Advanced Economic History

(Master PPD & APE)
(EHESS & Paris School of Economics)

Thomas Piketty

Academic year 2025-2026

Lectures 9-10: International Trade, Foreign Wealth and the World Balance of Payment in Historical Perspective

(check on line for updated versions)

In previous years, my lectures were about « Party systems and socioeconomic inequality in electoral democracies? »

Key question: who votes for whom and why?

What do we know about the interaction between political cleavages and socioeconomic inequality and its evolution over time?

On-going research program using post-electoral surveys:

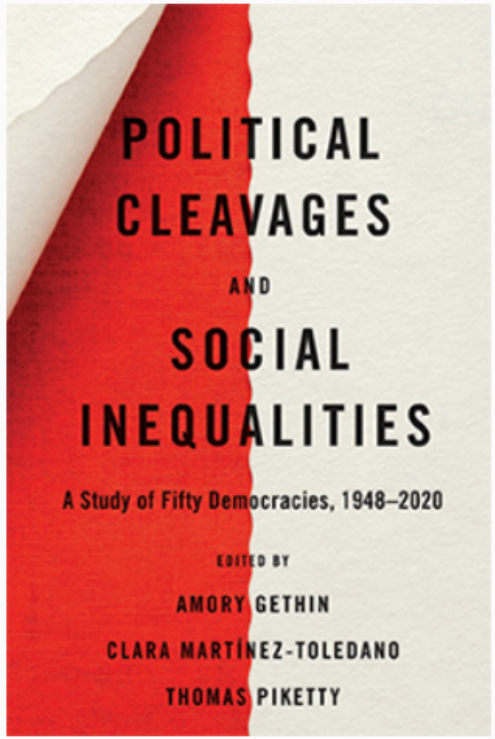
See World Political Clevages and Inequality Database, WPID.world

See also Brahmin Left vs Merchant Right: Changing Political Cleavages in 21 Western Electoral Democracies, 1948-2020 (with A. Gethin, C. Martinez-Toledano, QJE 2022)

→ this research program offers interesting comparative pespectives on the changing effects of income, wealth, education, gender, etc., on political attitudes, but unfortunately with a limited time span (post-WW2) and limited sample sizes

WORLD POLITICAL CLEAVAGES AND INEQUALITY DATABASE

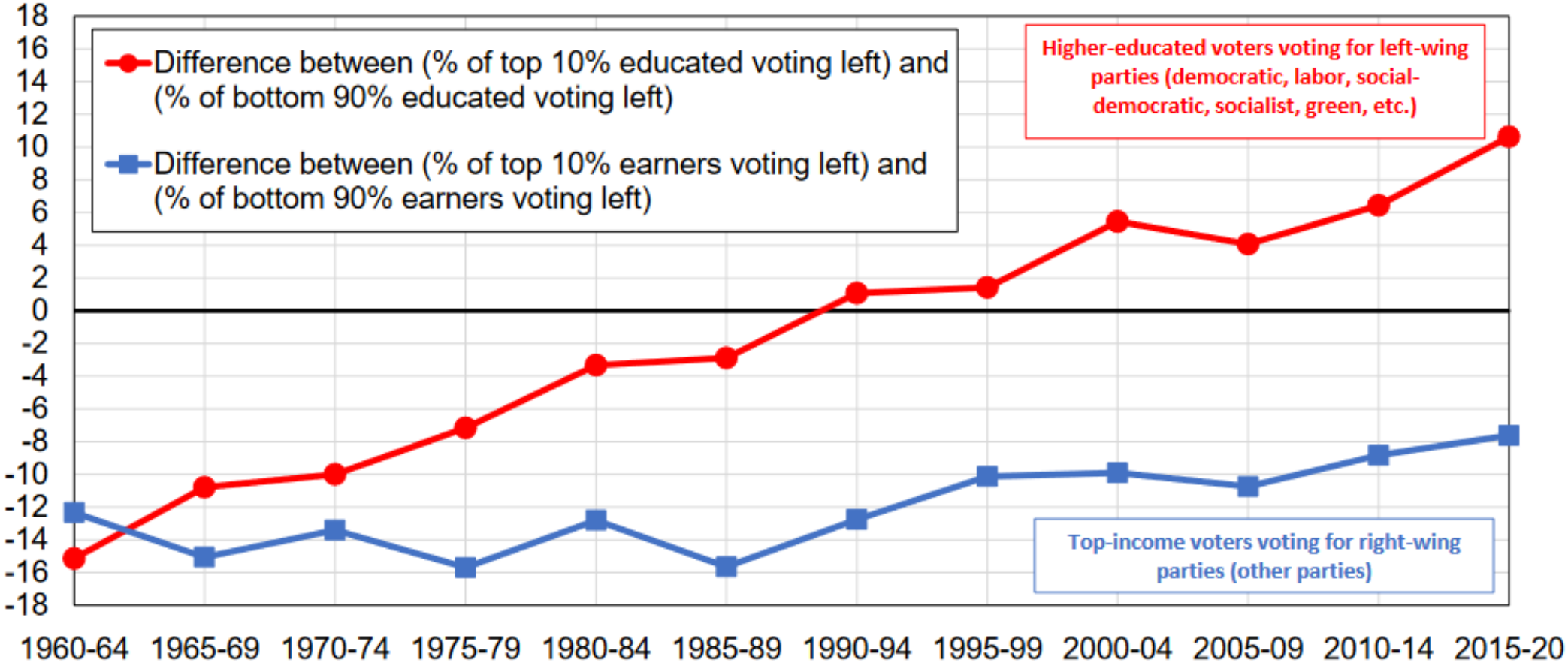
THE BOOK



Who votes for whom and why? Why has growing inequality in many parts of the world not led to renewed class-based conflicts, and seems instead to have come with the emergence of new divides over identity and integration? News analysts, scholars, and citizens interested in exploring those questions inevitably lack relevant data, in particular the kinds of data that establish historical and international context. *Political Cleavages and Social Inequalities* provides the missing empirical background, collecting and examining a treasure trove of information on the dynamics of polarization in modern democracies.

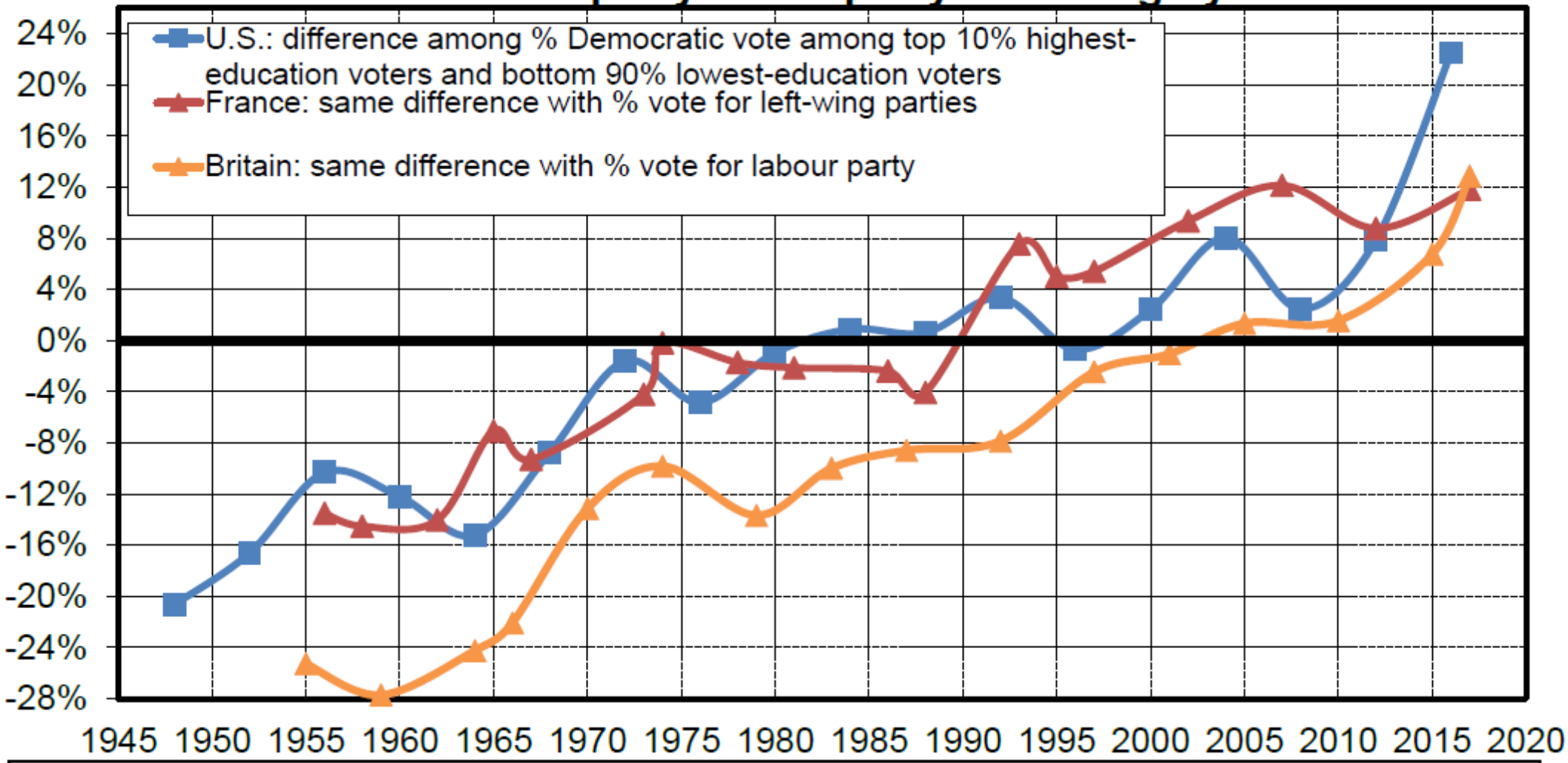
The chapters draw on a unique set of surveys conducted between 1948 and 2020 in fifty countries on five continents, analyzing the links between voters' political preferences and socioeconomic characteristics, such as income, education, wealth, occupation, religion, ethnicity, age, and gender. This analysis sheds new light on how political movements succeed in coalescing multiple interests and identities in contemporary democracies. It also helps us understand the conditions under which conflicts over inequality become politically salient, as well as the

Figure 1 - The emergence of multi-elite party systems in Western democracies



Source: authors' computations using the World Political Cleavages and Inequality Database.
Note: in the 1960s, both higher-educated and high-income voters were less likely to vote for left-wing (democratic / labor / social-democratic / socialist / green) parties than lower-educated and low-income voters by more than 10 percentage points. The left vote has gradually become associated with higher education voters, giving rising to a "multi-elite party system". Figures correspond to five-year averages for Australia, Britain, Canada, Denmark, France, Germany, Italy, the Netherlands, Norway, Sweden, Switzerland, and the US. Estimates control for income/education, age, gender, religion, church attendance, rural/urban, region, race/ethnicity, employment status, and marital status (in country-years for which these variables are available).

The electoral left in Europe & the US, 1945-2020: from the workers' party to the party of the highly educated



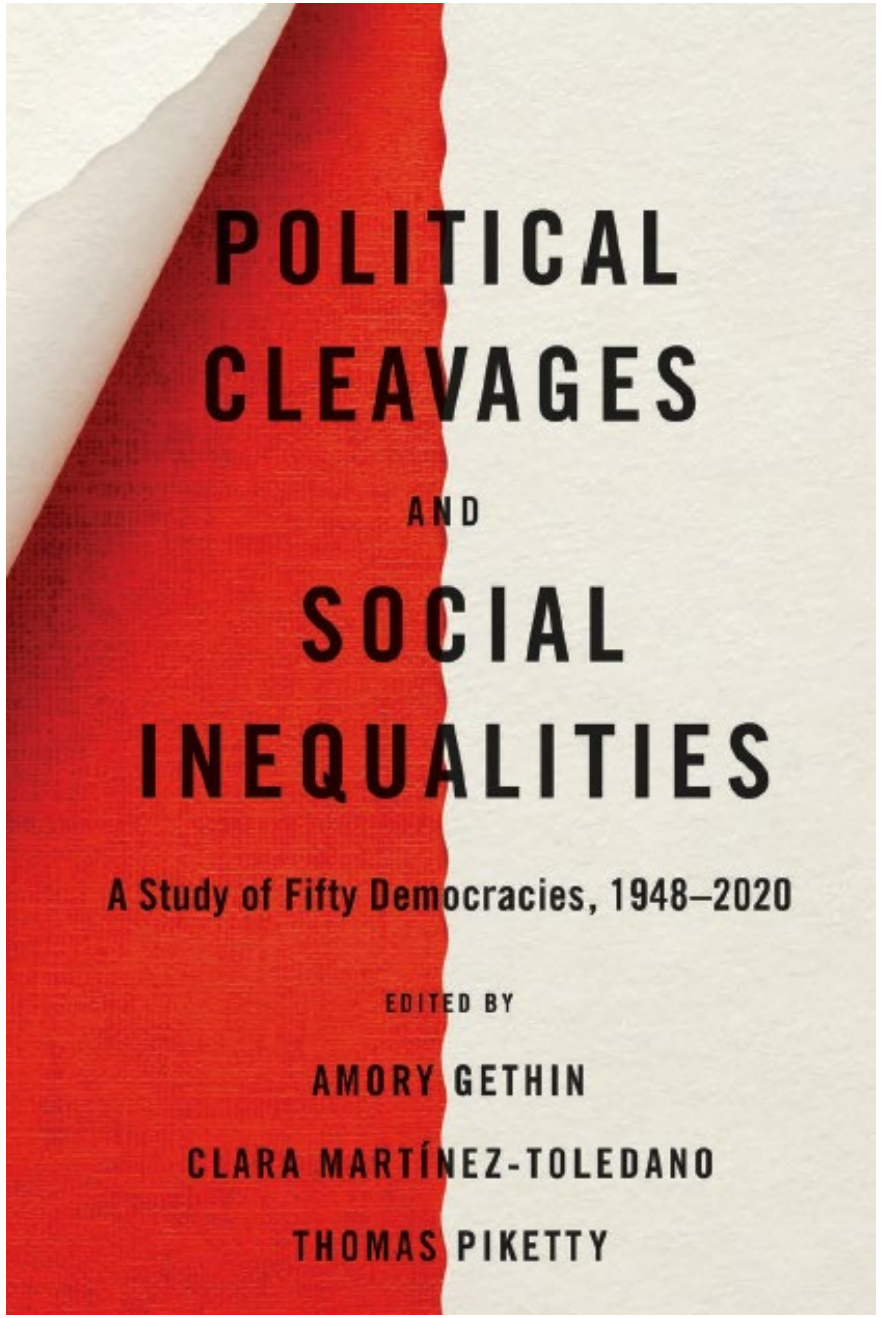
Interpration. During the 1950-1970 period, the vote for the democratic party in the U.S., left-wing parties in France (socialists-communists-radicals-greens) in France and the labour party in Britain was associated with the voters with the lowest educational diplomas; in the 1990-2010 period is became associated with the voters with the highest education diplomas. The British evolution is slightly lagging behind the French and U.S. evolutions but goes in the same direction. **Sources and series:** see piketty.pse.ens.fr/ideology (figure 15.13)

