Global Inequality in Historical & Comparative Perspective

Thomas Piketty

PSE Summer School, June 10 2025

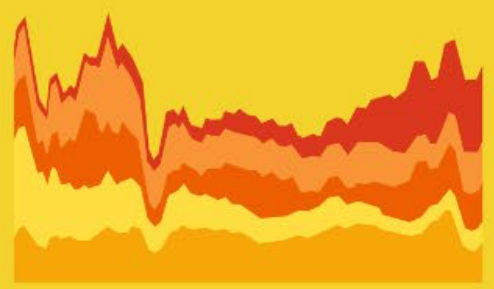
WORLD | BY COUNTRY | DATA | METHODOLOGY | ABOUT US | NEWS

WORLD INEQUALITY DATABASE

WORLD VIEW

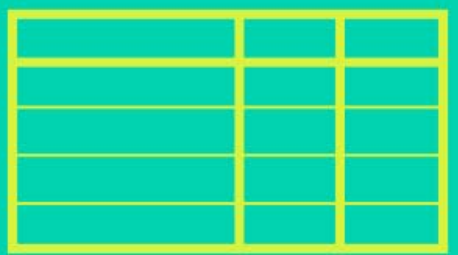
Compare inequality between countries on an interactive world map

COUNTRY GRAPHS



Follow the evolution of inequality within countries with user-friendly graphs

DATA TABLES



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WORLD
INEQUALITY
REPORT
2022
Coordinated by
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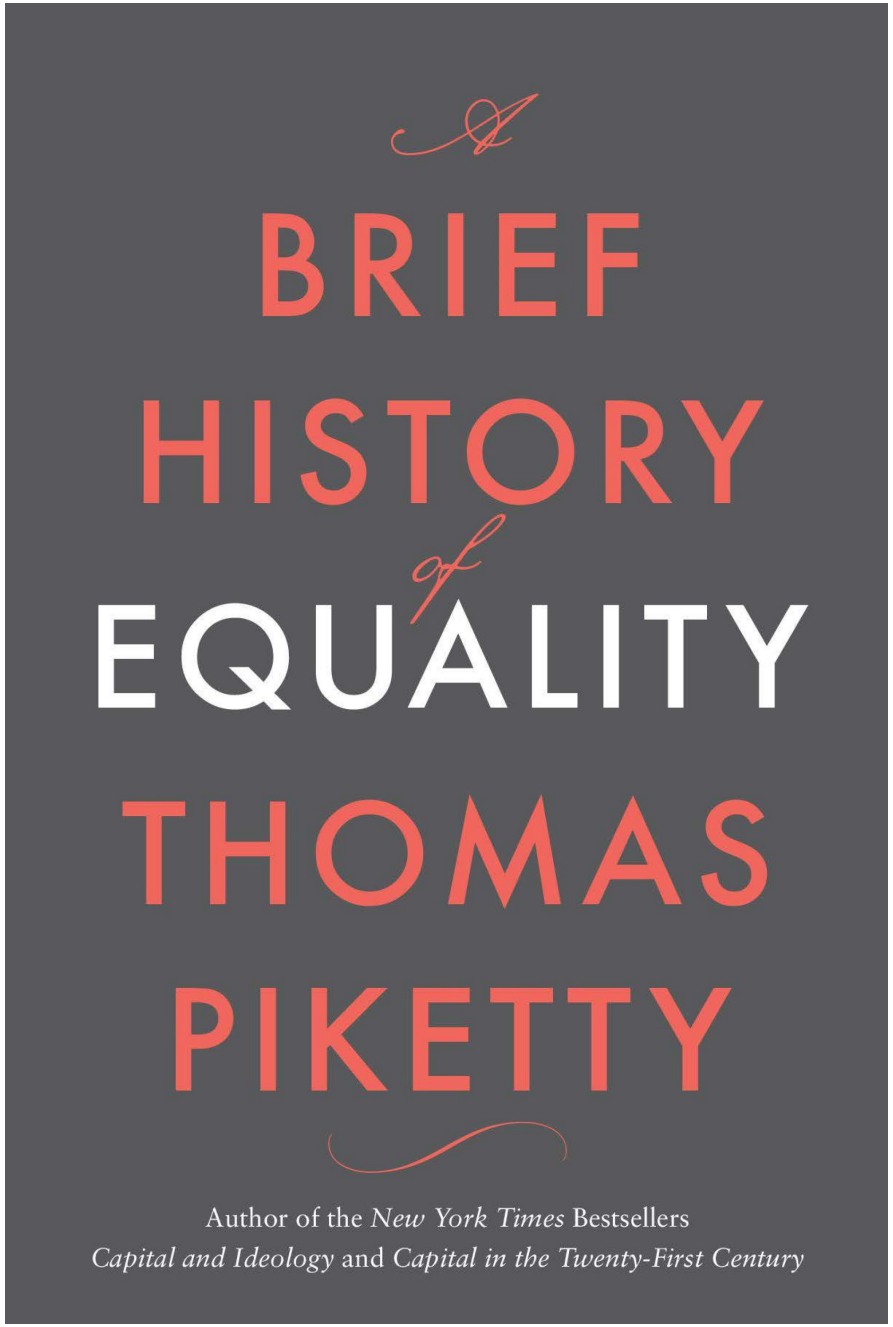
Emmanuel Saez
Gabriel Zucman
WORLD INEQUALITY LAB
wir2022.wid.world
@WIL_inequality | #InequalityReport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UNEQUAL EXCHANGE AND NORTH-SOUTH RELATIONS:

EVIDENCE FROM GLOBAL TRADE FLOWS AND THE WORLD BALANCE OF PAYMENTS 1800-2025

GASTÓN NIEVAS
THOMAS PIKETTY

WORKING PAPER N°2025/11

MAY 2025

WORLD INEQUALITY LAB

COUNTRY & REGION

KEY INDICATORS

AVERAGE INCOME
- Per adult national income
- Per adult GDP

INCOME INEQUALITY
- Top 10% share
- Bottom 50% share
- Top 1% share

AVERAGE WEALTH
- Per adult national wealth
- Wealth-income ratio

WEALTH INEQUALITY
- Top 10% share
- Bottom 50% share
- Top 1% share

CARBON INEQUALITY [NEW]
- Top 10% carbon emitters

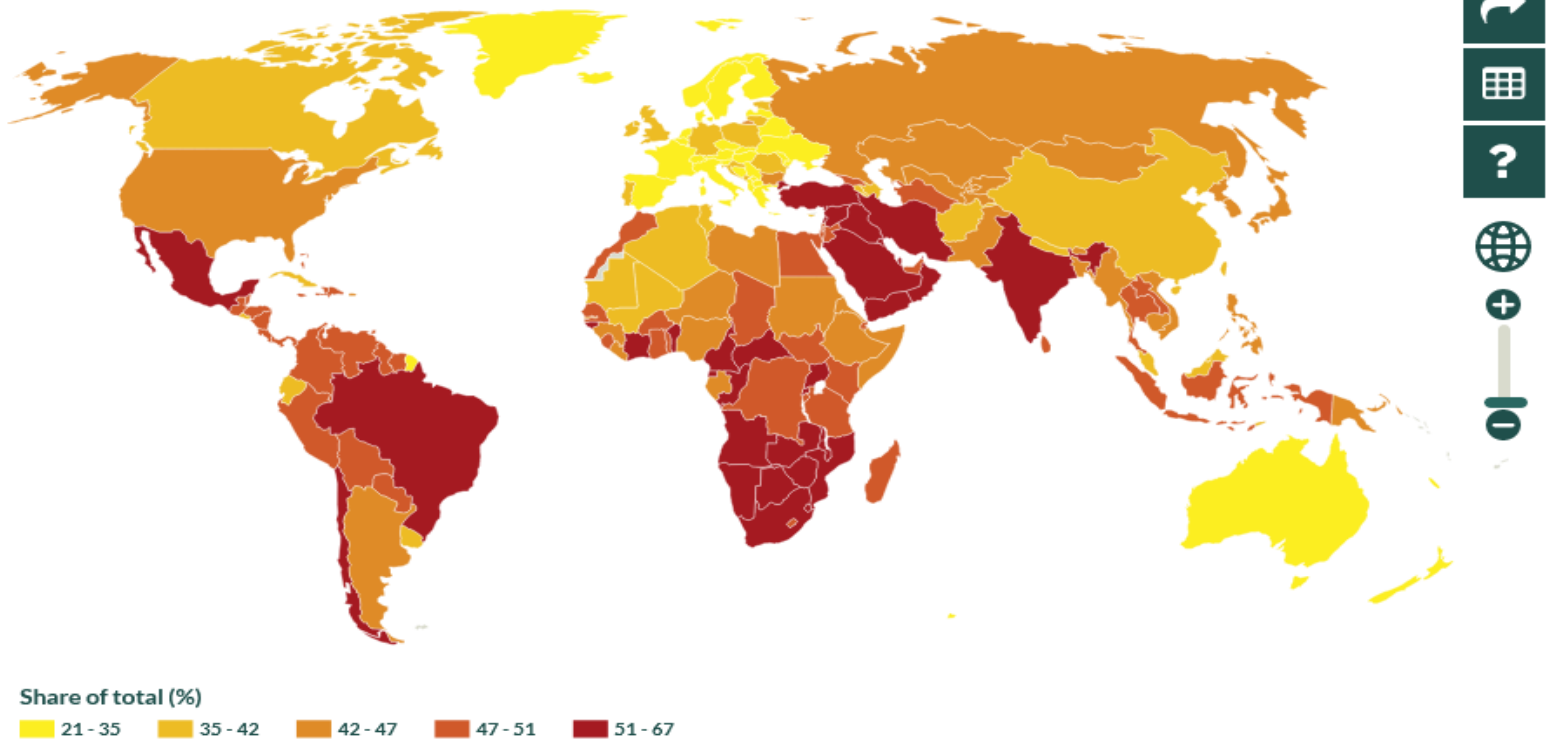
GENDER INEQUALITY [NEW]
- Female labor income share

MORE INDICATORS

Top 10% national income share

Region View | Country View

Latest year



WORLD INEQUALITY DATABASE

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MORE INDICATORS

Bottom 50% national income share

Region View | Country View

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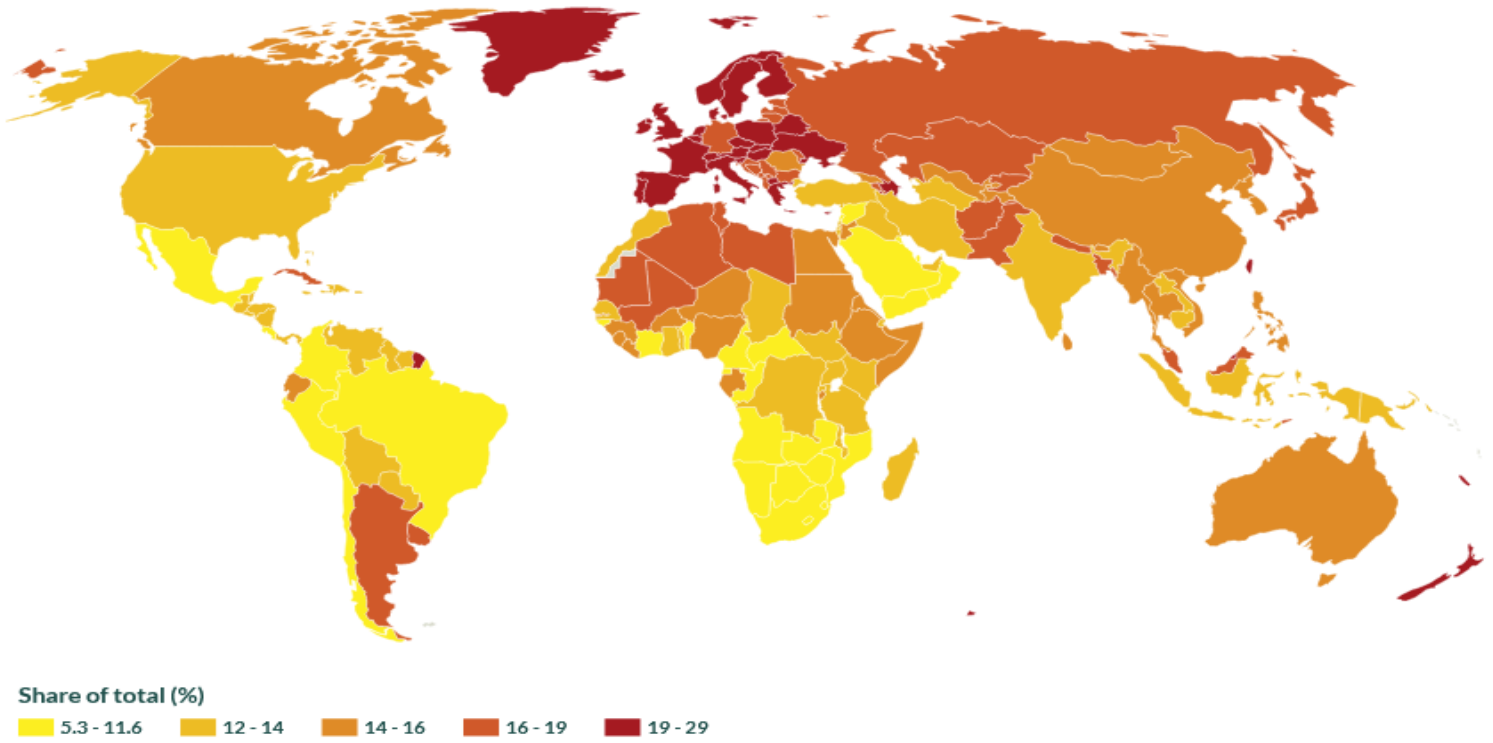
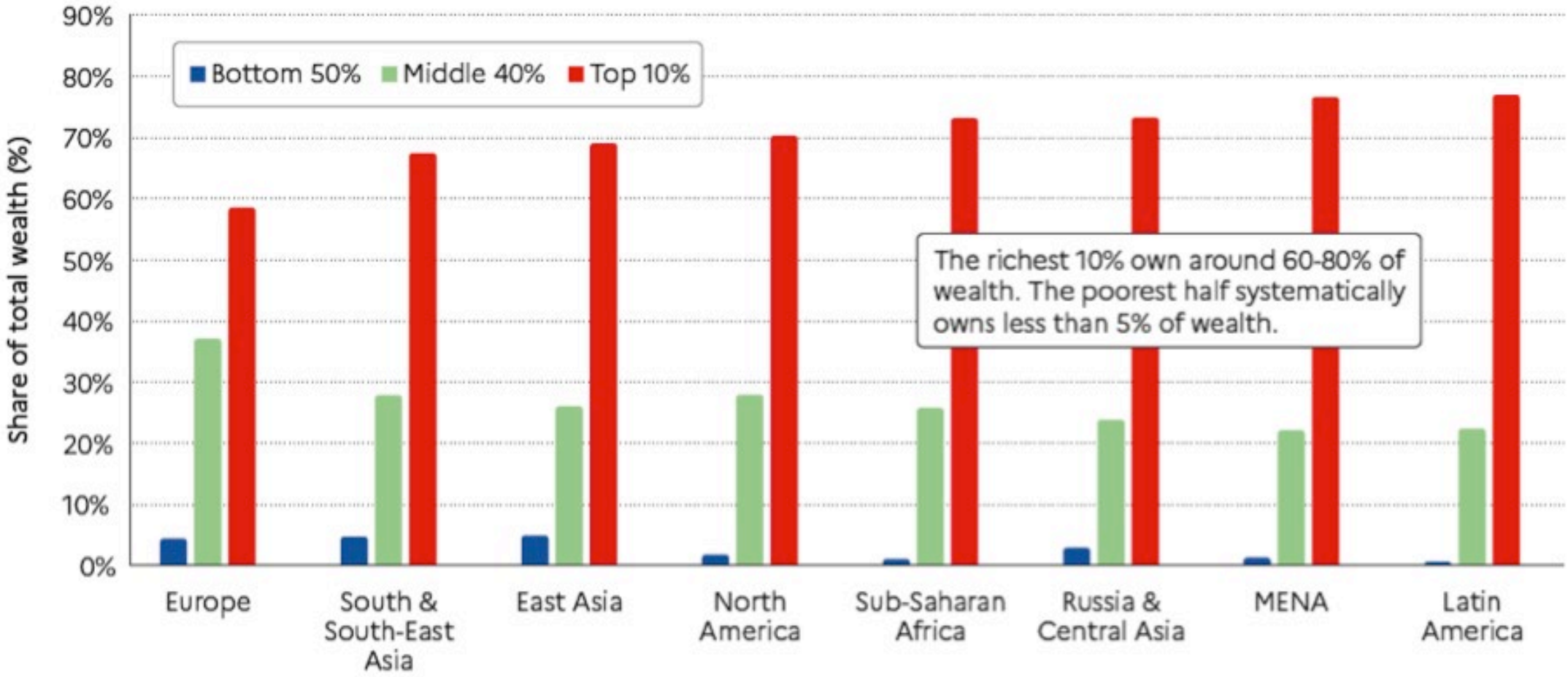
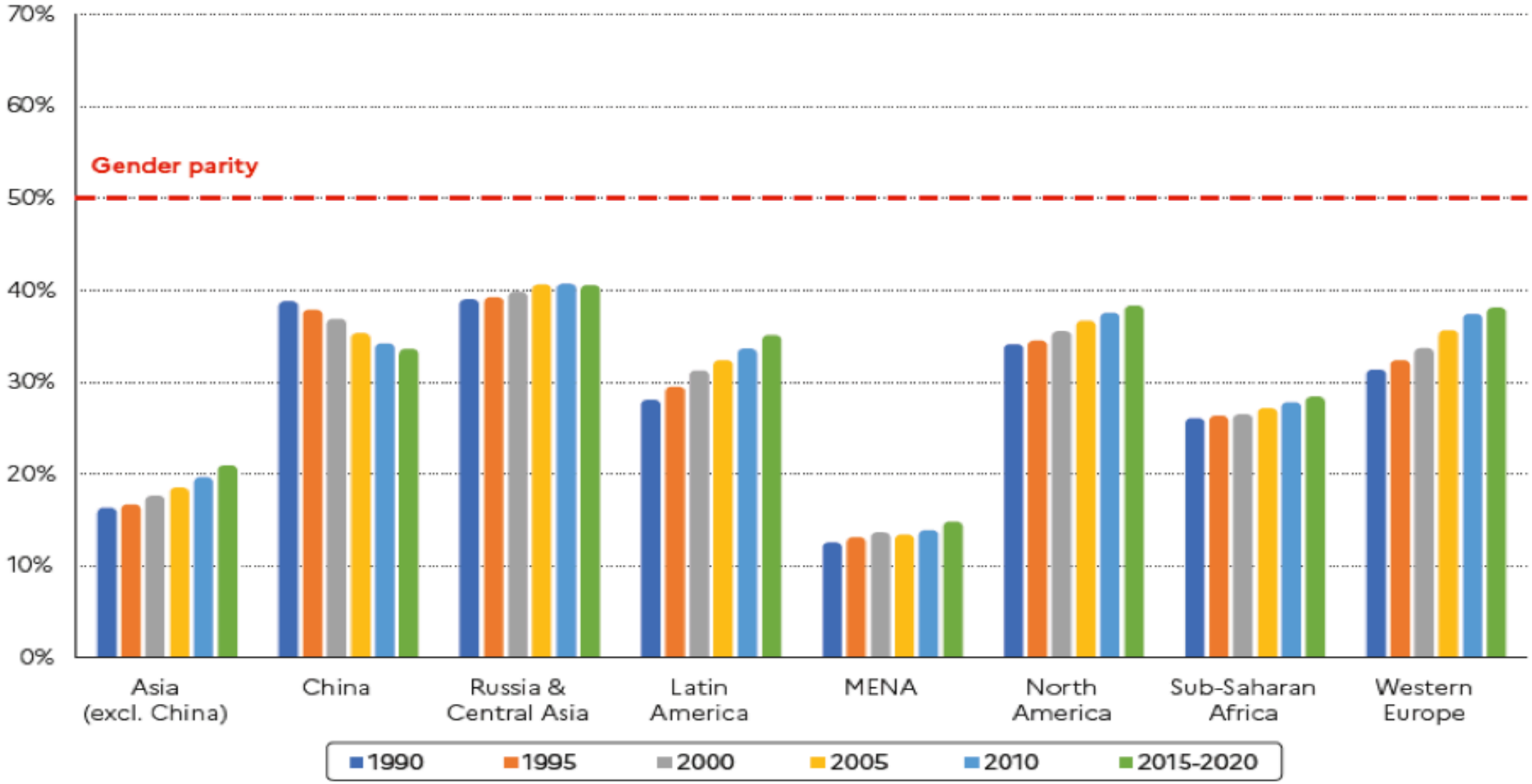


Figure 4 *The extreme concentration of capital: wealth inequality across the world, 2021*



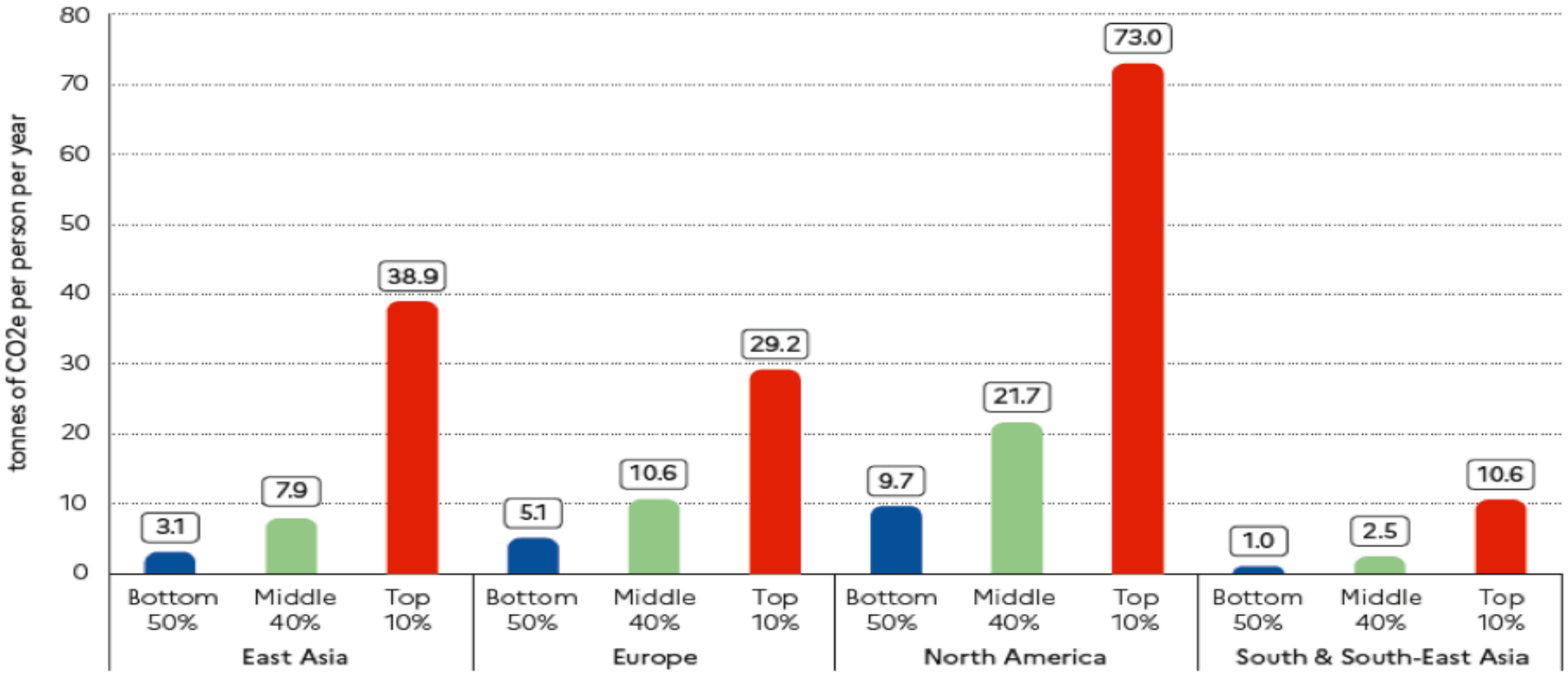
Interpretation: *The Top 10% in Latin America captures 77% of total household wealth, versus 22% for the Middle 40% and 1% for the Bottom 50%. In Europe, the Top 10% owns 58% of total wealth, versus 38% for the Middle 40% and 4% for the Bottom 50%.* ***Sources and series:*** *wir2022.wid.world/methodology.*

