asia and Middle East since the 1970s-1980s.
Note. The values reported here are decennial averages: 1800 refers to 1800-1809, 1810 to 1810-1819, etc. **Sources and series**: see wid.world

Net Current Account as % World GDP: Annual Series



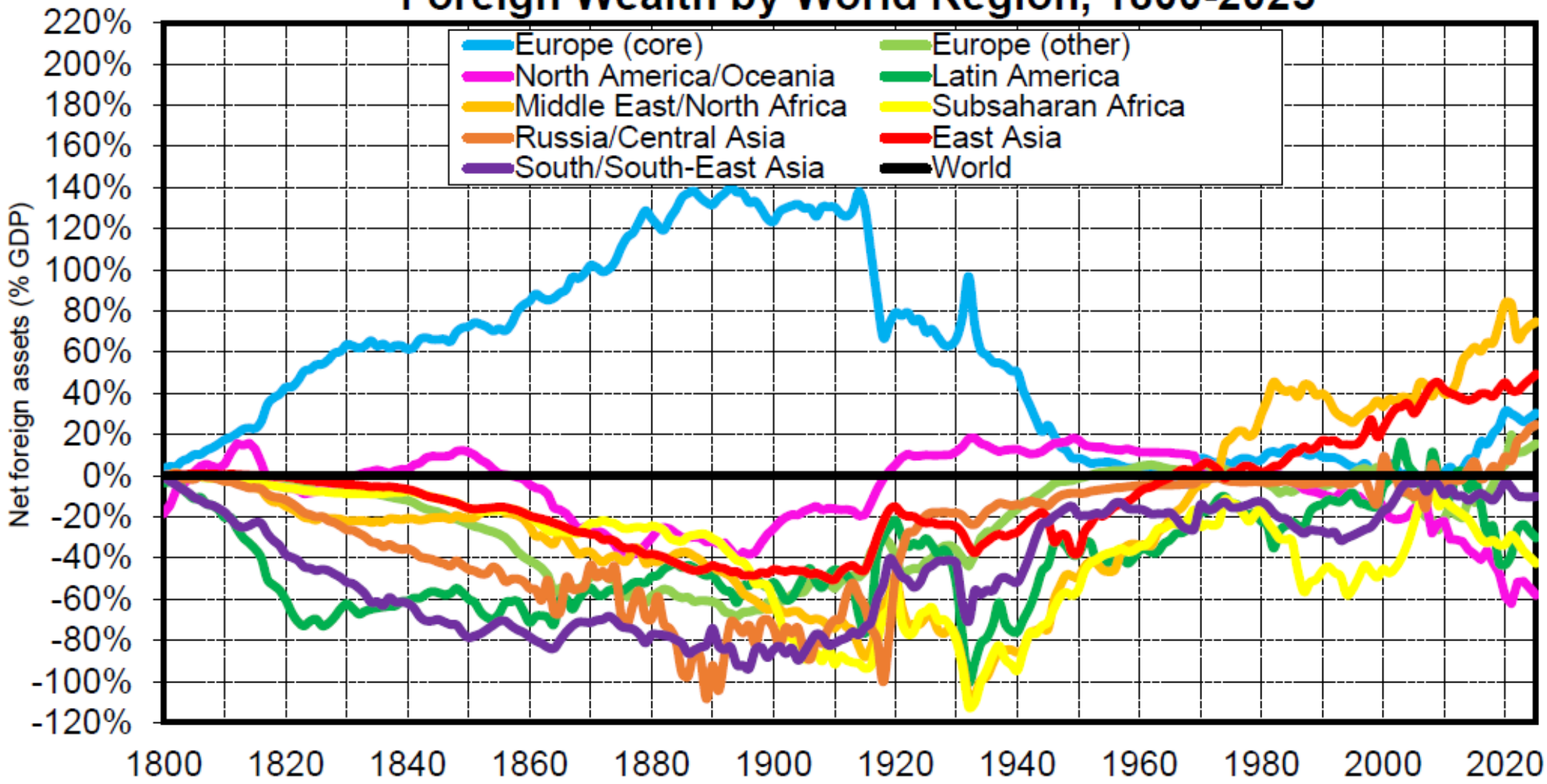
Interpretation. Annual series on current account surpluses and deficits are very bumpy, due to a large numbers of shocks (world wars, oil shocks, etc.), but they also show clear patterns: permanent European surplus between 1800 & 1914, large European deficits during wars (and US surpluses), large MENA and East Asia surpluses (and US deficits) since the 1970s-1980s. **Sources and series**: see wid.world

Foreign Wealth by World Region, 1800-2025



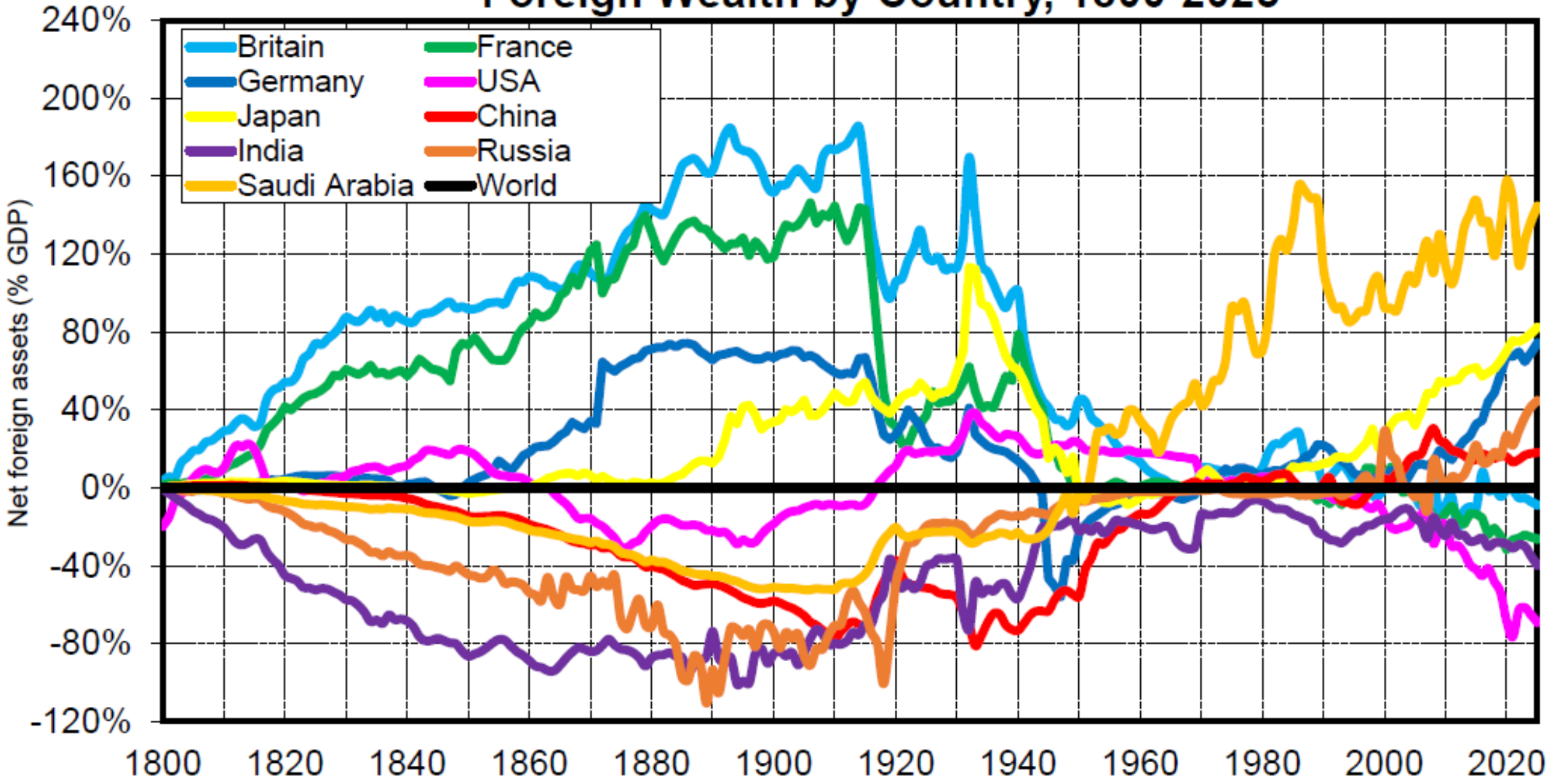
Interpretation. Between 1800 & 1914, Europe owns a rising fraction of the rest of the world. In 1914, Europe's foreign wealth (i.e. net foreign assets held by European residents in the rest of the world) reach about 70% of Europe's GDP. These foreign assets vanish between 1914 and 1950. They are partly replaced by foreign assets owned by the US between 1920 and 1970 and by oil countries (particularly in the Middle East) and East Asia since the 1970s-1980s. **Sources and series**: wid.world

Foreign Wealth by World Region, 1800-2025



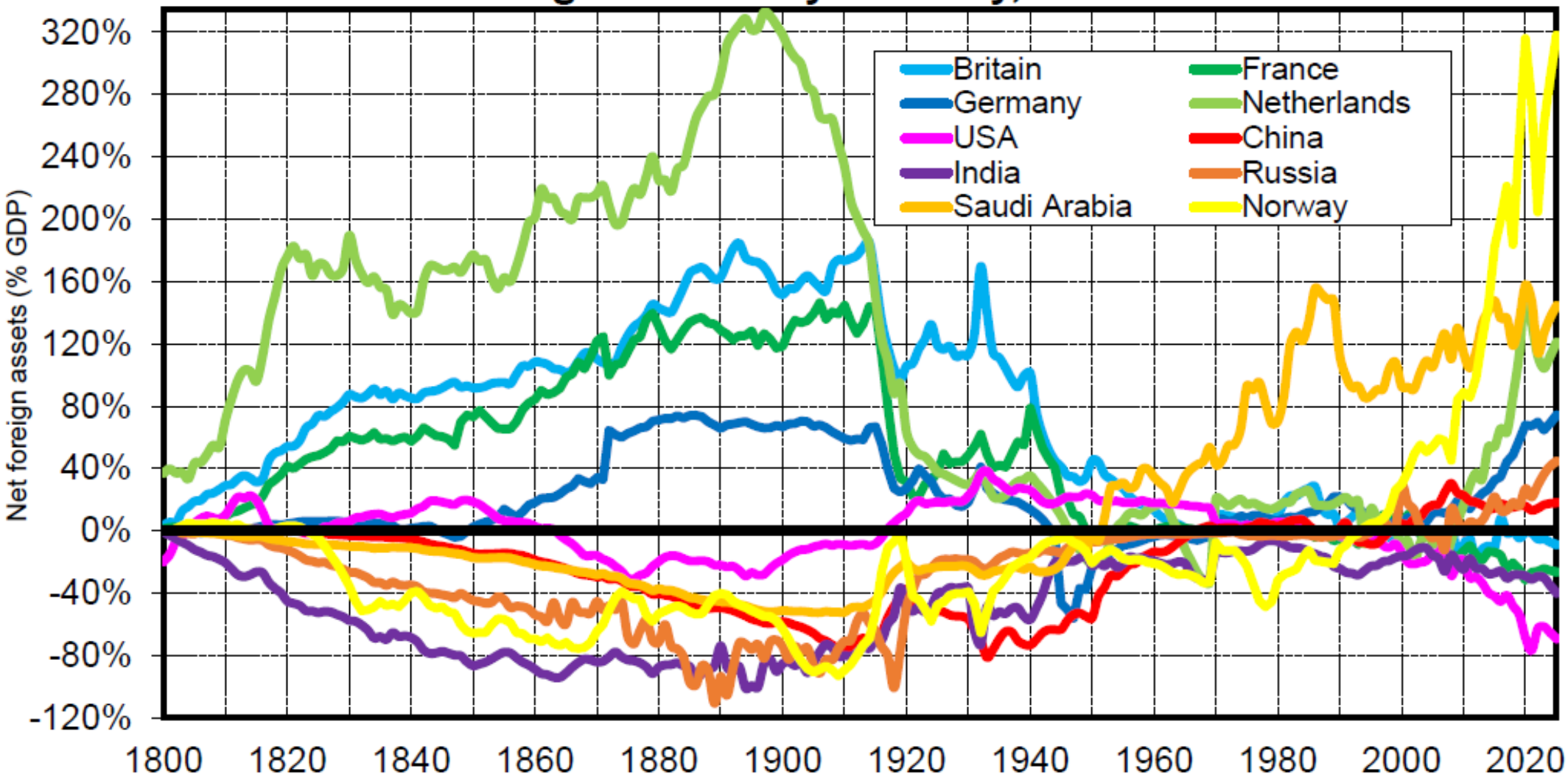
Interpretation. If we look at core European colonial powers (Britain, France, Germany, Netherlands, making 68% of Europe's GDP in 1914), we find that their net foreign assets reach almost 140% of their GDP in 1914. In contrast other European countries have large negative foreign wealth (approximately of the same magnitude as other parts of the world). I.e. core European powers own assets in South Europe, Eastern Europe and Nordic Europe with approximately the same proportions as in the rest of the world. **Sources and series**: wid.world