- Unfortunately, these post-electoral surveys have limited sample size. In addition, there exists no survey at all before the 1940s-1950s
- **In order to study longer time periods, and also in order to provide more detailed decompositions of socioeconomic cleavages vs territorial cleavages, one needs to use other data sources: local-level election results matched with local-level census & fiscal data**

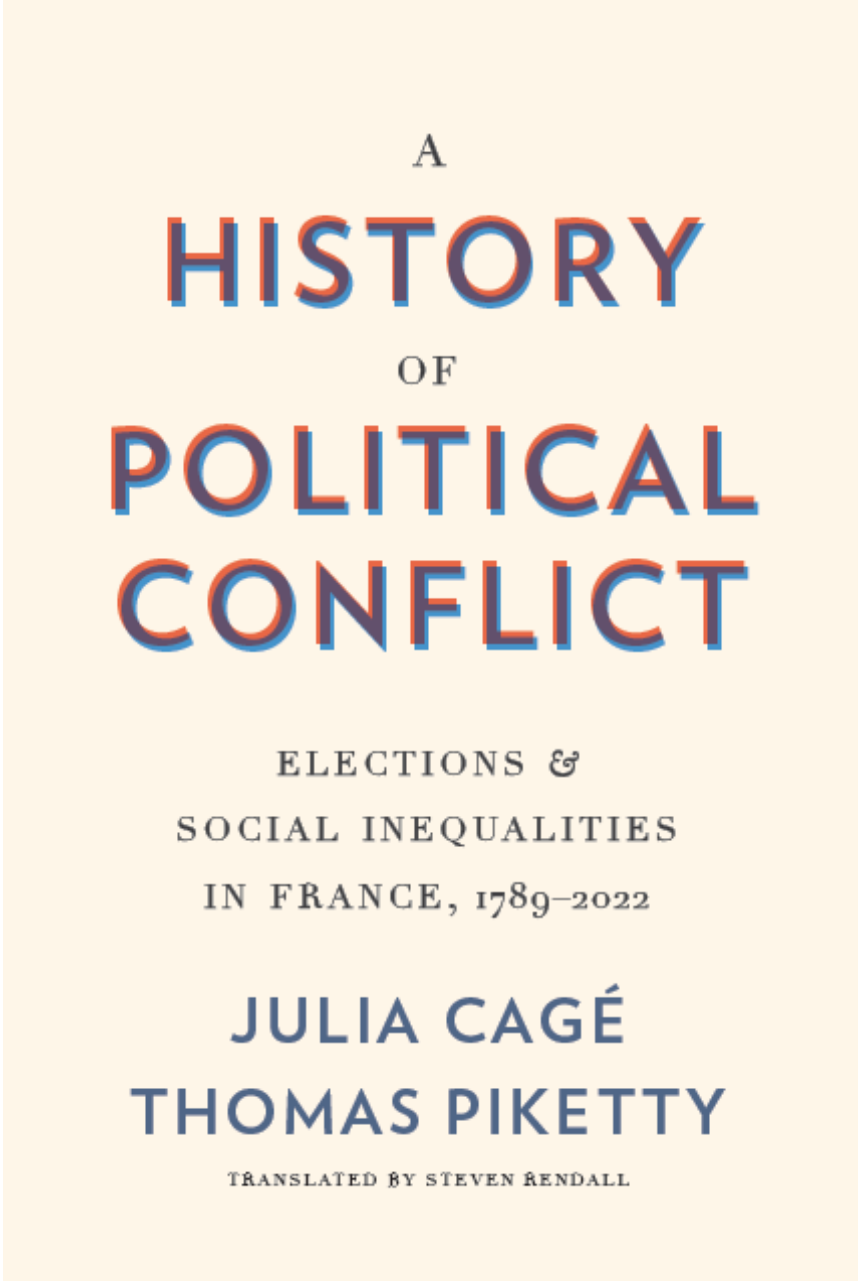
→ **One key lesson from more granular data: the return of the territorial divide**,

due to **unequal access to high-end public services and infrastructures** (universities, hospitals, transportation, etc.)

and **unequal exposure to international trade**: large agglomerations now work in the services, while smaller cities keep loosing manufacturing jobs

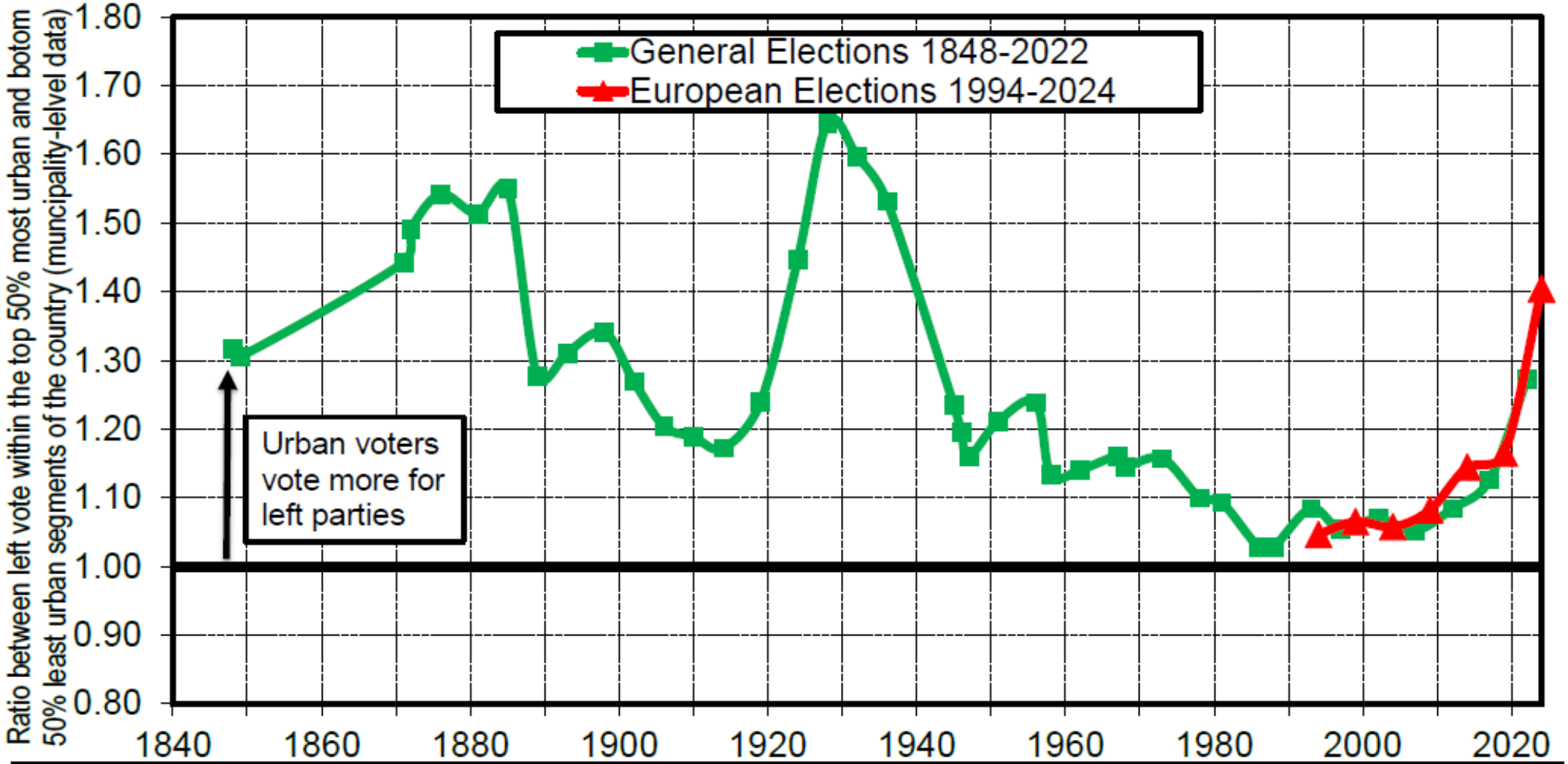

POLITICAL
CLEAVAGES
AND
SOCIAL
INEQUALITIES
A Study of Fifty Democracies, 1948–2020
EDITED BY
AMORY GETHIN
CLARA MARTÍNEZ-TOLEDANO
THOMAS PIKETTY

2021


A
HISTORY
OF
POLITICAL
CONFLICT
ELECTIONS &
SOCIAL INEQUALITIES
IN FRANCE, 1789–2022
JULIA CAGÉ
THOMAS PIKETTY
TRANSLATED BY STEVEN RENDALL

2025

Return of the Territorial Divide: France 1848-2024



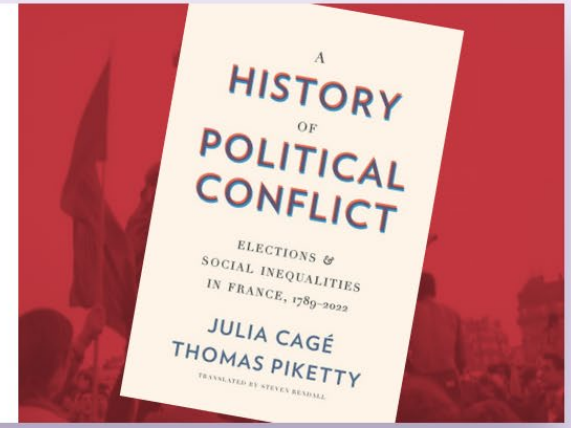
Interpretation. The territorial divide, as measured by the ratio between left vote share within the top 50% most urban and bottom 50% least urban segments of the country (based on municipality-level voting data and conurbation size), rose enormously in recent decades. It is now back to the levels observed at the end of the 19th century and during interwar period. **Sources & series**: see unehistoireduconflitpolitique.fr

A history
of political conflict

Elections and social inequalities in France, 1789-2022

Learn more about the book →

Order the book



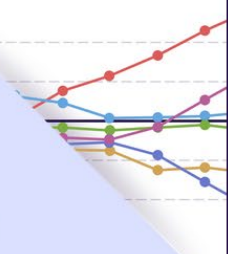
See
all data from the book

MAPPING

How have votes and wealth been distributed in France since 1789?

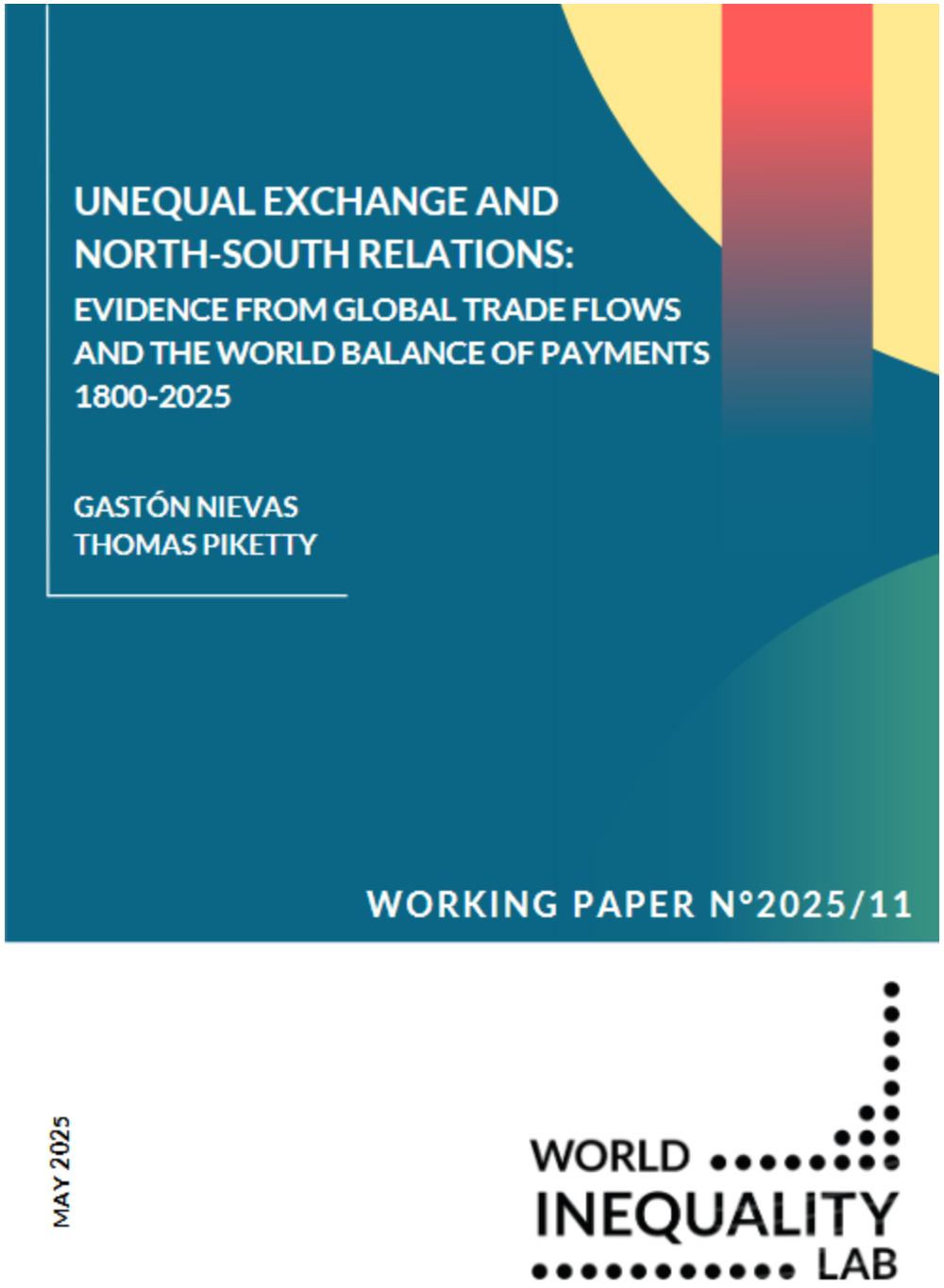
PORTRAIT

How has your municipality voted over the past two centuries and



CONFLICT

Who has the most popular vote and the most bourgeois vote?



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 more than 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.