Figure 13 *Female labor income share across the world, 1990-2020*

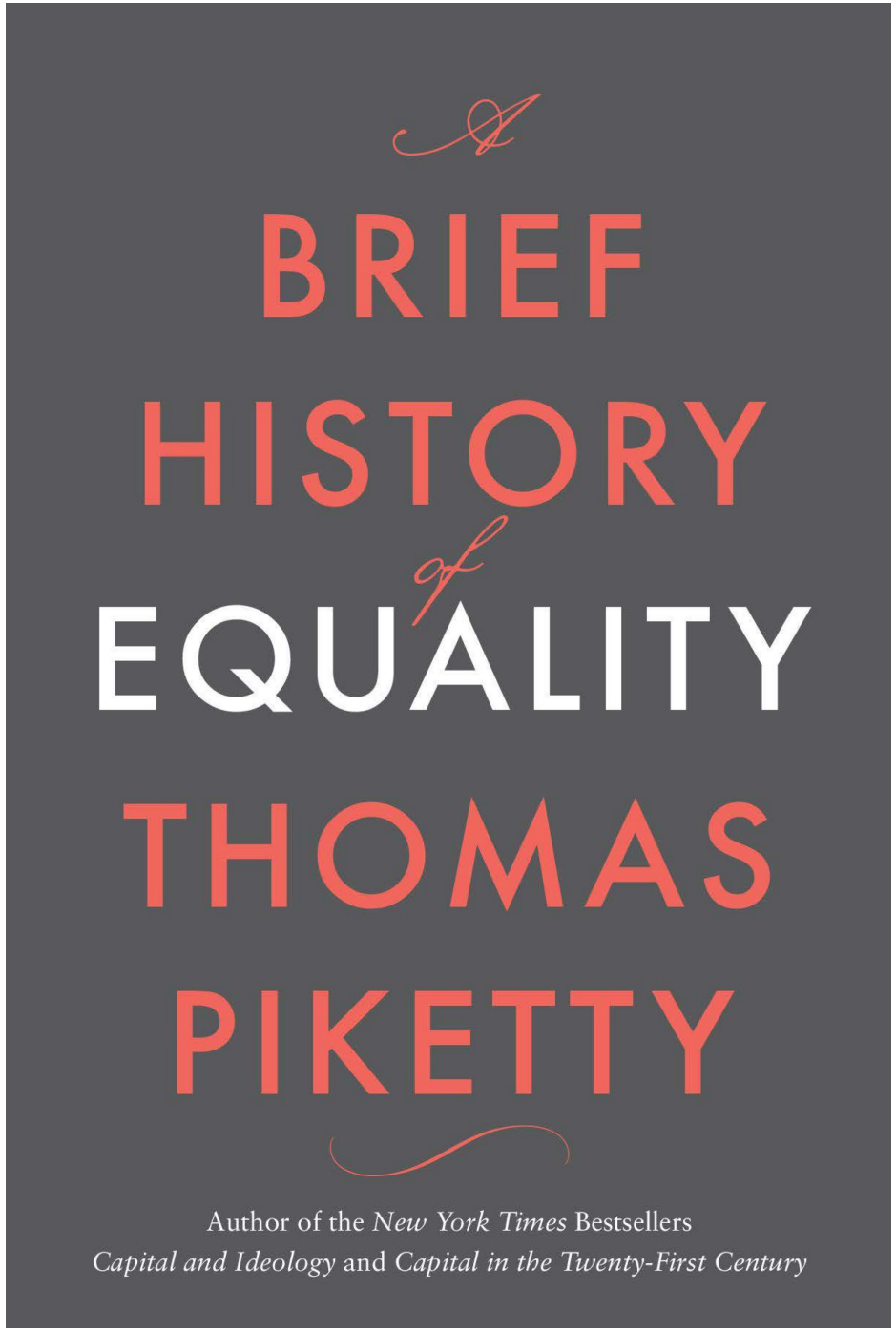


Interpretation: *The female labour income share rose from 34% to 38% in North America between 1990 and 2020.* ***Sources and series:*** *wir2022.wid.world/methodology and Neef and Robilliard (2021).*

Figure 15 *Per capita emissions across the world, 2019*



Interpretation: *Personal carbon footprints include emissions from domestic consumption, public and private investments as well as imports and exports of carbon embedded in goods and services traded with the rest of the world. Modeled estimates based on the systematic combination of tax data, household surveys and input-output tables. Emissions split equally within households.* ***Sources and series:*** *wir2022.wid.world/methodology and Chancel (2021).*


A
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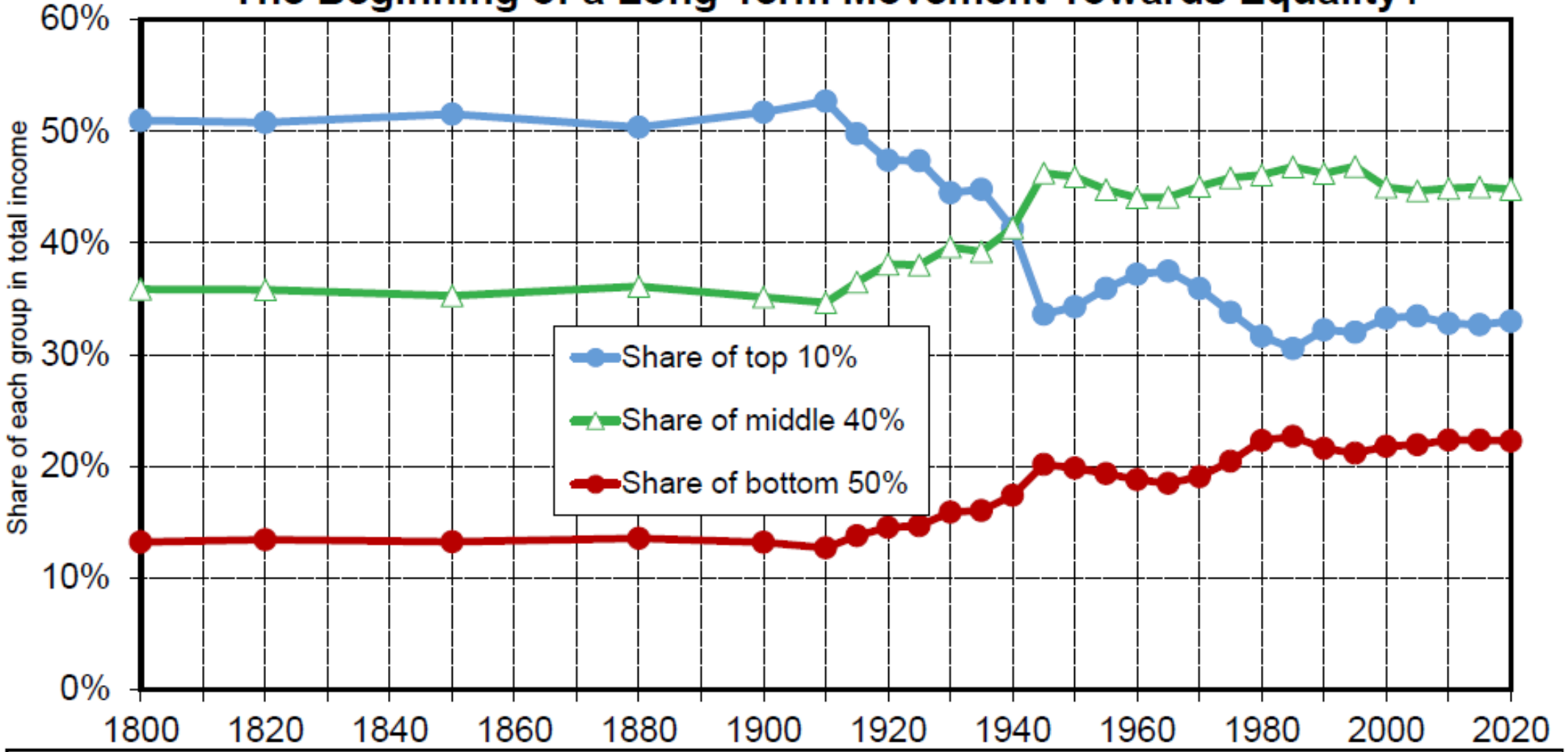
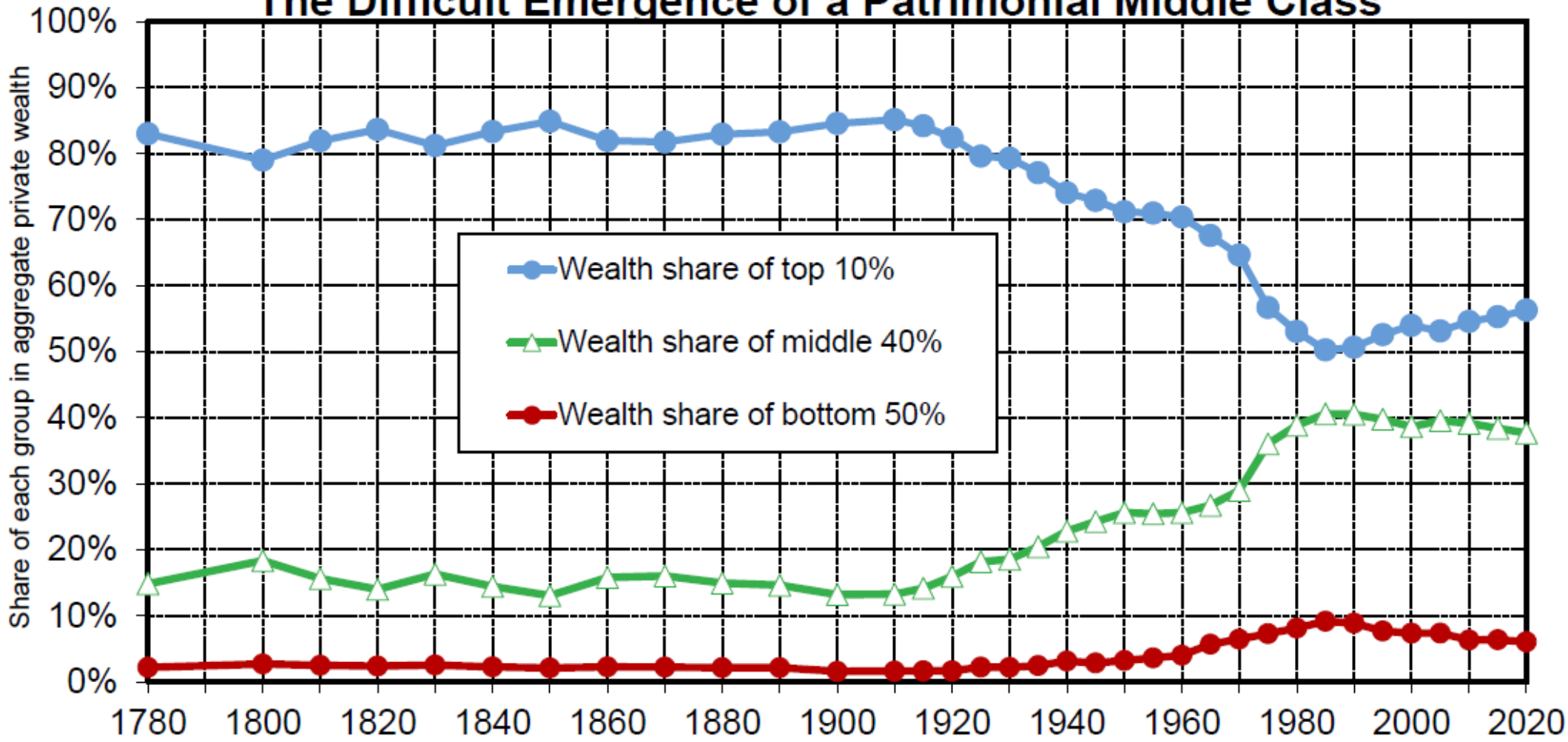
Contents of the book

Income Distribution in France, 1800-2020: The Beginning of a Long-Term Movement Towards Equality?



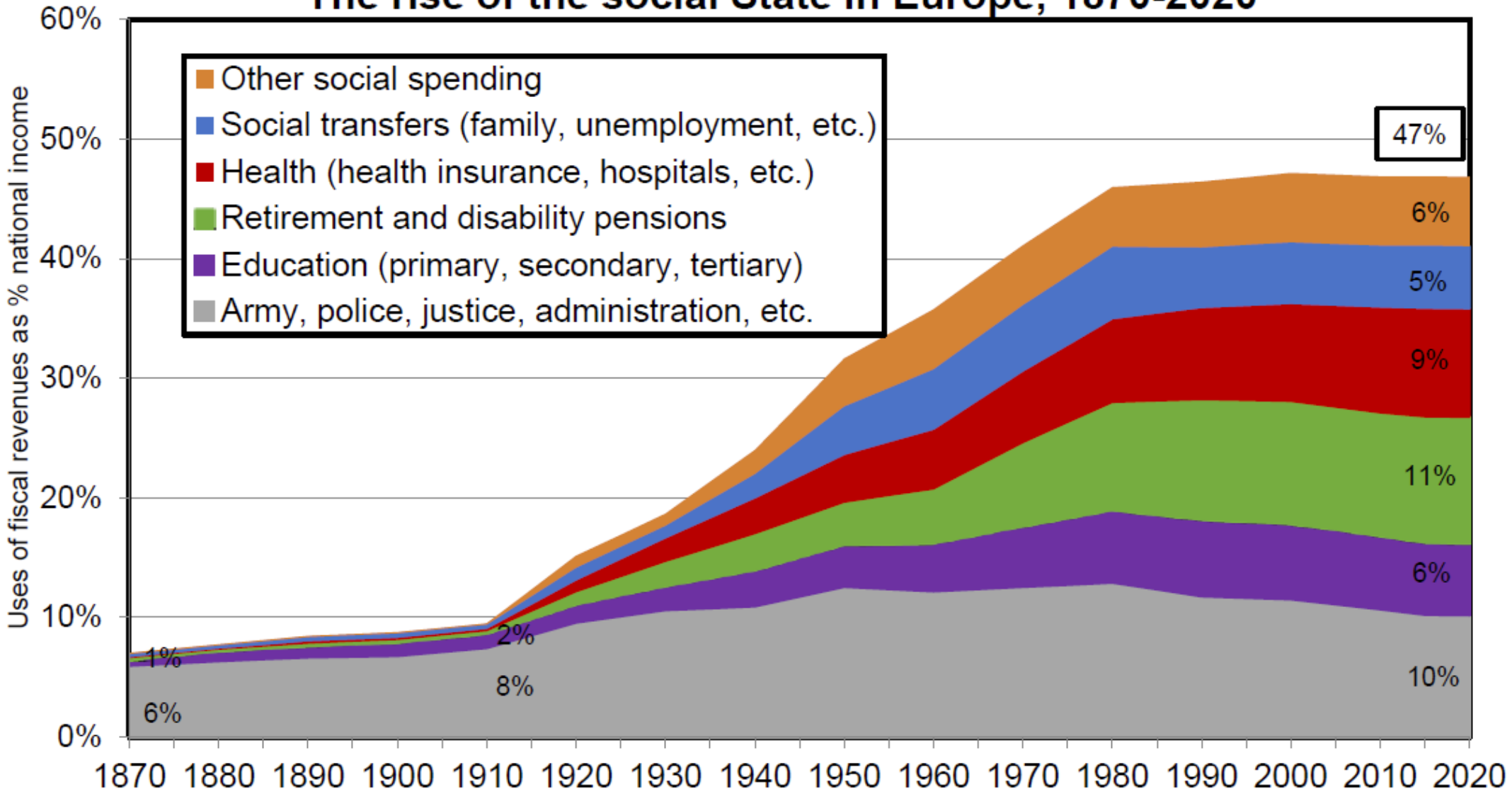
Interpretation. The share of the top 10% highest incomes in total income (including capital income - rent, dividends, interest, profits - & labour income - wages, self-employment income, pensions, unemployment benefits) was about 50% in France from the 1780s to the 1910s. The fall in the concentration of income started after World War 1 and occured to the benefit of the "lower classes" (the bottom 50% lowest incomes) and the "middle classes" (the next 40%), at the expense of the "upper classes" (the top 10%). **Sources and series**: see piketty.pse.ens.fr/equality (figure 7)

Wealth Distribution in France, 1780-2020: The Difficult Emergence of a Patrimonial Middle Class



Interpretation. The share of top 10% wealth holders in aggregate private wealth (real estate, business and financial assets, net of debt) was around 80%-90% in France between 1780 and 1910. The decline in wealth concentration begins with World War I and stops in the 1980s. It benefited mostly to the "patrimonial middle class" (the middle 40%), which is defined here as the intermediate group between the top 10% and the bottom 50% of the wealth distribution. **Sources and series**: see piketty.pse.ens.fr/equality (figure 6)

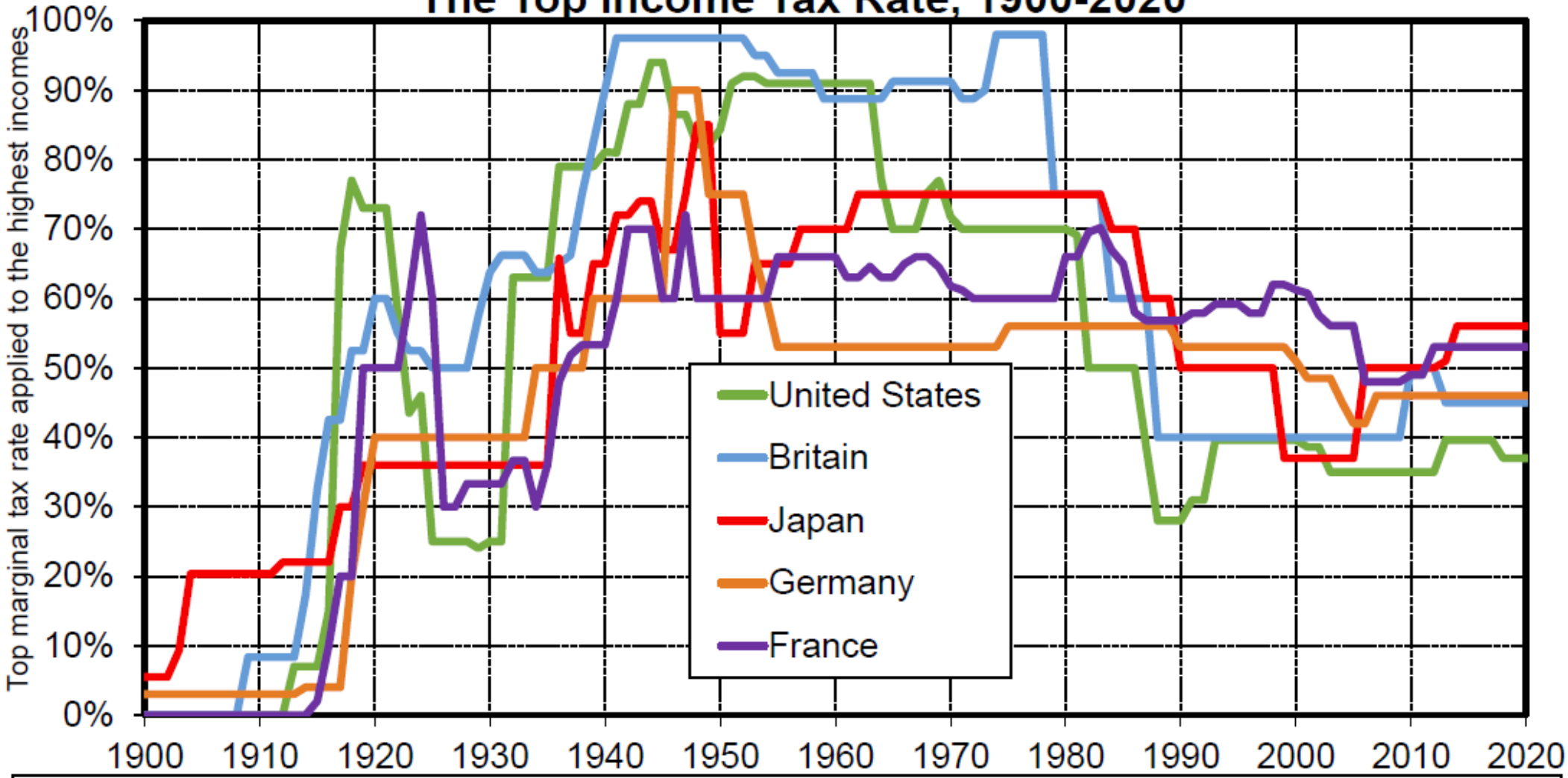
The rise of the social State in Europe, 1870-2020



Interpretation. In 2020, fiscal revenues represented 47% of national income on average in Western Europe et were used as follows: 10% of national income for regalian expenditure (army, police, justice, general administration, basic infrastructure: roads, etc.); 6% for education; 11% for pensions; 9% for health; 5% for social transfers (other than pensions); 6% for other social spending (housing, etc.). Before 1914, regalian expenditure absorbed almost all fiscal revenues.

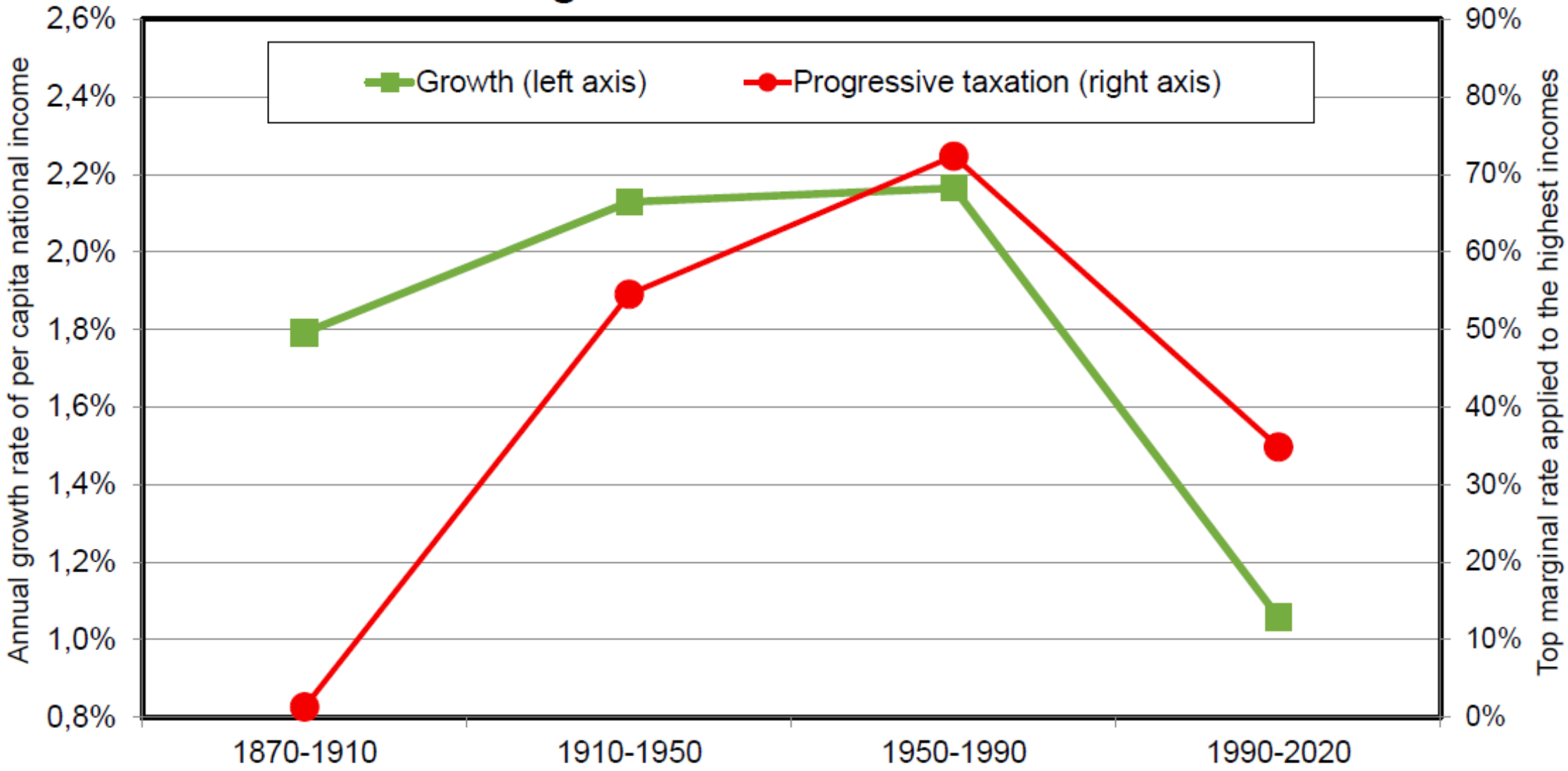
Note. The evolution depicted here is the average of Germany, France, Britain and Sweden. **Sources and séries**: see piketty.pse.ens.fr/equality (figure 19)