Foreign Wealth by Country, 1800-2025



Interpretation. Between 1800 & 1914, Europe's accumulation of foreign assets is driven primarily by Britain (about 180% of GDP in 1914) and France (140%), and to a lesser extent Germany (70%). Since the 1970s-1980s, oil countries like Saudi Arabia have also accumulated very large foreign assets relative to their GDP (130% in 2025), but with a much smaller GDP relative to world GDP. **Sources and series**: wid.world

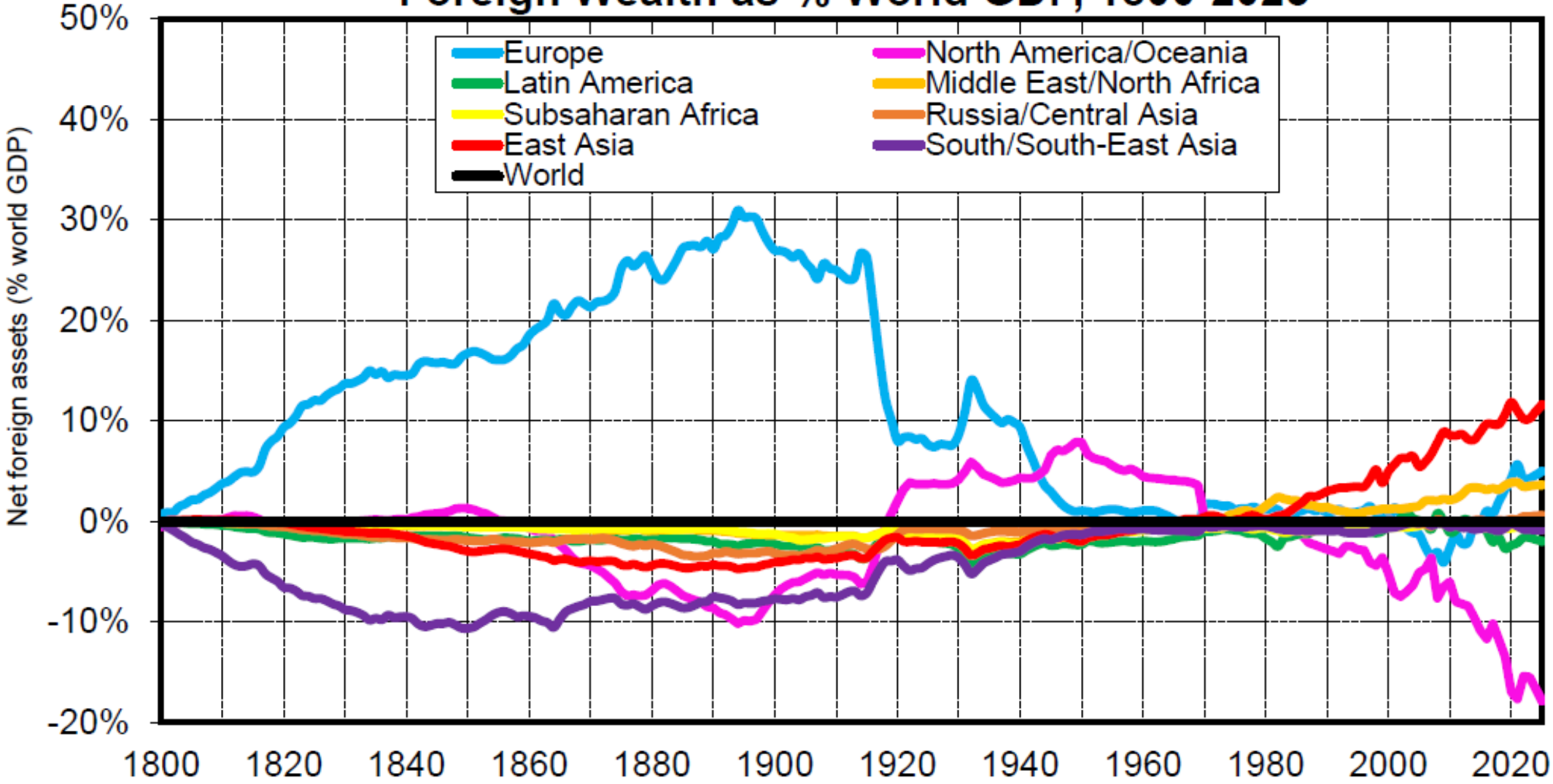
Foreign Wealth by Country, 1800-2025



Interpretation. If we include smaller economies into the picture, we find that net foreign assets can be as large as 300% of a country's GDP or more, such as the Netherlands in 1900 (a small country with large colonial holdings in Indonesia) or Norway in 2025 (a small country with enormous oil and gas reserves that were transformed into a large sovereign fund in a recent decades).

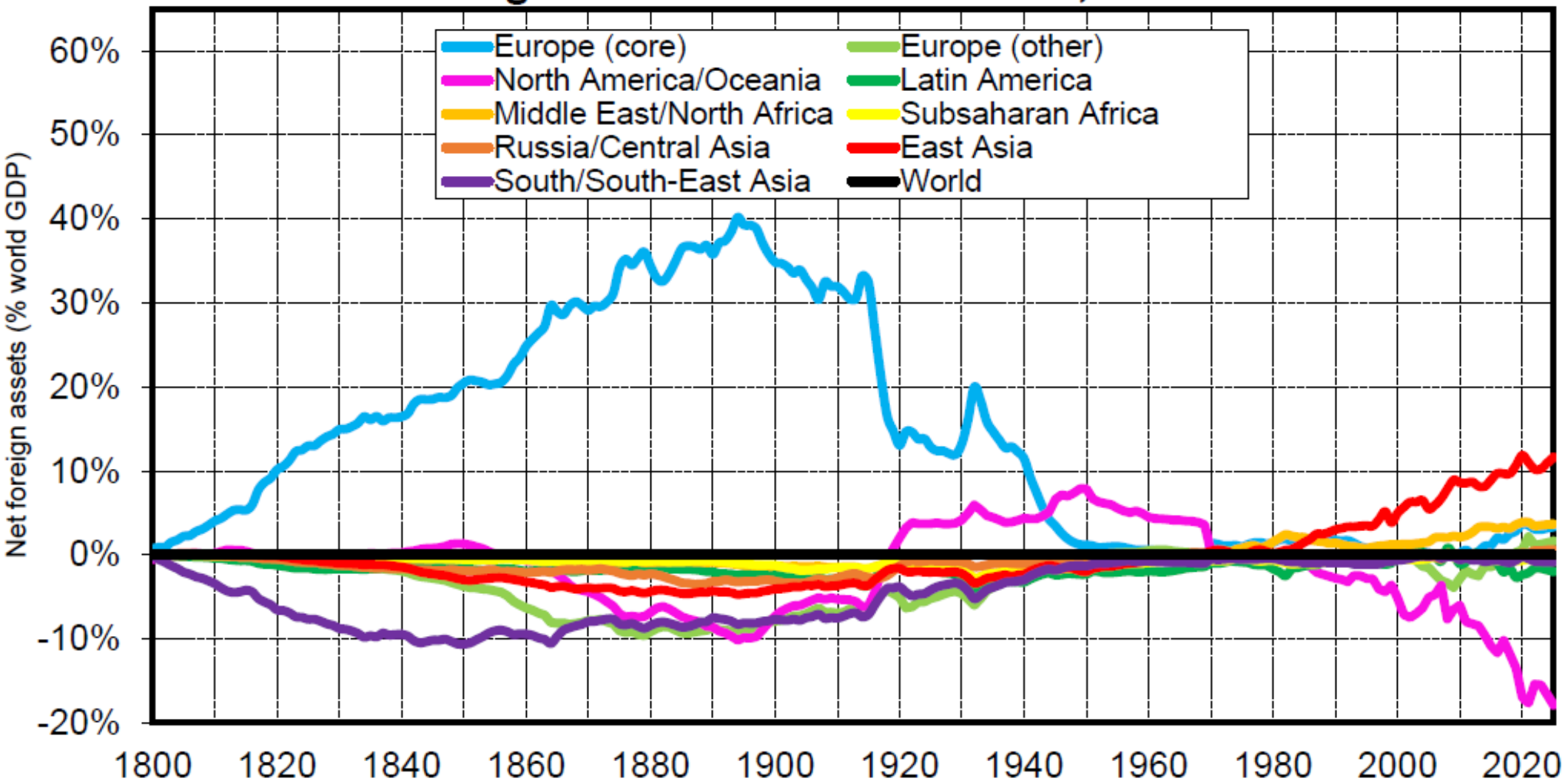
Sources and series: wid.world

Foreign Wealth as % World GDP, 1800-2025



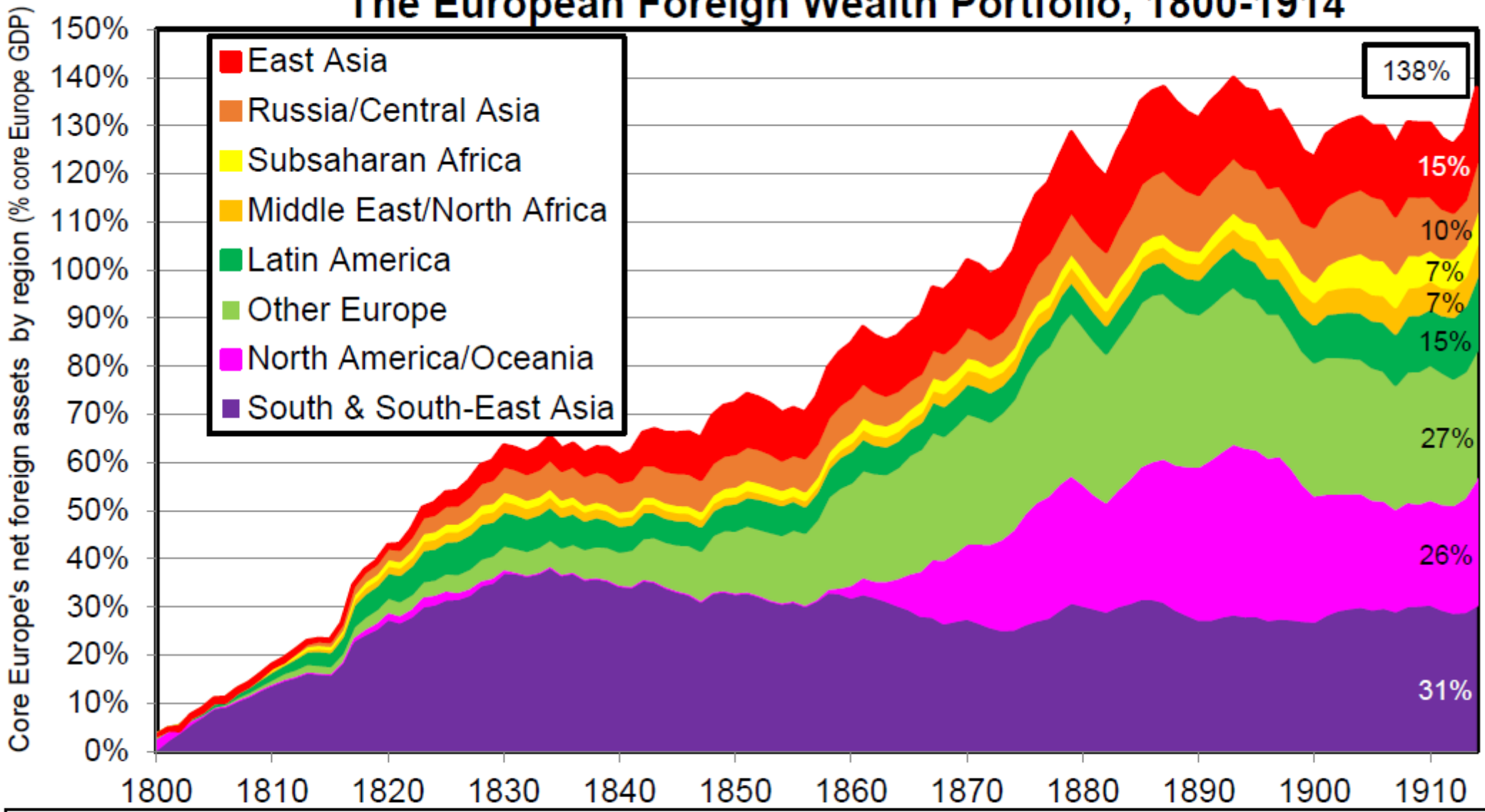
Interpretation. If we express net foreign assets as a fraction of world GDP (rather than as a fraction of the GDP of each country or region), then we find that Europe's pre-WW1 foreign wealth is about 2.5-3 times larger than East Asia's foreign wealth today (and 5-6 times larger than Middle East's foreign wealth today). **Sources and series**: wid.world