Outline of the presentation

Sources/methods & contribution to the literature

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

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

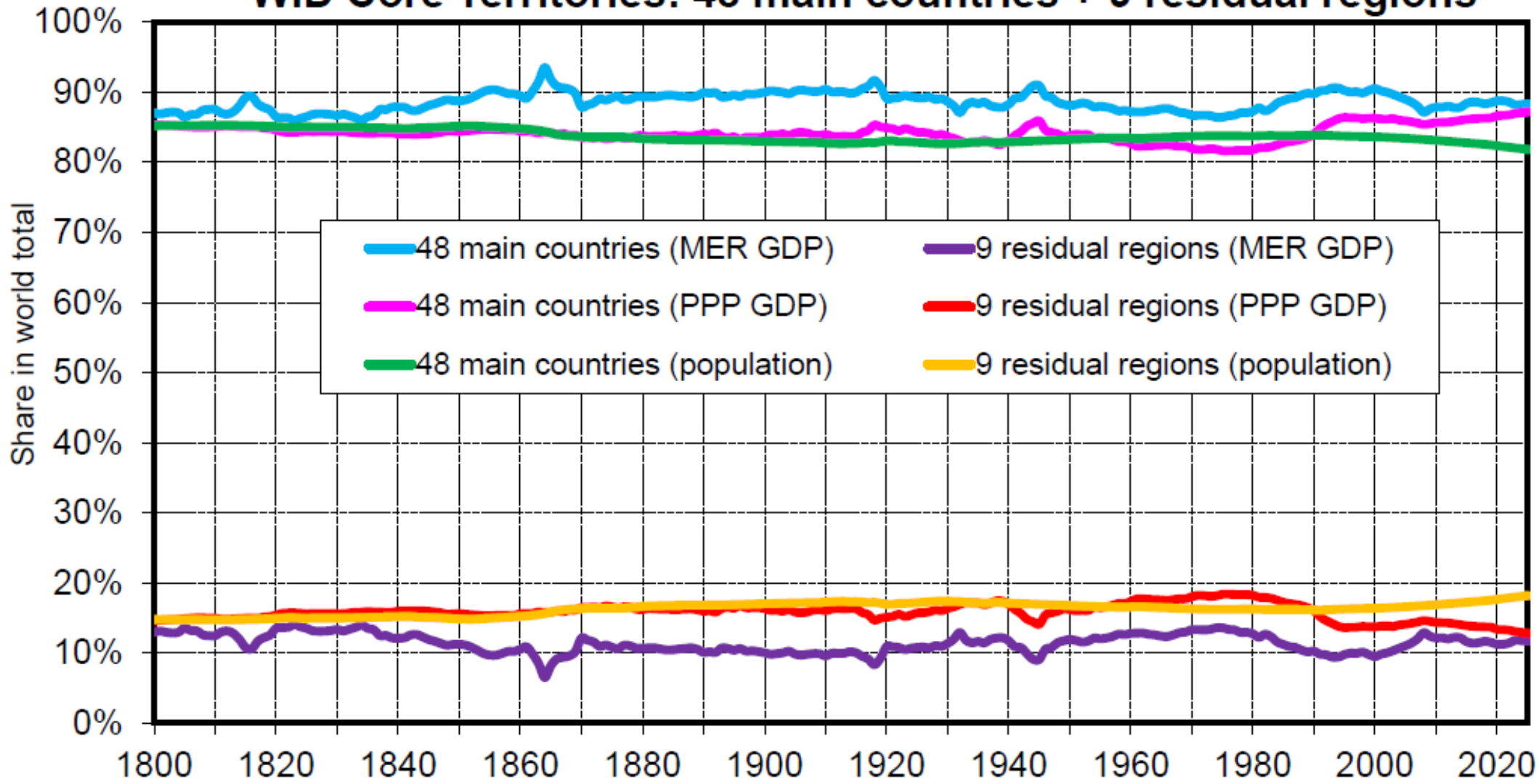
Decomposing global imbalances 1800-2025: primary commodit., manufactured goods, services, income flows, transfers

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

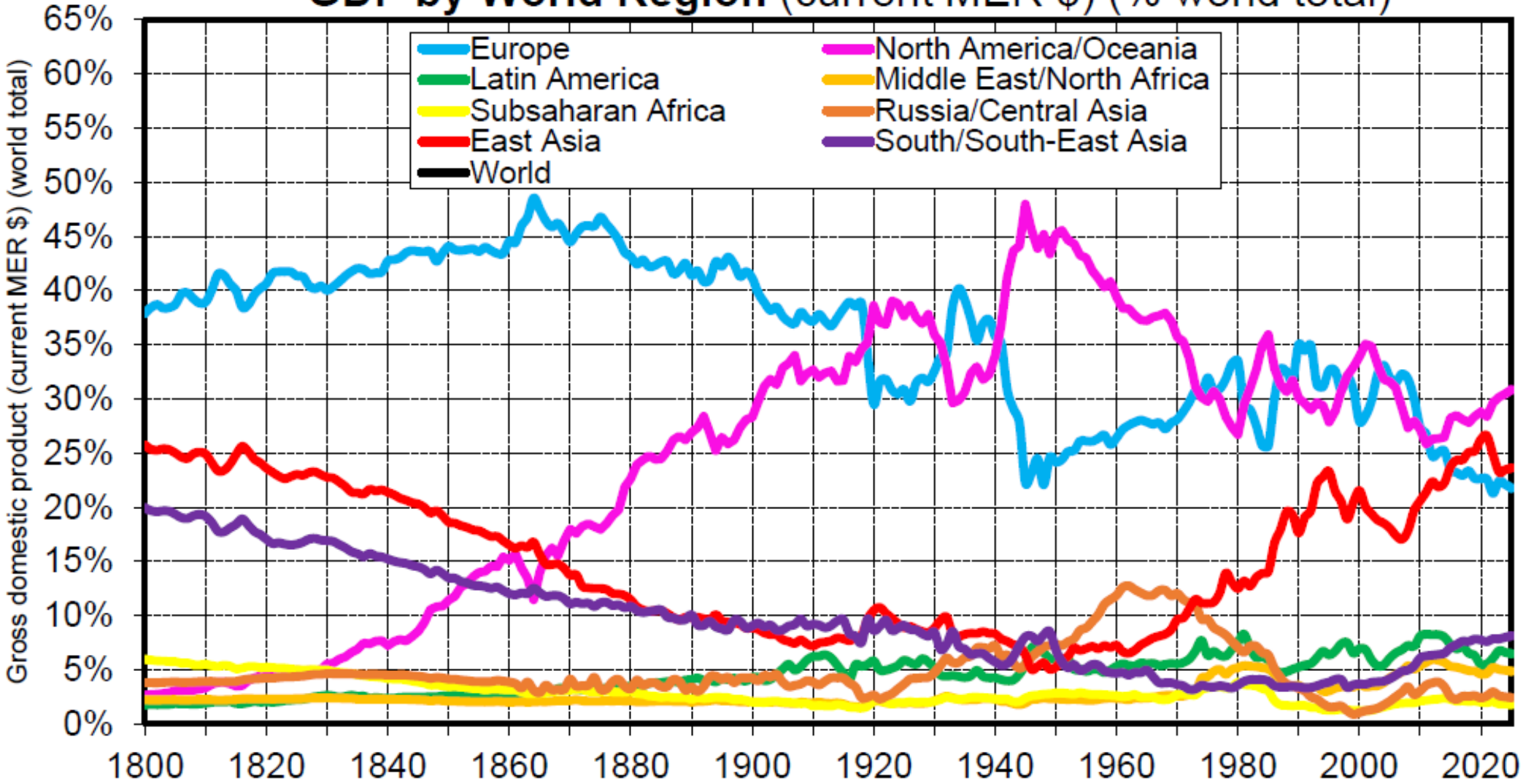
The World Historical Balance of Payment Database (WBOP, wbop.world) provides data series for 57 core territories (48 main countries + 9 residual regions, which we define using fixed 2025 borders) covering the entire world. It includes for all 57 core territories annual series covering the entire 1800-2025 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



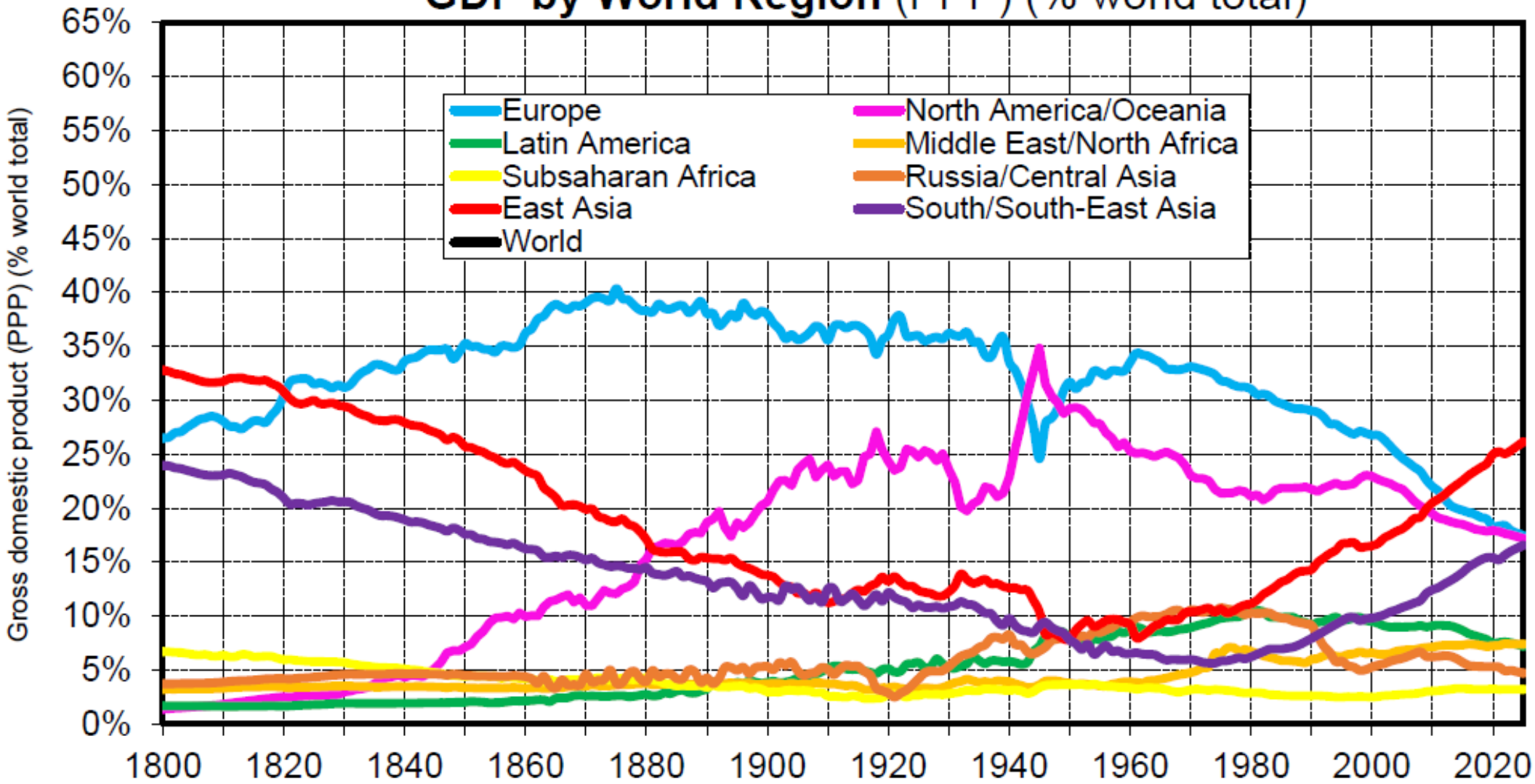
Interpretation. Historical WID national accounts include annual 1800-2025 series for 57 core territories (48 main countries + 9 residual regions, which we define using fixed 2025 borders). The 48 main countries make about 85-90% of the world GDP (both in market exchange rate and purchasing power parity) 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.)

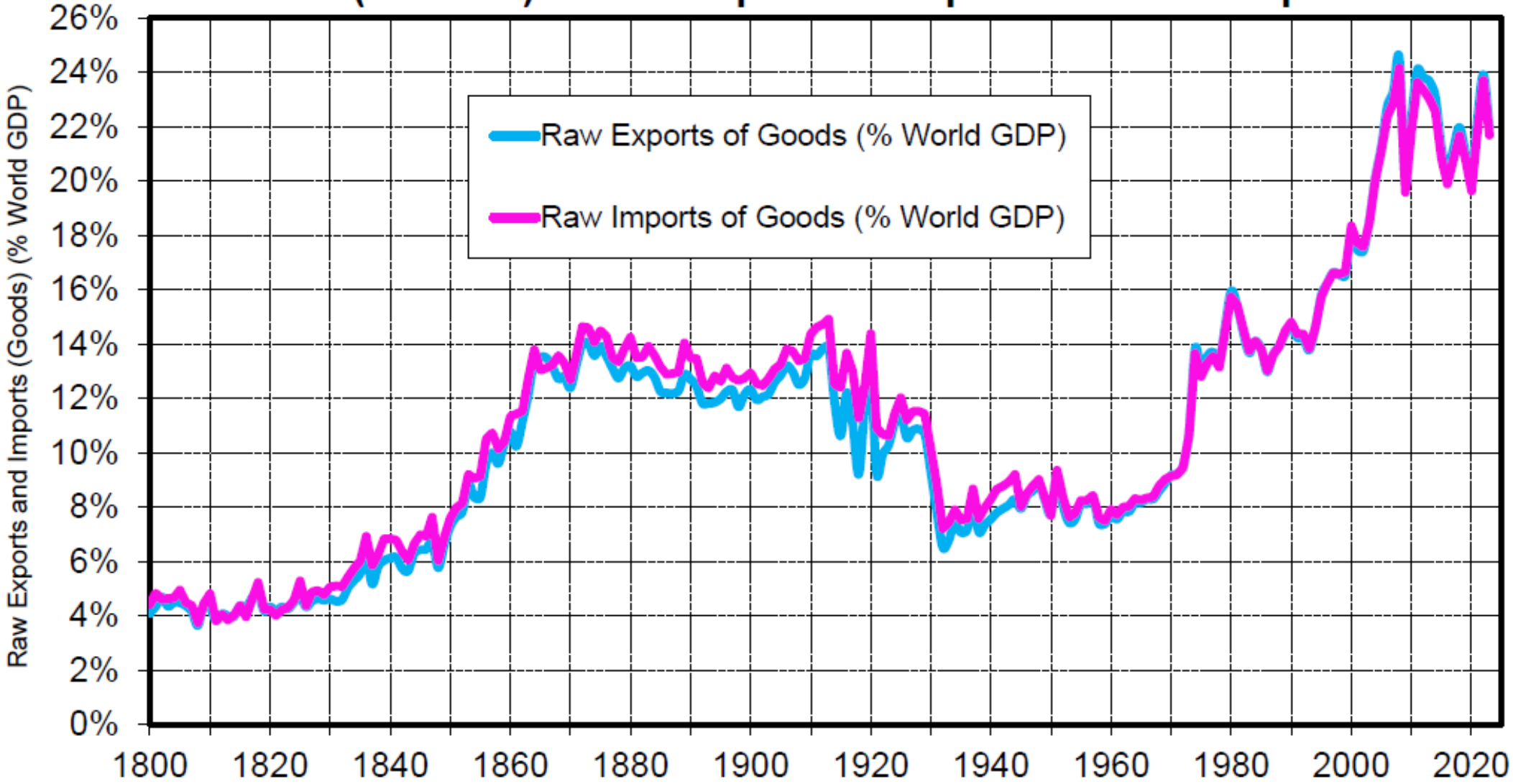
+ Net **income** inflows (mostly capital income)