The Invention of Progressive Taxation: The Top Income Tax Rate, 1900-2020



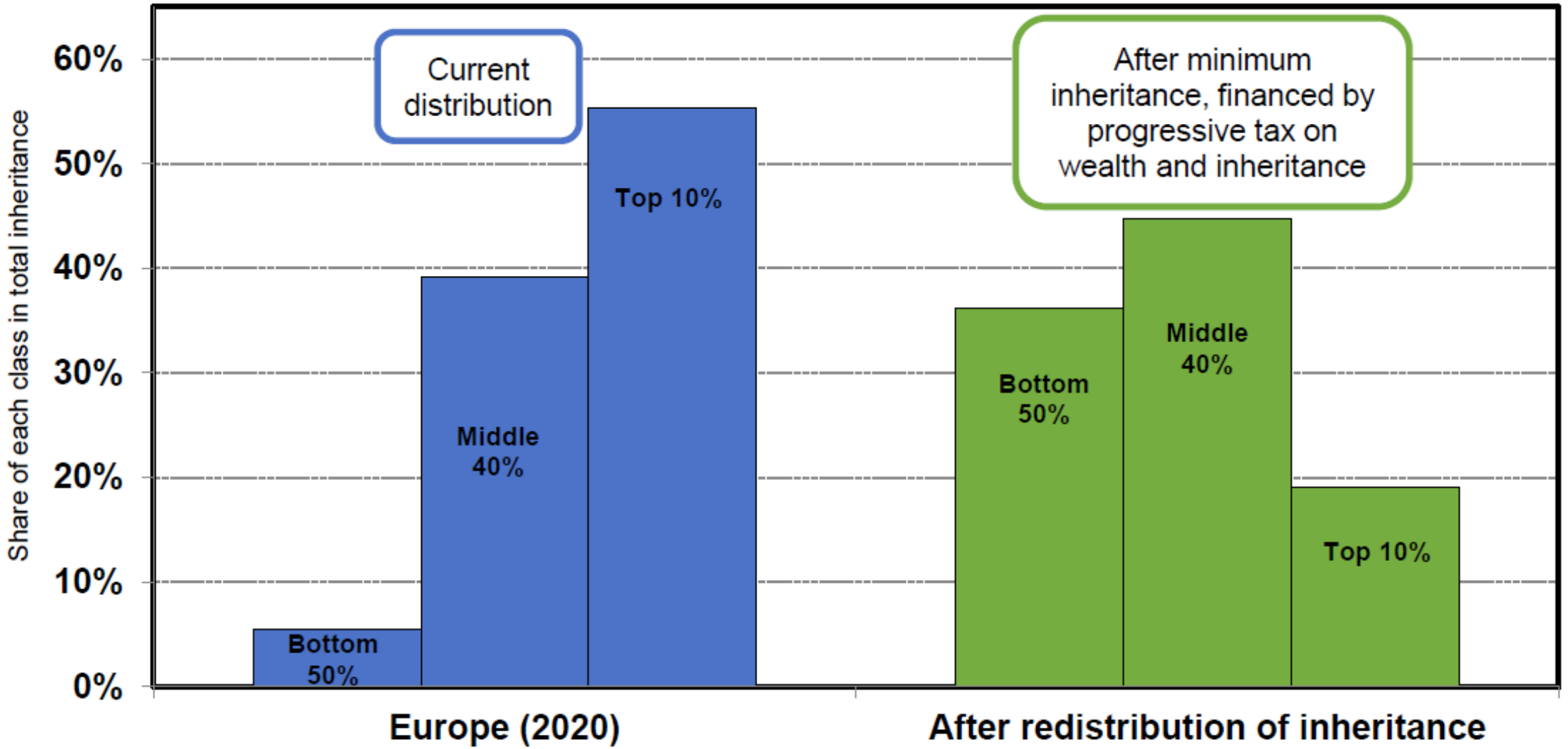
Interpretation. The marginal income tax rate applied to the highest incomes was on average 23% in the U.S. from 1900 to 1932, 81% from 1932 to 1980 and 39% from 1980 to 2018. Over these same periods, the top rate was equal to 30%, 89% and 46% in Britain, 26%, 68% and 53% in Japan, 18%, 58% and 50% in Germany, and 23%, 60% and 57% in France. Progressive taxation peaked in mid-century, especially in the U.S. and in Britain. **Sources and series**: see piketty.pse.ens.fr/equality (figure 20)

Growth and Progressive Taxation in the U.S. 1870-2020



Interpretation. in the U.S., the growth rate of per capita national income dropped from 2,2% per year between 1950 and 1990 to 1,1% between 1990 and 2020, while the top marginal tax rate applied to the highest incomes dropped from 72% to 35% over the same period. The promised resurgence of growth following the cut in top tax rates did not occur. **Sources and series**: see piketty.pse.ens.fr/equality (figure 23)

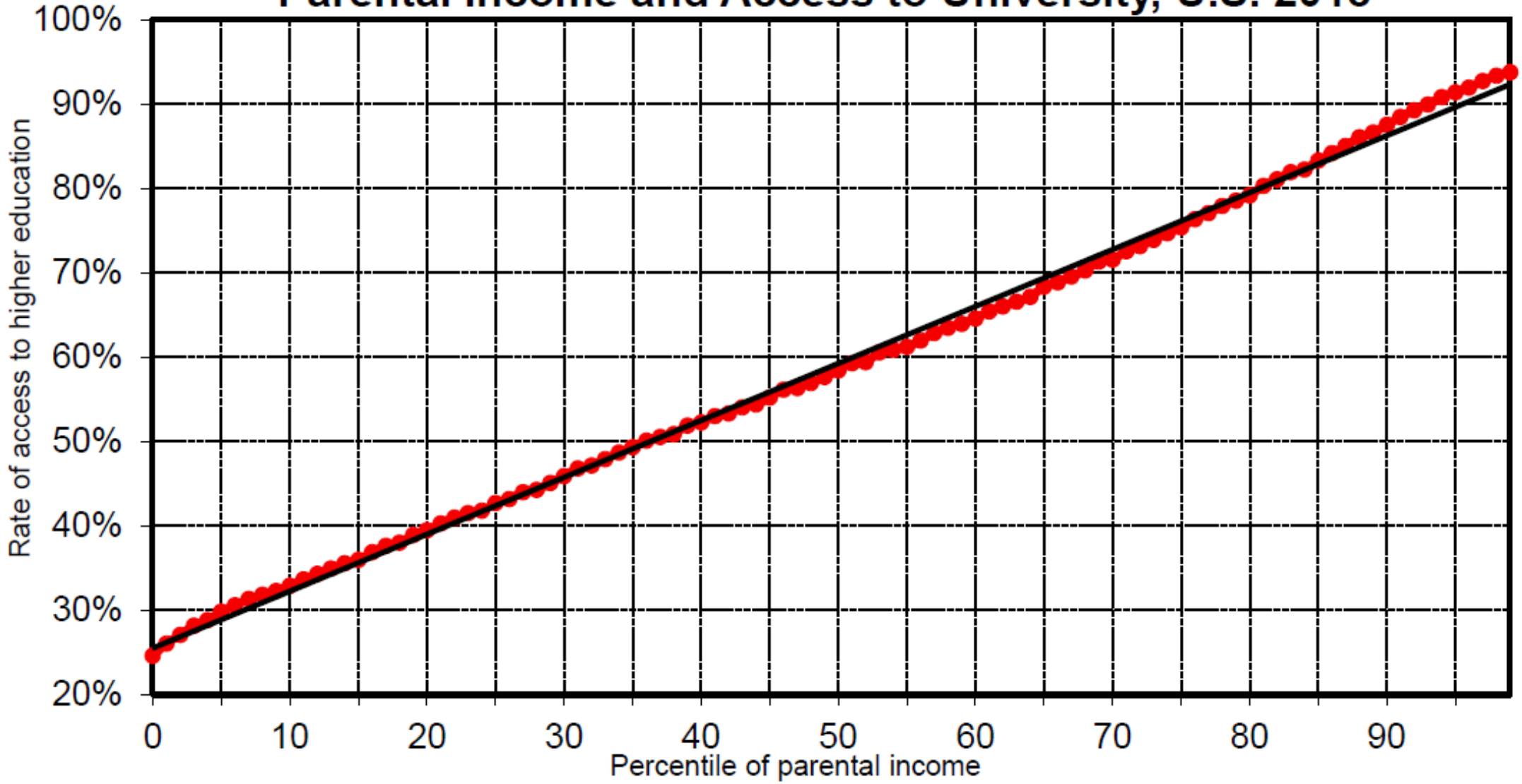
The Redistribution of Inheritance



Interpretation. The share of the poorest 50% in total inheritance is 6% in Europe in 2020, vs 39% for the next 40% and 55% for the richest 10%. After implementation of inheritance for all (minimum inheritance equal to 60% of average wealth, allocated at 25-year-old), financed by a progressive tax on wealth and inheritance, this share would be equal to 36% (vs 45% and 19%).

Note: Europe: average Britain-France-Sweden. **Sources and series**: see piketty.pse.ens.fr/equality (figure 30)

Parental Income and Access to University, U.S. 2018



Interpretation. In 2018, the rate of access to higher education (percentage of individuals aged 19-21 enrolled in a university, college or any other institution of higher education) was barely 30% among the bottom 10% poorest children in the United States, and over 90% among the top 10% richest children. **Sources and series**: see piketty.pse.ens.fr/equality (figure 31).

UNEQUAL EXCHANGE AND NORTH-SOUTH RELATIONS:

EVIDENCE FROM GLOBAL TRADE FLOWS AND THE WORLD BALANCE OF PAYMENTS 1800-2025

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WORLD INEQUALITY LAB

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.

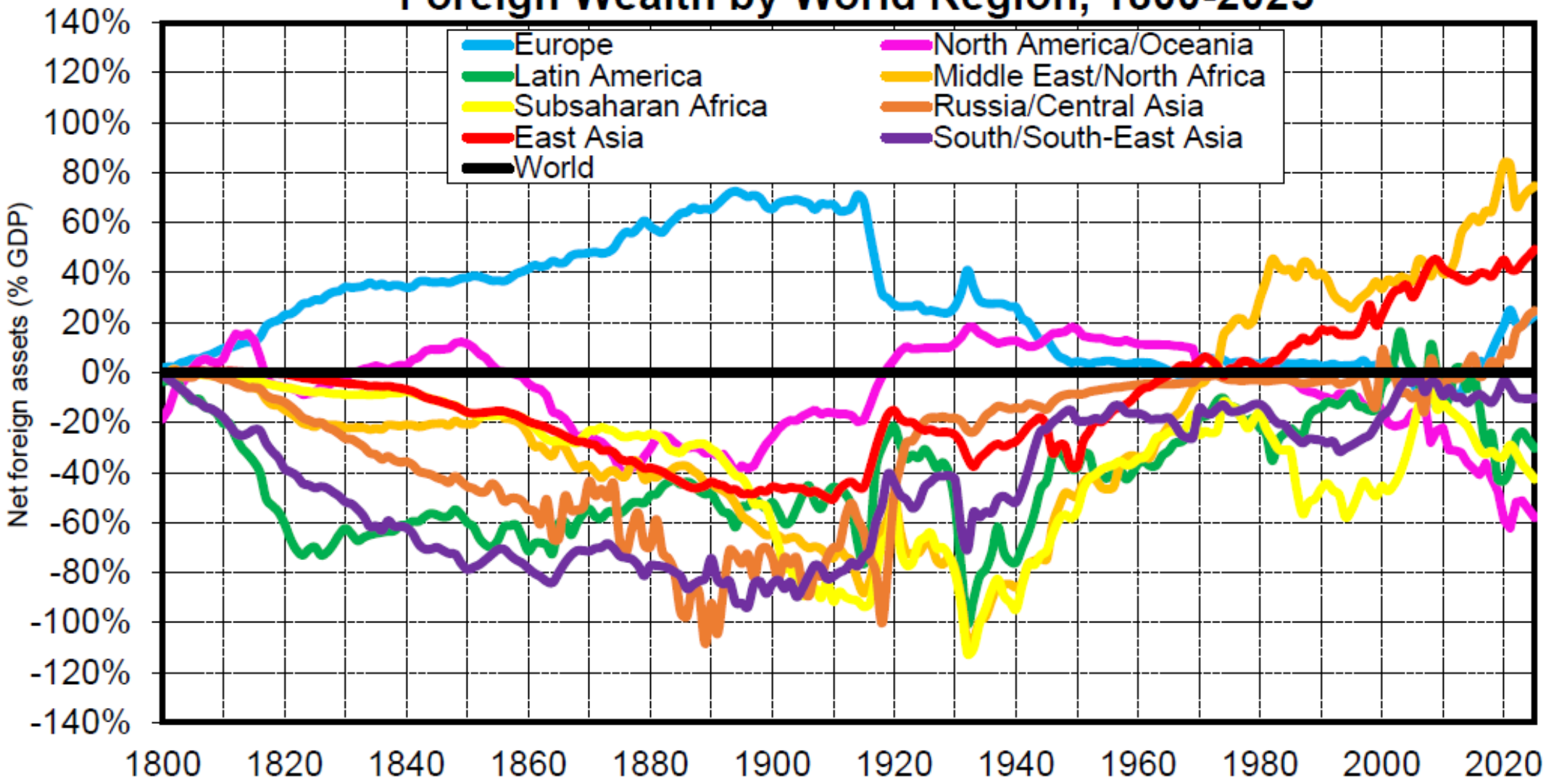
Developed by Gastón Nievas and Thomas Piketty, WBOP harmonizes balance of payments data across time and countries, enabling long-run comparative analysis of trade, capital flows, and foreign wealth accumulation.

What We Do in this Research

We build a new database on global trade flows and the world balance of payment (including goods, services, income and transfers) covering 57 core territories (48 main countries + 9 residual regions) over the 1800-2025 period

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

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

Main objective: we want to compare current imbalances (2025) with previous global imbalances (in particular 1914)

Differences: larger imbalance in 1914 (as % world GDP), key role of colonial transfers & low commodity prices (forced labour etc.) in order to build foreign wealth (**Europe never in trade surplus 1800-1914!**)

Similarities: in both cases, **low commodity prices play critical role for wealth accumulation** by manufacturing power (Europe or East Asia)

→ **Small changes in bargaining power & terms of exchange can completely reverse relative wealth position of North vs South**

Q.: Are global economic relations characterized by **self-correcting market mechanisms** or by **persistent imbalances & power relations**?

A.: **Persistent imbalances and power relations have always played a critical role over 1800-2025 period**, & self-correction can end badly

→ International economic relations can be mutually beneficial, but in order to reach their full potential we need collective rules & a more inclusive trade and monetary system
(≈ Keynes ICU 1943) (International Clearing Union: exchange rates closer to parity and/or common currency (Bancor or higher IMF SDRs), centralized credits/debits, common borrowing rate, corrective tax on excessive current account surpluses, etc.)

Outline of the talk

(1) **Sources/methods** & contribution to the literature

(2) **Magnitude & composition** of global trade & BoP flows 1800-2025

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

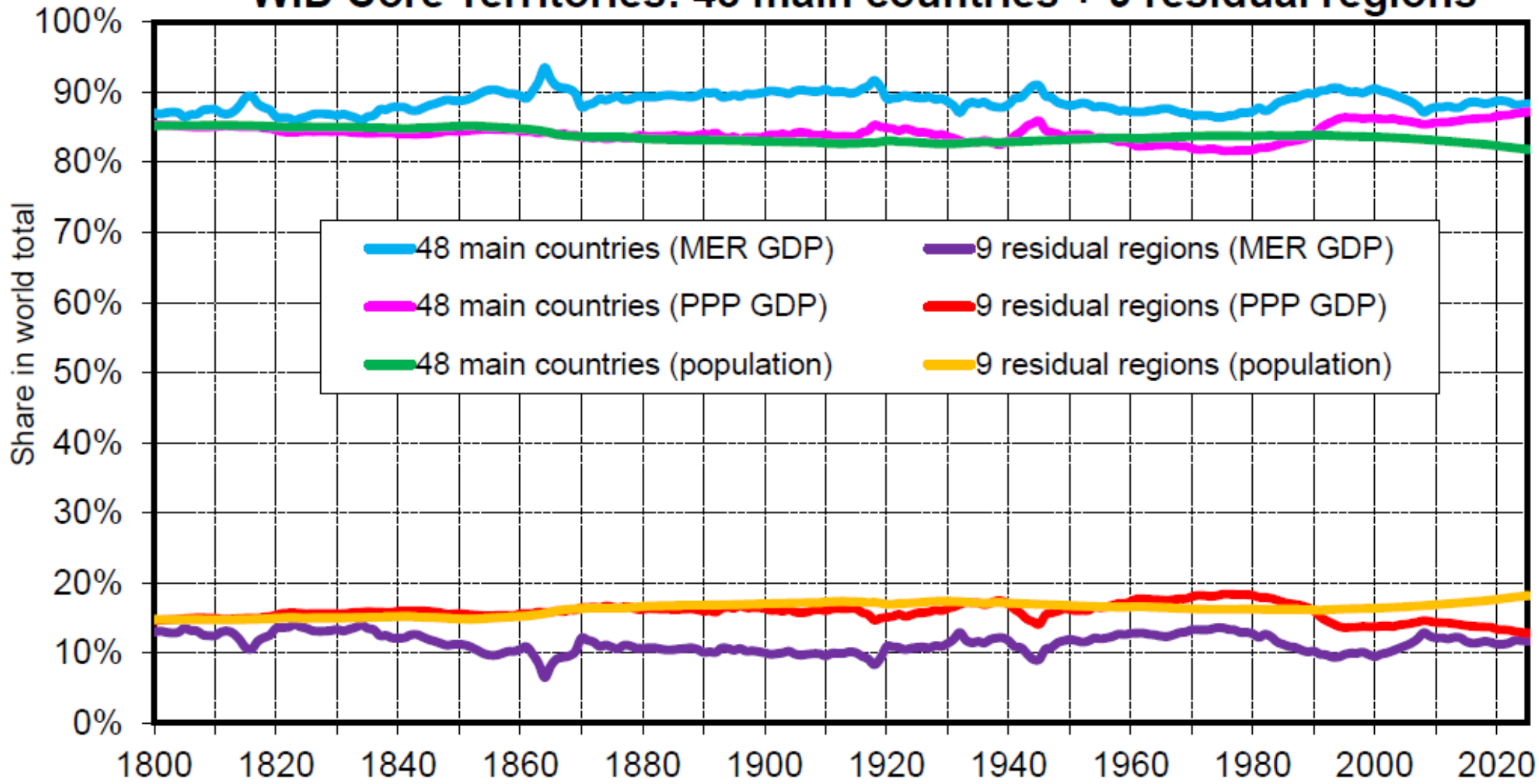
(4) **Decomposing global imbalances** 1800-2025: primary commodit., manufactured goods, services, income flows, transfers

(5) **Counterfactual simulations** on foreign wealth accumulation under alternative trade & monetary regimes 1800-2025

The World Historical Balance of Payment Database (WBOP): Geographical Coverage (57 core territories = 48 main countries + 9 residual regions)	
East Asia (5)	China, Japan, South Korea, Taïwan Other EASA
Europe (11)	Britain, Denmark, France, Germany, Italy, Netherlands, Norway, Spain, Sweden, Other W.EUR, Other E.EUR
Latin America (6)	Argentina, Brasil, Chile, Colombia Mexico, Other LATAM
Middle East/ North Africa (8)	Algeria, Egypt, Iran, Morocco, Saudi Arabia, Turkey, UAE, Other MENA
North America/ Oceania (5)	USA, Canana, Australia, New Zealand Other NAOC
Russia/ Central Asia (2)	Russia Other RUCA
South/South-East Asia (9)	Bengladesh, India, Indonesia, Myanmar, Pakistan, Philipinnes, Thailand, Vietnam, Other SSEA
Sub-Saharan Africa (11)	DR Congo, Ethiopa, Kenya, Ivory Coast, Mali, Niger, Nigeria, Rwanda, Sudan, South Africa, Other SSAF

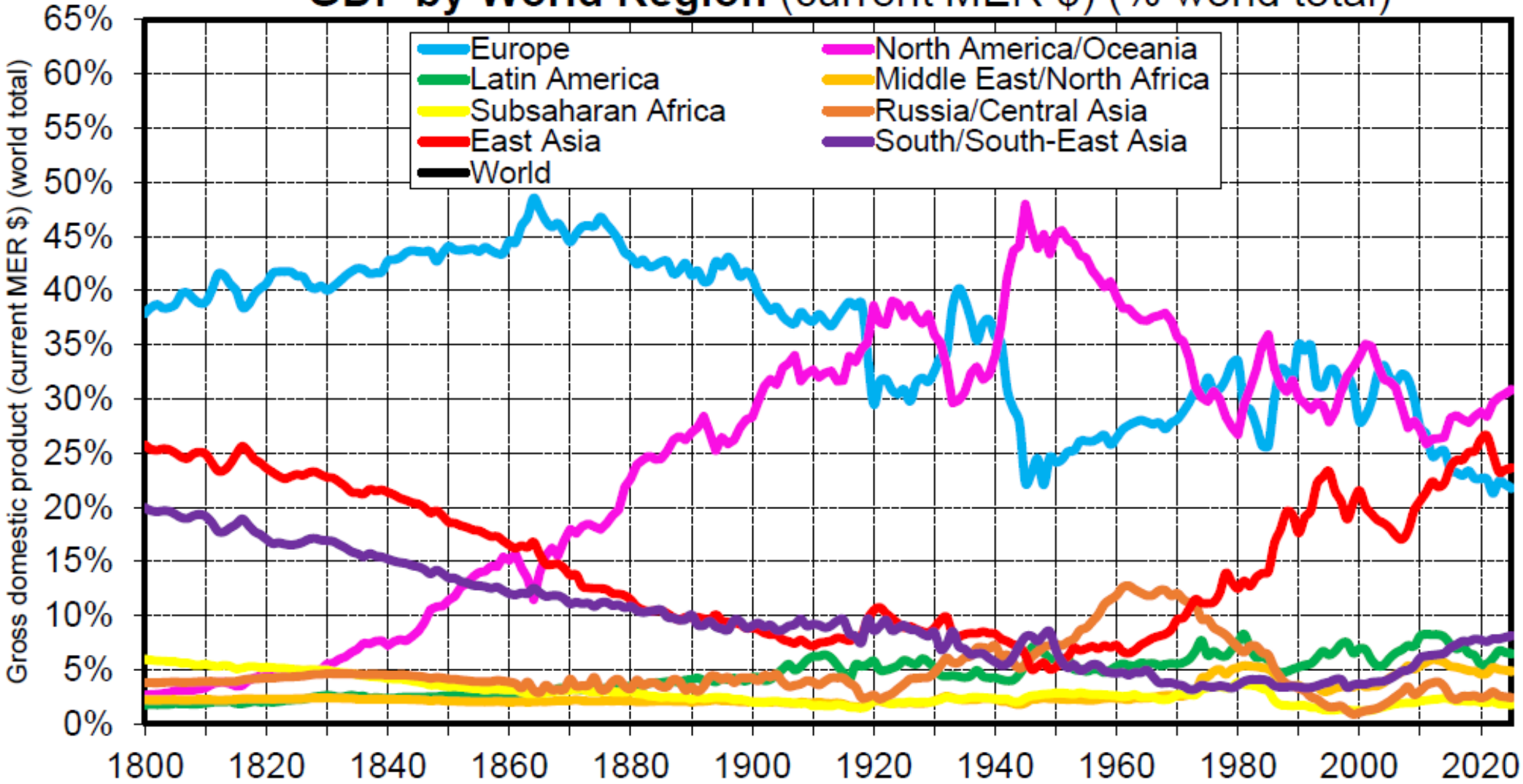
The World Historical Balance of Payment Database (WBOP, wbop.world) provides data series for 57 core territories (48 main countries + 9 residual regions, which we define using fixed 2025 borders) covering the entire world. It includes for all 57 core territories annual series covering the entire 1800-2025 period nominal GDP, trade balance for goods (exports and imports broken down for primary commodities vs manufactured goods), trade balance for services (exports and imports), foreign income (inflows and outflows), foreign transfers (inflows and outflows), current account (sum of net trade balance and net foreign income and transfer) and foreign wealth (gross assets and liabilities). All series are expressed in current MER USD. We also provide series on price indexes, market exchange rates and real exchange rates so that all series can be converted in constant monetary units (MER or PPP). Over the 1970-2025 period we provide similar series covering 216 countries/jurisdictions (168 of which define the 9 residual regions), again with fixed 2025 borders, and with additional breakdown for services (transportation, travel/tourism, other services), income (capital income, labour income, taxes) and transfers (private remittances, public transfers, other transfers) and for assets and liabilities (equity, debt, direct investment).