Foreign Wealth as % World GDP, 1800-2025



Interpretation. If we express net foreign assets as a fraction of world GDP (rather than as a fraction of the GDP of each country or region), then we find that pre-WW1 foreign wealth helf by core European colonial powers (Britain, France, Germany, Netherlands) is about 3-4 times larger than East Asia's foreign wealth today (and 8-10 times larger than Middle East's foreign wealth today). In effect, at the eve of WW1, European powers had a very balanced wealth portfolio across all other world regions. **Sources and series**: wid.world

The European Foreign Wealth Portfolio, 1800-1914



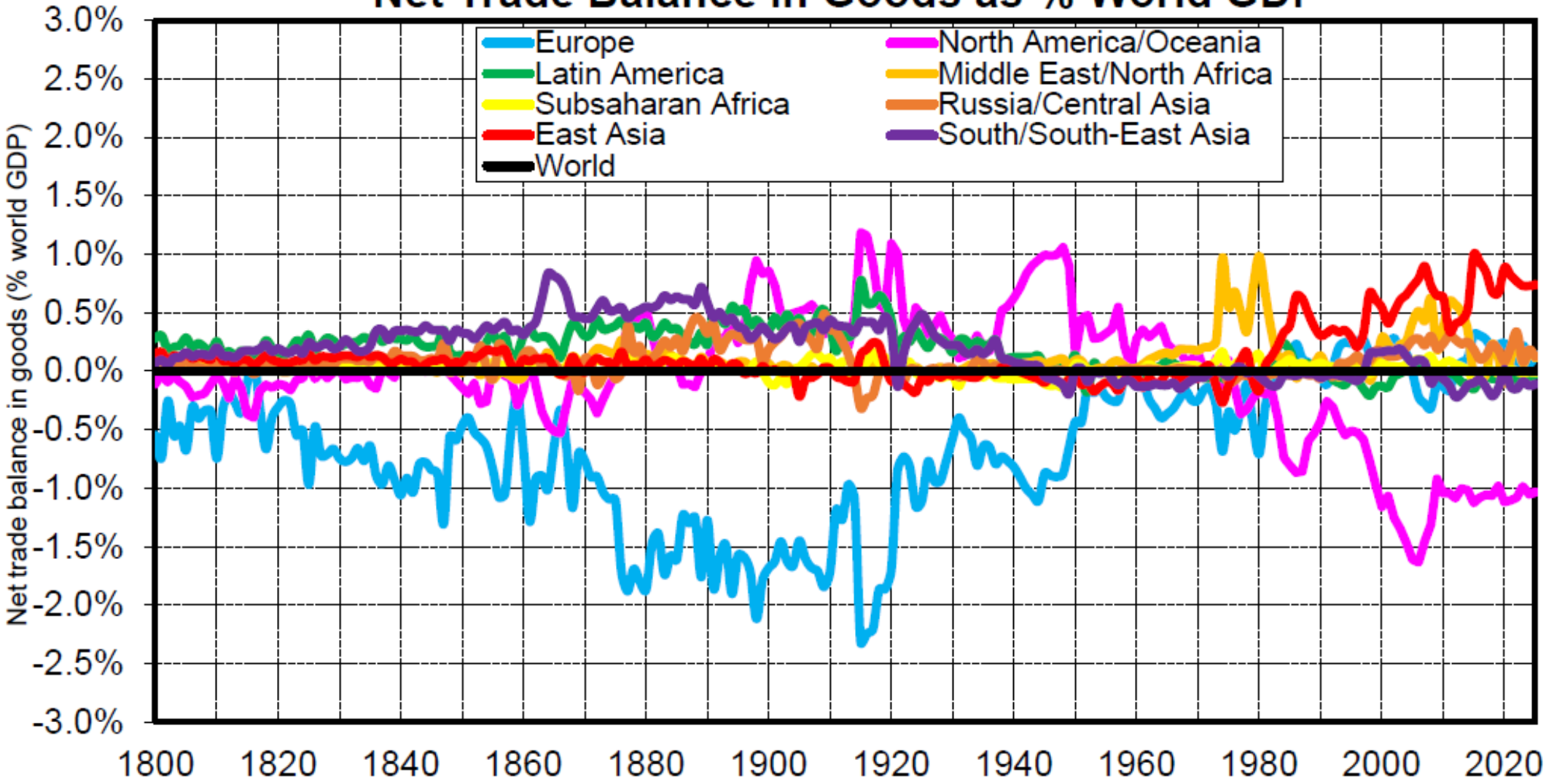
Interpretation. Between 1800 & 1914, core European colonial powers (Britain, France, Germany, Netherlands) accumulate a very large and diversified foreigh wealth porfolio in the rest of the world. By 1914, they own the equivalent of 138% of their GDP in net foreign assets. South & South-East Asia assets are particularly important in the 1800-1840 period - especially British and Dutch holdings in India & Indonesia. Other Europe (including South, Nordic and Eastern Europe), Russia/Central Asia and Middle East/North Africa play a very large role in French and German holdings in the 1880-1914 period. **Sources and series**: wid.world

Decomposing global imbalances 1800-2025: primary commodities, manufactured goods, services, income flows, transfers

Key role of colonial transfers, low commodity prices (forced labour etc.) and capital income in order to build Europe's foreign wealth: **Europe never in trade surplus 1800-1914!**

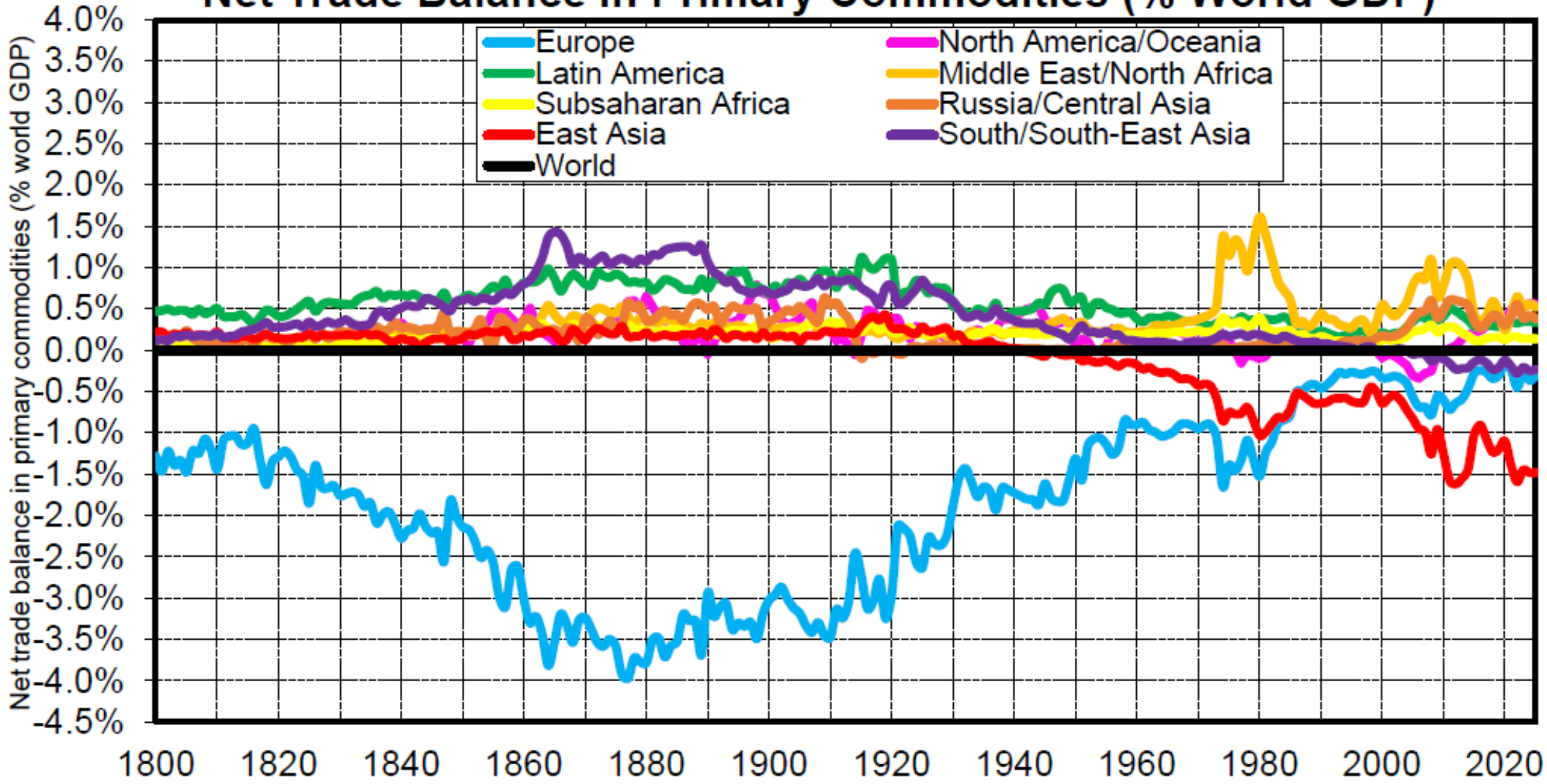
Both in 1800-1914 & in 1970-2025, **low commodity prices play a critical role for wealth accumulation** by manufacturing power (Europe or East Asia)

Net Trade Balance in Goods as % World GDP



Interpretation. Between 1800 and 1914, Europe has a large permanent deficit in trade for goods. I.e. Europe's large current account surplus over this period comes entirely from other BoP items (services, income, transfers). In recent decades, US deficit in trade for goods has been of comparable magnitude, but with insufficient compensating items in the world balance of payment. **Sources and series**: see wid.world