+ 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

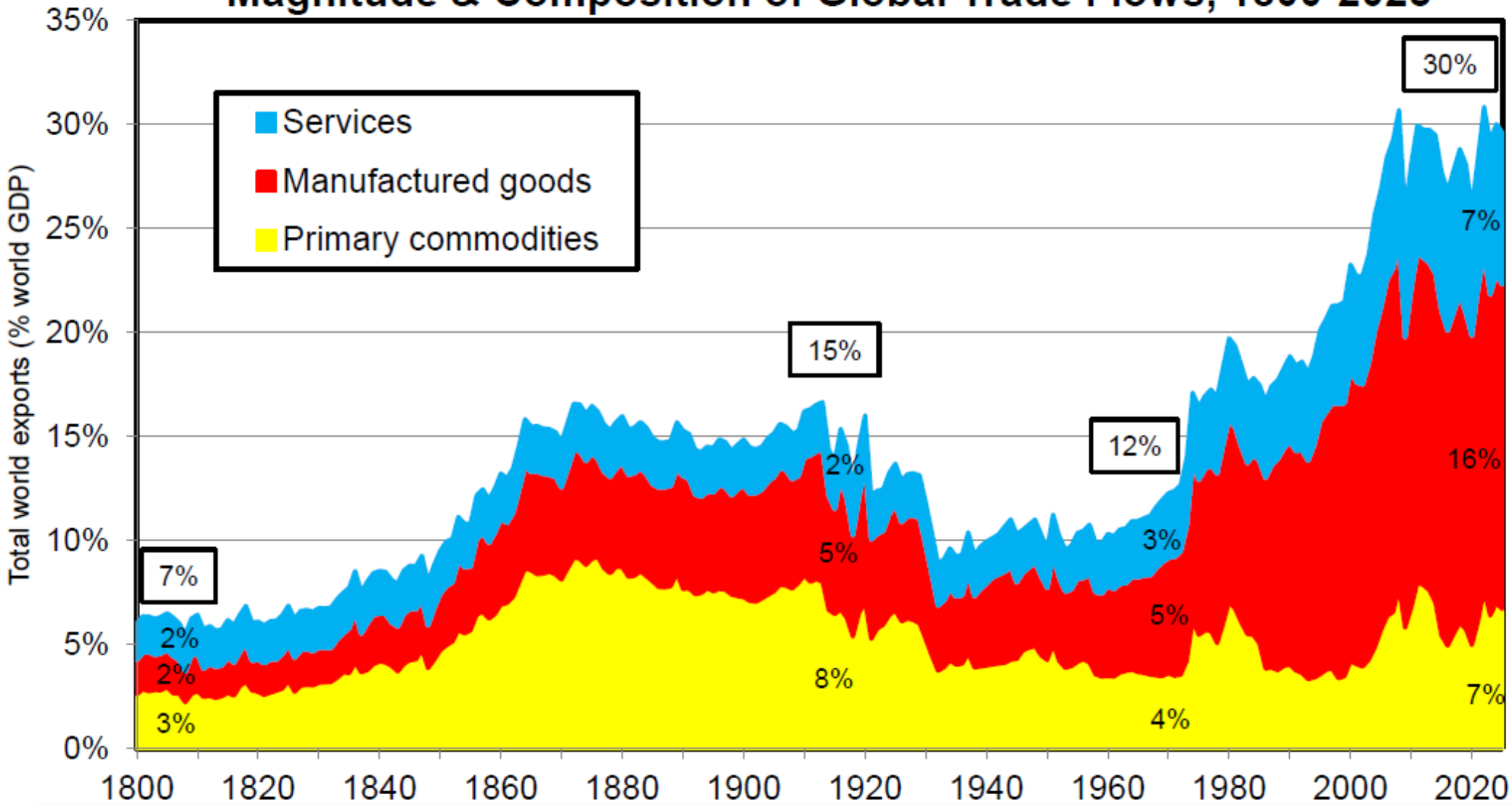
Magnitude & composition of global trade and BoP flows 1800-2025

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

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

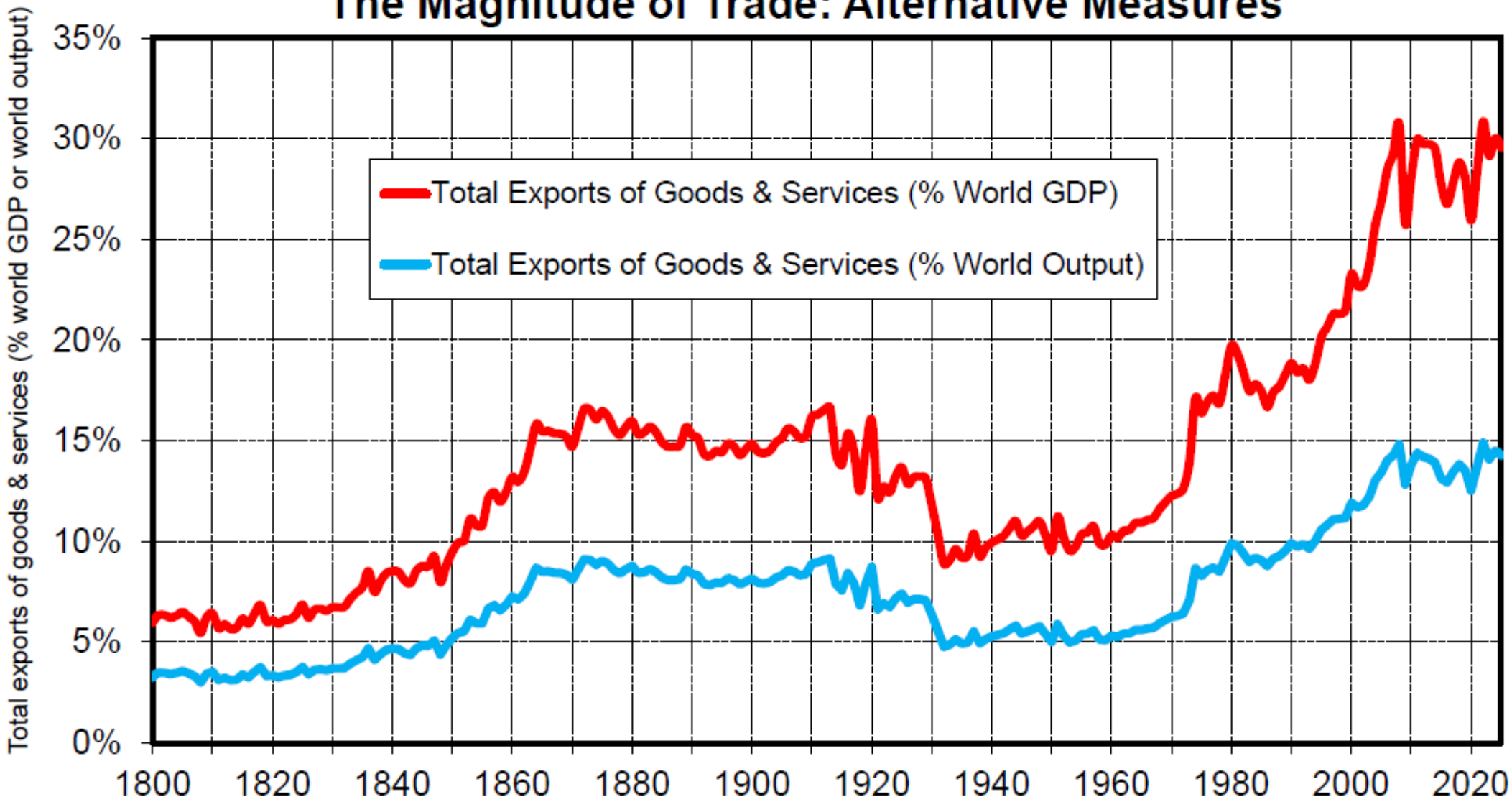
The changing magnitude and composition of **foreign income flows** and **foreign transfer flows**

Magnitude & Composition of Global Trade Flows, 1800-2025



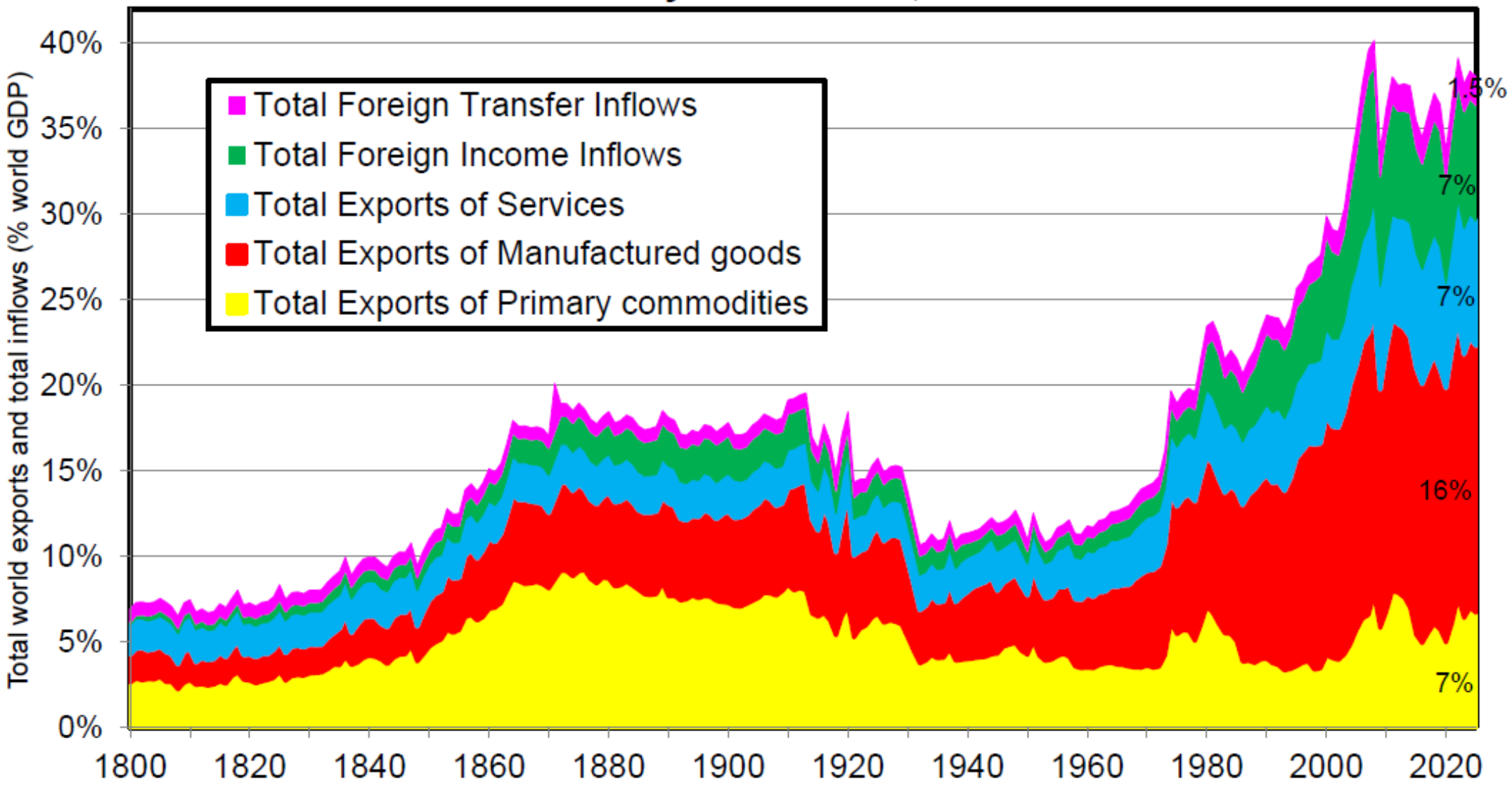
Interpretation. Total world exports have risen from about 7% of world GDP in 1800 to about 15% in 1914, 12% in 1970 and 30% in 2025, with a collapse in the 1930s, a steep rise in the 1970s (oil price shock) and a plateau since the 2008 financial crisis. Primary commodities include agricultural products,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