WID Core Territories: 48 main countries + 9 residual regions



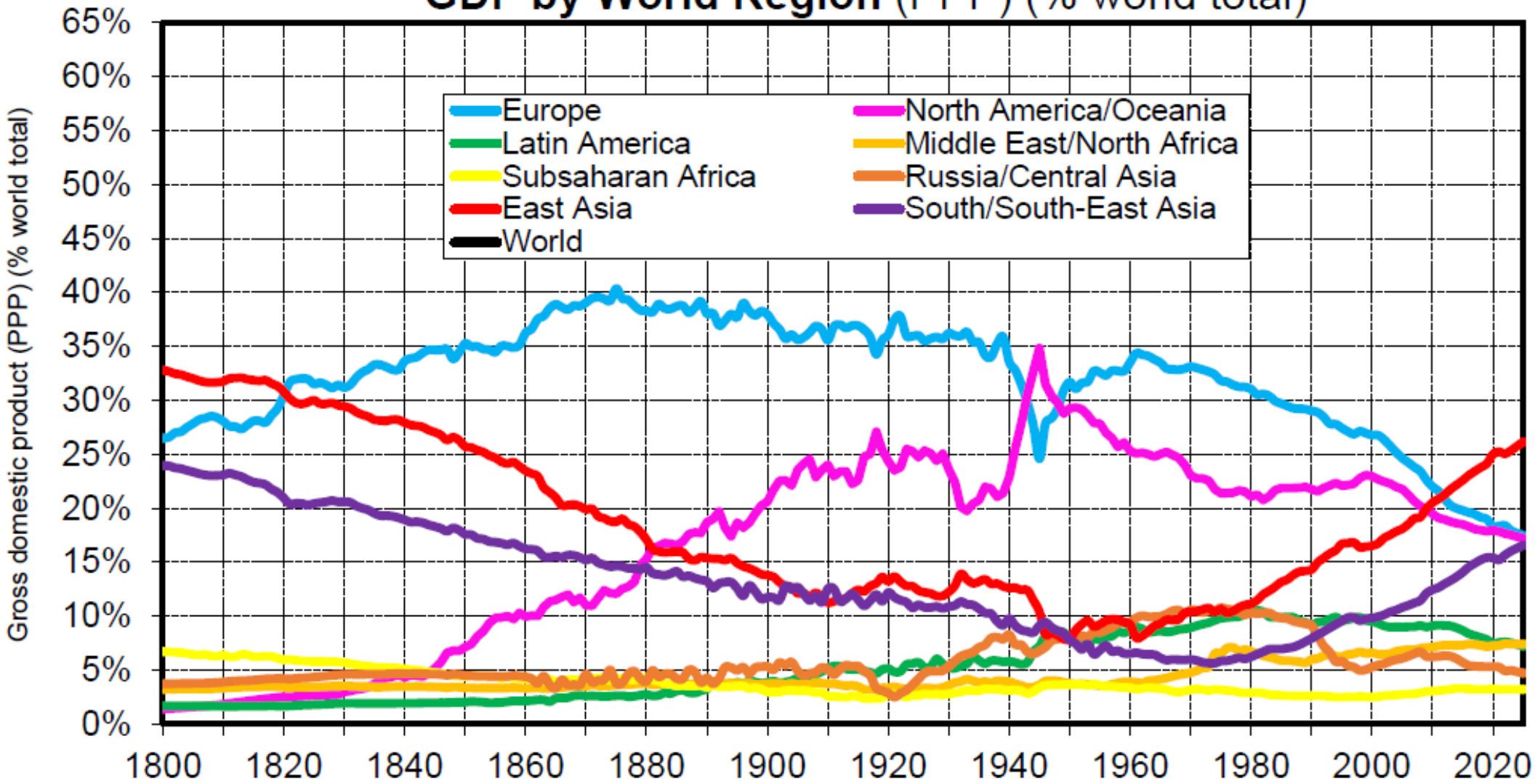
Interpretation. Historical WID national accounts include annual 1800-2025 series for 57 core territories (48 main countries + 9 residual regions, which we define using fixed 2025 borders). The 48 main countries make about 85-90% of the world GDP (both in market exchange rate and purchasing power parity) and population throughout the 1800-2025 period. For recent decades (1970-2025), WID national accounts series cover 216 countries/jurisdictions (168 of which form the 9 residual regions), again with fixed 2025 borders. **Sources and series**: see wid.world

GDP by World Region (current MER $) (% world total)



Interpretation. Using current MER $ (market exchange rates), North America/Oecania represents about 30% of world GDP in 2025 (about the same level as in 1900), vs 23% for Europe (41% in 1900) and 24% in East Asia (8% in 1900). **Sources and series**: see wid.world

GDP by World Region (PPP) (% world total)



Interpretation. Using PPP values (purchasing power parity), North America/Oecania represents about 17% of world GDP in 2025 (25% in 1900), vs 17% for Europe (37% in 1900) and 26% in East Asia (14% in 1900). Generally speaking, the share of NAOC and Europe in world GDP has always been substantially smaller if we use PPPs rather than MERs (market exchange rates). **Sources and series**: see wid.world

Sources/methods and contribution to the literature

(1) We start from official IMF BoP series 1970-2023:

Current account surplus/deficit CA_{it}

= Net trade balance in **goods** (excl. freight/insurance etc.)

+ Net trade balance in **services** (incl. freight/insurance etc.)

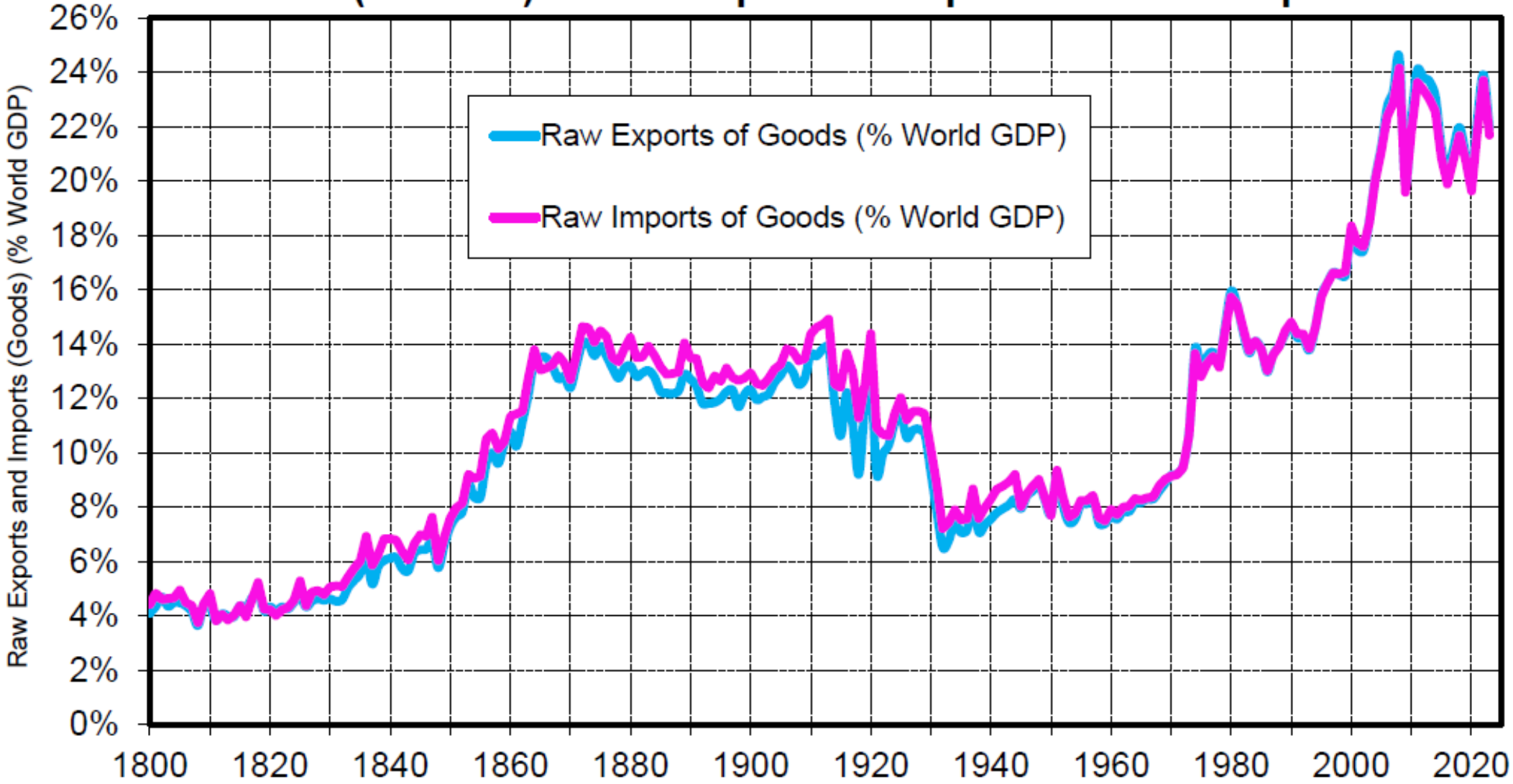
+ Net **income** inflows (mostly capital income)

+ Net **transfer** inflows (remittances, public aid, war tributes, etc.)

(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

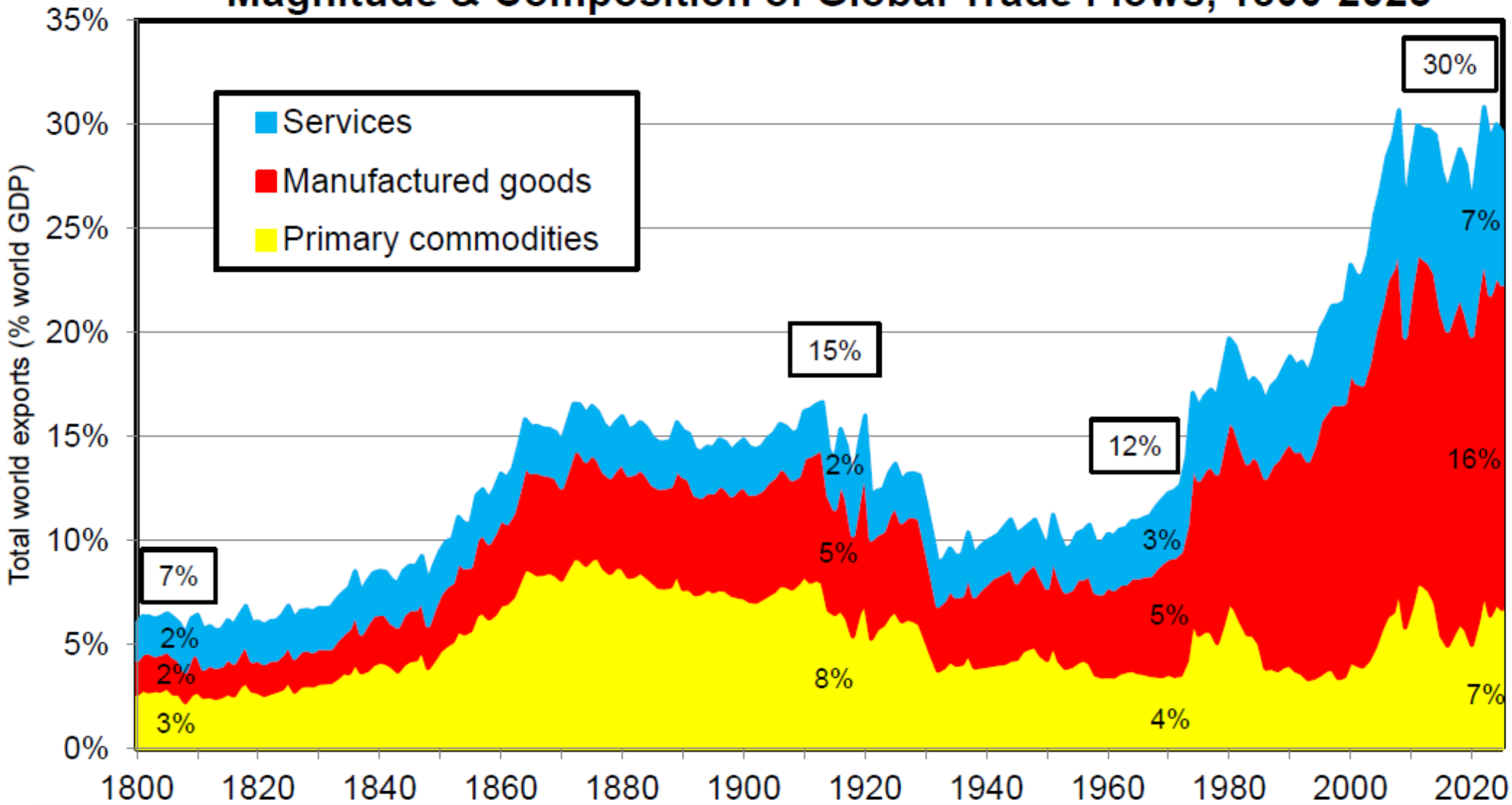
Magnitude & composition of global trade and BoP flows 1800-2025

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

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

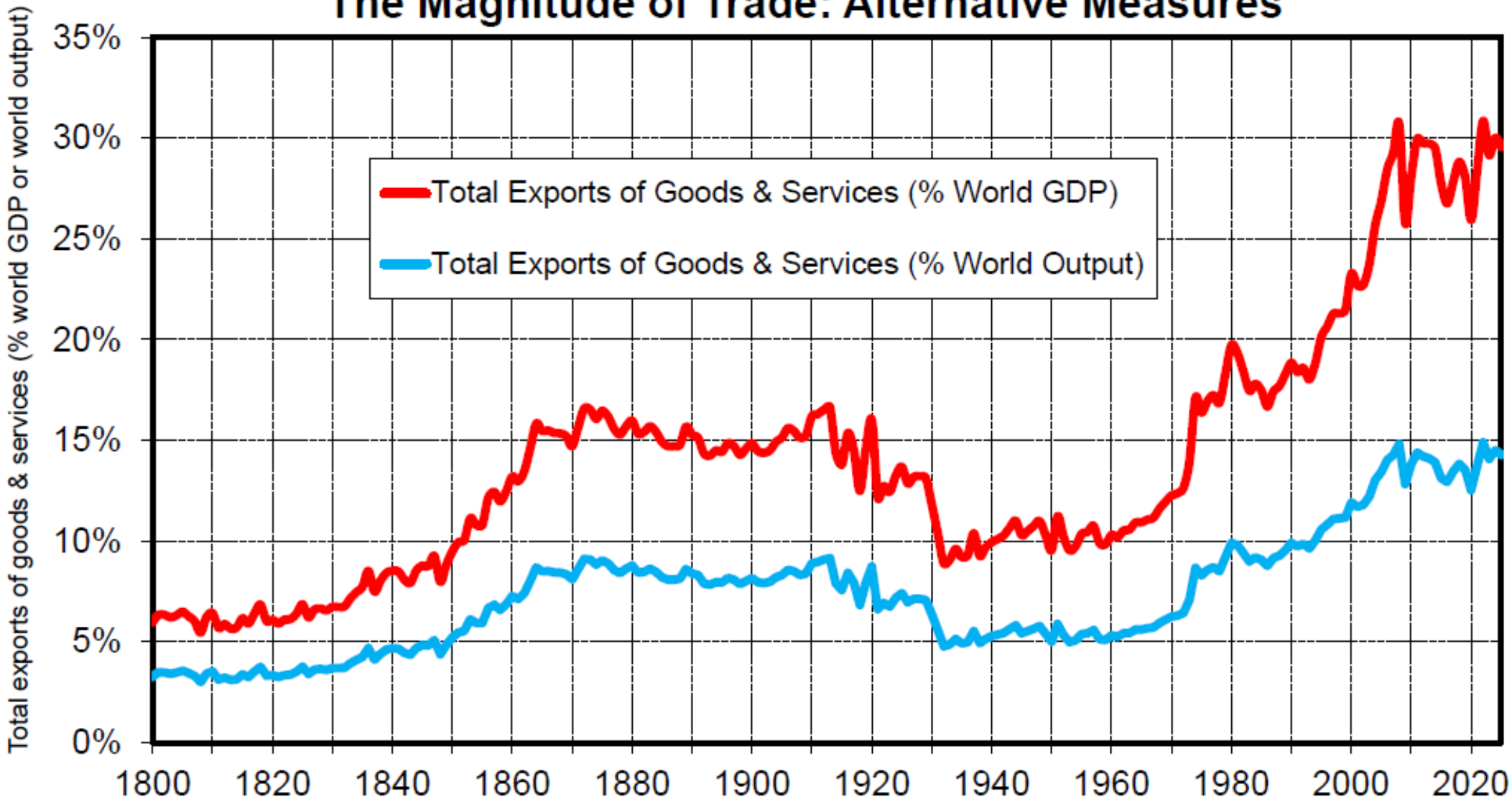
The changing magnitude and composition of **foreign income flows** and **foreign transfer flows**

Magnitude & Composition of Global Trade Flows, 1800-2025



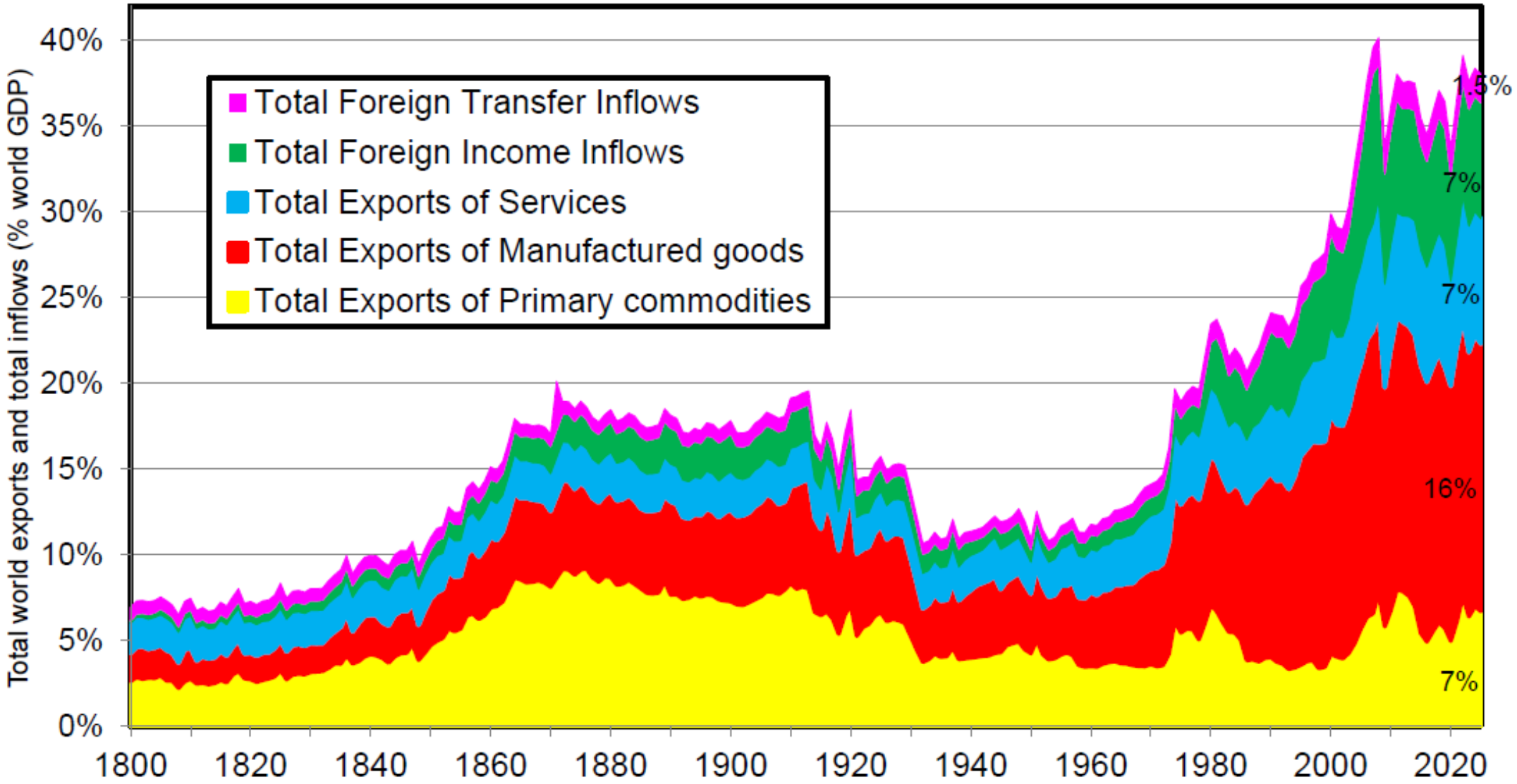
Interpretation. Total world exports have risen from about 7% of world GDP in 1800 to about 15% in 1914, 12% in 1970 and 30% in 2025, with a collapse in the 1930s, a steep rise in the 1970s (oil price shock) and a plateau since the 2008 financial crisis. Primary commodities include agricultural products, 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



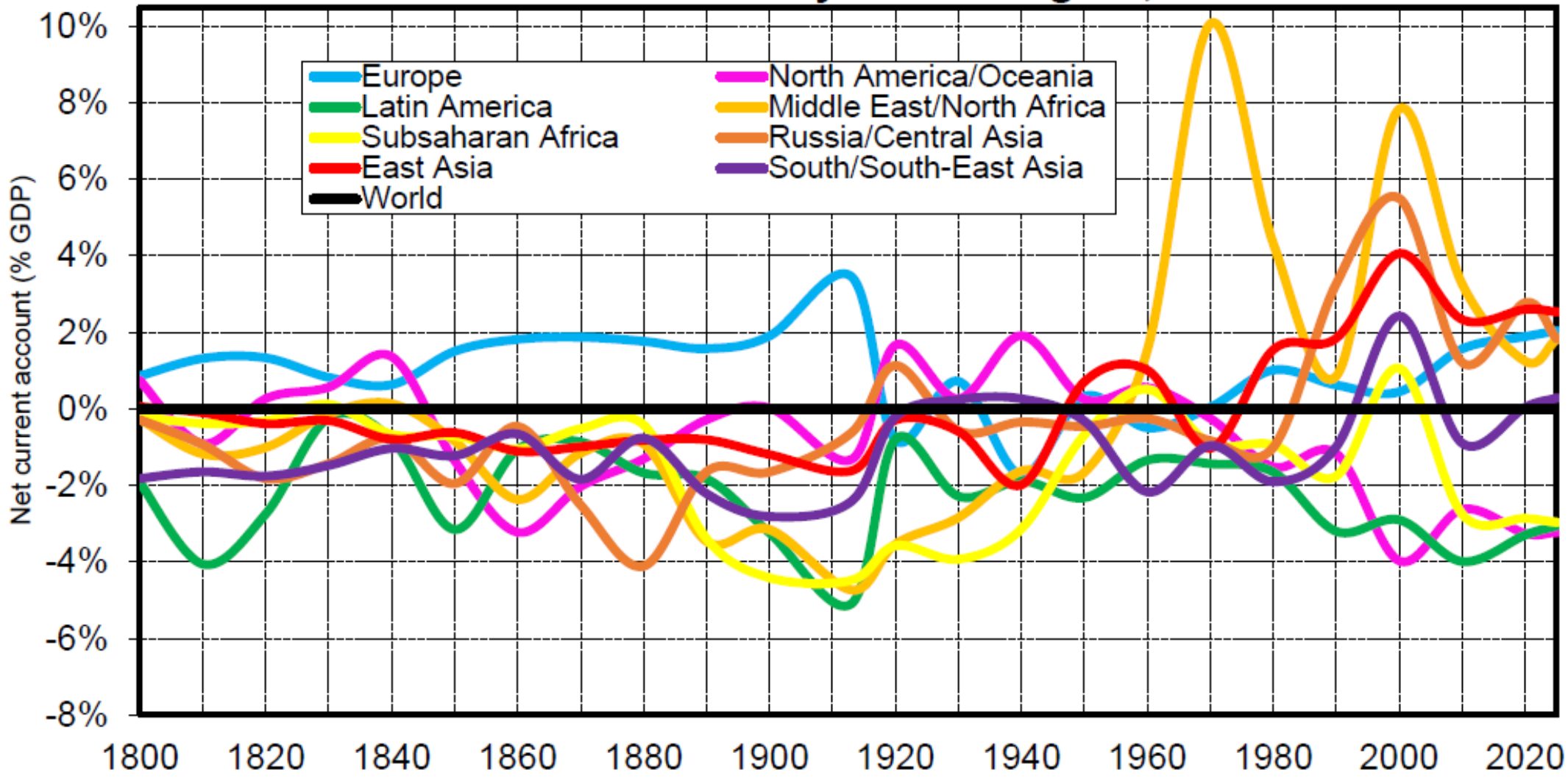
Interpretation. Gross flows of foreign income (in practice mostly capital income) and foreign transfers (private and public) have always been smaller in magnitude than gross trade flows, but they have increased over time. Income flows now make about 7% of world GDP (vs 0.1% in 1800, 2% in 1914 & 1% in 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