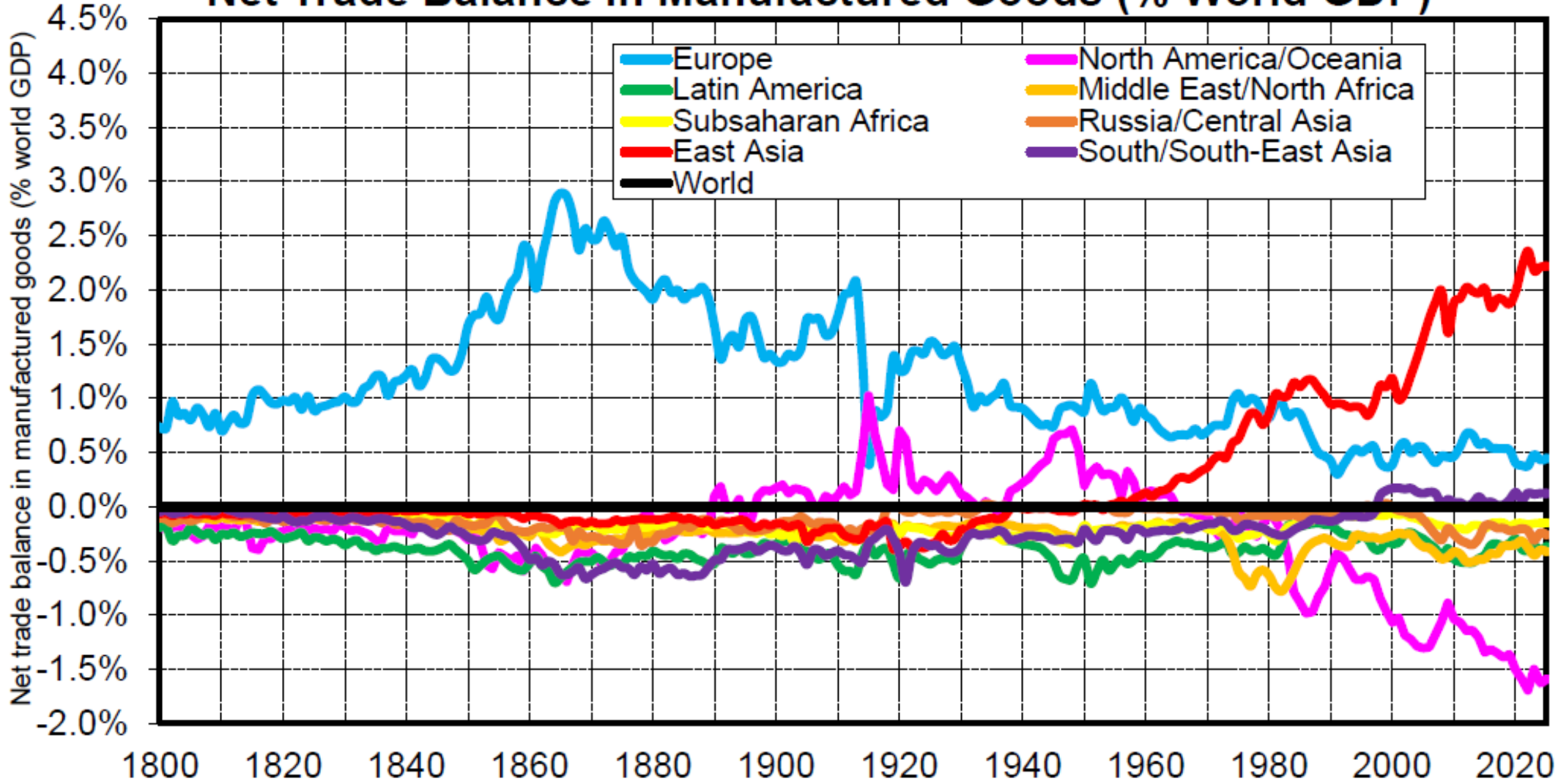
Net Trade Balance in Primary Commodities (% World GDP)



Interpretation. Between 1800 and 1914, the very large European deficit in trade of goods is entirely driven by an enormous deficit with primary commodities. In effect, the equivalent of over half of the world production of primary commidities is exported to Europe from the rest of the world. We observe a similar flow going to East Asia (Japan, China) in recent decades, albeit of smaller magnitude so far.

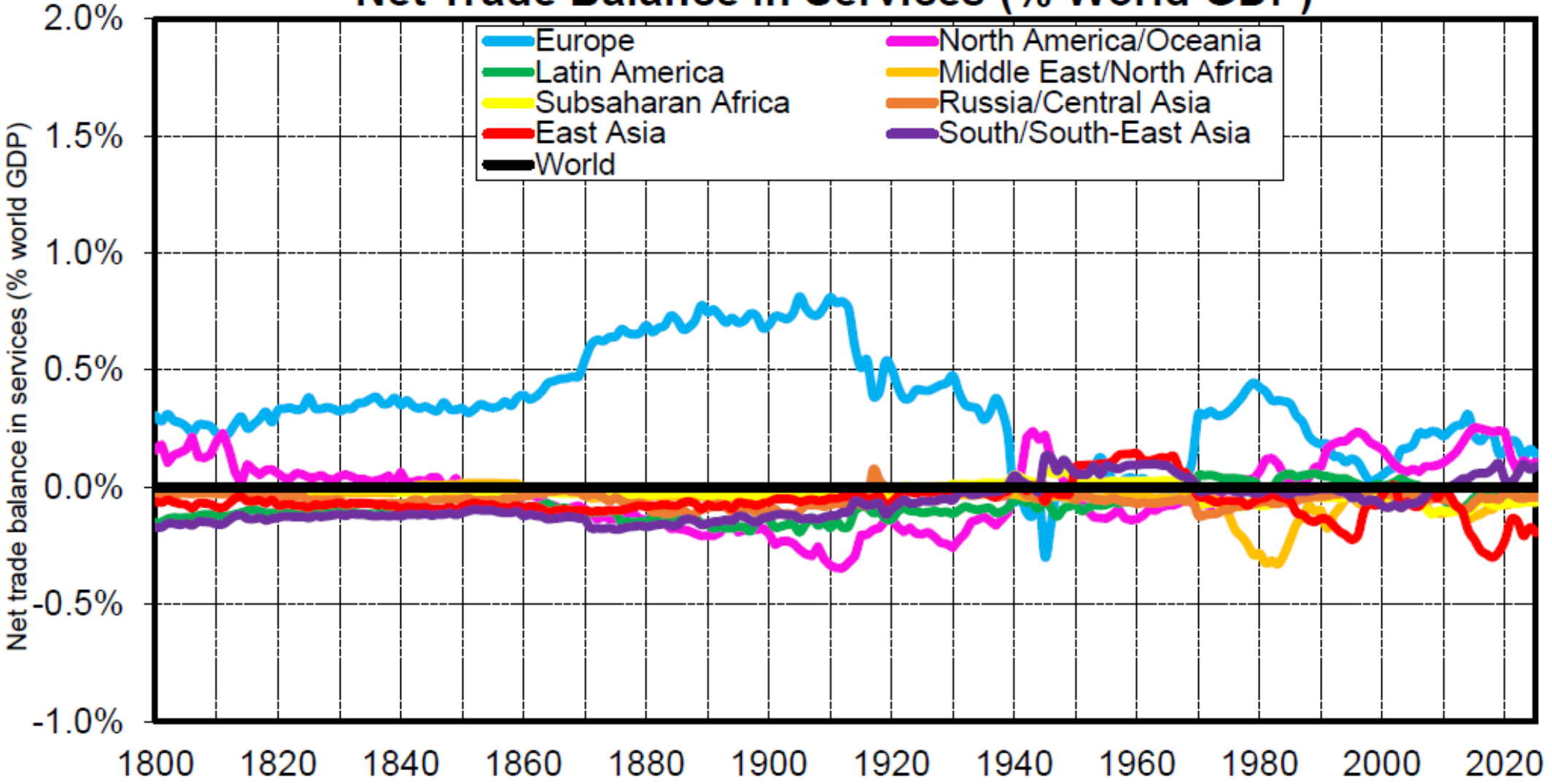
Sources and series: see wid.world

Net Trade Balance in Manufactured Goods (% World GDP)



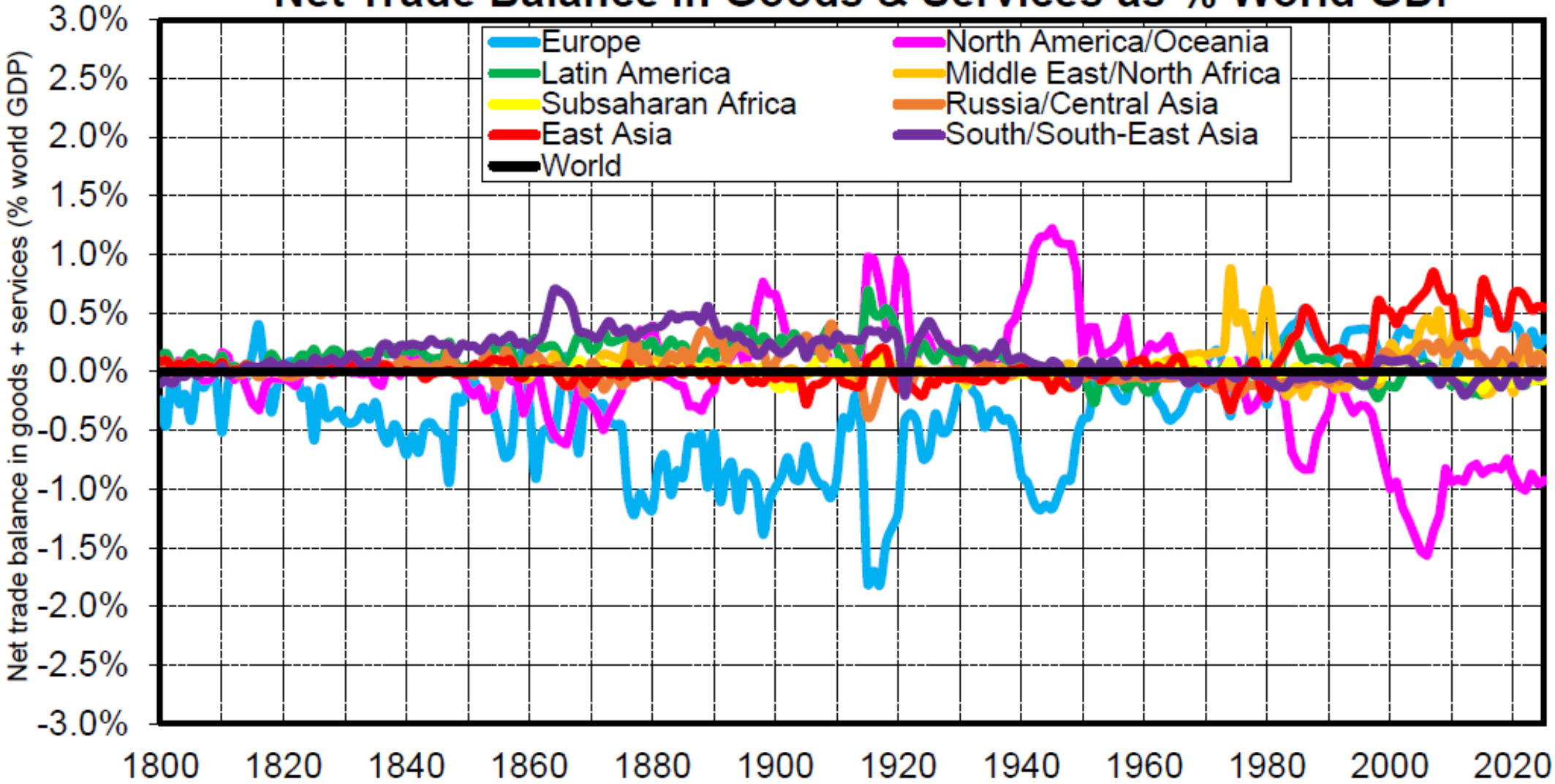
Interpretation. Between 1800 & 1914, Europe is making a large trade surplus in manufactured goods (especially Britain), but it is insufficient to compensate for the huge deficit in primary commodities. In contrast, the trade surplus in manufactured goods of East Asia in recent decades has been of sufficient magnitude to turn the primary commodities deficit into a net surplus. **Sources and series**: see wid.world

Net Trade Balance in Services (% World GDP)