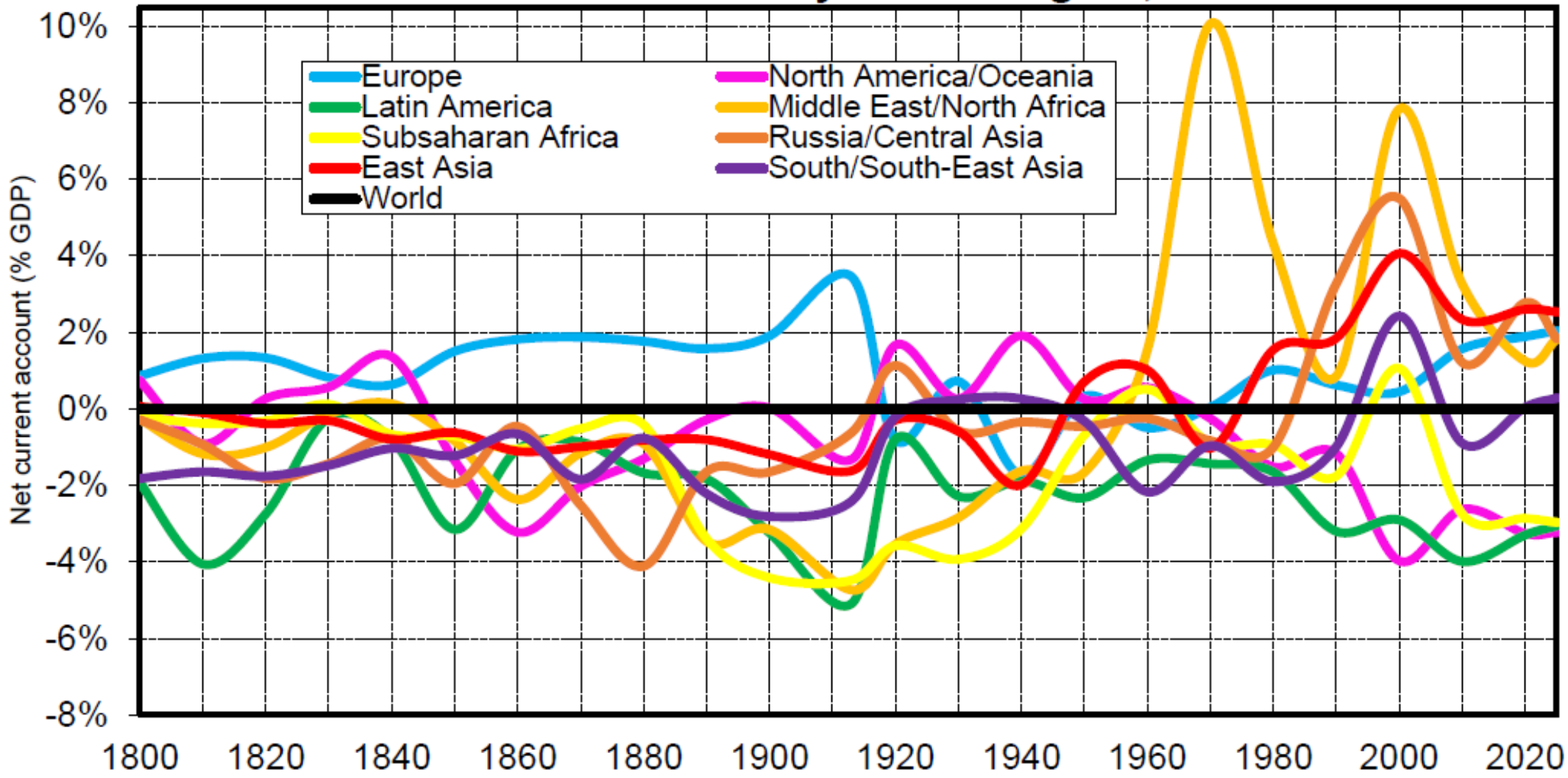
Interpretation. Gross flows of foreign income (in practice mostly capital income) and foreign transfers (private and public) have always been smaller in magnitude than gross trade flows, but they have increased over time. Income flows now make about 7% of world GDP (vs 0.1% in 1800, 2% in 1914 & 1% in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

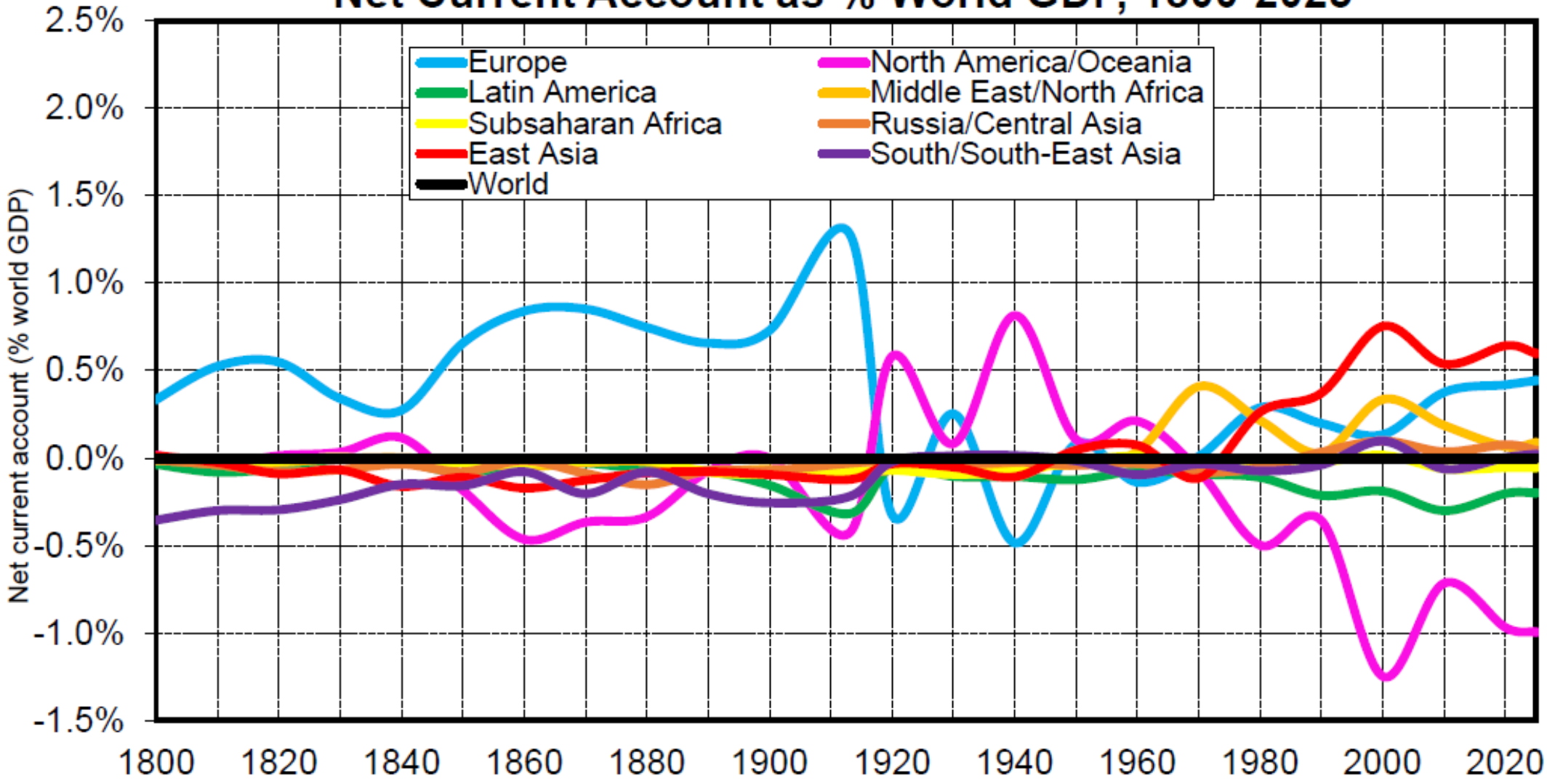
Like East Asia (and oil countries) **in 1970-2025**, but with a much larger magnitude relative to world GDP, and a very diversified world portolio in 1914

Net Current Account by World Region, 1800-2025



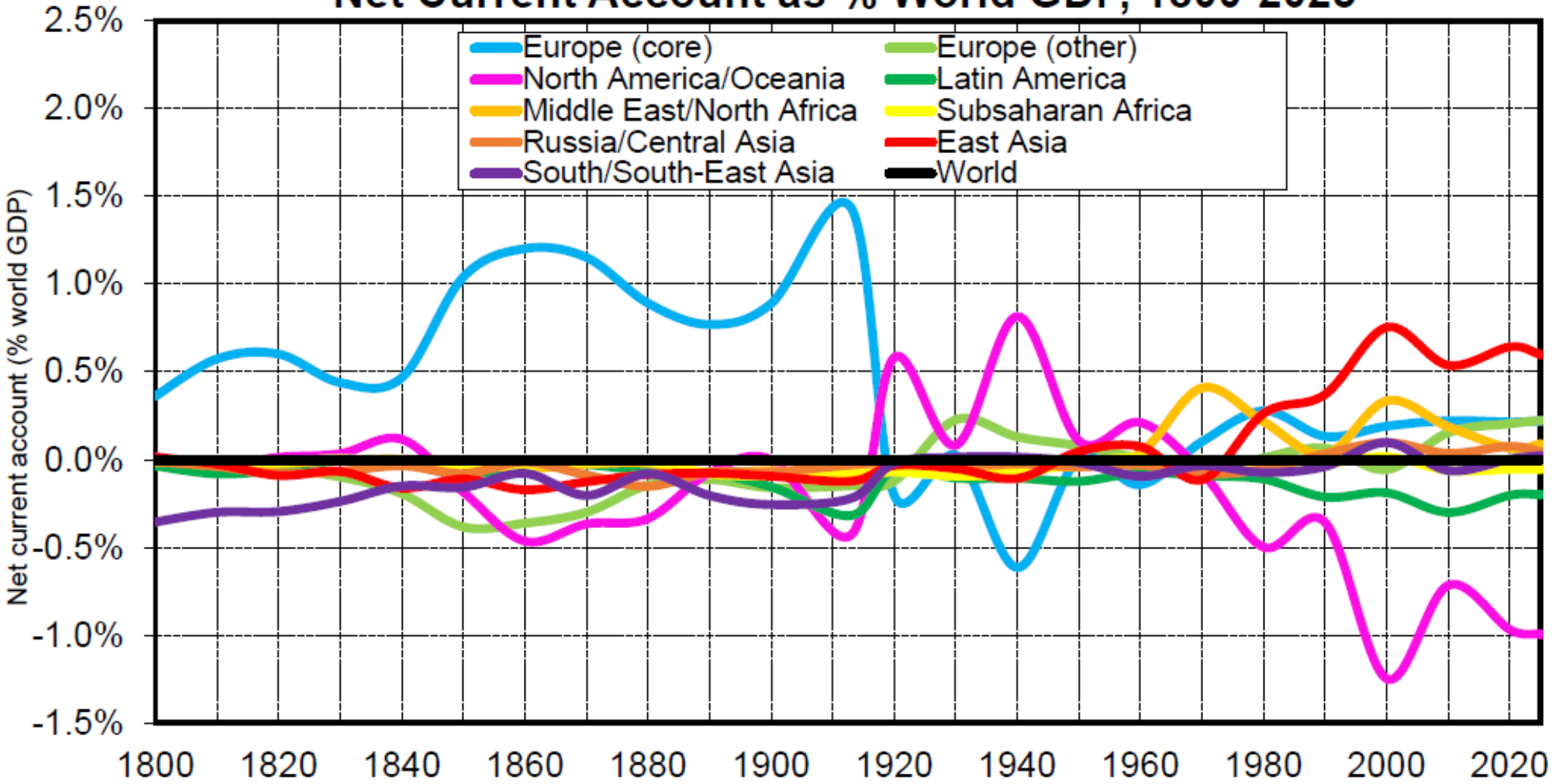
Interpretation. Between 1800 & 1914, Europe has a permanent current account surplus (close to 2% of its GDP on average, and rising over time) while the rest of the world has a permanent deficit. Since the 1970s-1980s, the main surpluses come from oil countries (Middle East, Russia) and East Asia. **Note**.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



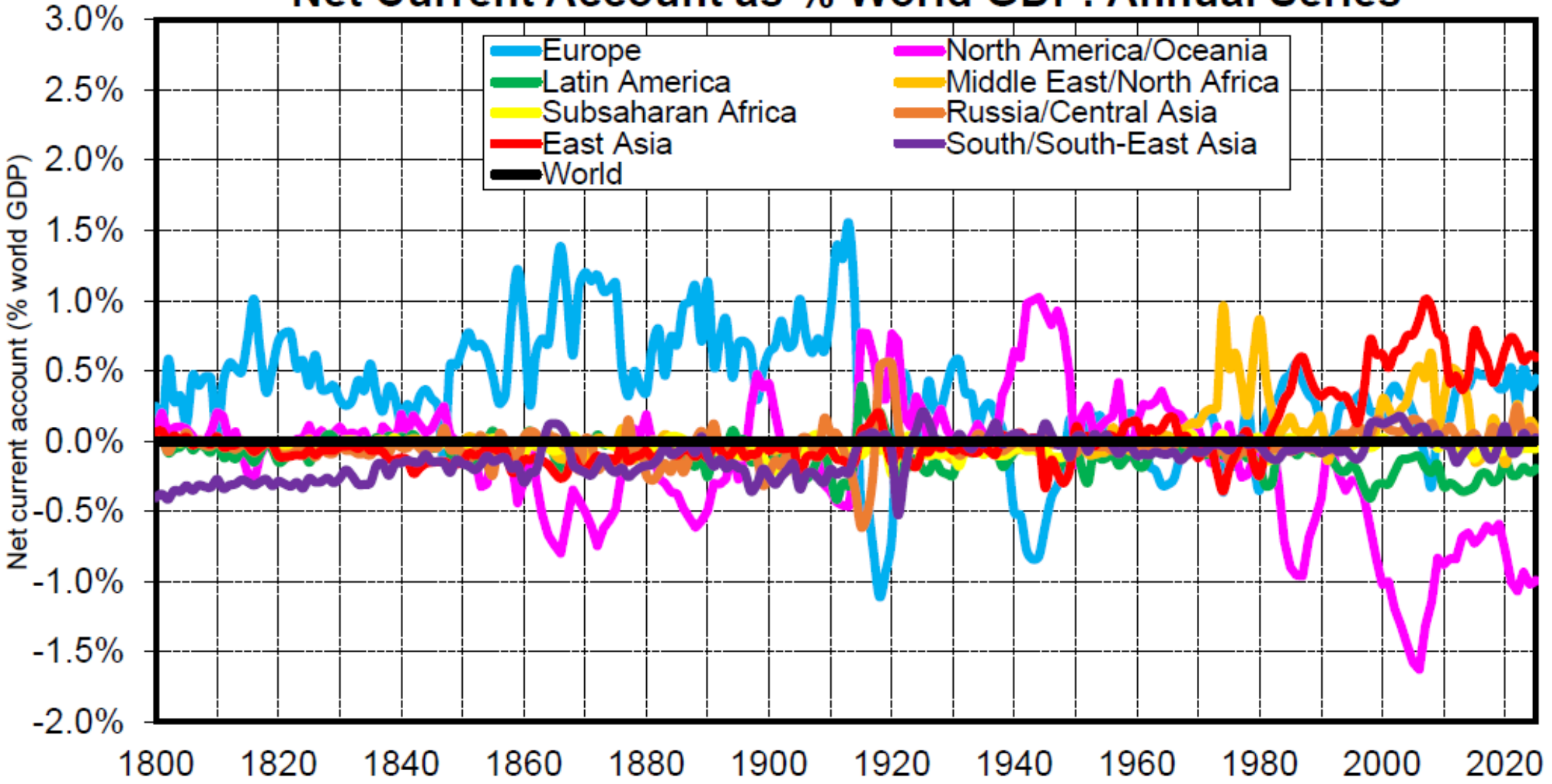
Interpretation. If we express current account as a fraction of world GDP (rather than as a fraction of the GDP of each country or region), we find that Europe's current account surplus between 1800 and 1914 was substantially larger than the surpluses of Middle East or Easr Asia since the 1970s-1980s.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