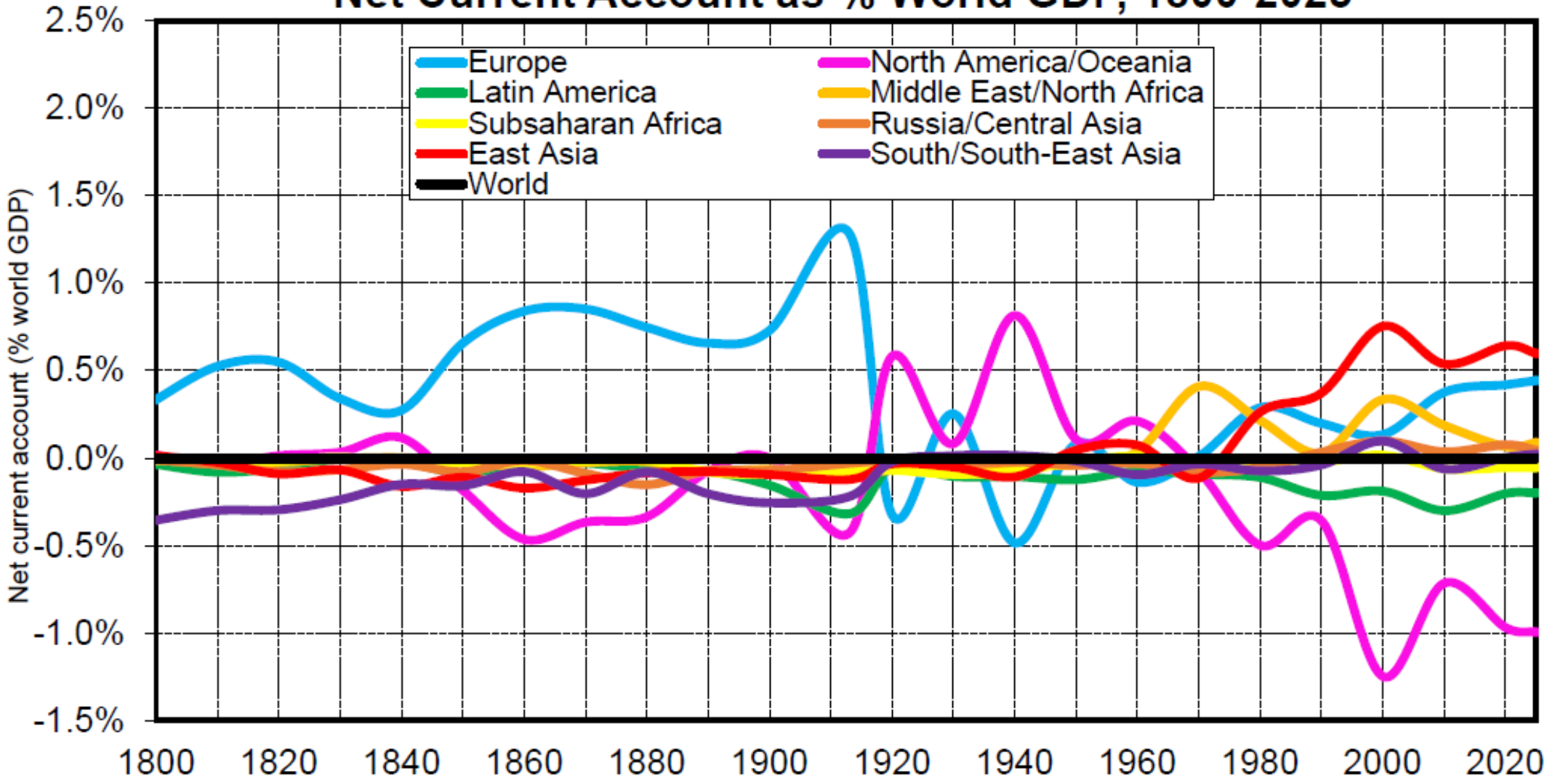
Like East Asia (and oil countries) **in 1970-2025**, but with a much larger magnitude relative to world GDP, and a very diversified world portolio in 1914

Net Current Account by World Region, 1800-2025



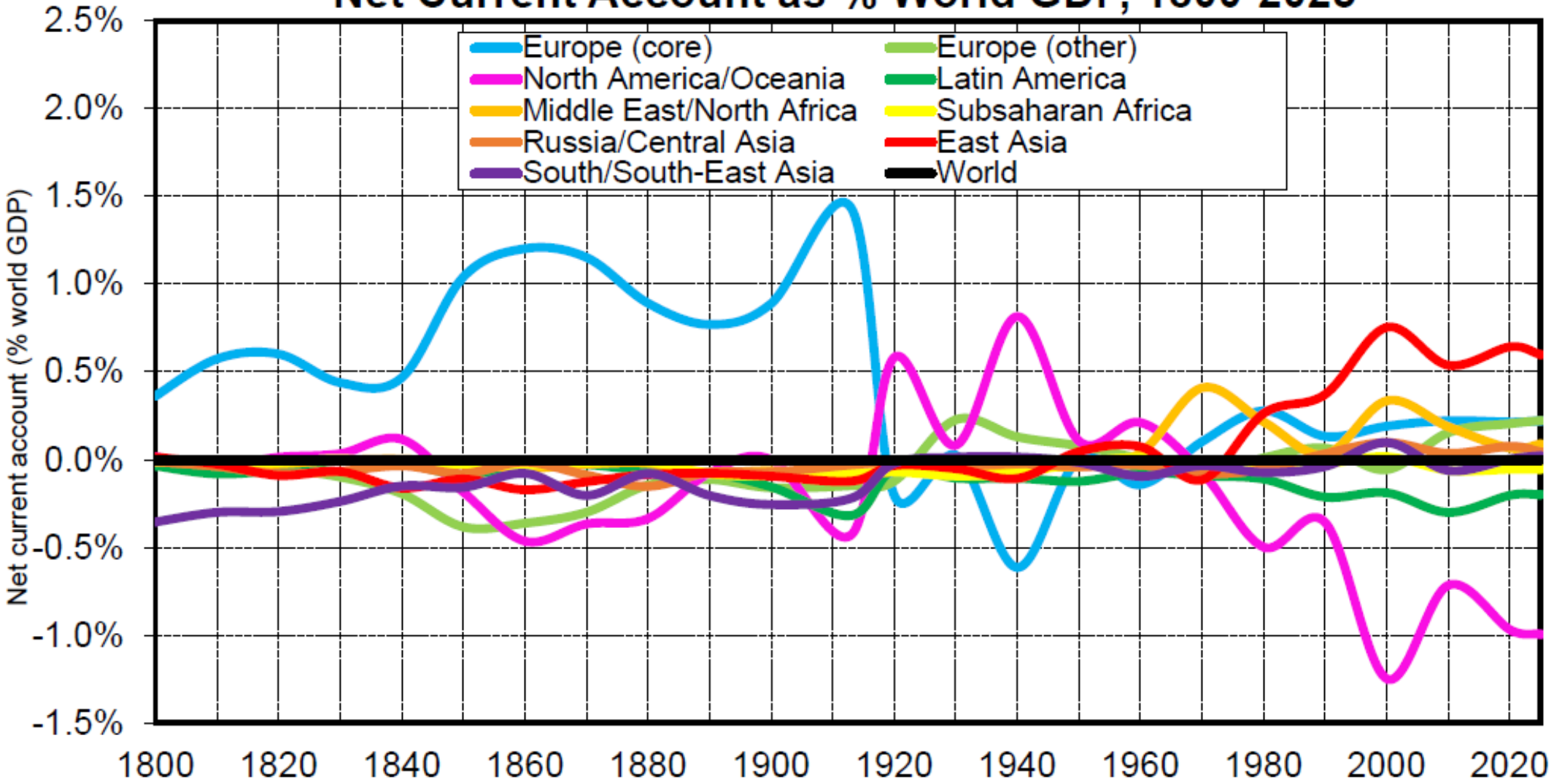
Interpretation. Between 1800 & 1914, Europe has a permanent current account surplus (close to 2% of its GDP on average, and rising over time) while the rest of the world has a permanent deficit. Since the 1970s-1980s, the main surpluses come from oil countries (Middle East, Russia) and East Asia. **Note**. 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



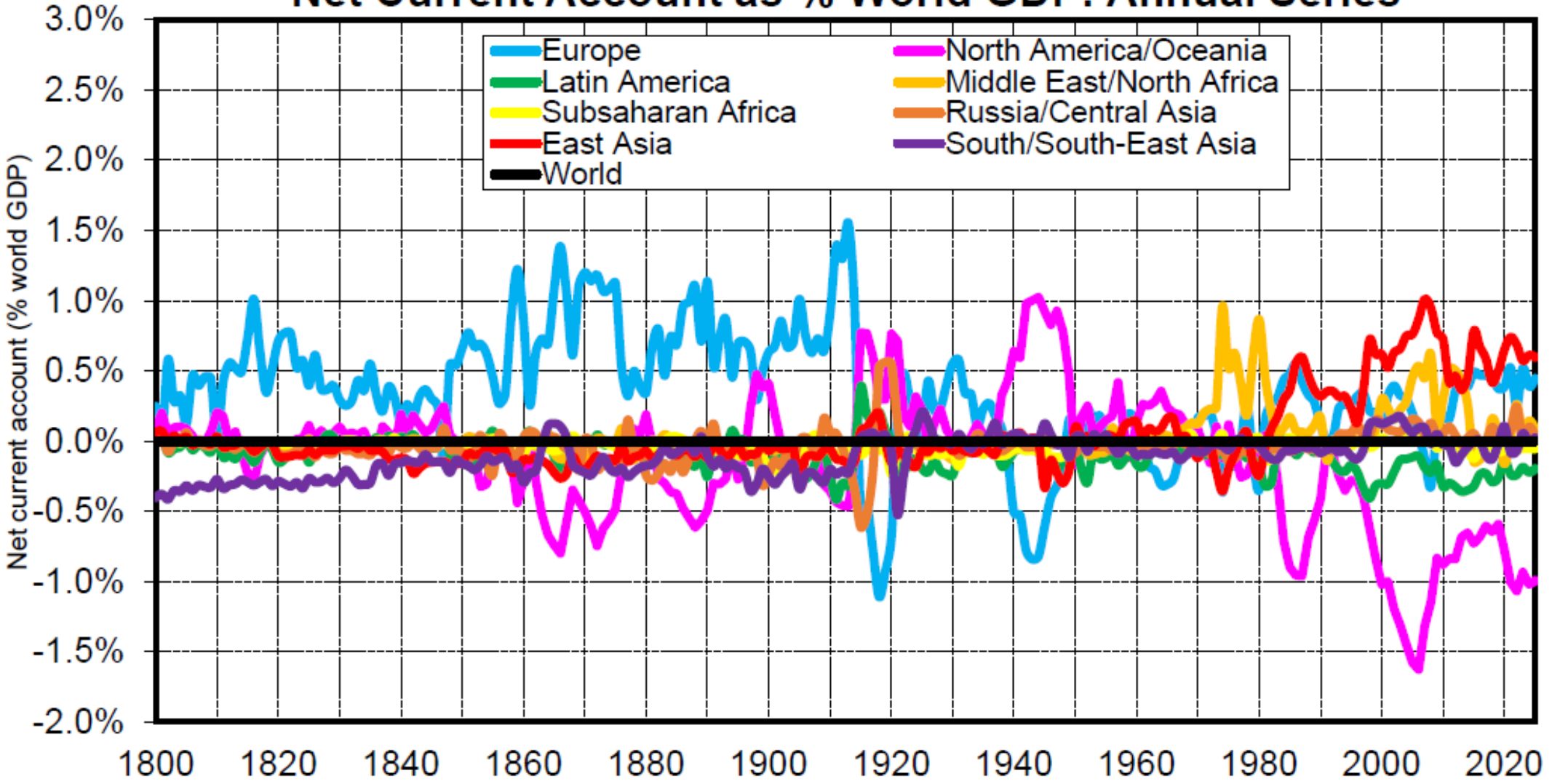
Interpretation. If we express current account as a fraction of world GDP (rather than as a fraction of the GDP of each country or region), we find that Europe's current account surplus between 1800 and 1914 was substantially larger than the surpluses of Middle East or Easr Asia since the 1970s-1980s. **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



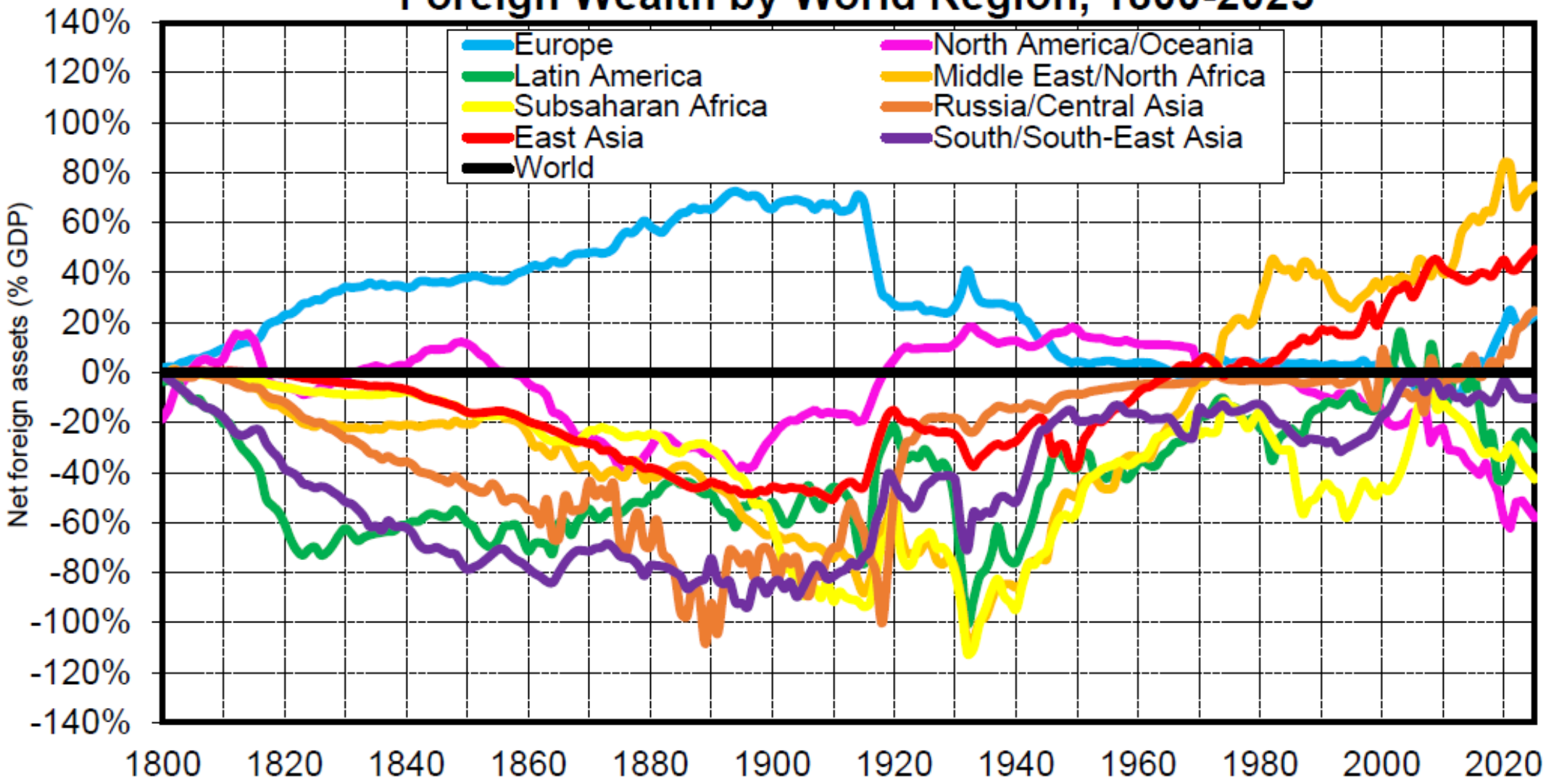
Interpretation. If we concentrate on core European colonial powers (Britain, France, Germany, Netherlands), we find that Europe's current account surplus between 1800 and 1914 looks even larger as compared to the surplus of East Asia and Middle East since the 1970s-1980s.
Note. The values reported here 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



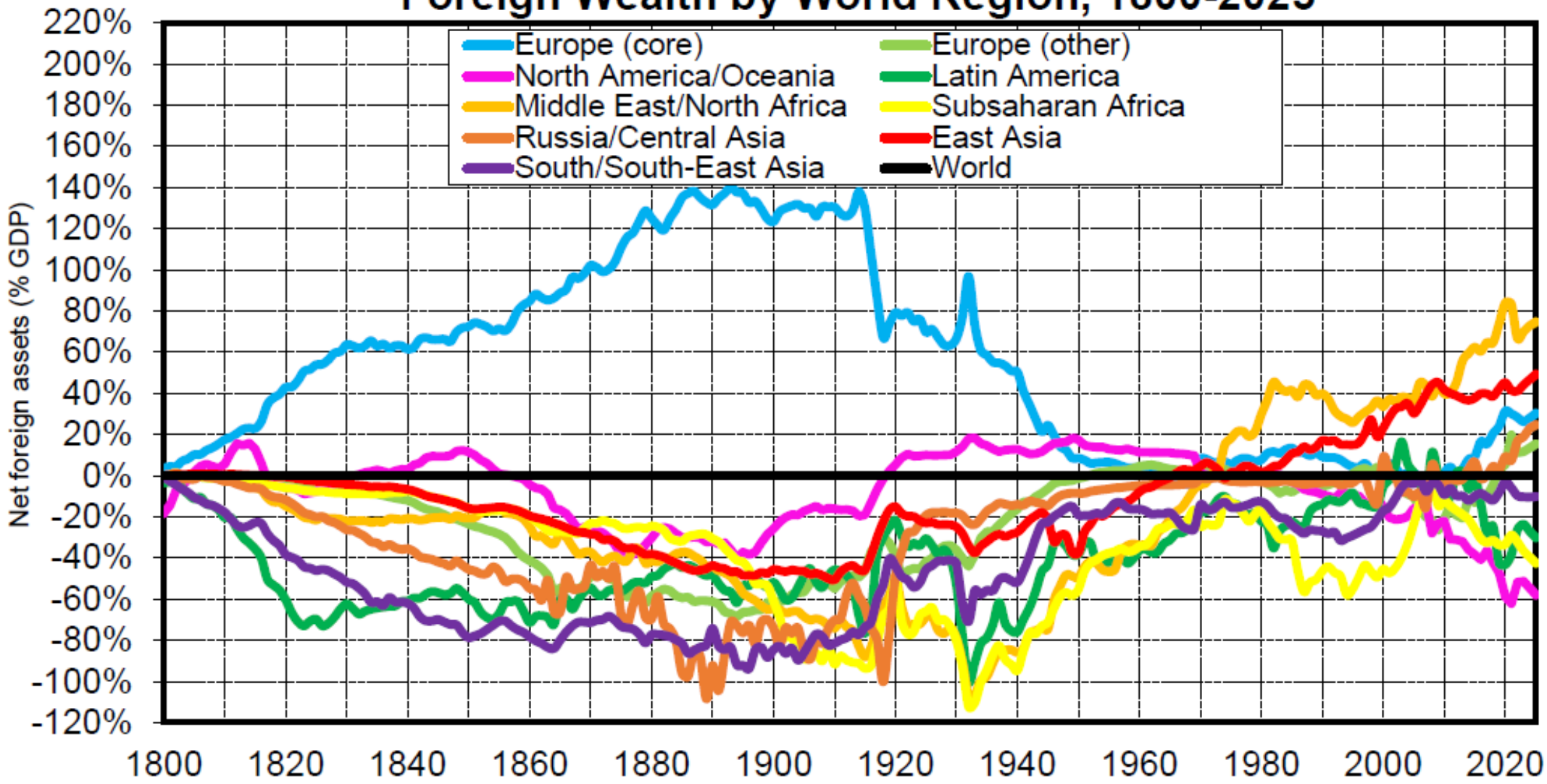
Interpretation. Annual series on current account surpluses and deficits are very bumpy, due to a large numbers of shocks (world wars, oil shocks, etc.), but they also show clear patterns: permanent European surplus between 1800 & 1914, large European deficits during wars (and US surpluses), large MENA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

Foreign Wealth by World Region, 1800-2025



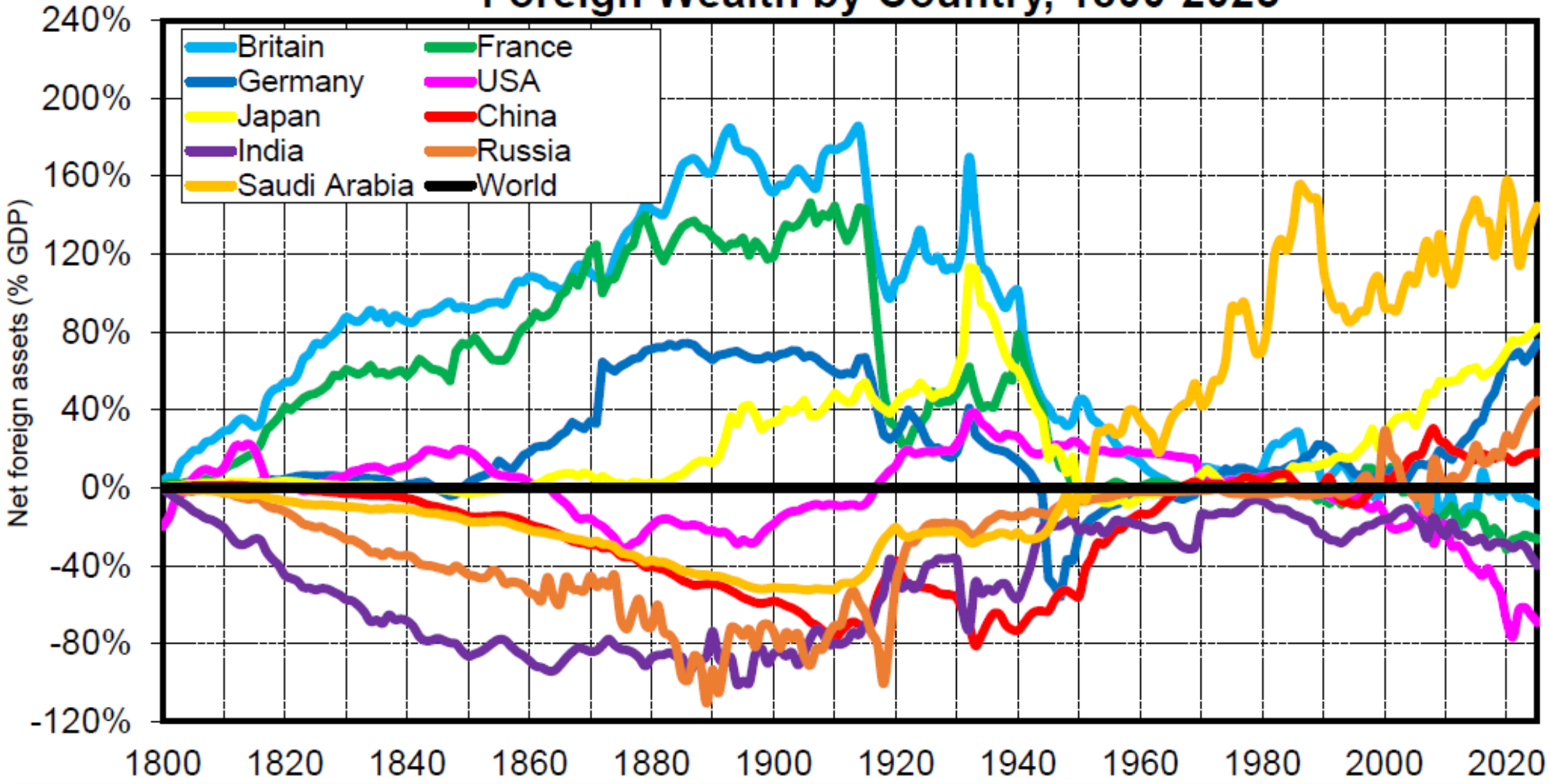
Interpretation. Between 1800 & 1914, Europe owns a rising fraction of the rest of the world. In 1914, Europe's foreign wealth (i.e. net foreign assets held by European residents in the rest of the world) reach about 70% of Europe's GDP. These foreign assets vanish between 1914 and 1950. They are partly 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