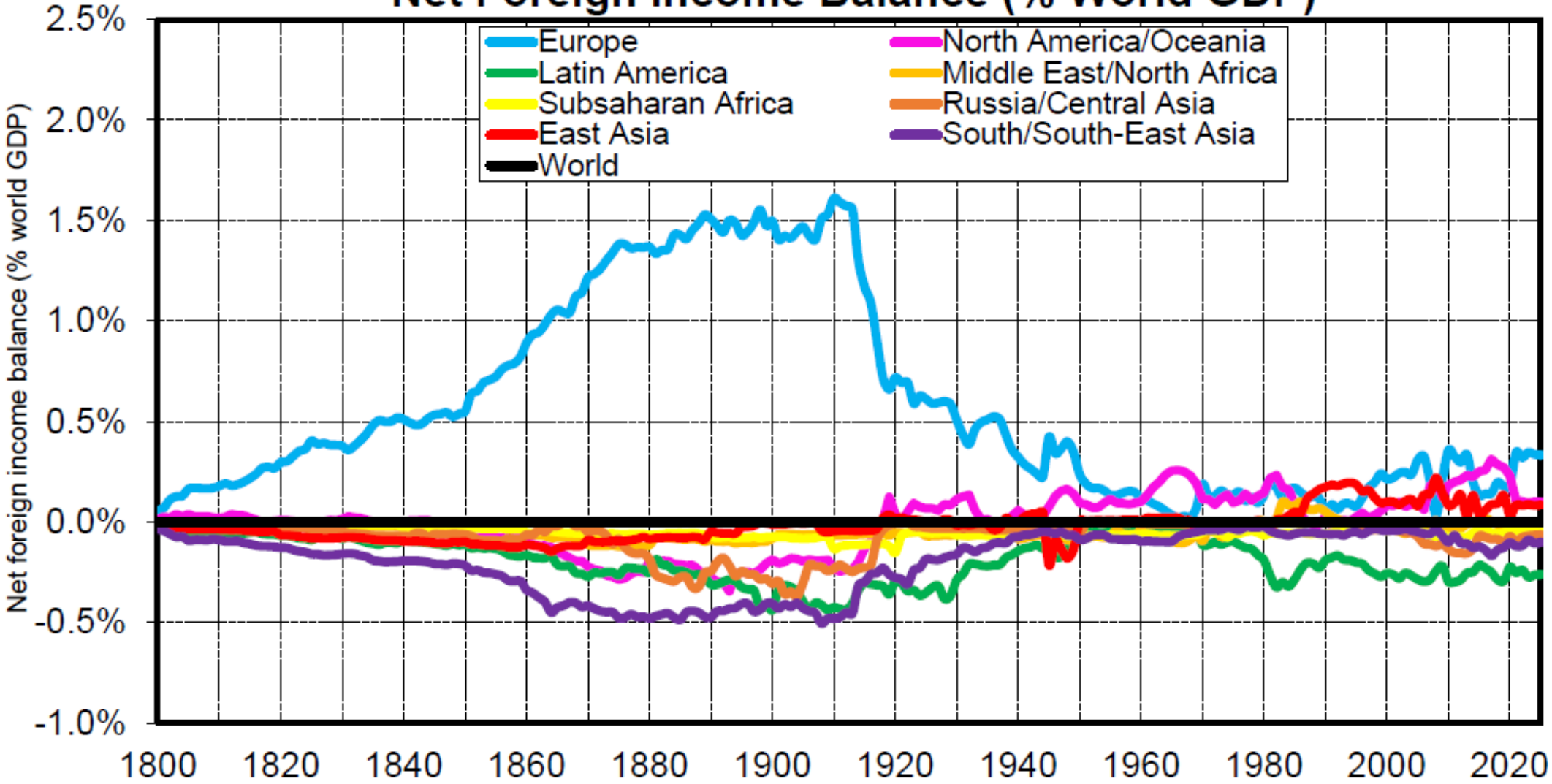
Interpretation. Between 1800 and 1914, Europe is making a permanent surplus in trade for services, particularly Britain in maritime transport, trading services, insurance, etc. (except during Napoleonic wars when US fleet gets a bigger share of freight). However this surplus alone is insufficient to compensate for the deficit in trade for goods. **Sources and series**: see wid.world

Net Trade Balance in Goods & Services as % World GDP



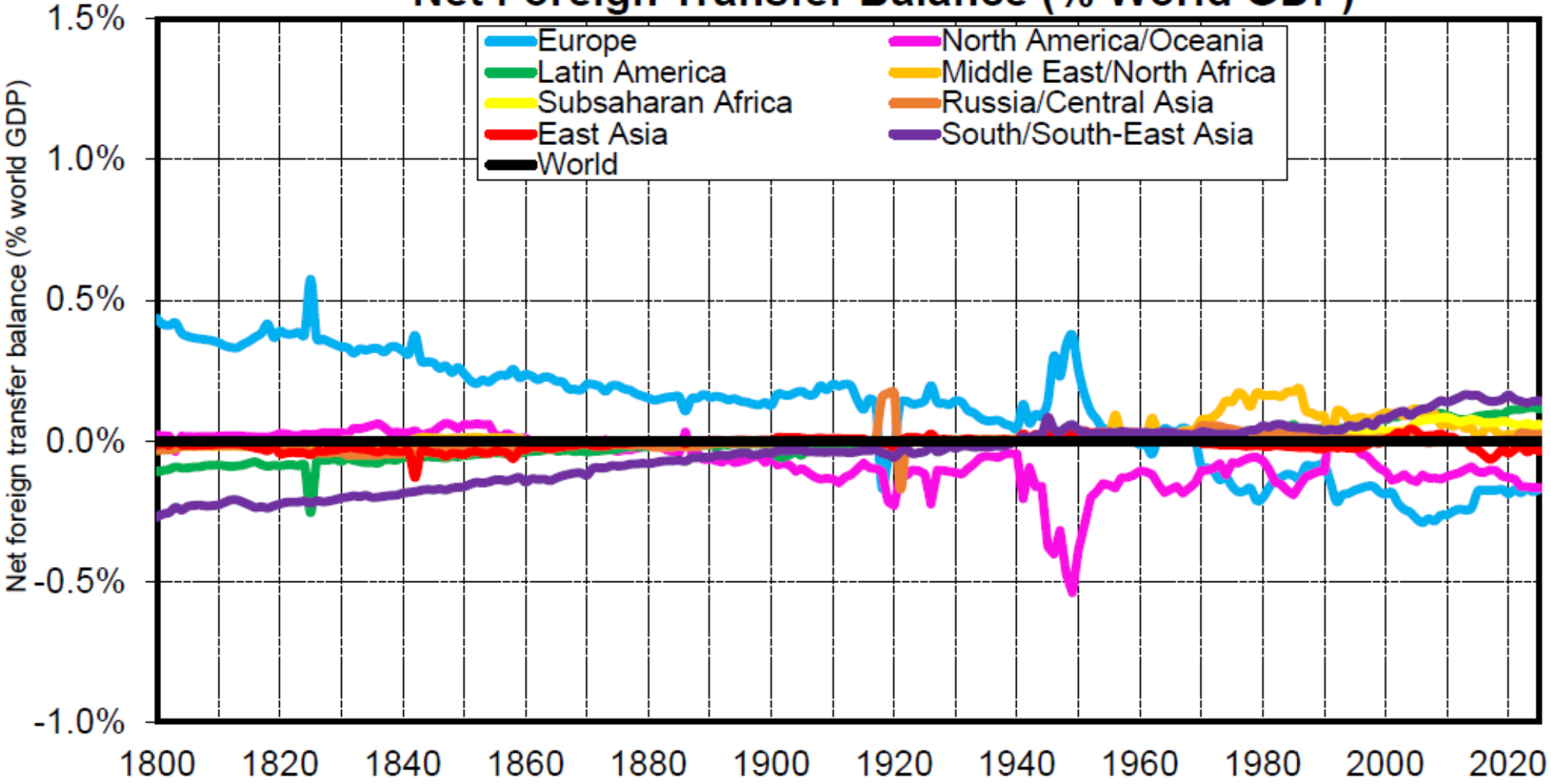
Interpretation. Between 1800 and 1914, Europe has a large permanent deficit in trade for goods, which is only partially compensated by the trade surplus in trade for services (in particular freight/insurance & trading services). I.e. Europe's large current account surplus over this period comes entirely from other BoP items (income, transfers). In recent decades, US deficit in trade for goods and services has been of comparable magnitude, but with insufficient compensating items in the world balance of payment. **Sources and series**: see wid.world

Net Foreign Income Balance (% World GDP)



Interpretation. Between 1800 and 1914, Europe is receiving a rising share of world GDP as foreign capital income payments from the rest of the world. In 1880-1914, Europe receives the equivalent of 1.5% of world GDP in net income flow each year, enough to cover the trade deficit and obtain a large current account surplus. However this is is not the case in 1800-1840 and 1840-1880, when net income flows alone are insufficient to cover the trade deficit. **Sources and series**: see wid.world

Net Foreign Transfer Balance (% World GDP)



Interpretation. Between 1800 and 1914, Europe is earning a permanent the surplus in net foreign transfers, reflecting a combination of war and colonial tributes (French tribute to Haïti 1825, British tribute to China 1842, etc.) and permanent transfers via colonial budgets, especially from India to Britain (so-called "Home charges") and Indonesia to the Netherlands. Although this surplus is smaller in magnitude than the capital income surplus in 1880-1914, it plays a critical role to generate Europe's current account surpluses in 1800-1880. **Sources and series**: see wid.world

Sources of Europe's foreign wealth accumulation, 1800-1914

	Net foreign assets (% GDP)		Decomposition of Net foreign assets/GDP ratio at time t+n (% GDP t+n)							
			Initial foreign wealth	Cumulated trade surplus or deficit (goods)			Cumulated trade surplus or deficit (services)	Cumulated foreign income inflow or outflow	including cumulated excess yield	Cumulated foreign transfer inflow or outflow
	β_t	β_{t+n}		Total	Primary commodities	Manufactured goods				
Europe (GB-FR-DE-NL)	**3%**	**138%**	**0%**	**-141%**	-408%	267%	**62%**	**201%**	59%	**22%**
Great Britain	**3%**	**185%**	**0%**	**-268%**	-653%	385%	**118%**	**299%**	118%	**42%**
France	**1%**	**144%**	**0%**	**-44%**	-269%	225%	**13%**	**191%**	27%	**-6%**
Germany	**0%**	**66%**	**0%**	**-66%**	-241%	175%	**42%**	**78%**	22%	**17%**
Netherlands	**37%**	**183%**	**5%**	**-136%**	-191%	55%	**-15%**	**263%**	-21%	**77%**

Interpretation. The net foreign wealth of European powers (GB-FR-DE-NL) rose from 3% to 138% of GDP between 1800 and 1914. Their cumulated trade deficit for goods was equal to -141% but it was more compensated by invisible BoP items (trade in services, foreign income and foreign transfers). **Sources & series**: see wid.world.

Sources of Europe's foreign wealth accumulation, 1800-1914

	Net foreign assets (% GDP)		Decomposition of Net foreign assets/GDP ratio at time t+n (% GDP t+n)							
			Initial foreign wealth	Cumulated trade surplus or deficit (goods)			Cumulated trade surplus or deficit (services)	Cumulated foreign income inflow or outflow	including cumulated excess yield	Cumulated foreign transfer inflow or outflow
	β_t	β_{t+n}		Total	Primary commodities	Manufactured goods				
Europe (GB-FR-DE-NL)	**3%**	**138%**	**0%**	**-141%**	-408%	267%	**62%**	**201%**	59%	**22%**
1800-1840	**3%**	**61%**	**2%**	**-44%**	-163%	119%	**32%**	**39%**	10%	**33%**
Great Britain	3%	85%	1%	-77%	-285%	208%	49%	54%	15%	58%
Netherlands	37%	140%	24%	-158%	-151%	-7%	-8%	198%	103%	85%
1840-1880	**61%**	**125%**	**27%**	**-67%**	-300%	233%	**40%**	**120%**	37%	**19%**
1880-1914	**125%**	**138%**	**56%**	**-103%**	-241%	138%	**38%**	**139%**	41%	**7%**