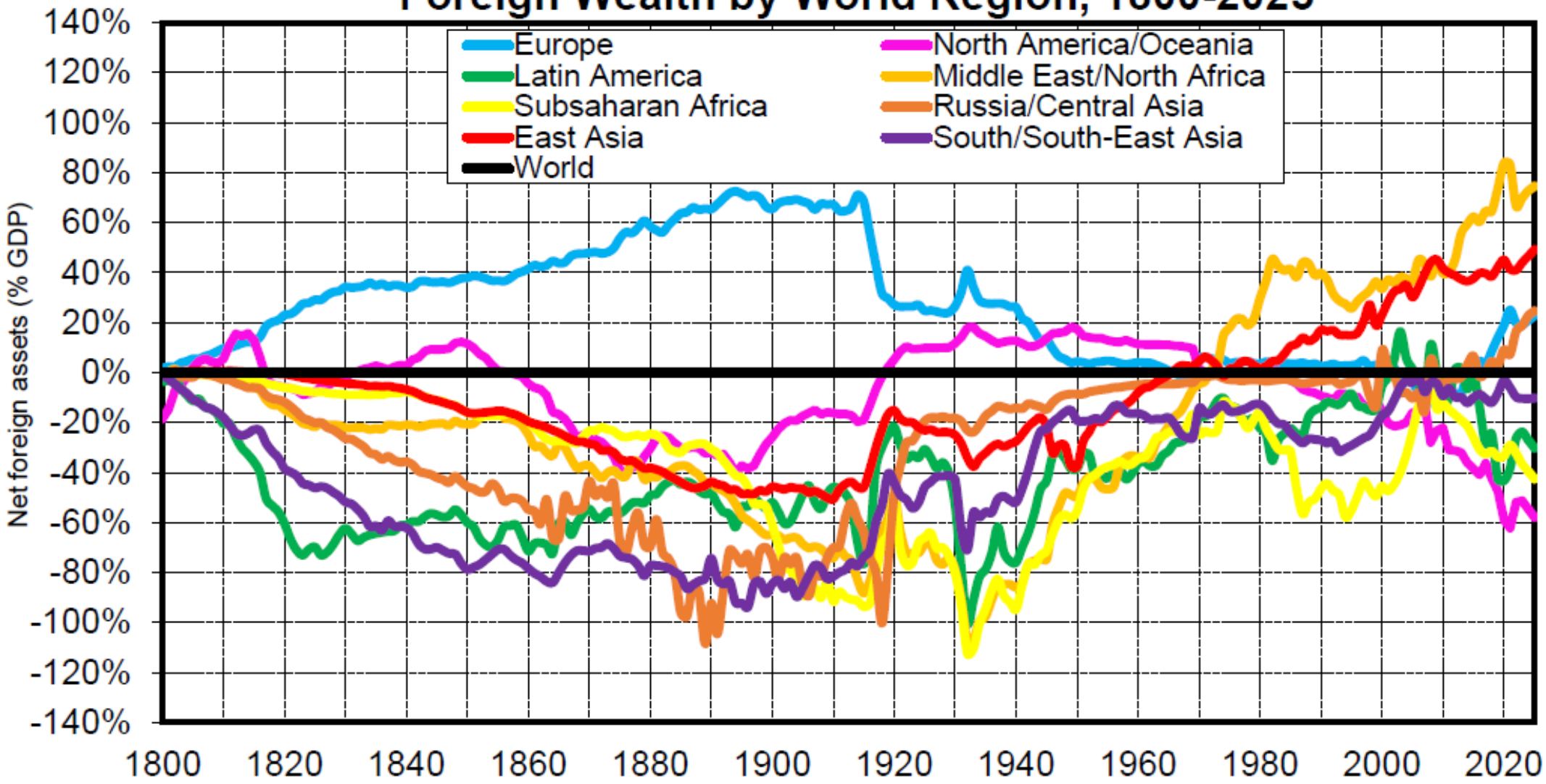
Interpretation. If we concentrate on core European colonial powers (Britain, France, Germany, Netherlands), we find that Europe's current account surplus between 1800 and 1914 looks even larger as compared to the surplus of East Asia and Middle East since the 1970s-1980s.
Note. The values reported here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



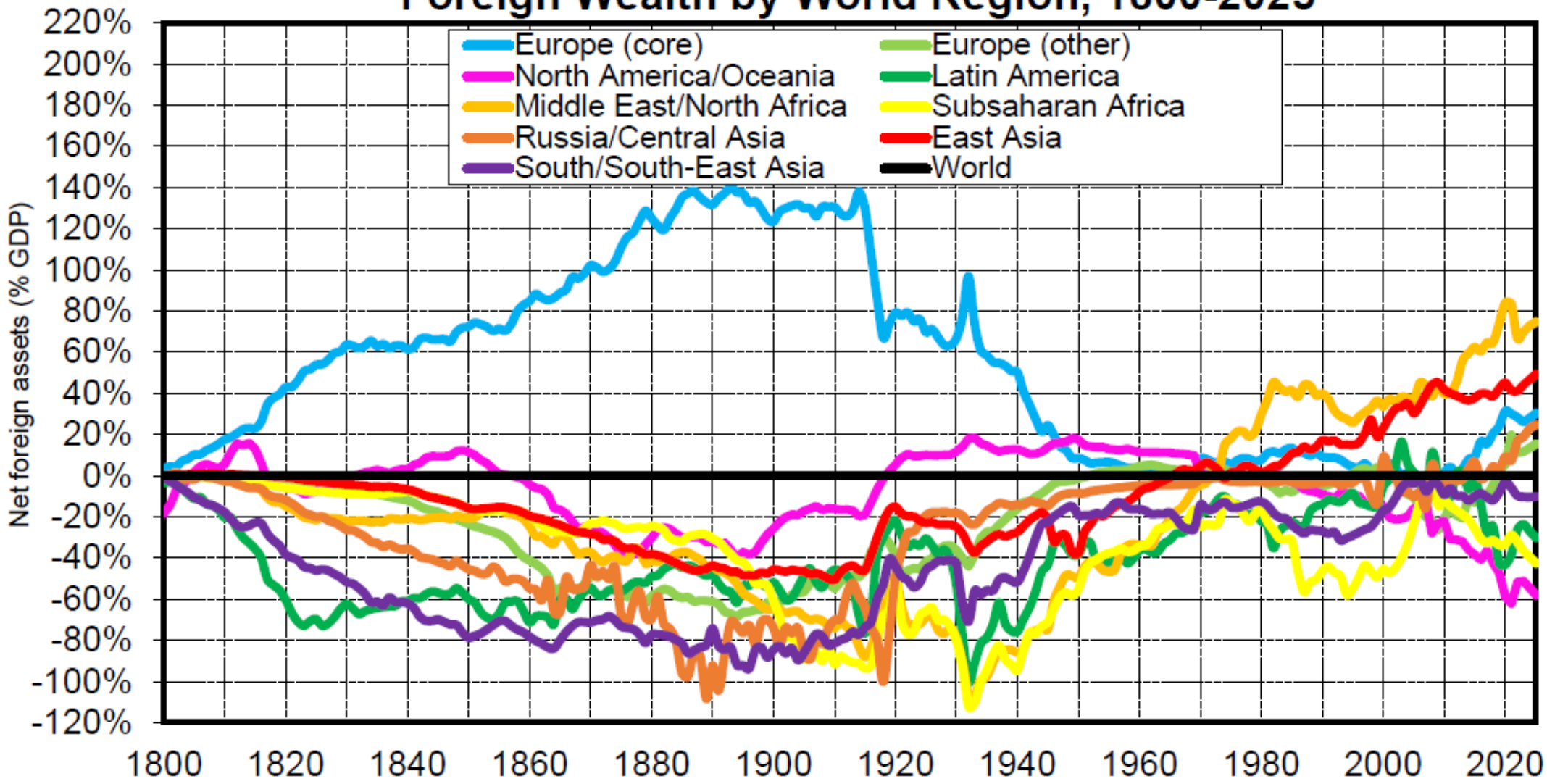
Interpretation. Annual series on current account surpluses and deficits are very bumpy, due to a large numbers of shocks (world wars, oil shocks, etc.), but they also show clear patterns: permanent European surplus between 1800 & 1914, large European deficits during wars (and US surpluses), large MENA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

Foreign Wealth by World Region, 1800-2025



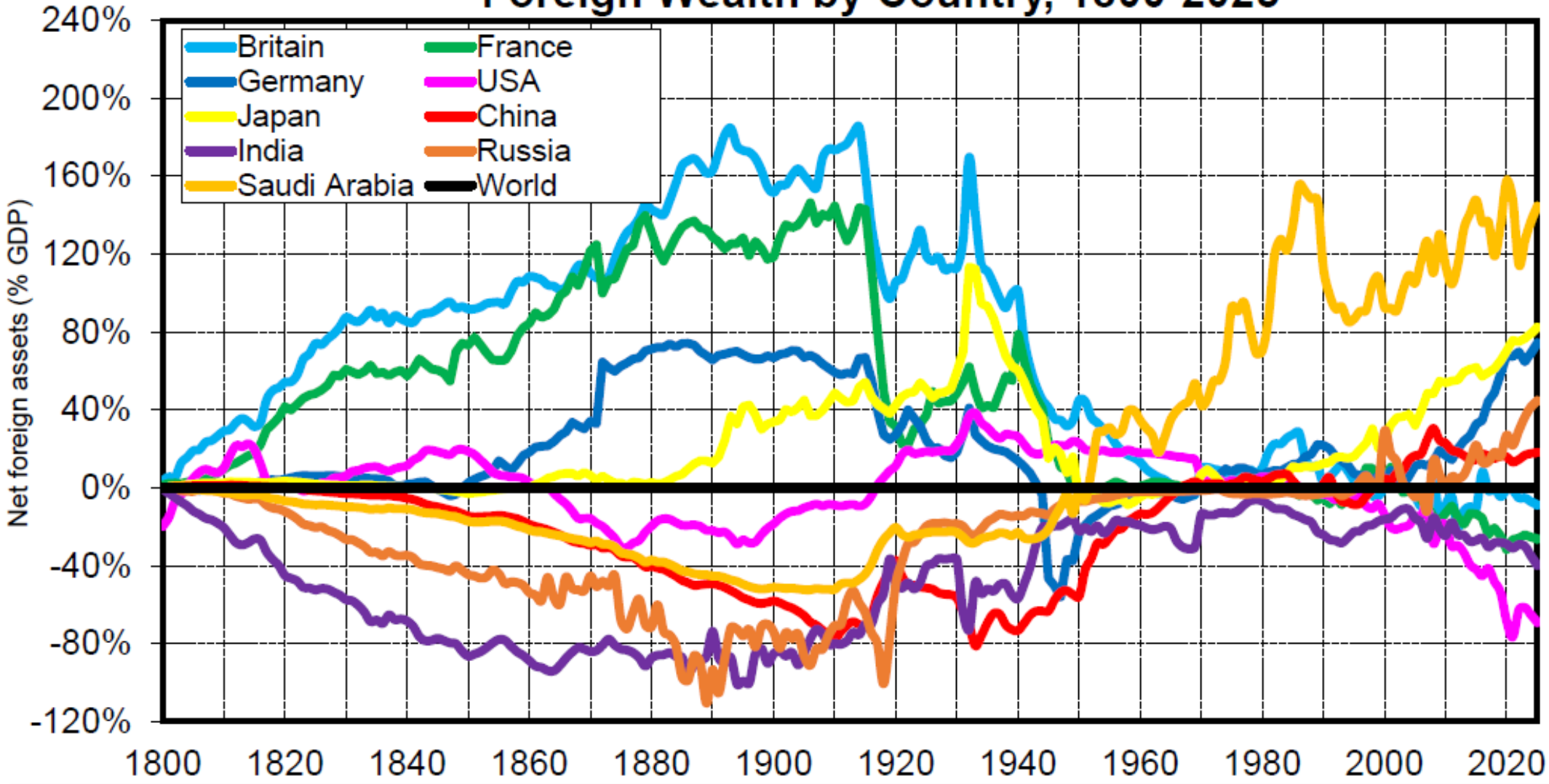
Interpretation. Between 1800 & 1914, Europe owns a rising fraction of the rest of the world. In 1914, Europe's foreign wealth (i.e. net foreign assets held by European residents in the rest of the world) reach about 70% of Europe's GDP. These foreign assets vanish between 1914 and 1950. They are partly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



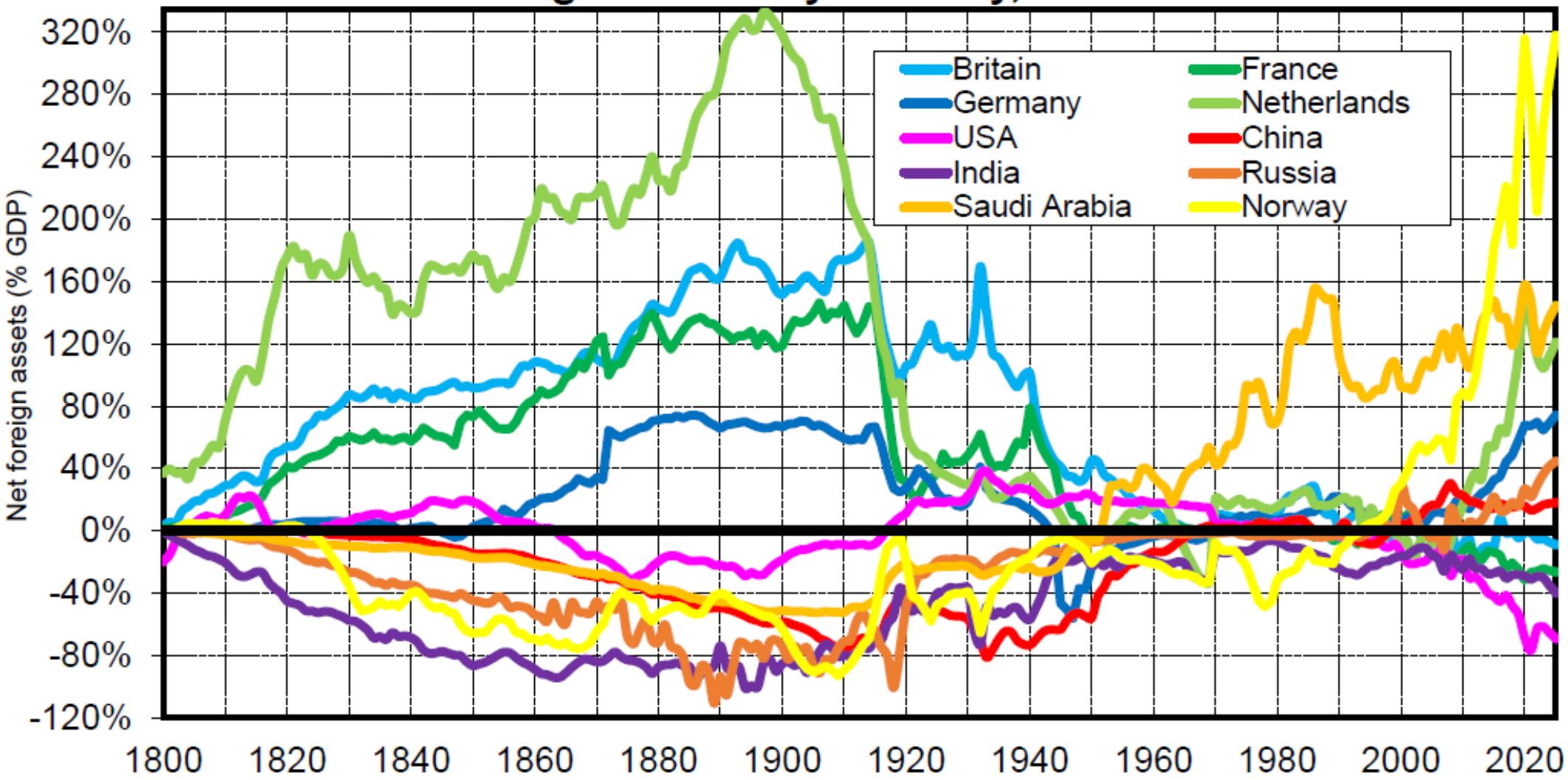
Interpretation. If we look at core European colonial powers (Britain, France, Germany, Netherlands, making 68% of Europe's GDP in 1914), we find that their net foreign assets reach almost 140% of their GDP in 1914. In contrast other European countries have large negative foreign wealth (approximately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