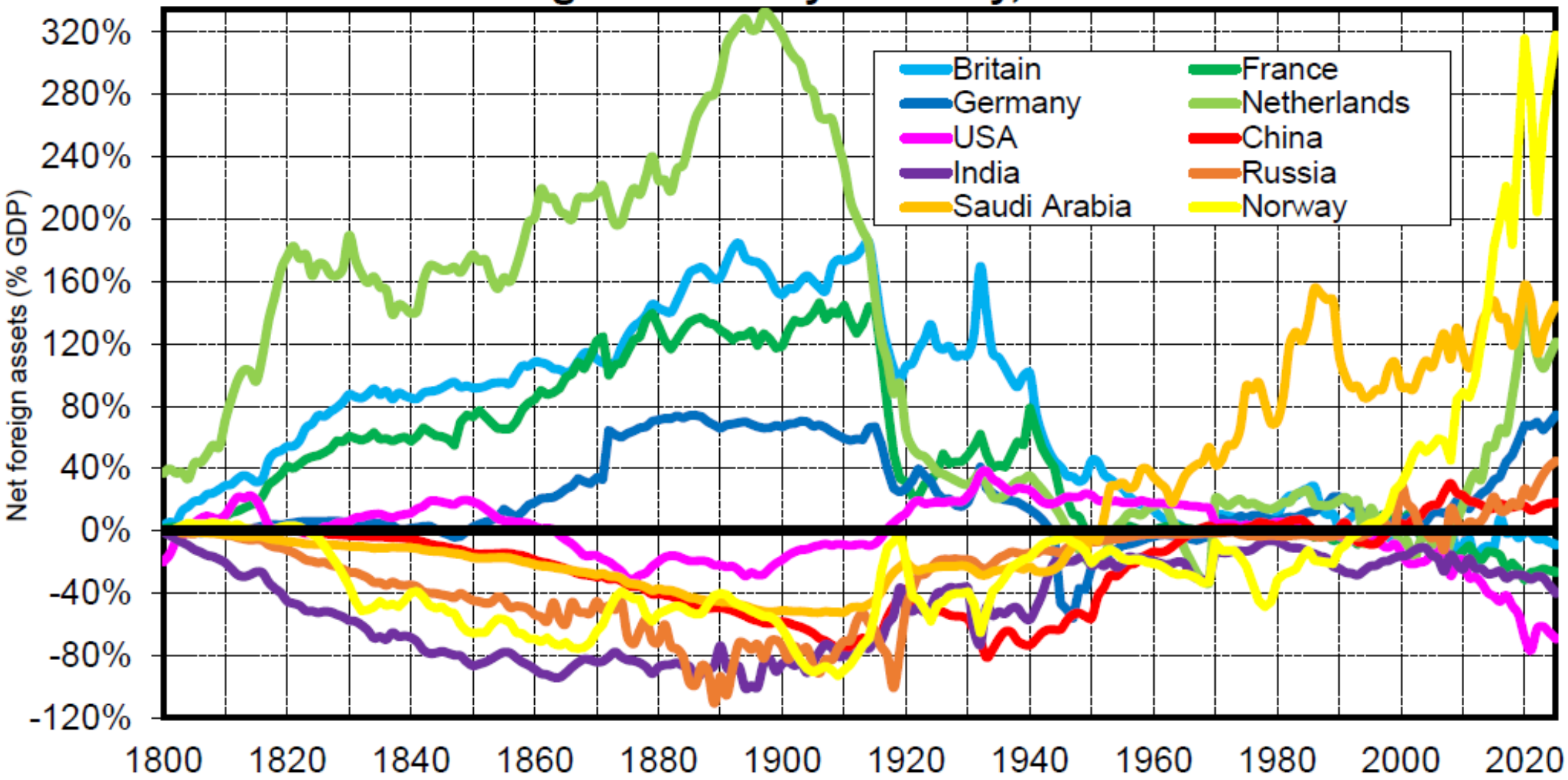
Interpretation. If we look at core European colonial powers (Britain, France, Germany, Netherlands, making 68% of Europe's GDP in 1914), we find that their net foreign assets reach almost 140% of their GDP in 1914. In contrast other European countries have large negative foreign wealth (approximately 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

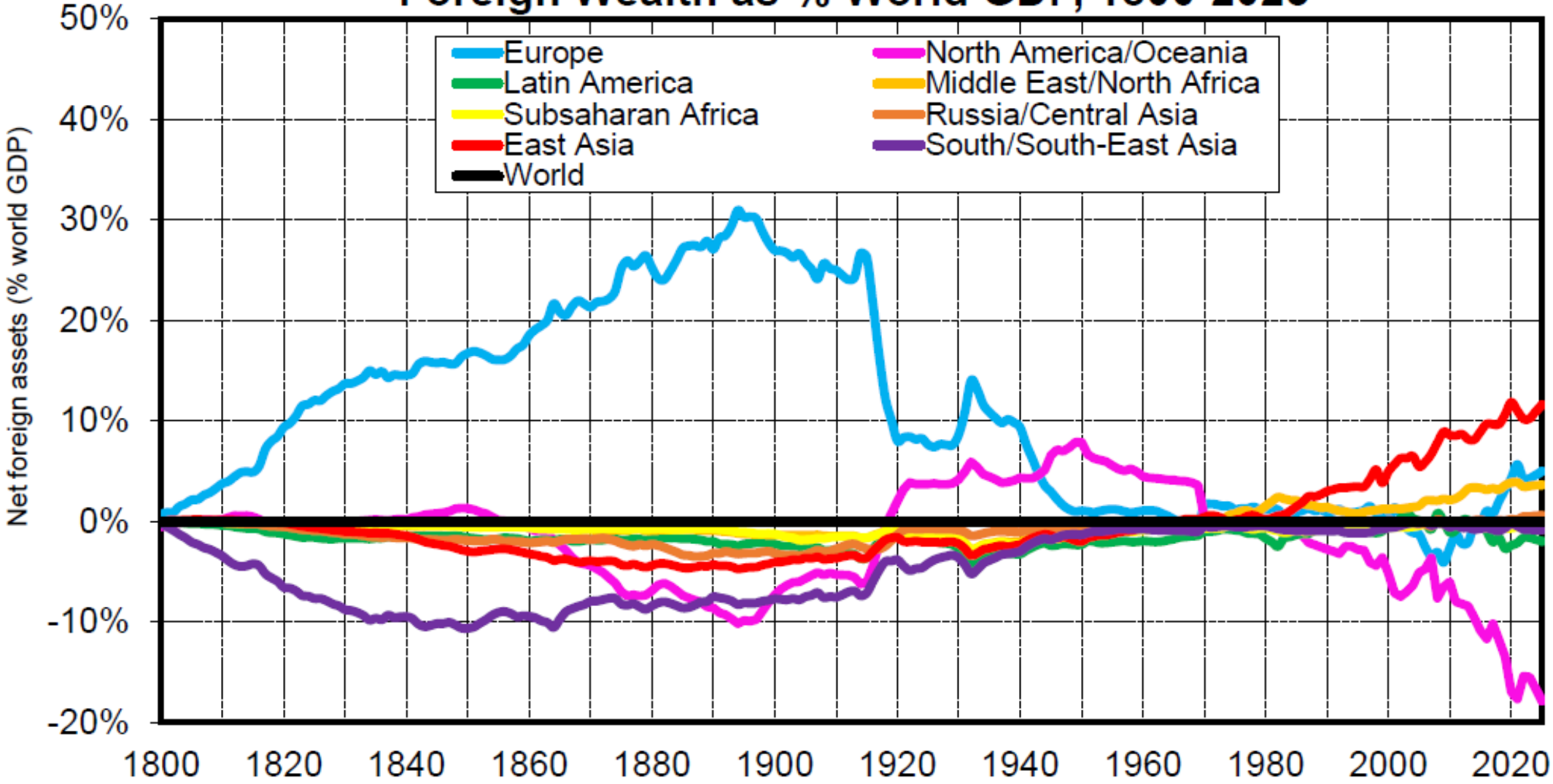
Foreign Wealth by Country, 1800-2025



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).

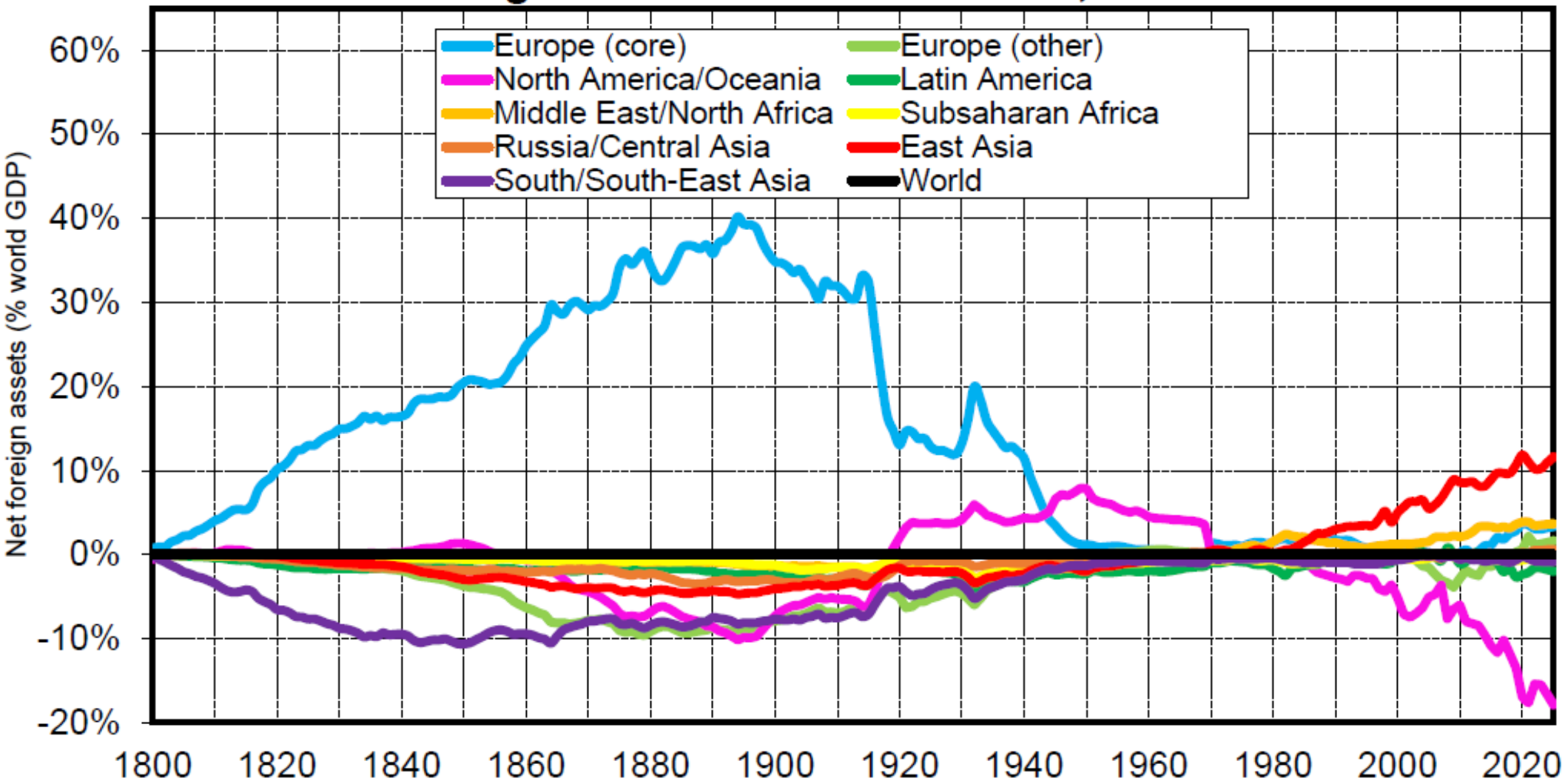
Sources and series: wid.world

Foreign Wealth as % World GDP, 1800-2025



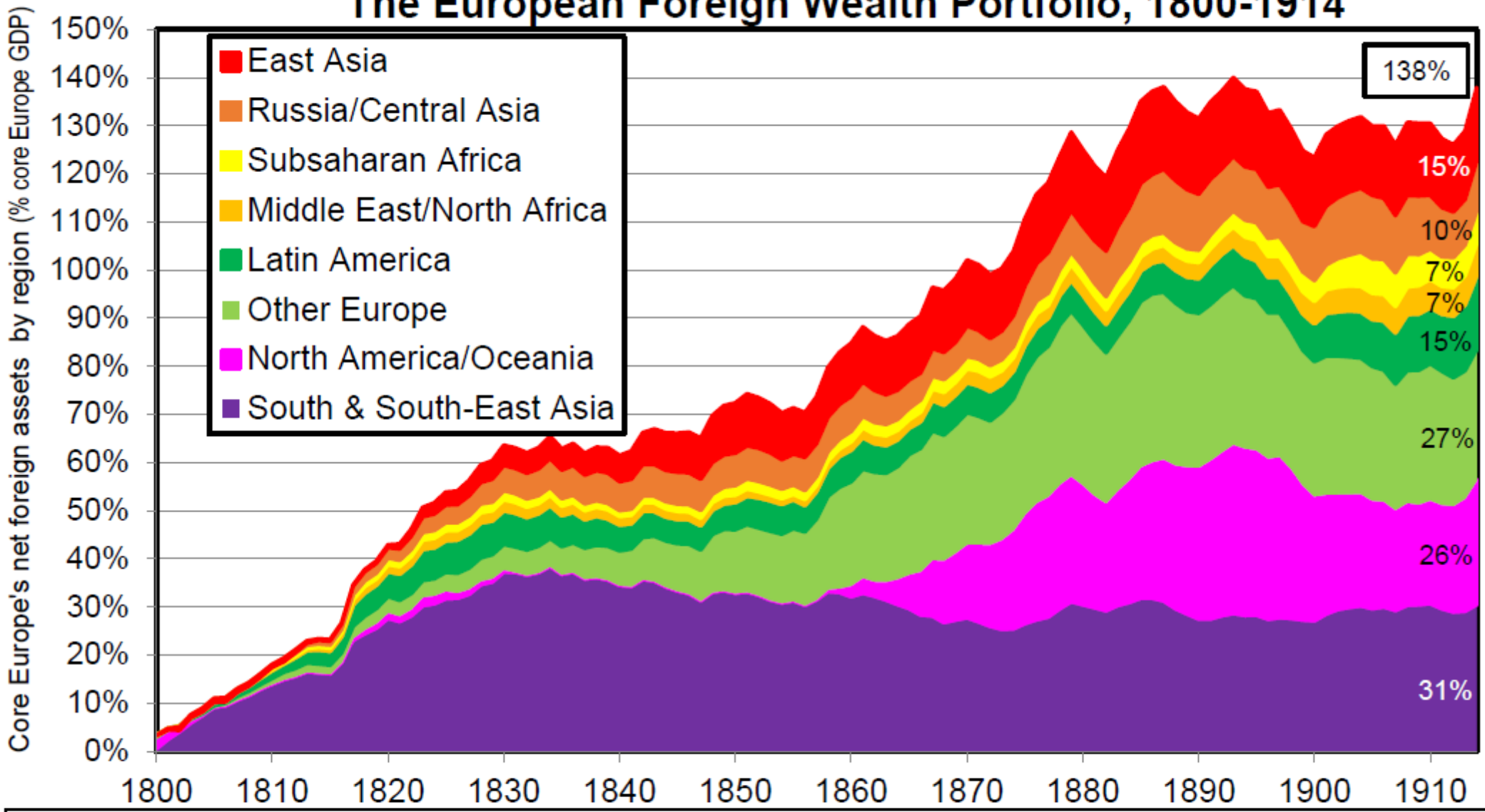
Interpretation. If we express net foreign assets as a fraction of world GDP (rather than as a fraction of the GDP of each country or region), then we find that Europe's pre-WW1 foreign wealth is about 2.5-3 times larger than East Asia's foreign wealth today (and 5-6 times larger than Middle East's foreign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



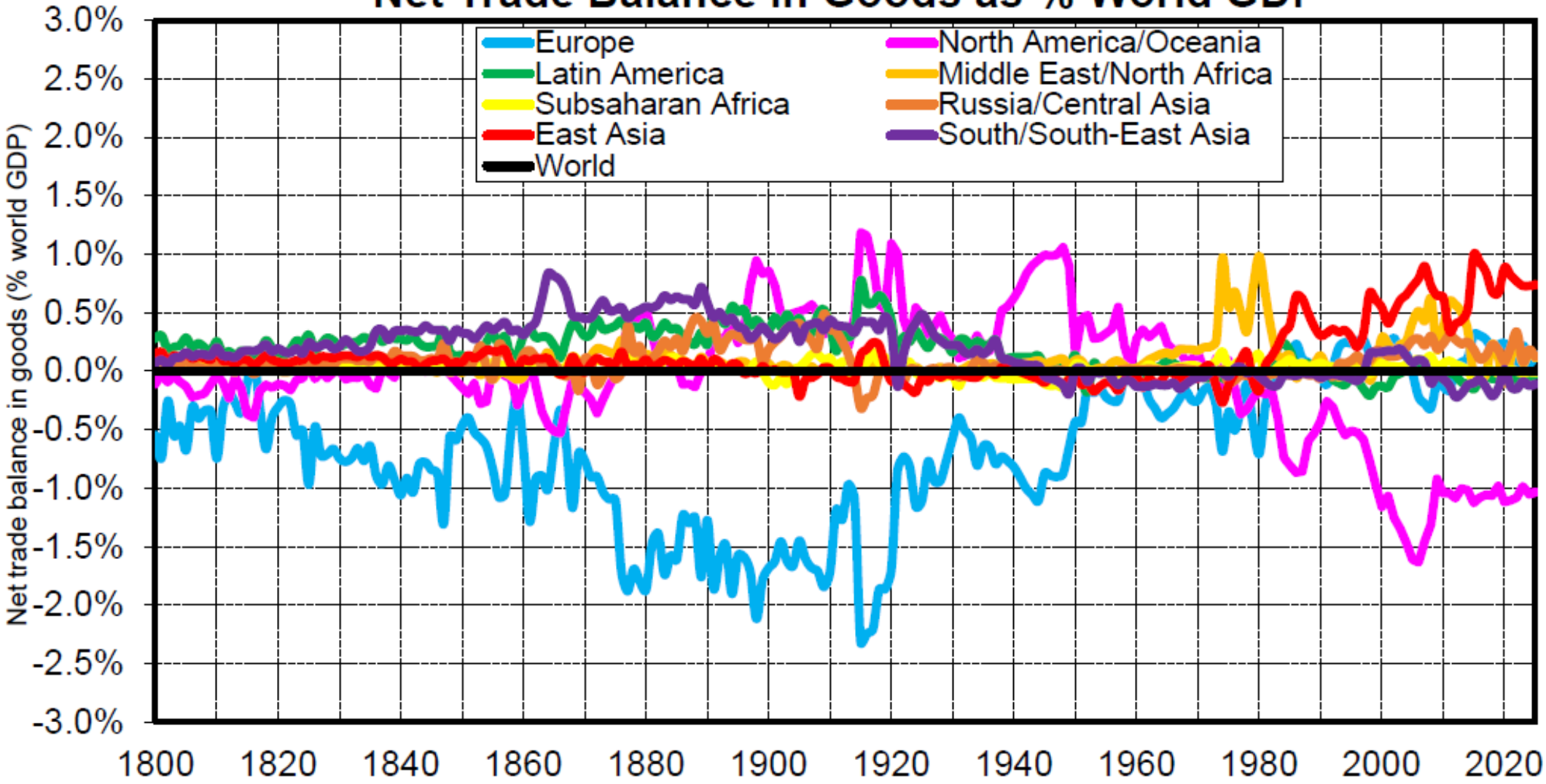
Interpretation. Between 1800 & 1914, core European colonial powers (Britain, France, Germany, Netherlands) accumulate a very large and diversified foreigh wealth porfolio in the rest of the world. By 1914, they own the equivalent of 138% of their GDP in net foreign assets. South & South-East Asia assets 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!**

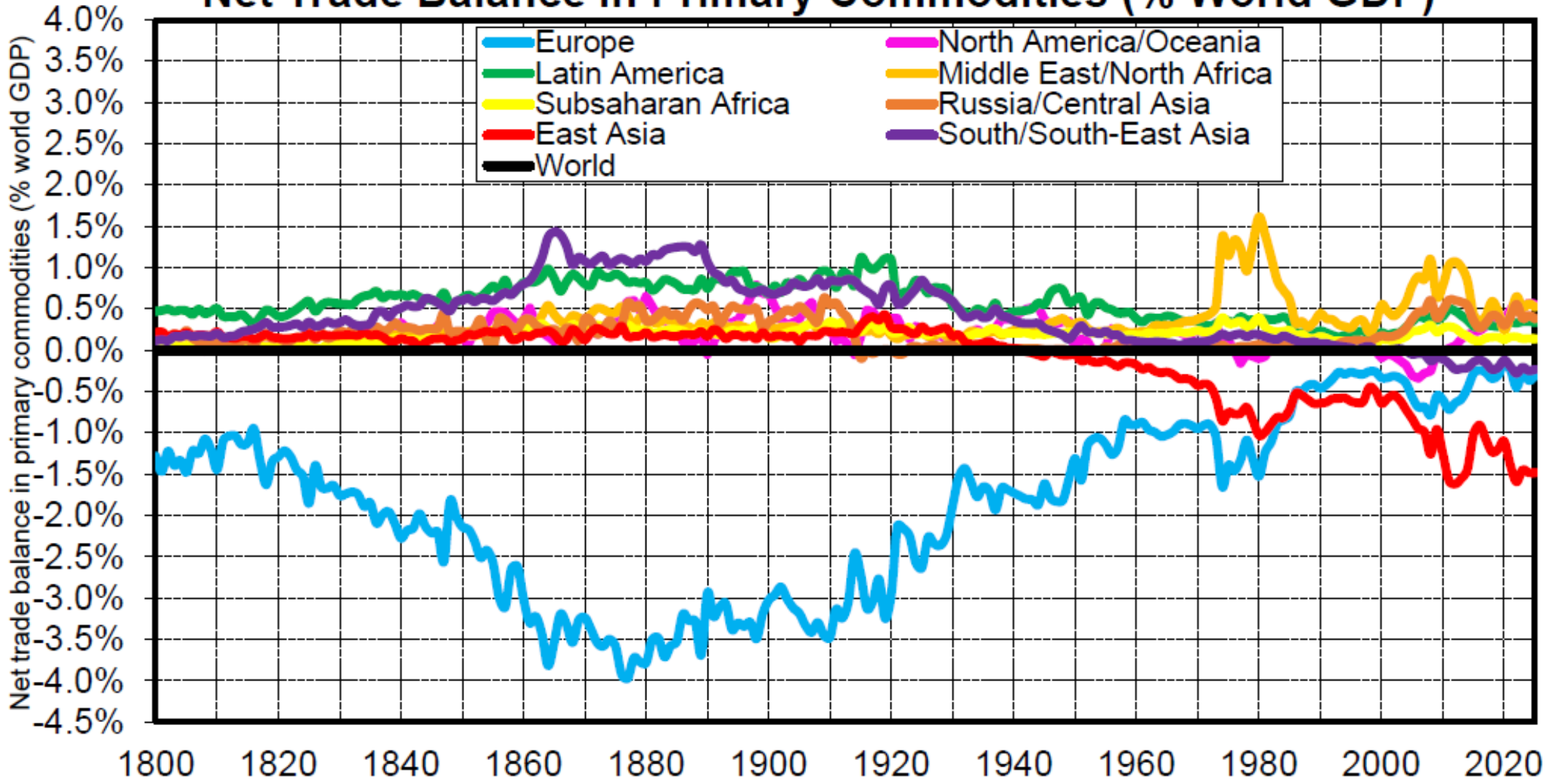
Both in 1800-1914 & in 1970-2025, **low commodity prices play a critical role for wealth accumulation** by manufacturing power (Europe or East Asia)

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

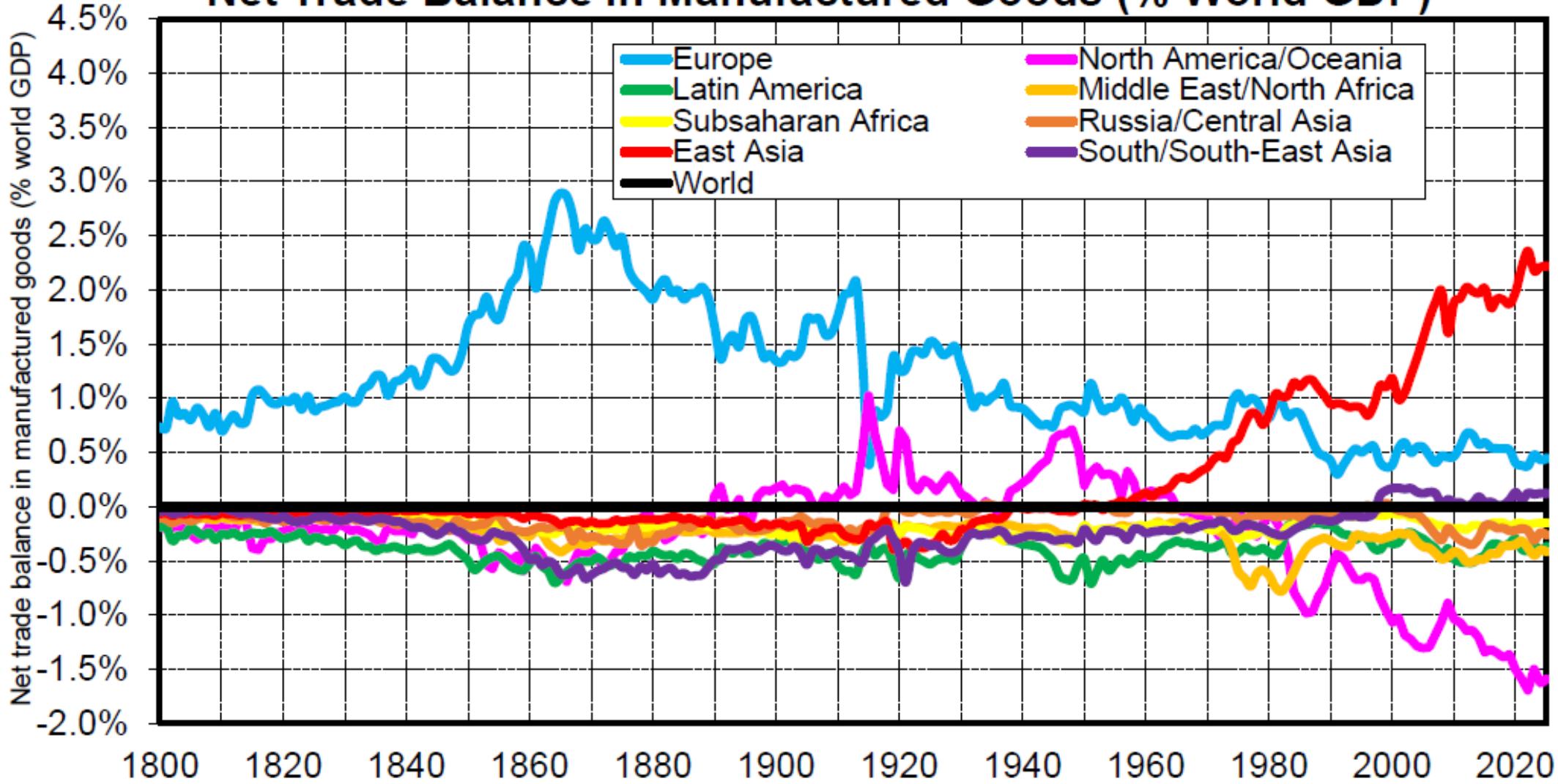
Net Trade Balance in Primary Commodities (% World GDP)



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.