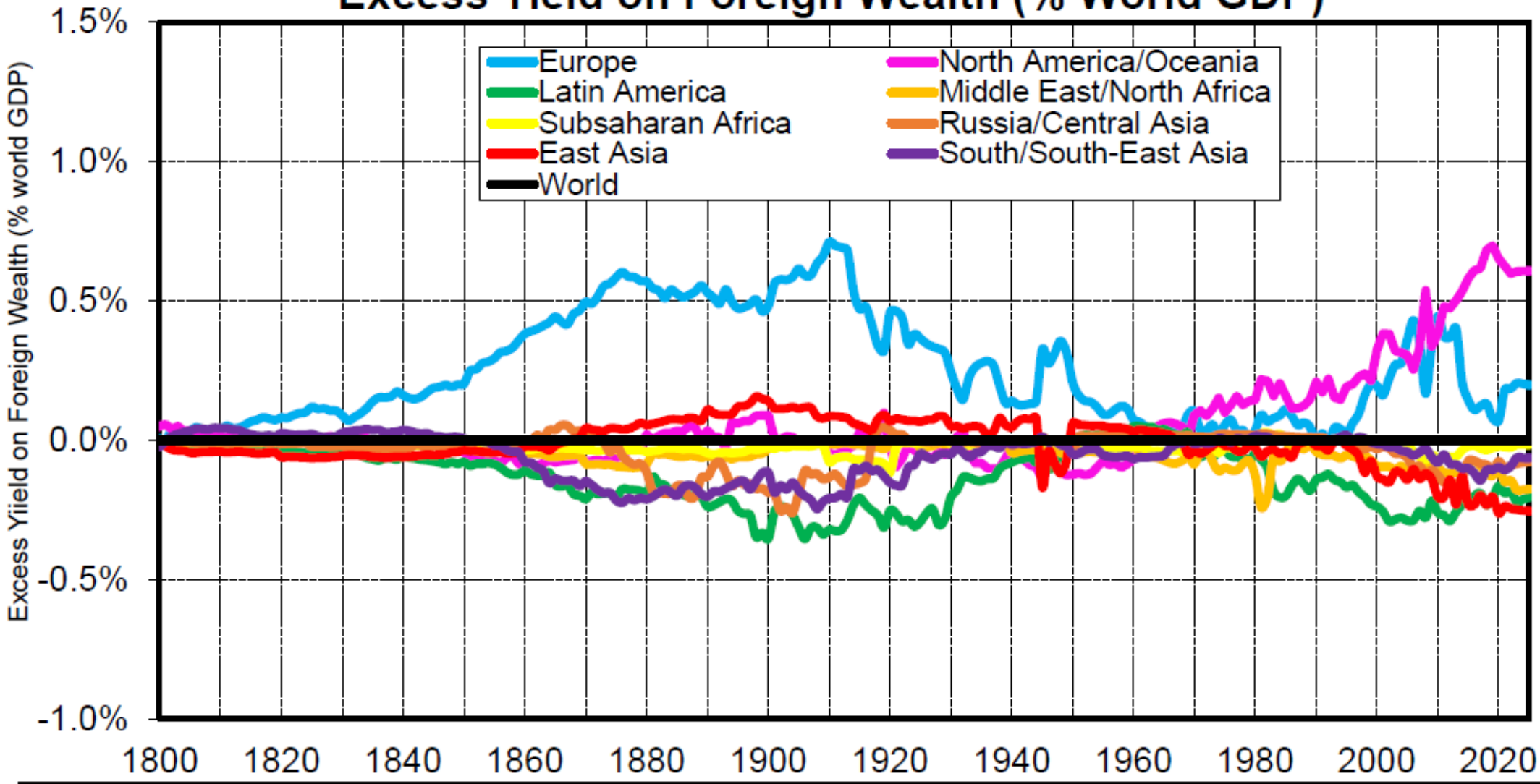
Interpretation. The net foreign wealth of European powers (GB-FR-DE-NL) rose from 3% to 138% of GDP between 1800 and 1914. Their cumulated trade deficit for goods was equal to -141% but it was more compensated by invisible BoP items (trade in services, foreign income and foreign transfers). **Sources & series**: see wid.world.

Sources of foreign wealth accumulation, 1970-2025

	Net foreign assets (% GDP)		Decomposition of Net foreign assets/GDP ratio at time t+n (% GDP t+n)							
			Initial foreign wealth	Cumulated trade surplus or deficit (goods)			Cumulated trade surplus or deficit (services)	Cumulated foreign income inflow or outflow	including cumulated excess yield	Cumulated foreign transfer inflow or outflow
	β_t	β_{t+n}		Total	Primary commodities	Manufactured goods				
Europe	**6%**	**23%**	**0%**	**6%**	-42%	48%	**18%**	**21%**	18%	**-19%**
North America/Oceania	**1%**	**-58%**	**0%**	**-64%**	11%	-75%	**10%**	**10%**	29%	**-8%**
Middle East/North Africa	**-5%**	**75%**	**0%**	**90%**	255%	-165%	**-35%**	**-6%**	-43%	**26%**
Subsaharan Africa	**-24%**	**-42%**	**-1%**	**29%**	198%	-169%	**-77%**	**-55%**	-29%	**64%**
East Asia	**5%**	**49%**	**0%**	**52%**	-92%	144%	**-12%**	**9%**	-14%	**-1%**

Interpretation. The net foreign wealth of East Asia rose from 5% to 49% of GDP between 1970 and 2025, largely due to its cumulated trade surplus. The net foreign wealth of North America/Oceania dropped from 1% to -58%, largely due to its cumulated trade deficit, and would have dropped even further without the positive foreign income coming from excess yield (differential between rates of return on foreign assets and liabilities). **Sources & series**: see wid.world.

Excess Yield on Foreign Wealth (% World GDP)



Interpretation. In 2000-2025, USA and Europe are obtaining together about 0.5-1% of world GDP each year from the rest of world in excess yield on foreign wealth (i.e. due to the differential between their rate of return on gross foreign assets and gross foreign liabilities). We observe a similar surplus for Europe in 1800-1914, but due to data imperfecttions this might also reflect other terms (such as unmeasured colonial payments) rather than excess yield strictly speaking. **Sources and series**: see wid.world

Counterfactual simulations on foreign wealth accumulation under alternative trade & monetary regimes 1800-2025

Financial simulations. We set colonial transfers to zero (or raise commodity prices) and leave all other flows unchanged, and look at impact on net foreign wealth in 1914 or 2025.

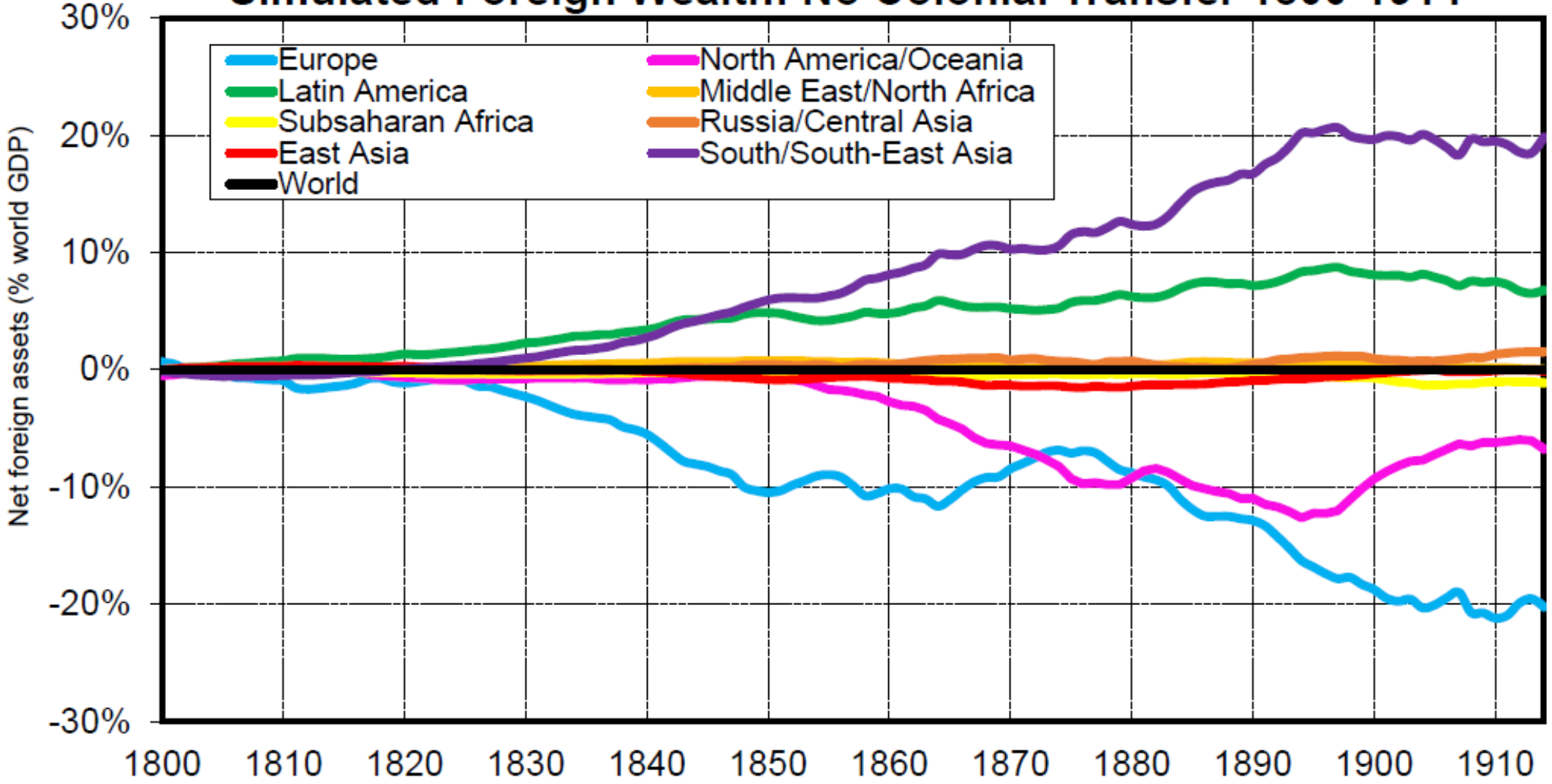
Economic simulations. Ideally we should also take into account the impact on domestic investment/productivity & global convergence in per capita GDP by 2025
(+ sectoral specialization/sustainability/carbon emissions) (ignored here, left for future research)

Main results from financial simulations.

1800-1914. If colonial transfers (war and colonial tributes) **are set to zero**, and/or **primary commodity prices are raised by 20%** (a lower bound estimate for the value of unpaid forced labor in export production of cotton, sugar, grain, etc.), **then Europe ends up with huge negative foreign wealth in 1914.**

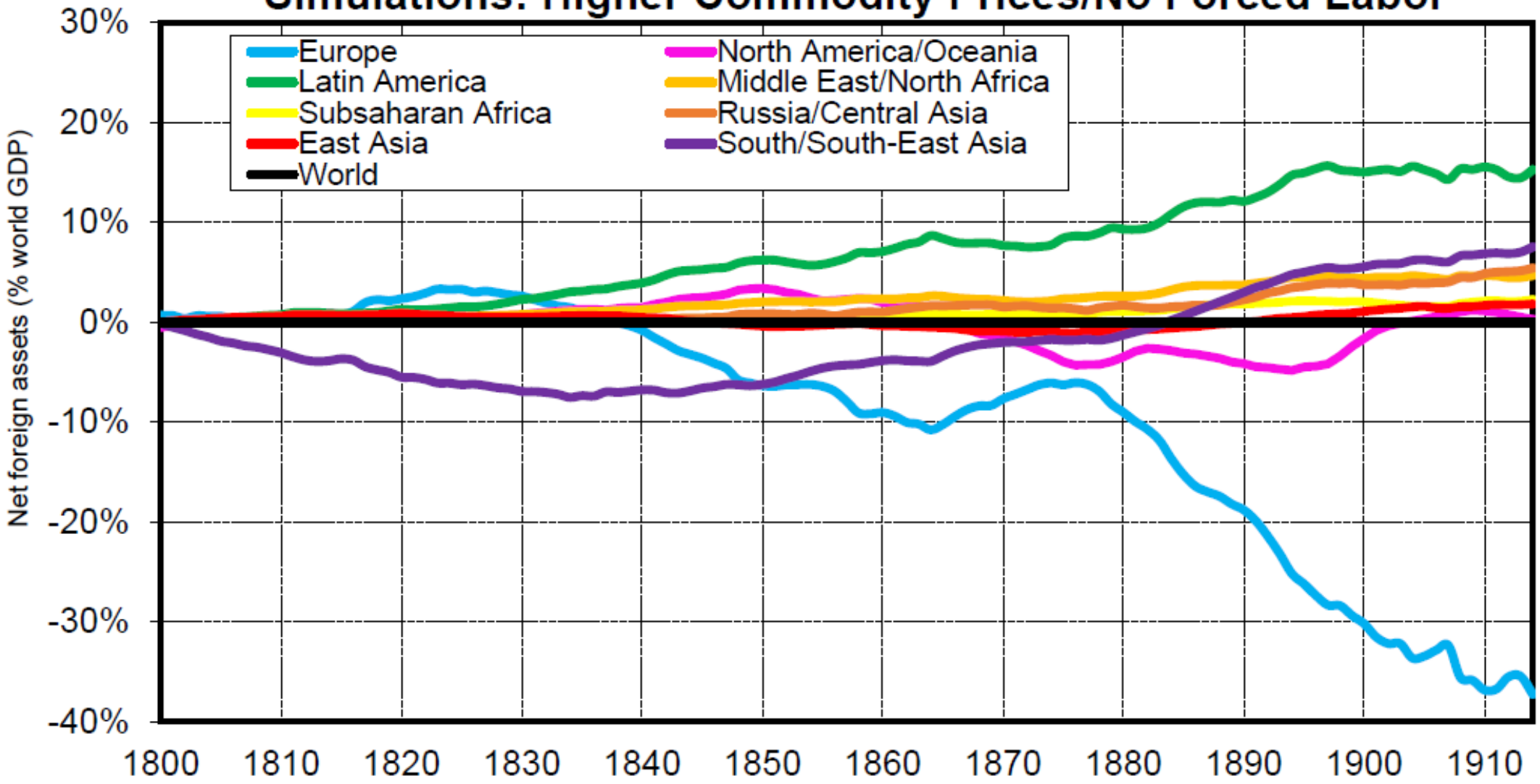
1970-2025. **If primary commodity prices are raised by 20%** (still a lot less than PPP), **then Subsaharan Africa owns substantial positive foreign wealth in 2025** (larger than East Asia).