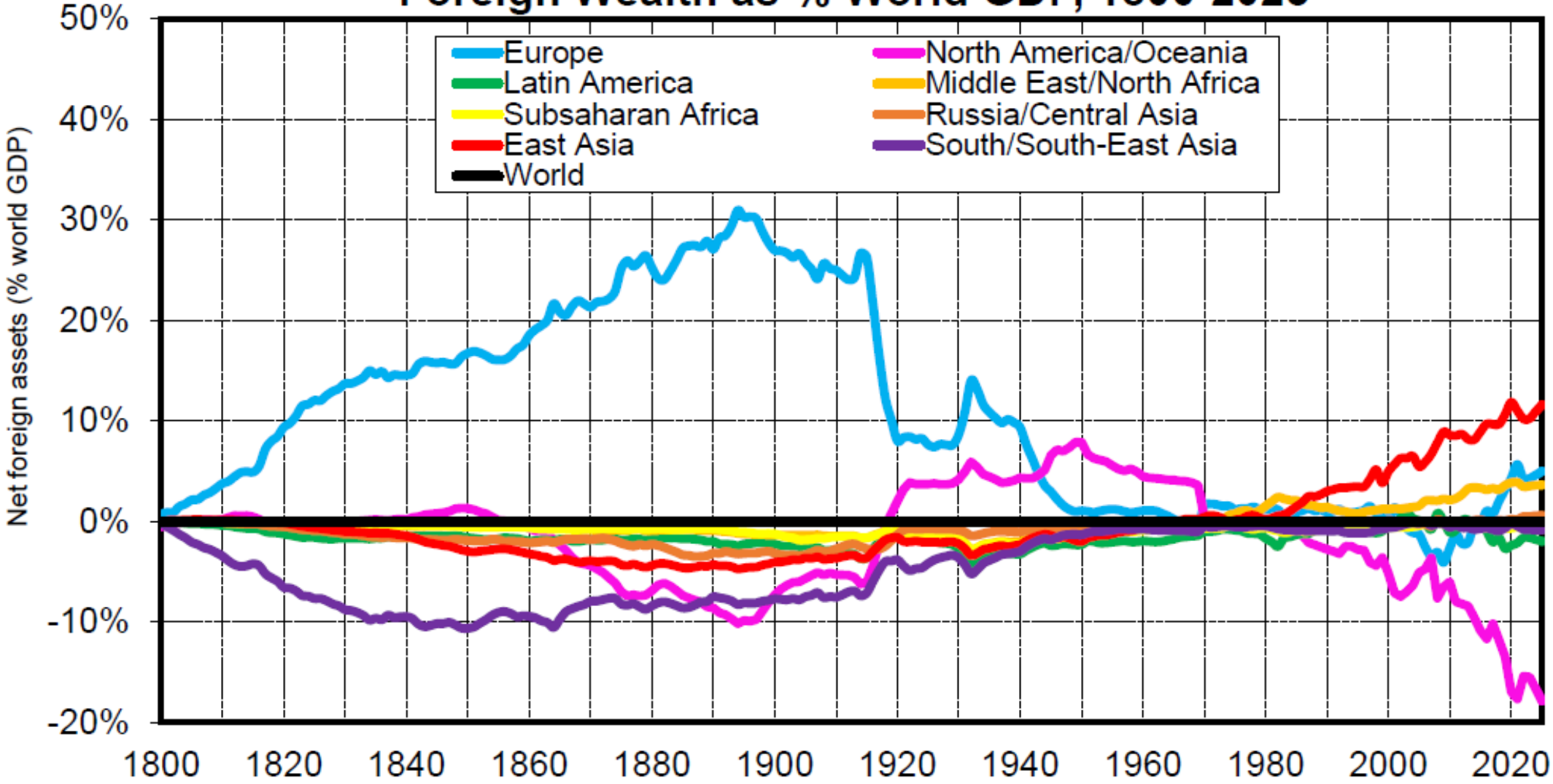
Foreign Wealth by Country, 1800-2025



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).

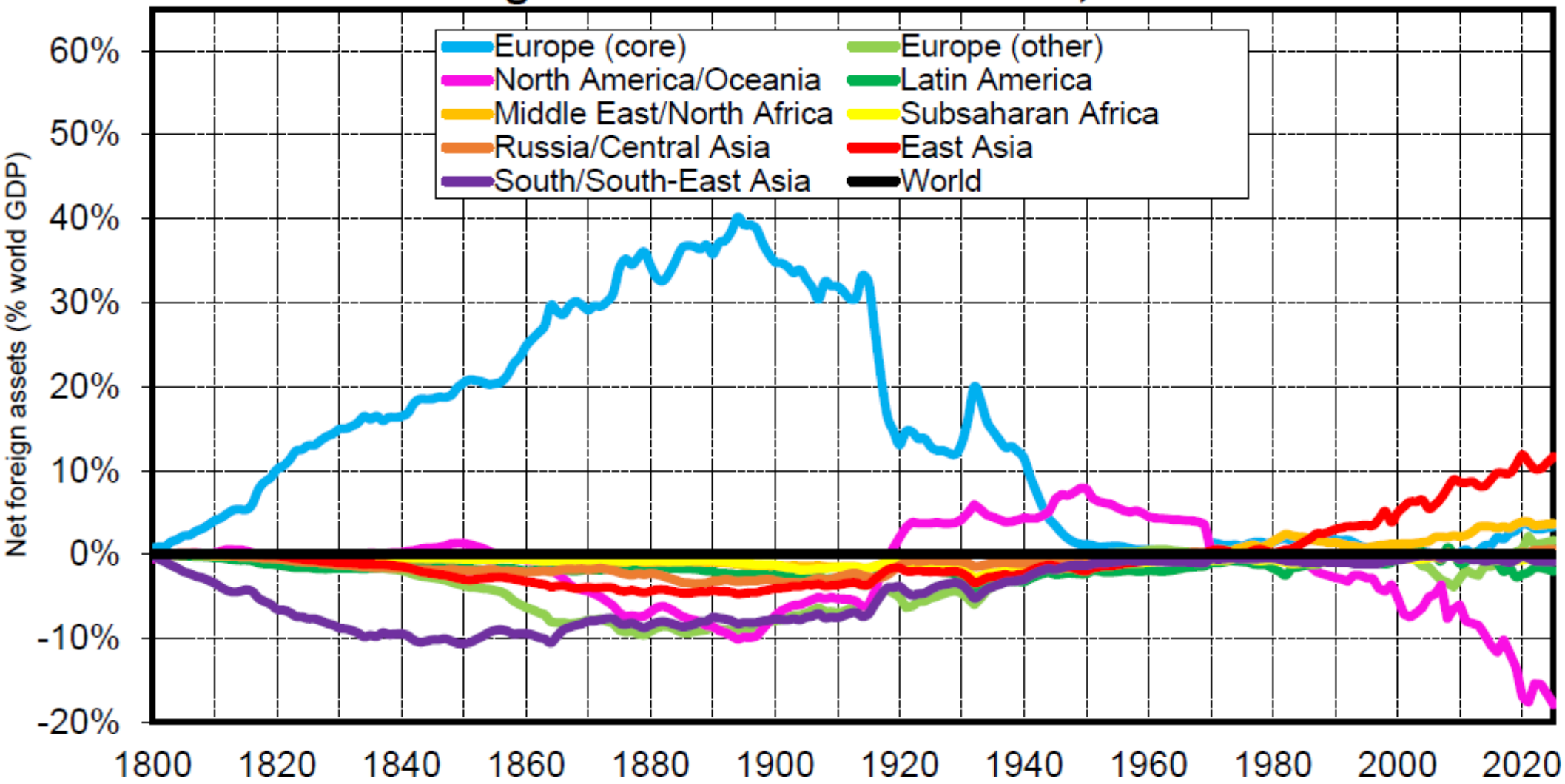
Sources and series: wid.world

Foreign Wealth as % World GDP, 1800-2025



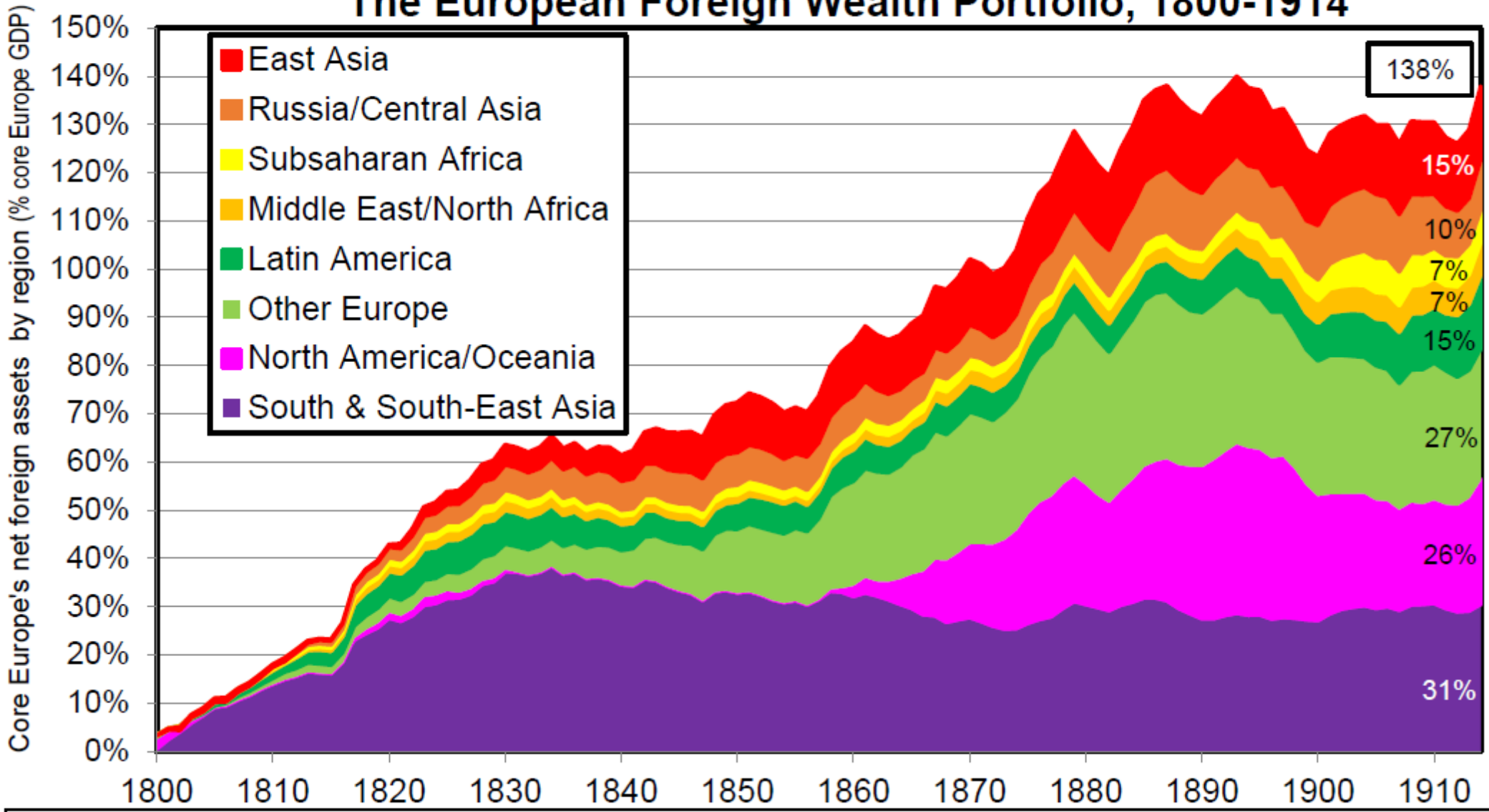
Interpretation. If we express net foreign assets as a fraction of world GDP (rather than as a fraction of the GDP of each country or region), then we find that Europe's pre-WW1 foreign wealth is about 2.5-3 times larger than East Asia's foreign wealth today (and 5-6 times larger than Middle East's foreign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