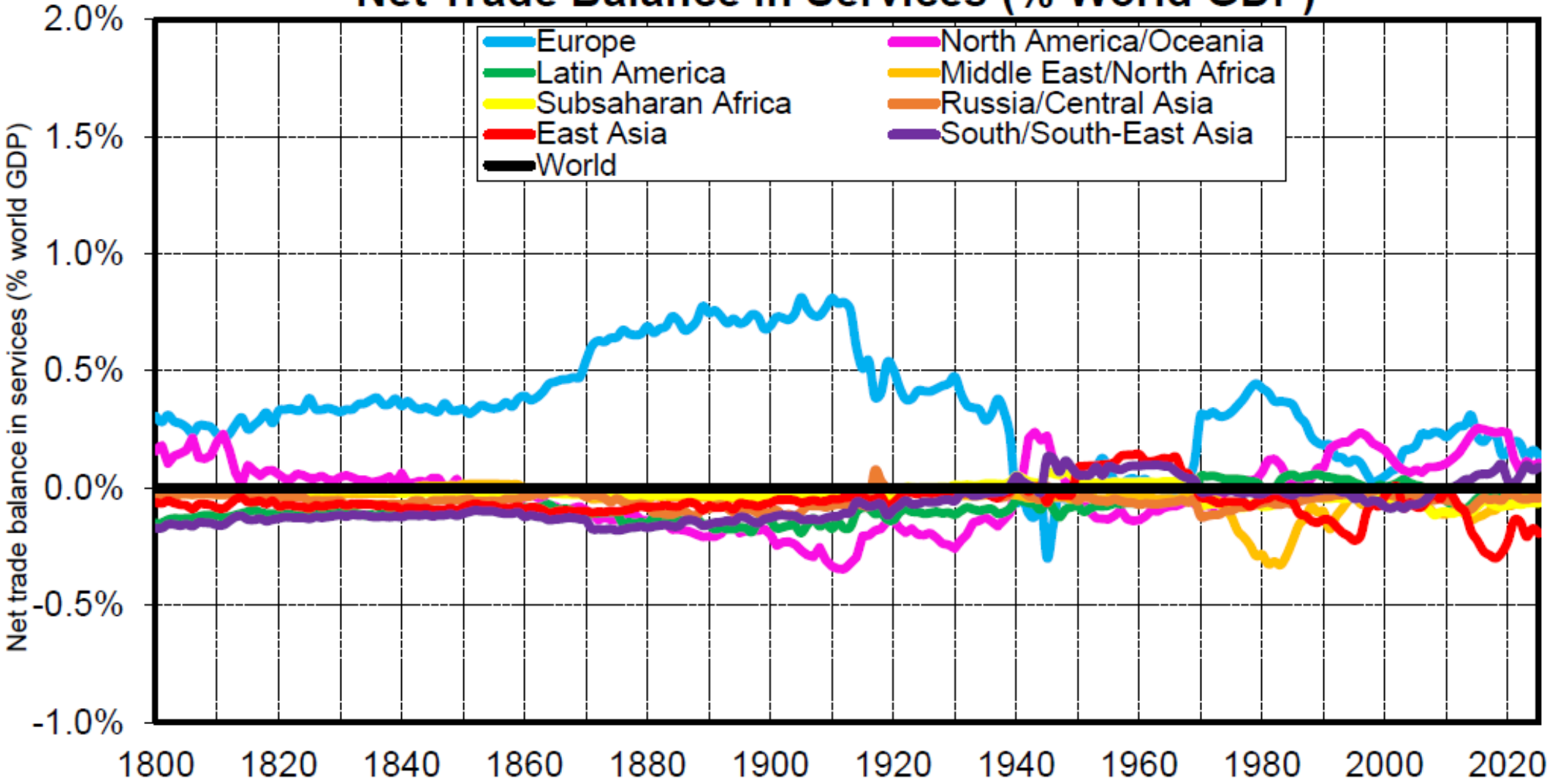
Sources and series: see wid.world

Net Trade Balance in Manufactured Goods (% World GDP)



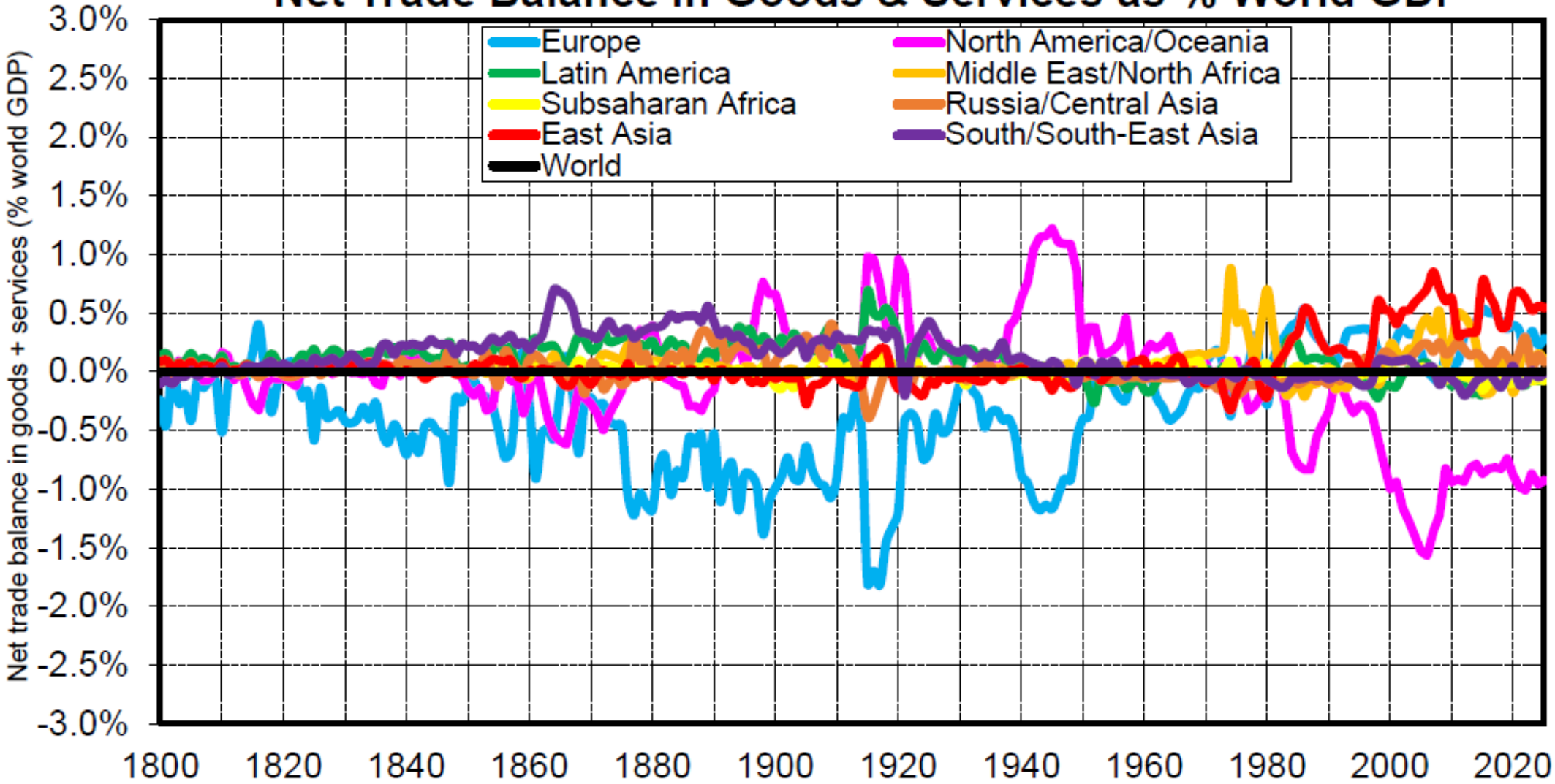
Interpretation. Between 1800 & 1914, Europe is making a large trade surplus in manufactured goods (especially Britain), but it is insufficient to compensate for the huge deficit in primary commodities. In contrast, the trade surplus in manufactured goods of East Asia in recent decades has been of sufficient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

Net Trade Balance in Services (% World GDP)



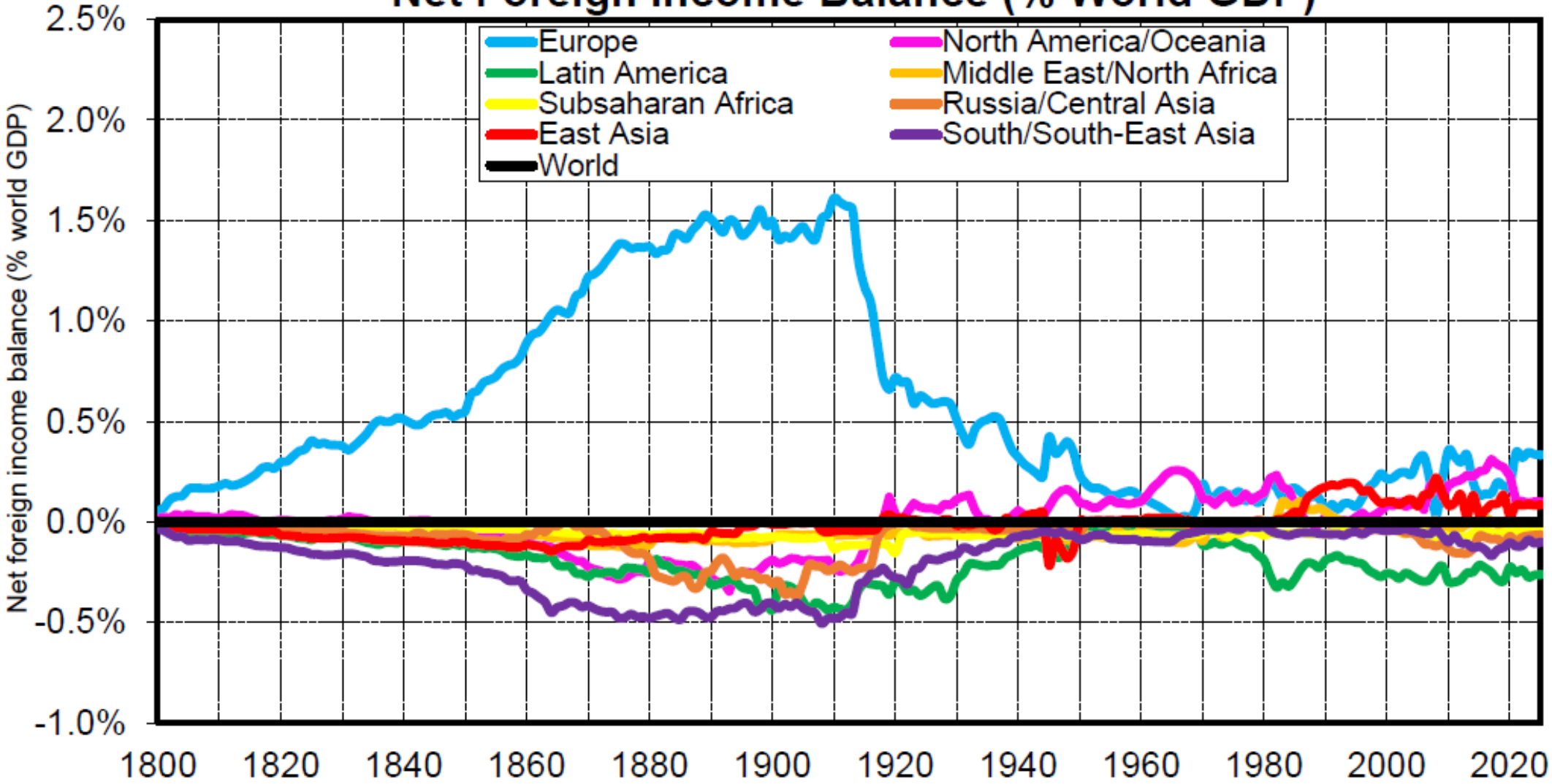
Interpretation. Between 1800 and 1914, Europe is making a permanent surplus in trade for services, particularly Britain in maritime transport, trading services, insurance, etc. (except during Napoleonic wars when US fleet gets a bigger share of freight). However this surplus alone is insufficient to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

Net Trade Balance in Goods & Services as % World GDP



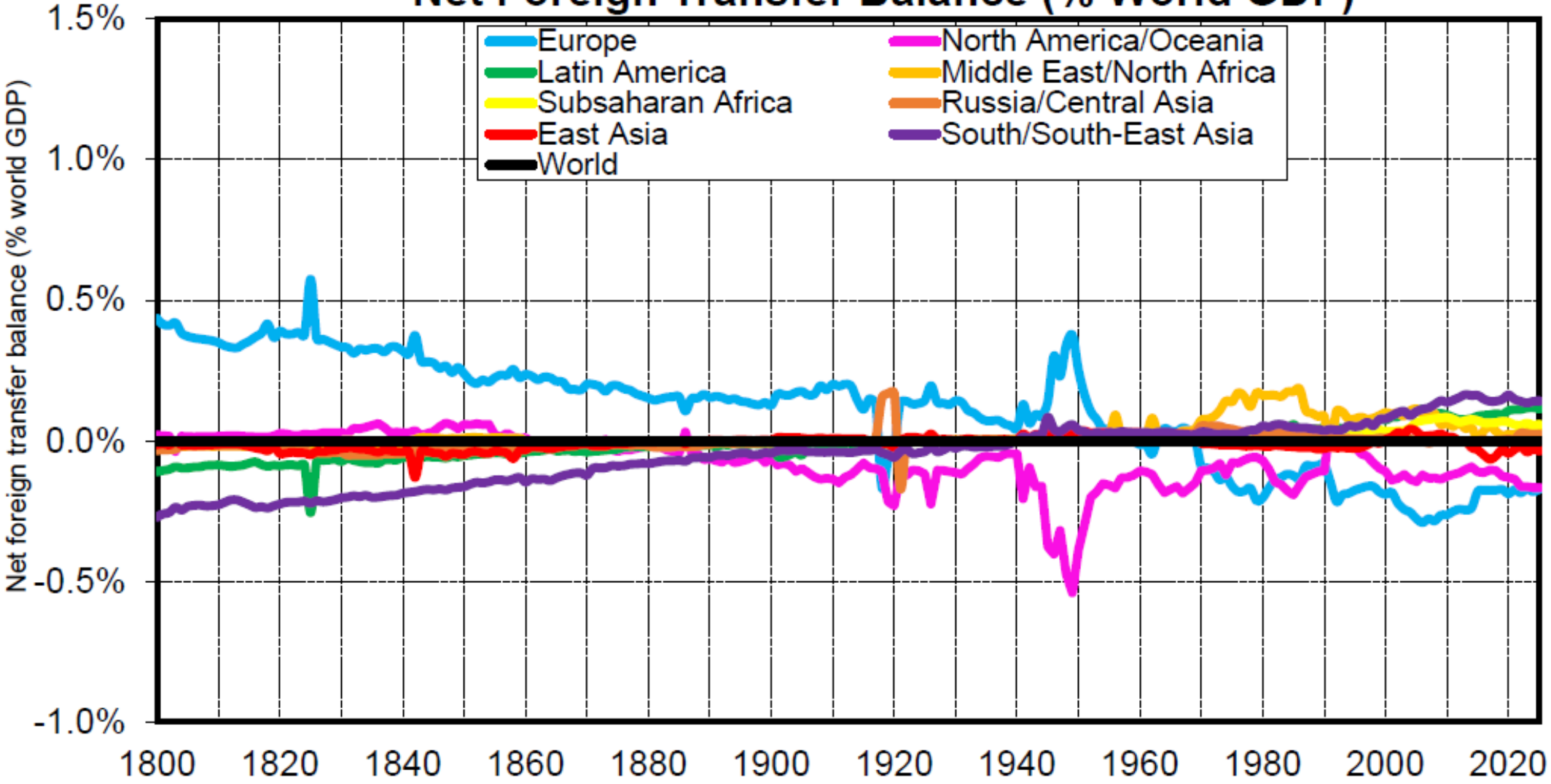
Interpretation. Between 1800 and 1914, Europe has a large permanent deficit in trade for goods, which is only partially compensated by the trade surplus in trade for services (in particular freight/insurance & trading services). I.e. Europe's large current account surplus over this period comes entirely 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%**

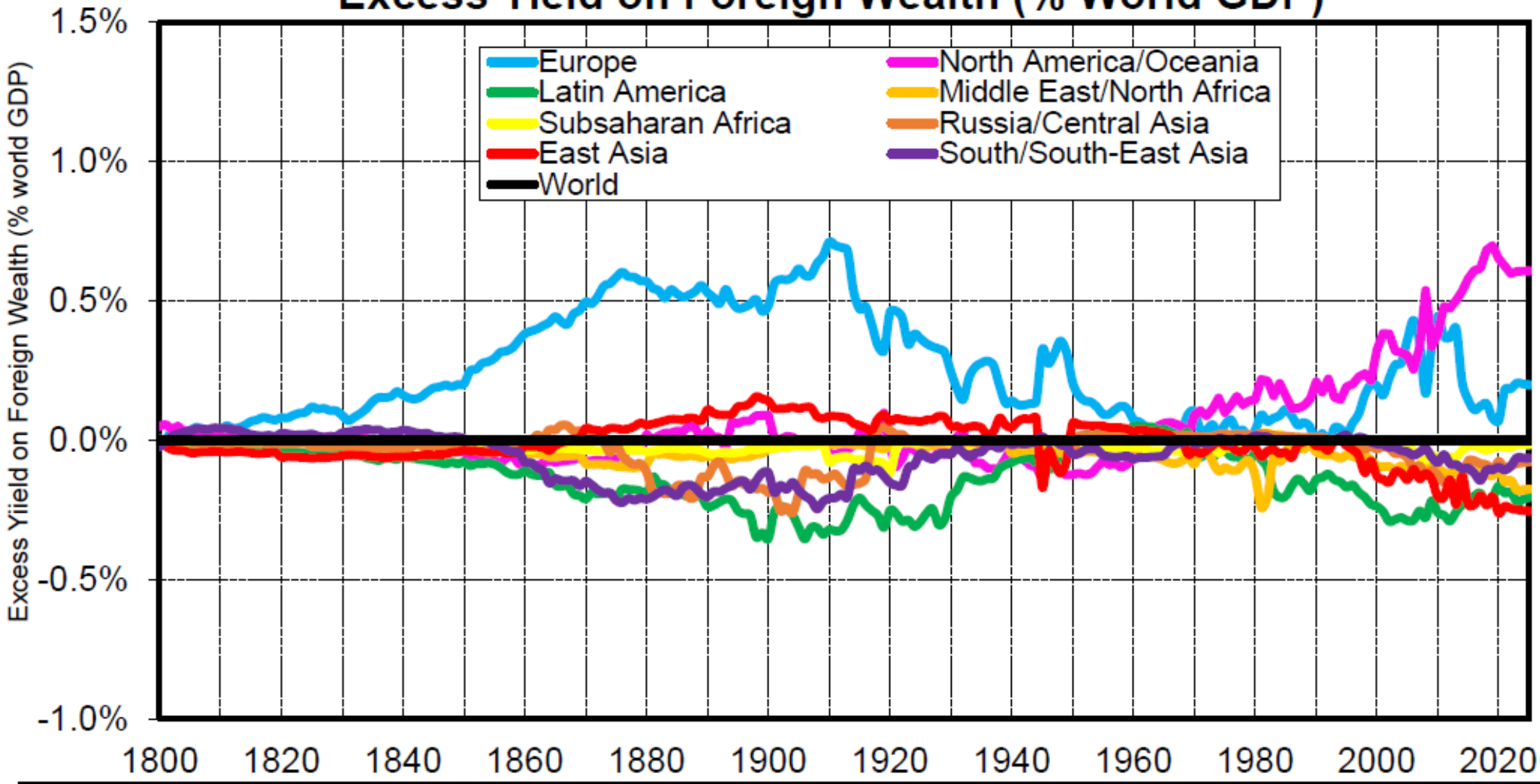
Interpretation. The net foreign wealth of European powers (GB-FR-DE-NL) rose from 3% to 138% of GDP between 1800 and 1914. Their cumulated trade deficit for goods was equal to -141% but it was more compensated by invisible BoP items (trade in services, foreign income and foreign transfers). **Sources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

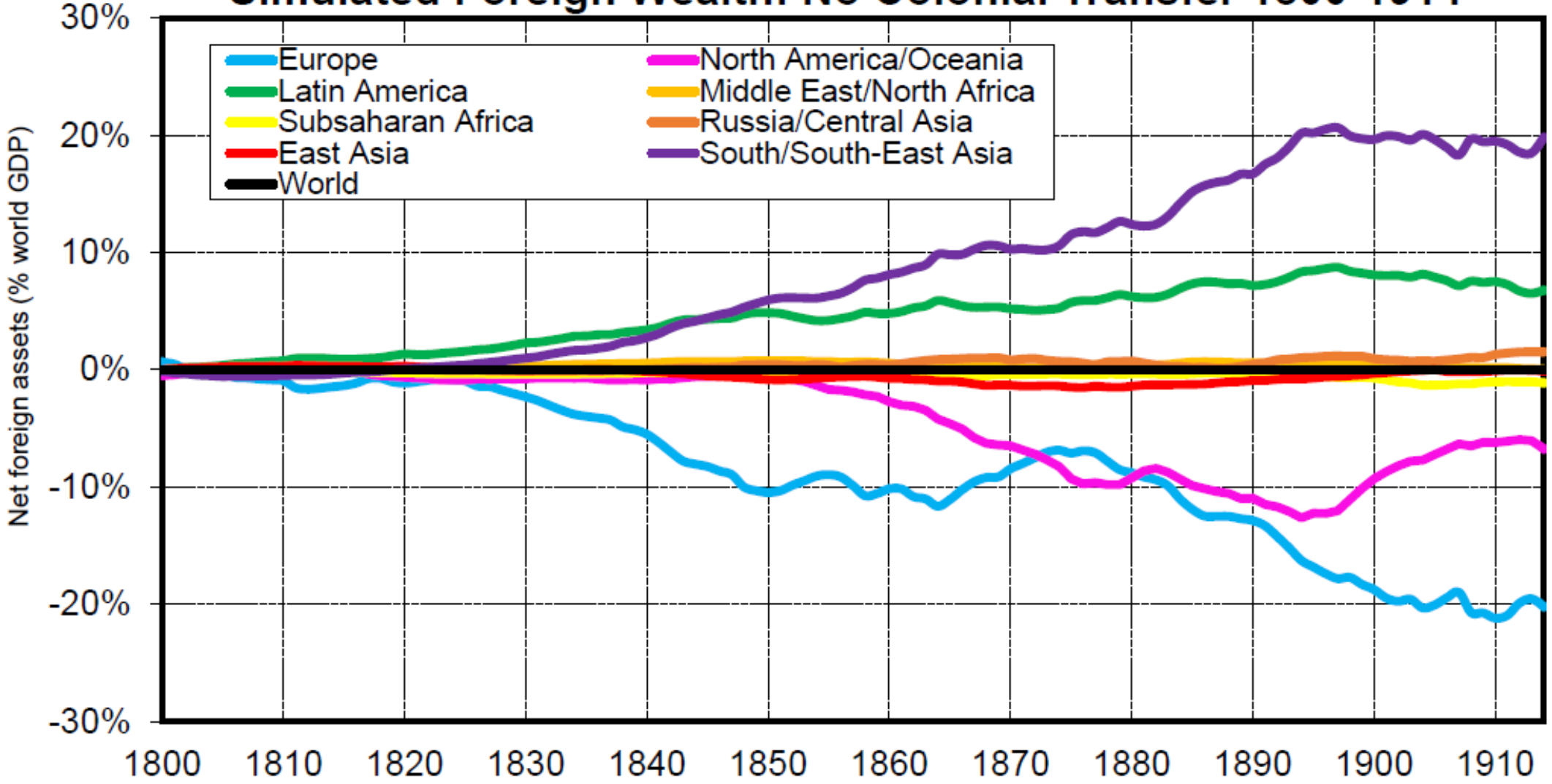
Economic simulations. Ideally we should also take into account the impact on domestic investment/productivity & global convergence in per capita GDP by 2025
(+ sectoral specialization/sustainability/carbon emissions)
(ignored here, left for future research)