Simulated Foreign Wealth: No Colonial Transfer 1800-1914



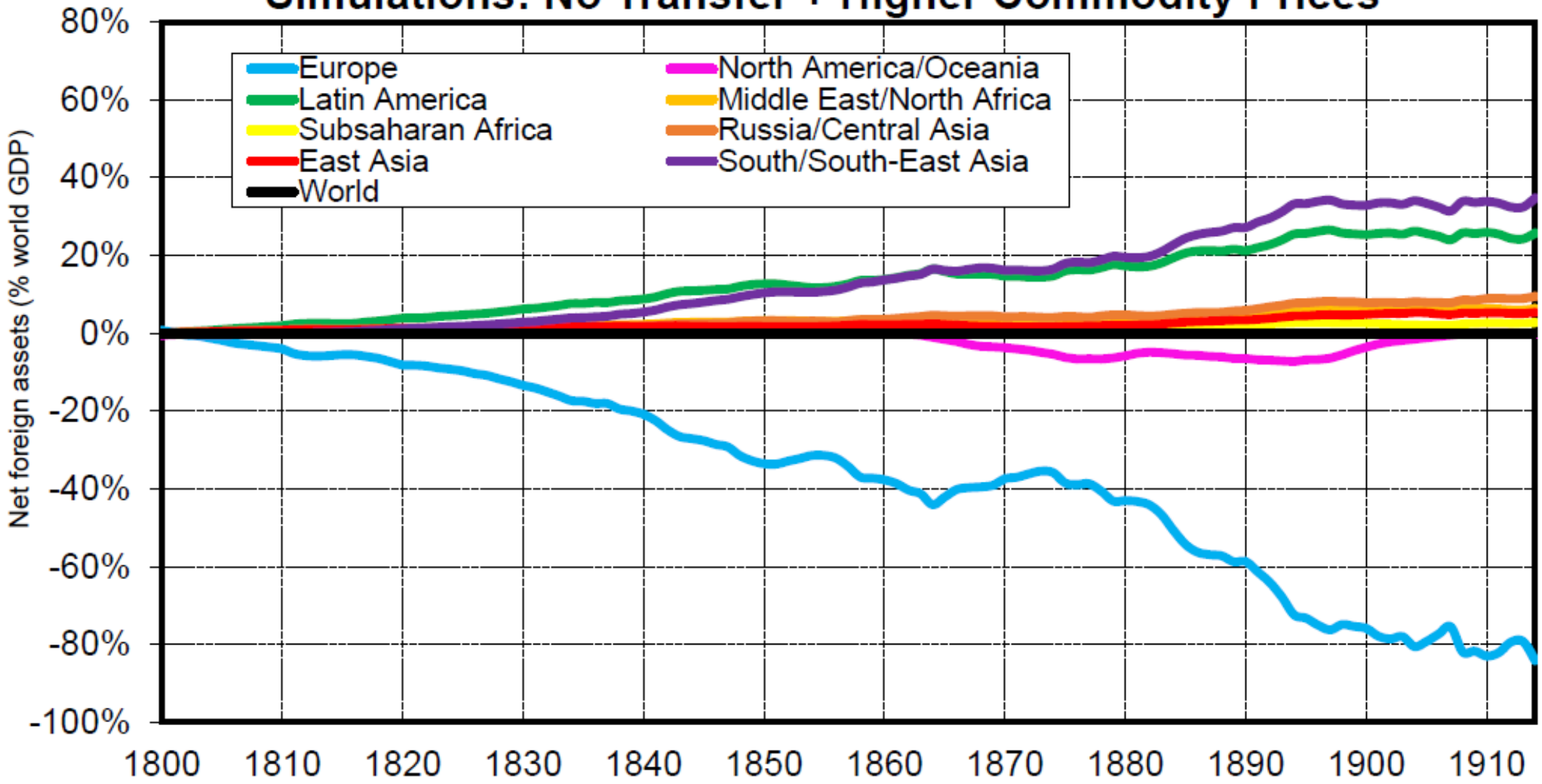
Interpretation. In the absence of the net transfer flows received by Europe in 1800-1914 (war tributes paid by Haïti and China to France and Britain, "Home charges" paid by India and Indonesia to Britain and the Netherlands, etc.)., and leaving all other flows unchanged, Europe would have had a very large negative wealth position by 1914, mostly to the benefit of South/South-East Asia (and to a lesser extent to Latin American, due to in particular to large transfer outflows from West Indies in 1800-1850). **Sources and series**: wid.world

Simulations: Higher Commodity Prices/No Forced Labor



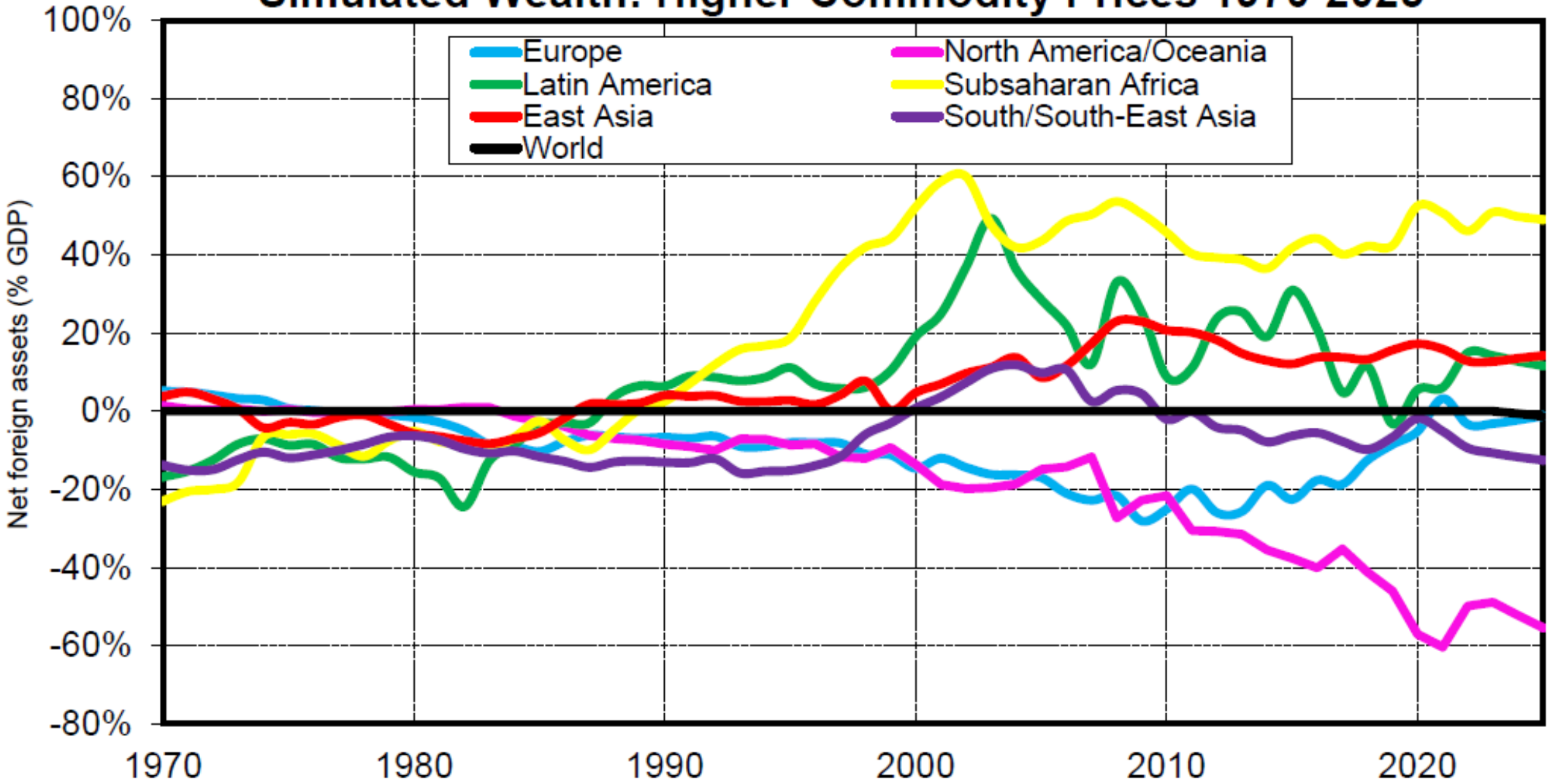
Interpretation. Assuming that primary commodity prices would have been 20% higher than what they were betwen 1800 and 1914 (which corresponds to a lower bound estimate of the value of unpaid forced labor in the export production of cotton, sugar, grain, etc.. over this period), and leaving all other flows unchanged, Europe would have had a very large negative wealth position by 1914 (about -60% of world GDP, i.e. about -160% of Europe's GDP), to the benefit of all other regions (including North America/Oceania). **Sources and series**: wid.world

Simulations: No Transfer + Higher Commodity Prices



Interpretation. Assuming both no colonial transfers and higher commodity prices, and leaving all other flows unchanged, Europe would have had an enormous negative wealth position by 1914 (about -100% of world GDP, i.e. about -300% of Europe's GDP), to the benefit of all other regions. In particular, South & South East Asia would owen about 40% of world GDP in foreign assets (about 500% of their GDP) and Latin America about 30% of world GDP (over 700% of their GDP). **Sources and series**: wid.world

Simulated Wealth: Higher Commodity Prices 1970-2025



Interpretation. Assuming that primary commodity prices would have been 20% higher than what they were betwen 1970 and 2025, leaving all other flows unchanged, then Subsaharan Africa would own substantial foreign wealth (+48% of its GDP, vs -42% in reality), more than East Asia (+14% of its GDP, vs +49% in reality), and a lot more than Europe (+1% of its GDP, vs +24% in reality).

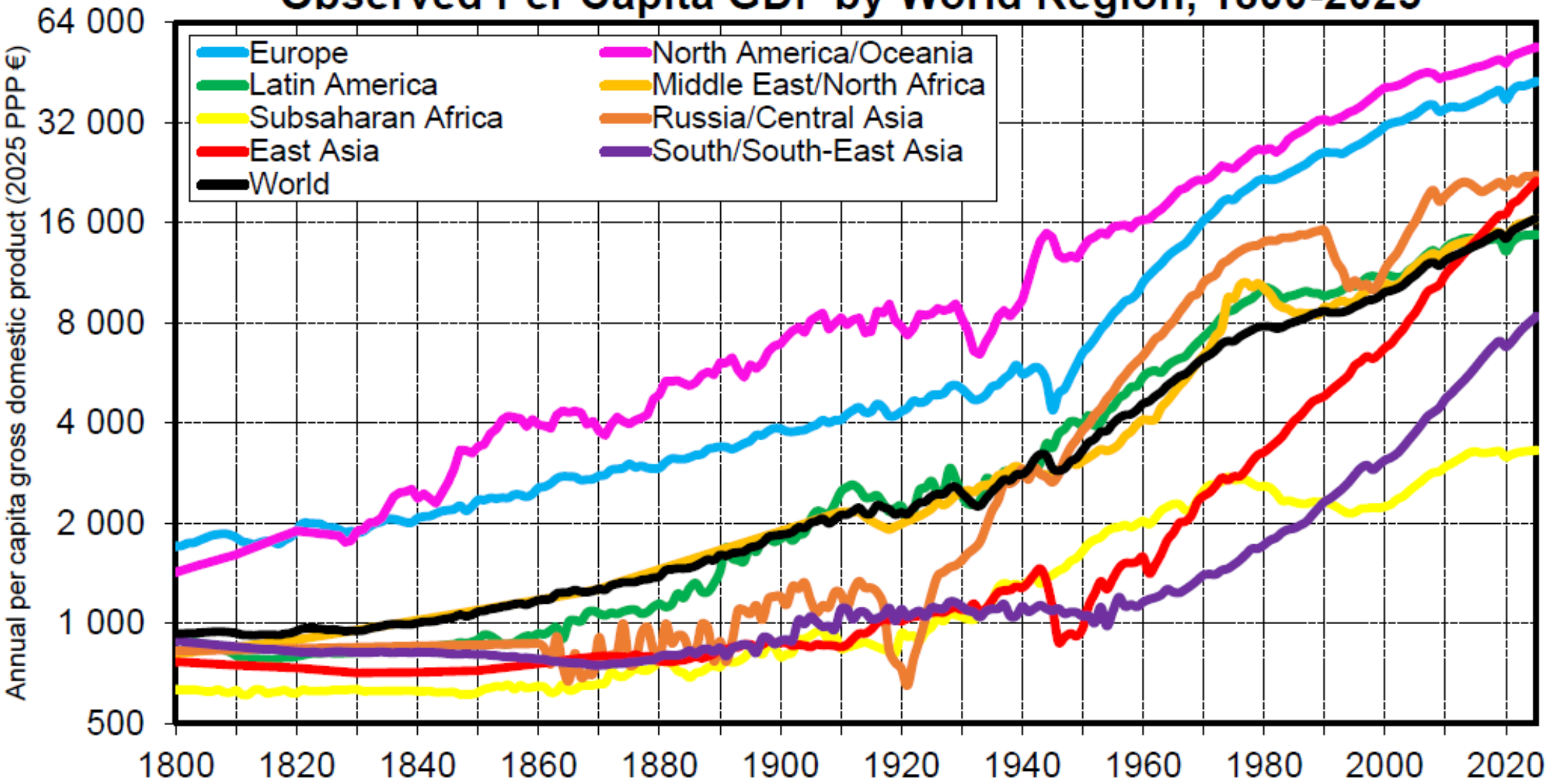
Sources and series: wid.world

Main results from economic simulations.

1800-2025. If colonial transfers are set to zero and **primary commodity prices are raised by 20%**, and **all corresponding revenues invested in domestic human capital accumulation in benefiting countries**, then this brings us a long way toward global convergence in per capita GDP by 2025

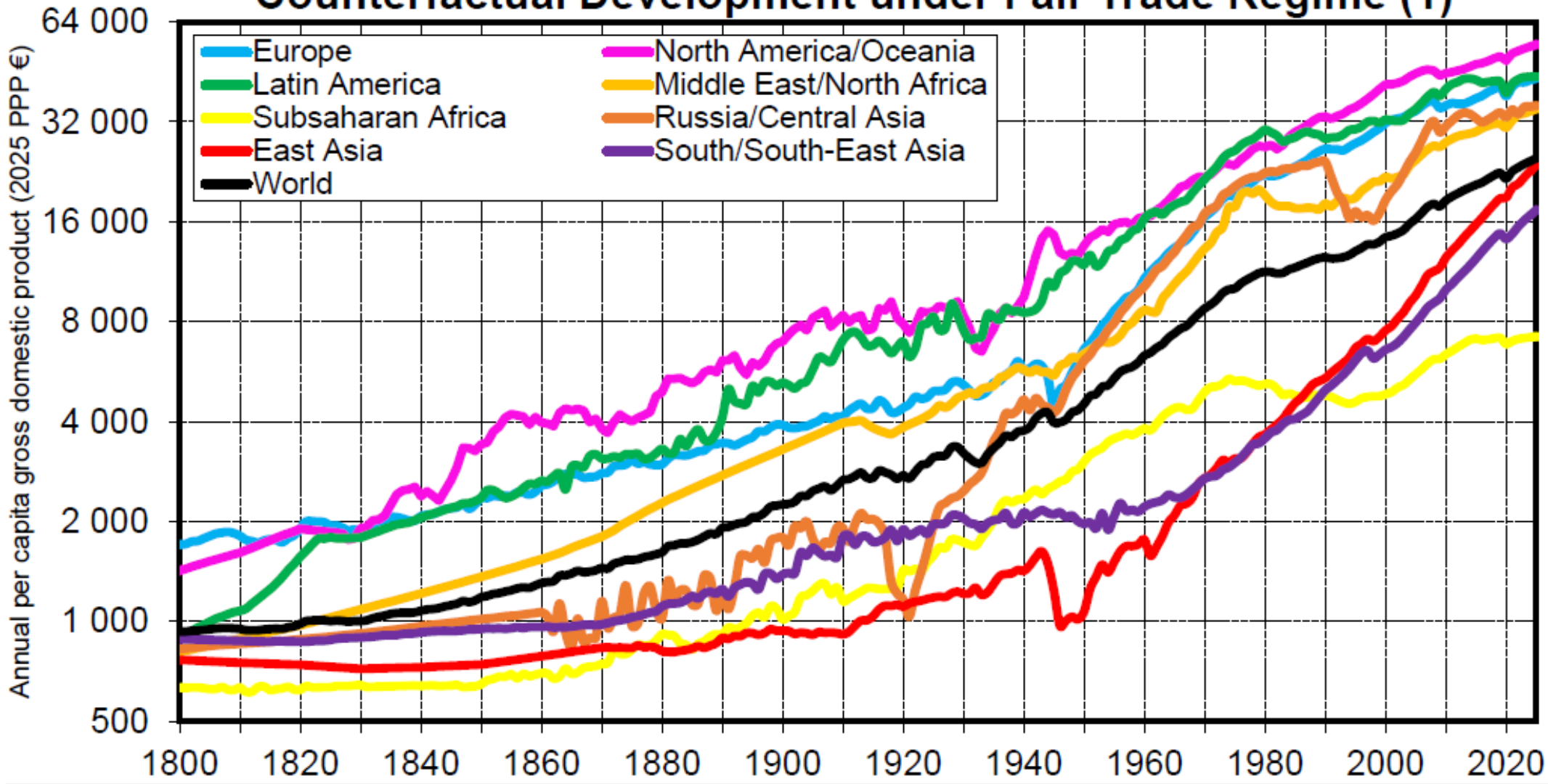
1800-2025. **In order to obtain further convergence** (including for Subsaharan Africa), **one also needs to assume a 30% rise in terms of exchange for poor countries**, e.g. via Global Clearing Union and/or Common International Currency

Observed Per Capita GDP by World Region, 1800-2025



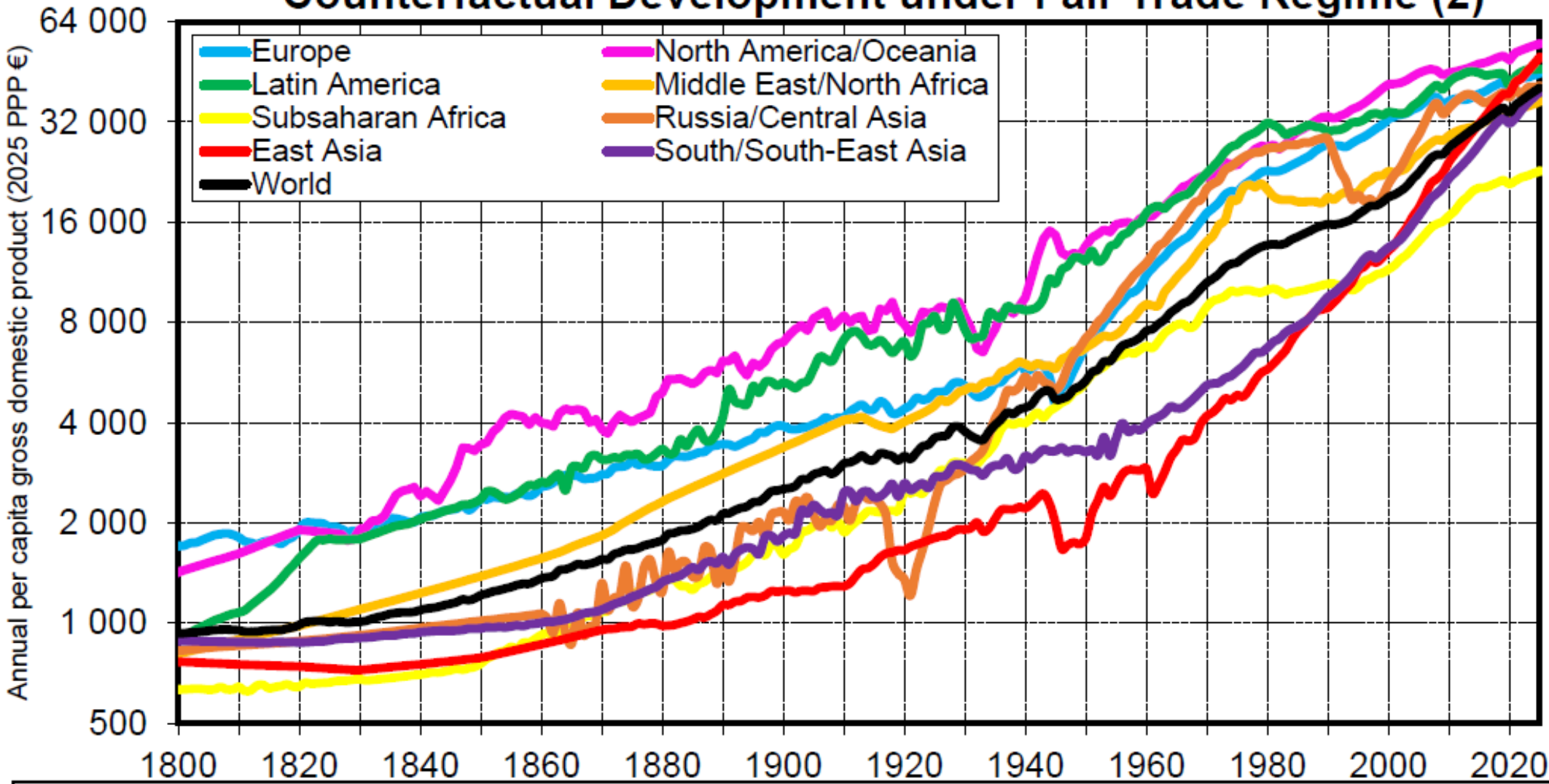
Interpretation. Expressed in 2025 PPP €, annual per capita gross domestic product (GDP) rose from about 900€ in 1800 to about 16 000€ in 2025 at the global level, with large disparities across world region: about 3 000€ in Subsaharan Africa, vs 40 000-50 000€ in Europe and North America/Oceania. Between 1800 and 2025, per capita GDP was multiplied by about 18 at the world level in PPP terms, which corresponds to average annual real growth rate of 1,3% per year. **Sources and series**: see wid.world

Counterfactual Development under Fair Trade Regime (1)



Interpretation. Average per capita GDP at the world level would be substantially larger in 2025 (and inequality between world regions a lot smaller) under the following counterfactual development scenario: no colonial transfers over 1800-1914 period + higher commodity prices over 1800-2025 period (+20%) + the corresponding gains are invested in domestic human capital investment in the benefiting countries + the corresponding losses are absorbed by consumption cuts by the rich in other countries, in particular in Europe. **Sources and series**: see wid.world

Counterfactual Development under Fair Trade Regime (2)



Interpretation. Average per capita GDP at the world level could be even larger in 2025 (and inequality between world regions even smaller) if we further assume better terms of exchange for poor countries throughout the 1800-2025 period (+30% in terms of exchange for countries with per capita GDP lower than 70% of world average, for instance via a Global Clearing Union and/or Common Currency). The bottom line is that different power relations, institutions and trade rules can have a major impact on comparative development. **Sources and series**: see wid.world

Conclusion of Lecture 3

- **The Industrial Revolution & the rise of the West** are tightly connected to a global system of mobilization of labour & natural ressources, in relation to slavery & colonialism

- **Other development trajectories could have happened**, but they would likely have involved sharply different power relations and different distributions of wealth & well-being between countries & social classes