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.**

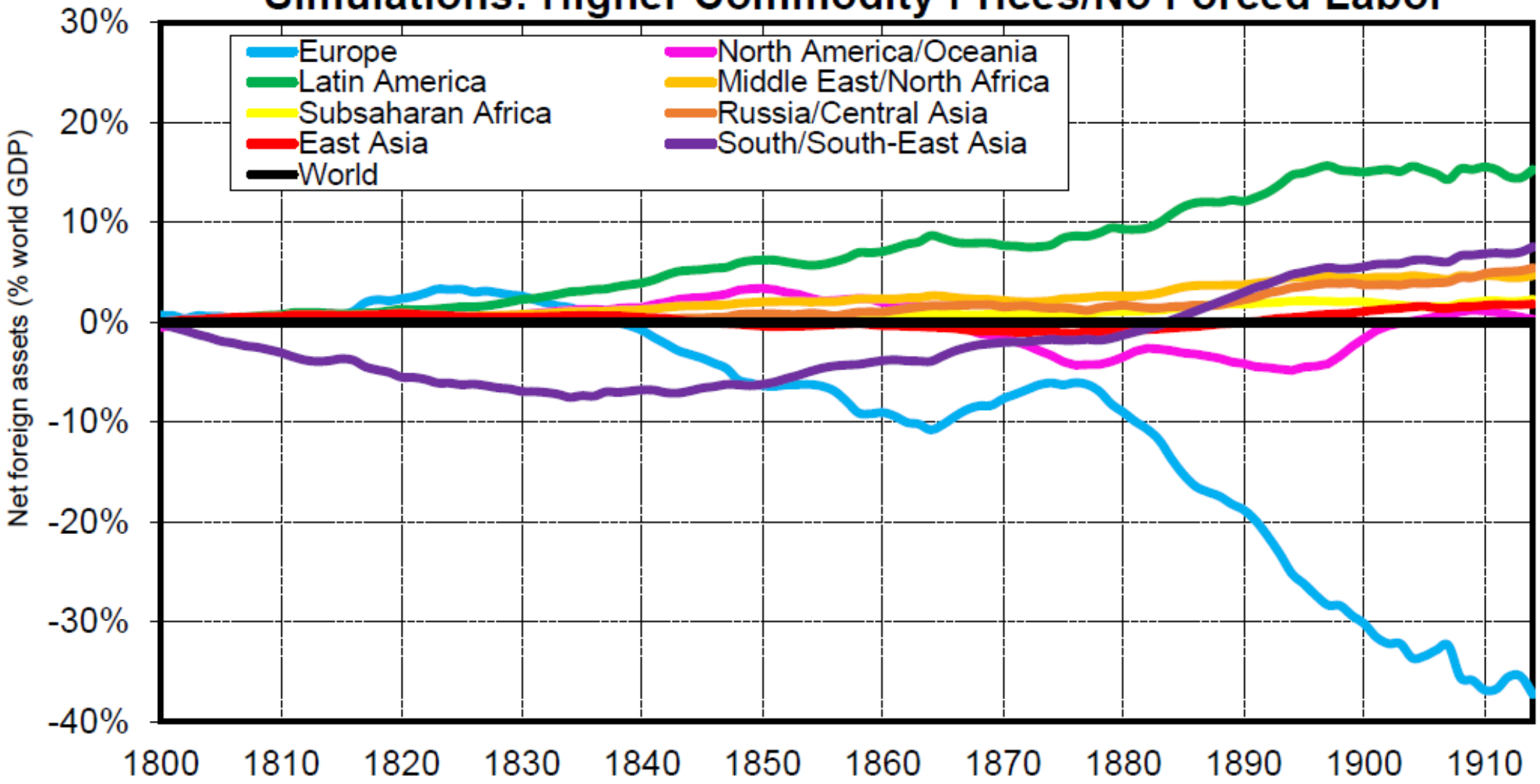
1970-2025. **If primary commodity prices are raised by 20%** (still a lot less than PPP), **then Subsaharan Africa owns substantial positive foreign wealth in 2025** (larger than East Asia).

Simulated Foreign Wealth: No Colonial Transfer 1800-1914



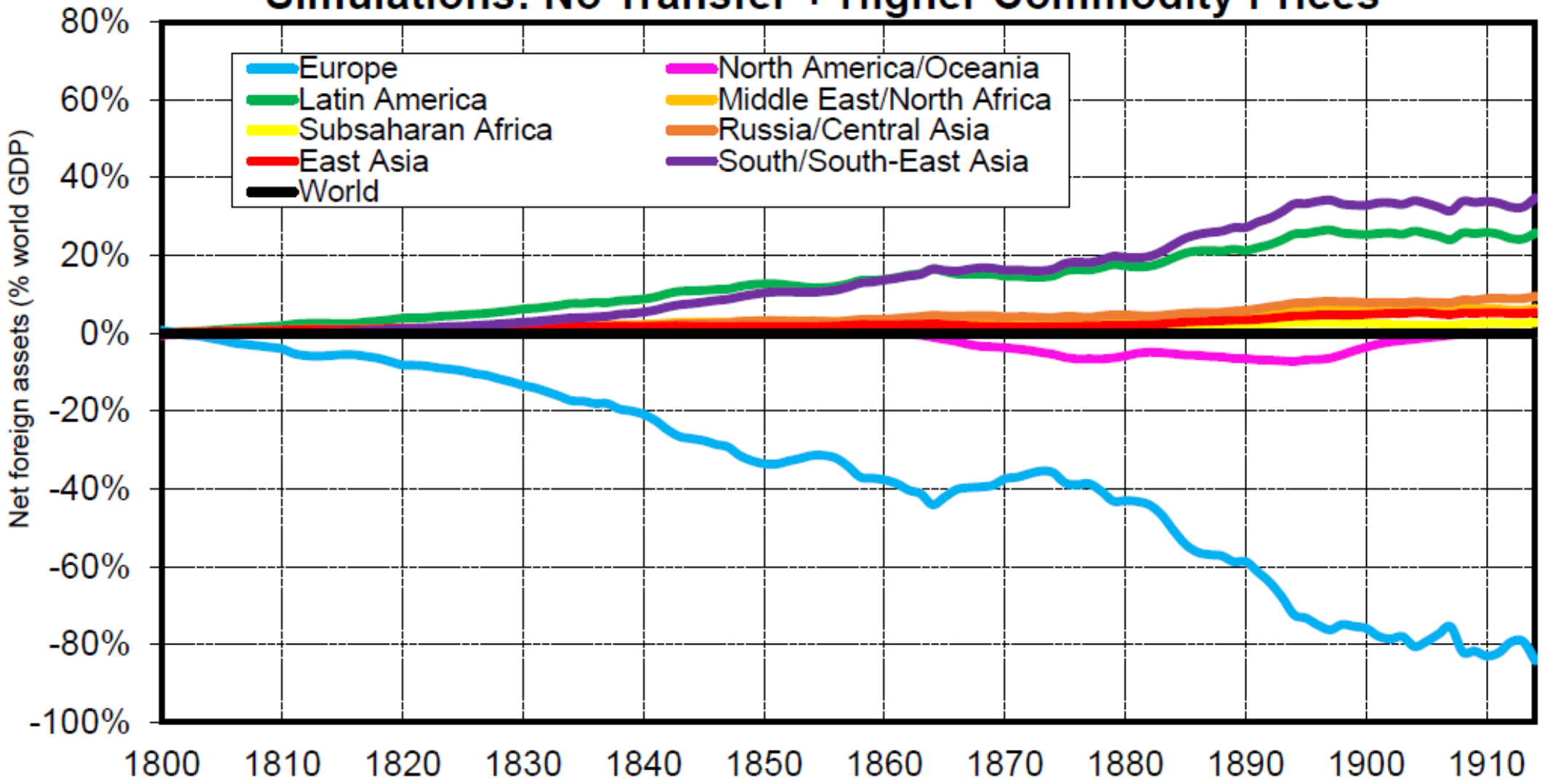
Interpretation. In the absence of the net transfer flows received by Europe in 1800-1914 (war tributes paid by Haïti and China to France and Britain, "Home charges" paid by India and Indonesia to Britain and the Netherlands, etc.)., and leaving all other flows unchanged, Europe would have had a very 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



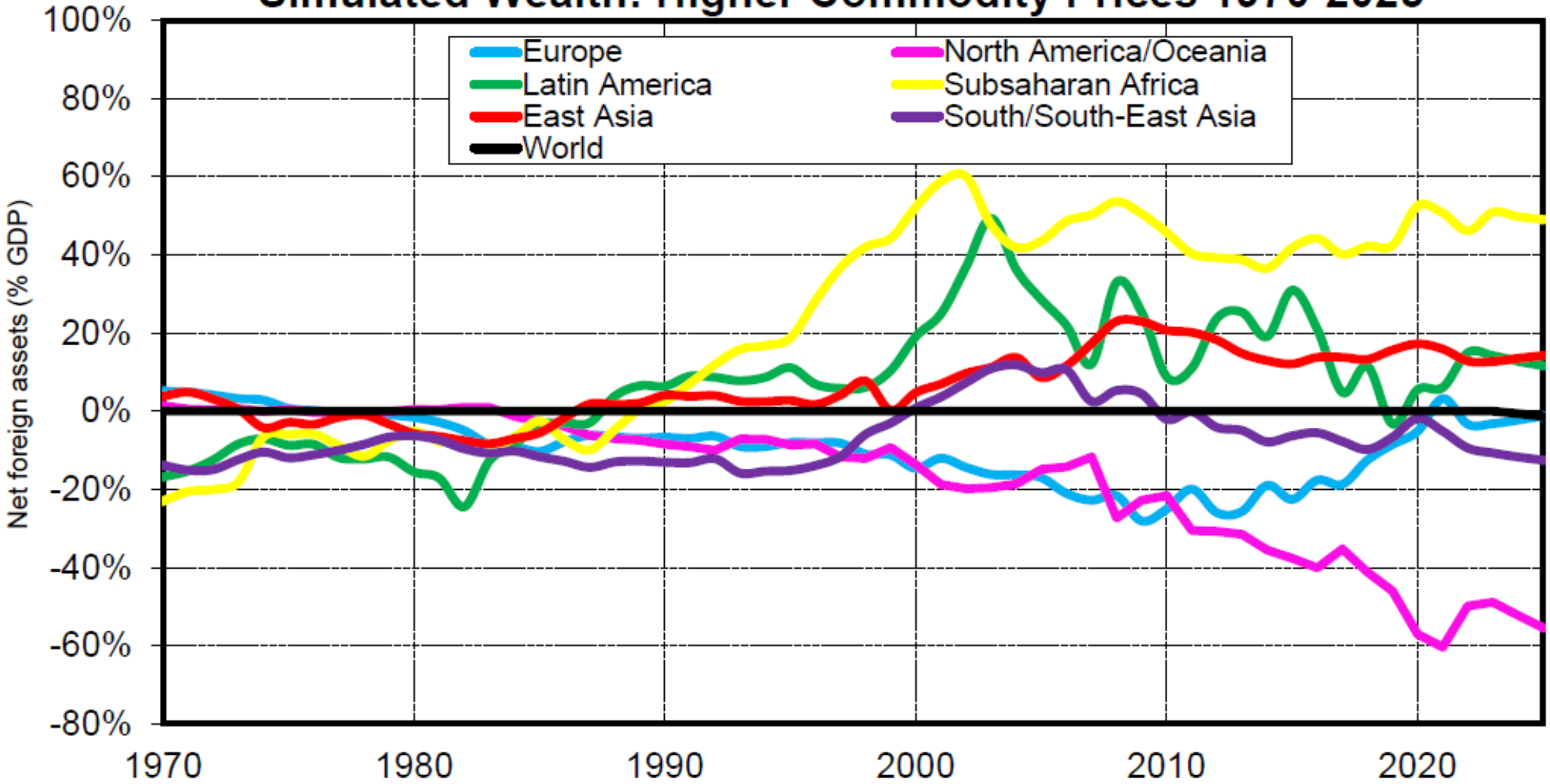
Interpretation. Assuming that primary commodity prices would have been 20% higher than what they were betwen 1800 and 1914 (which corresponds to a lower bound estimate of the value of unpaid forced labor in the export production of cotton, sugar, grain, etc.. over this period), and leaving all other 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).

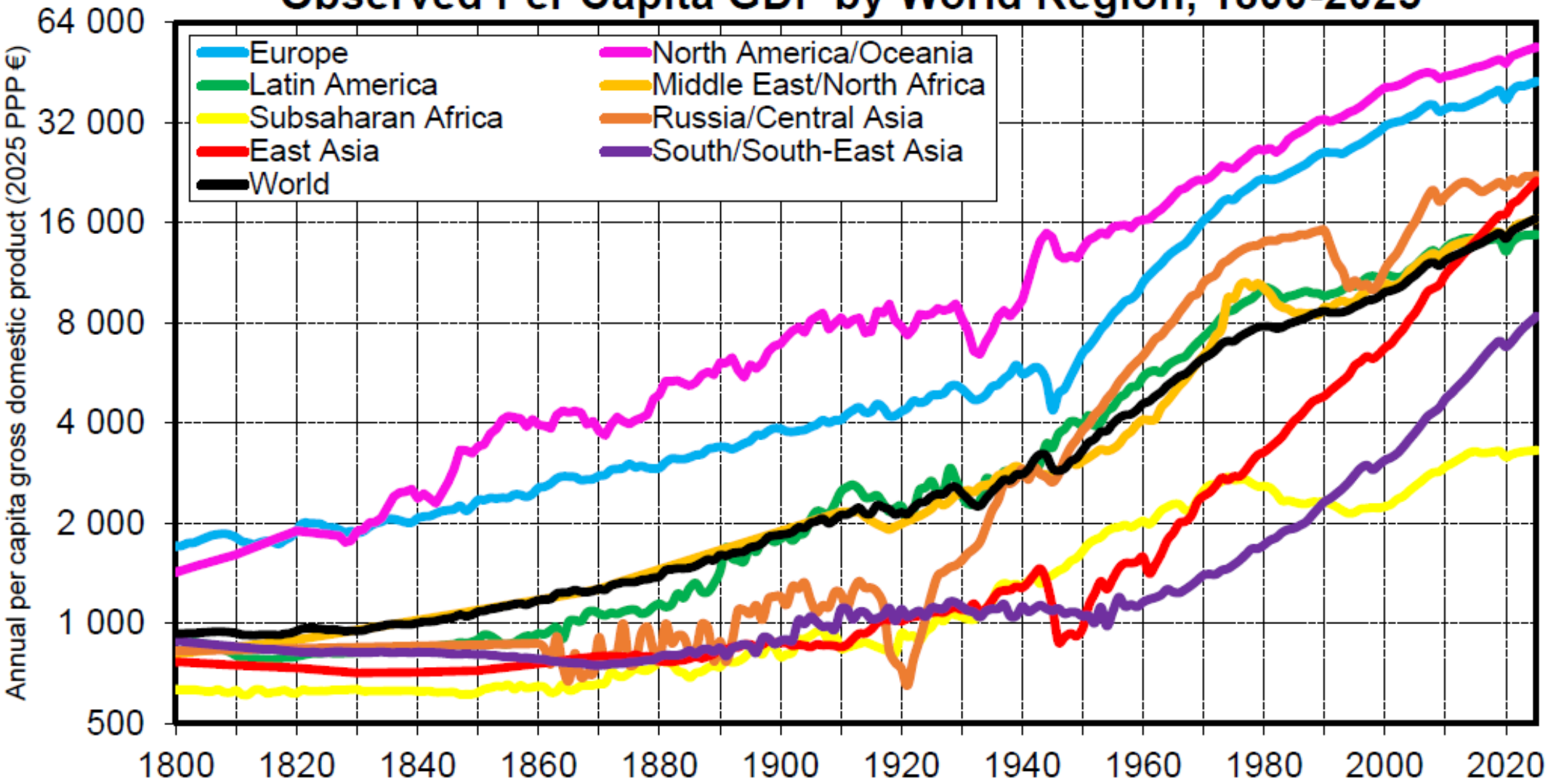
Sources and series: wid.world

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

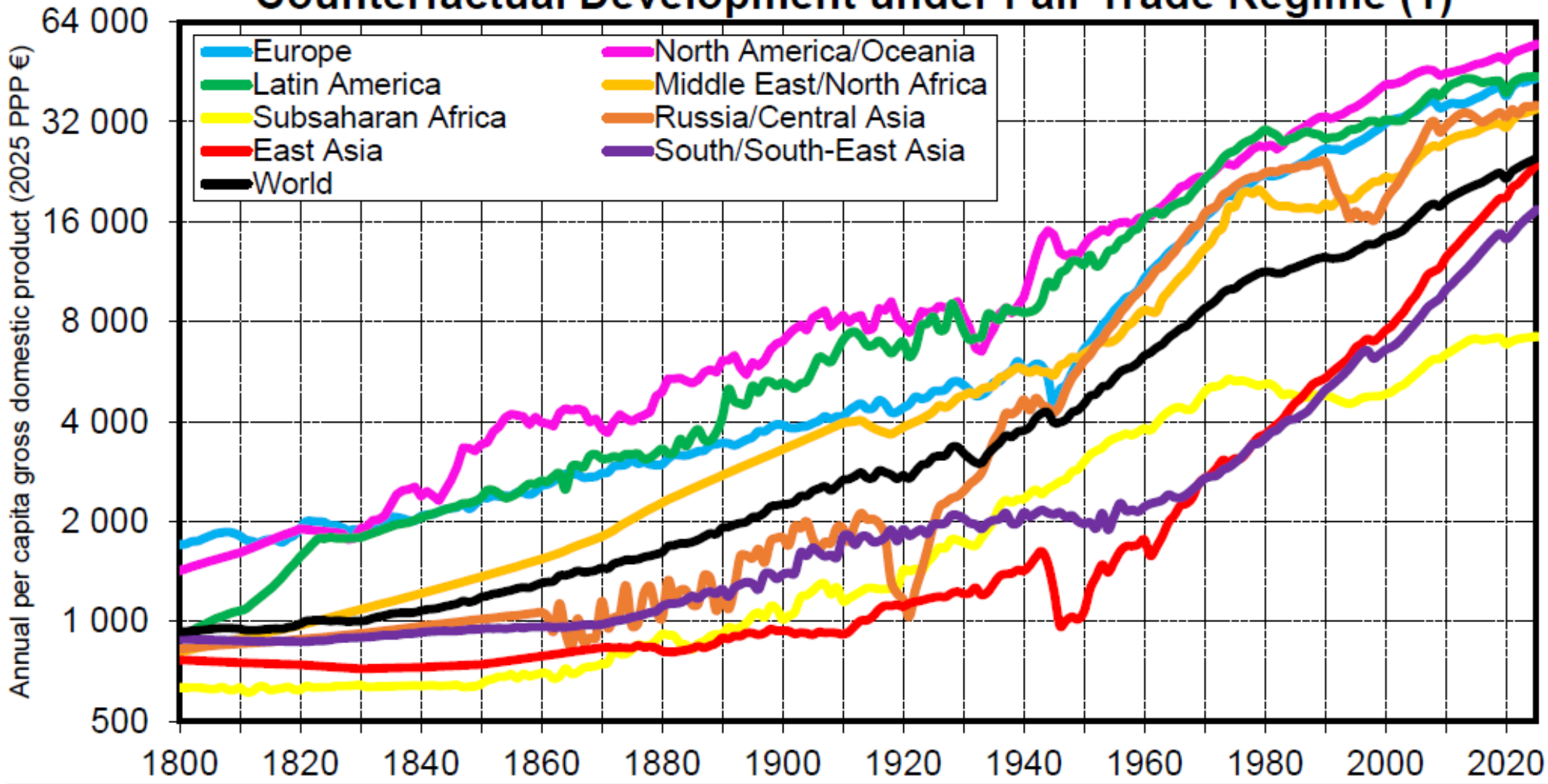
1800-2025. **In order to obtain further convergence** (including for Subsaharan Africa), **one also needs to assume a 30% rise in terms of exchange for poor countries**, e.g. via Global Clearing Union and/or Common International Currency

Observed Per Capita GDP by World Region, 1800-2025



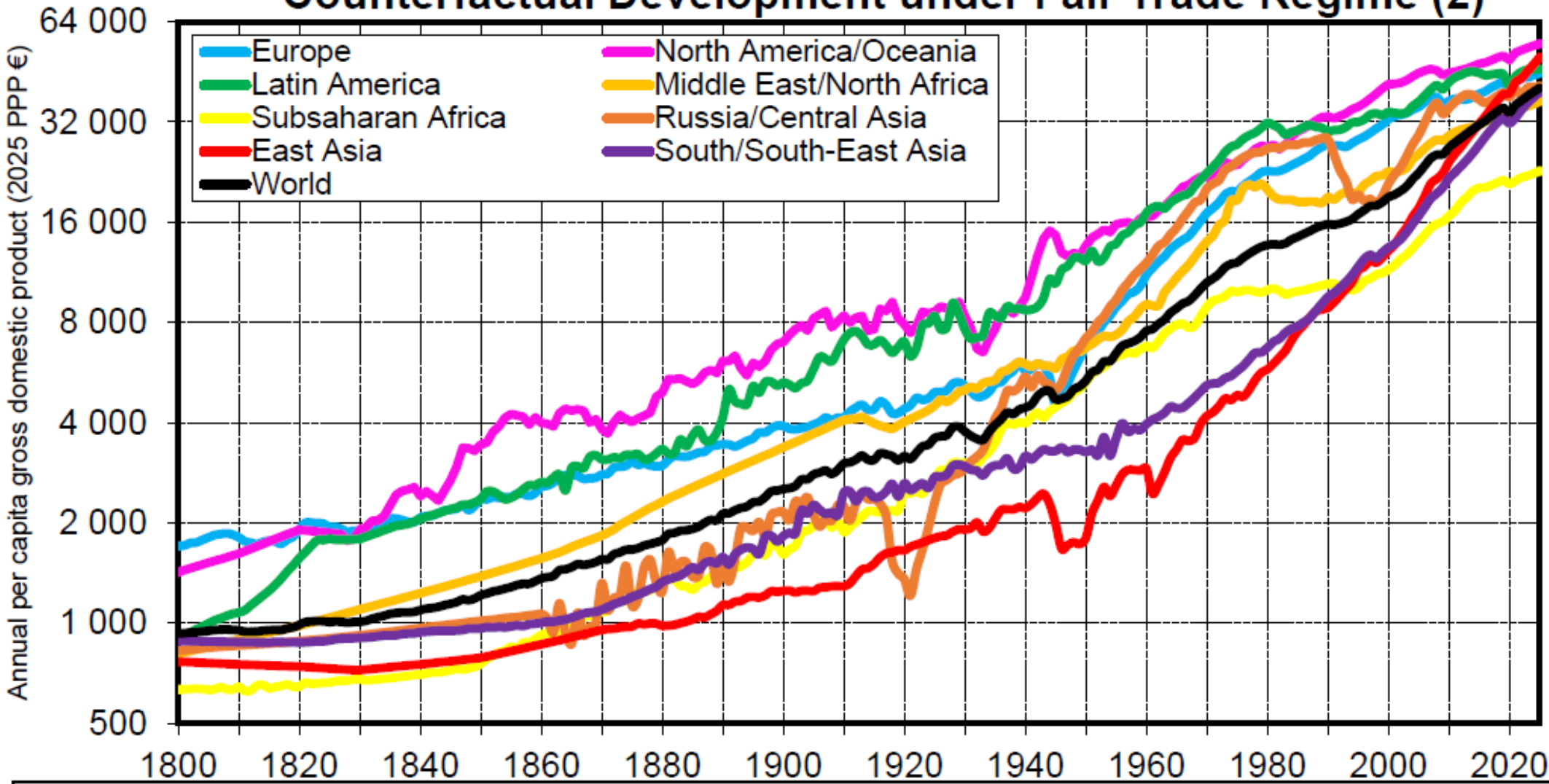
Interpretation. Expressed in 2025 PPP €, annual per capita gross domestic product (GDP) rose from about 900€ in 1800 to about 16 000€ in 2025 at the global level, with large disparities across world region: about 3 000€ in Subsaharan Africa, vs 40 000-50 000€ in Europe and North America/Oceania. Between 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

Concluding comments

Thanks to a new database on global trade flows and the world balance of payment over 1800-2025 period, we were able to compare different episodes of major imbalances (2025 vs 1914)

Power relations matter: small changes in bargaining power and commodity prices can completely reverse relative wealth position of North vs South. Trade/monetary regimes play a critical role.

Discussions about sustainable development should include the structural transformation of the world trade & financial system

Without major reform of IMF-WB-UN-OECD etc., hard to achieve IPCC goals

In future research, we plan to further analyze counterfactual development trajectories, both retrospective (1800-2025) and prospective (2025-2100), taking into account the interplay between alternative trade-monetary-financial regimes, within-country inequality, human capital accumulation, **sectoral productivity growth & carbon emissions (ignored here)**