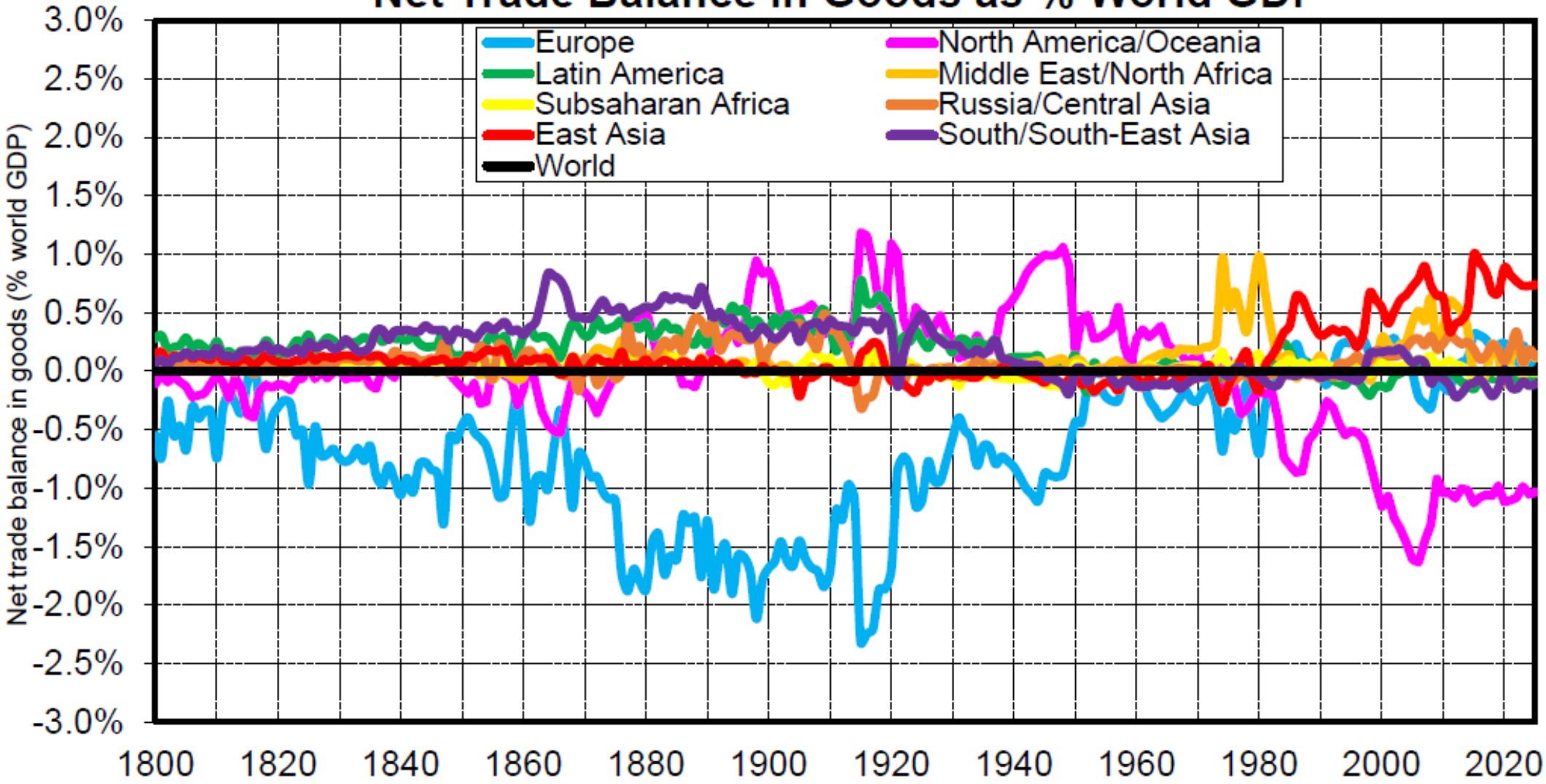
Interpretation. Between 1800 & 1914, core European colonial powers (Britain, France, Germany, Netherlands) accumulate a very large and diversified foreigh wealth porfolio in the rest of the world. By 1914, they own the equivalent of 138% of their GDP in net foreign assets. South & South-East Asia assets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

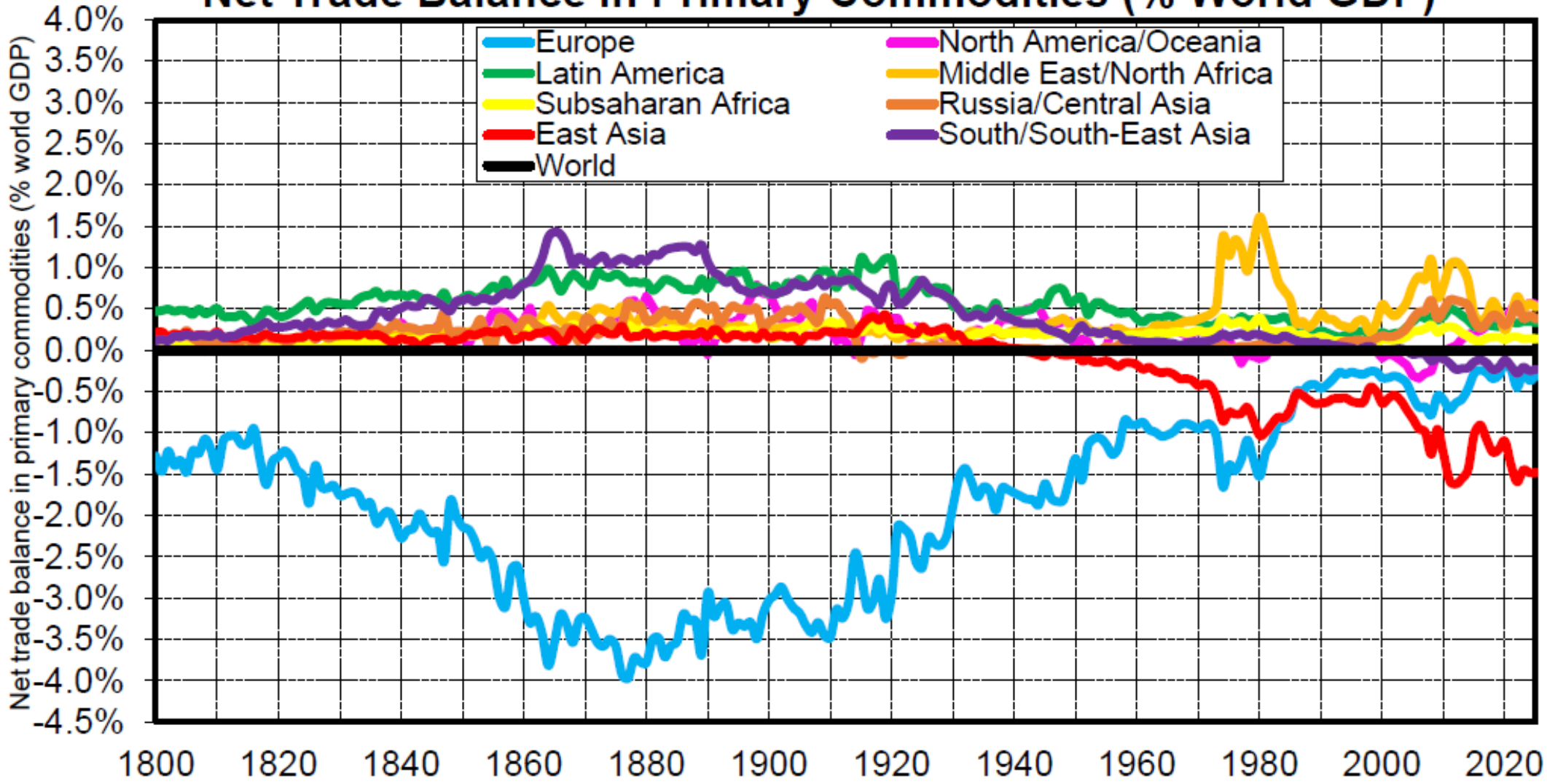
Both in 1800-1914 & in 1970-2025, **low commodity prices play a critical role for wealth accumulation** by manufacturing power (Europe or East Asia)

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

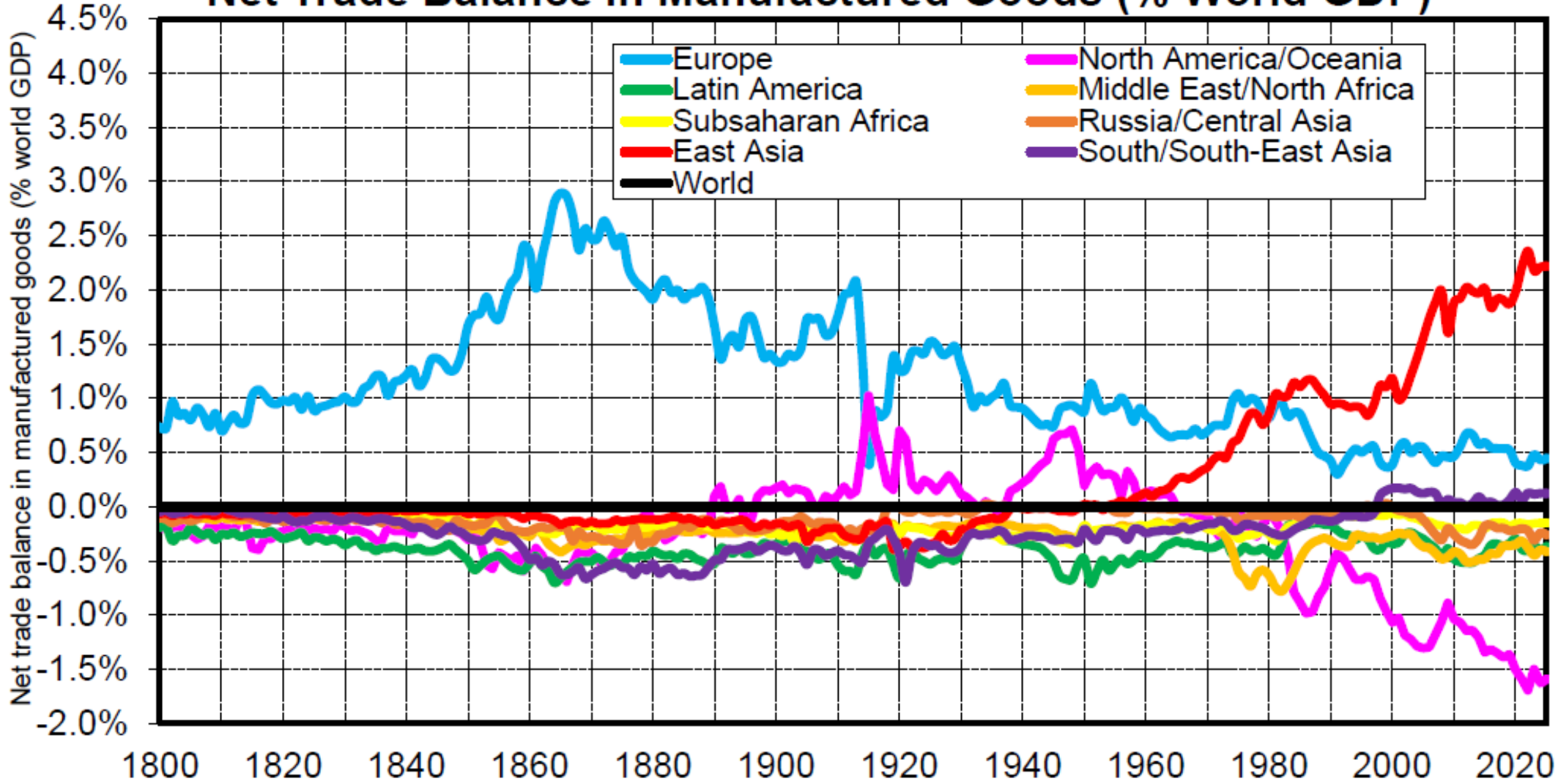
Net Trade Balance in Primary Commodities (% World GDP)



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.

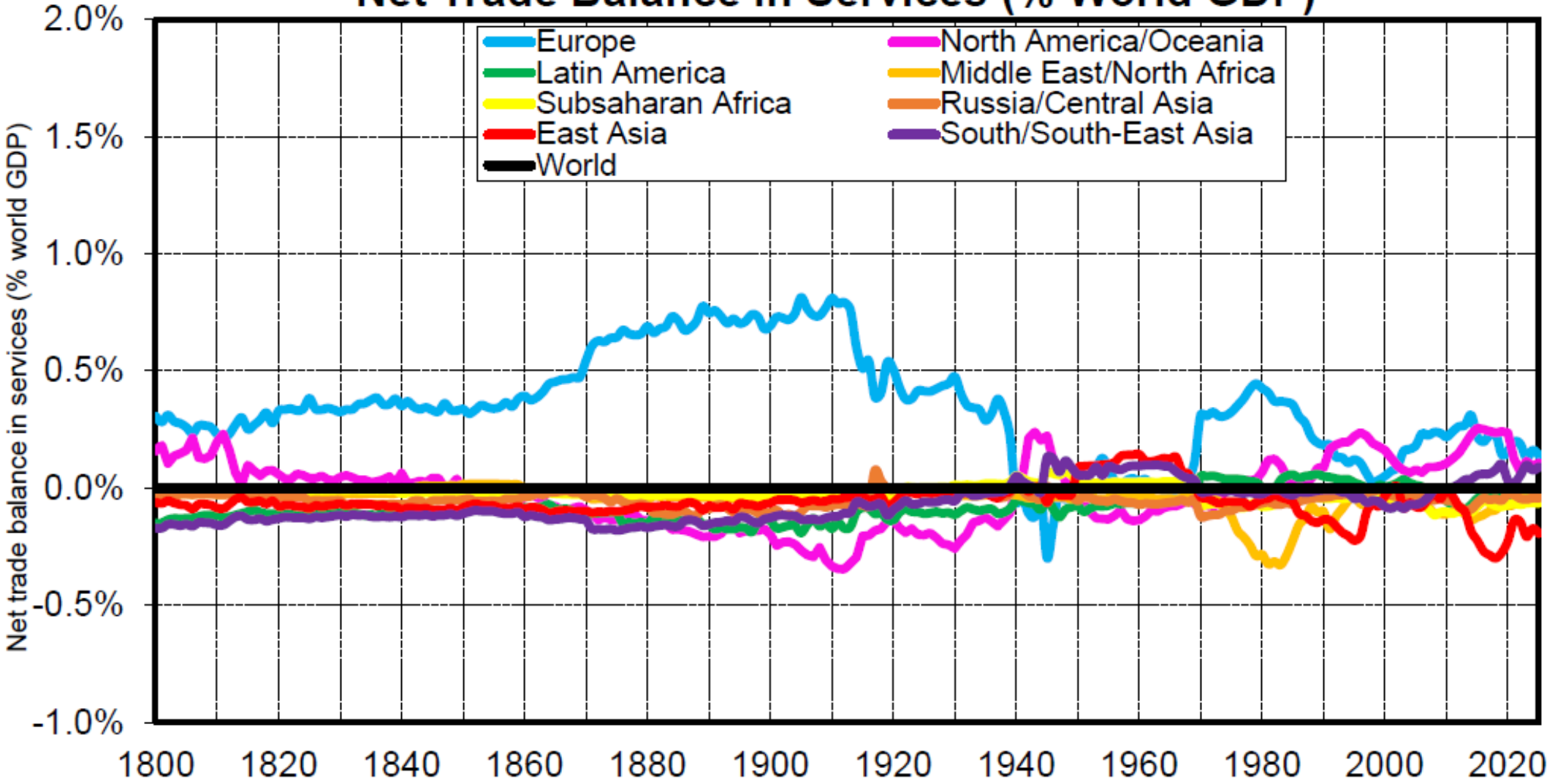
Sources and series: see wid.world

Net Trade Balance in Manufactured Goods (% World GDP)



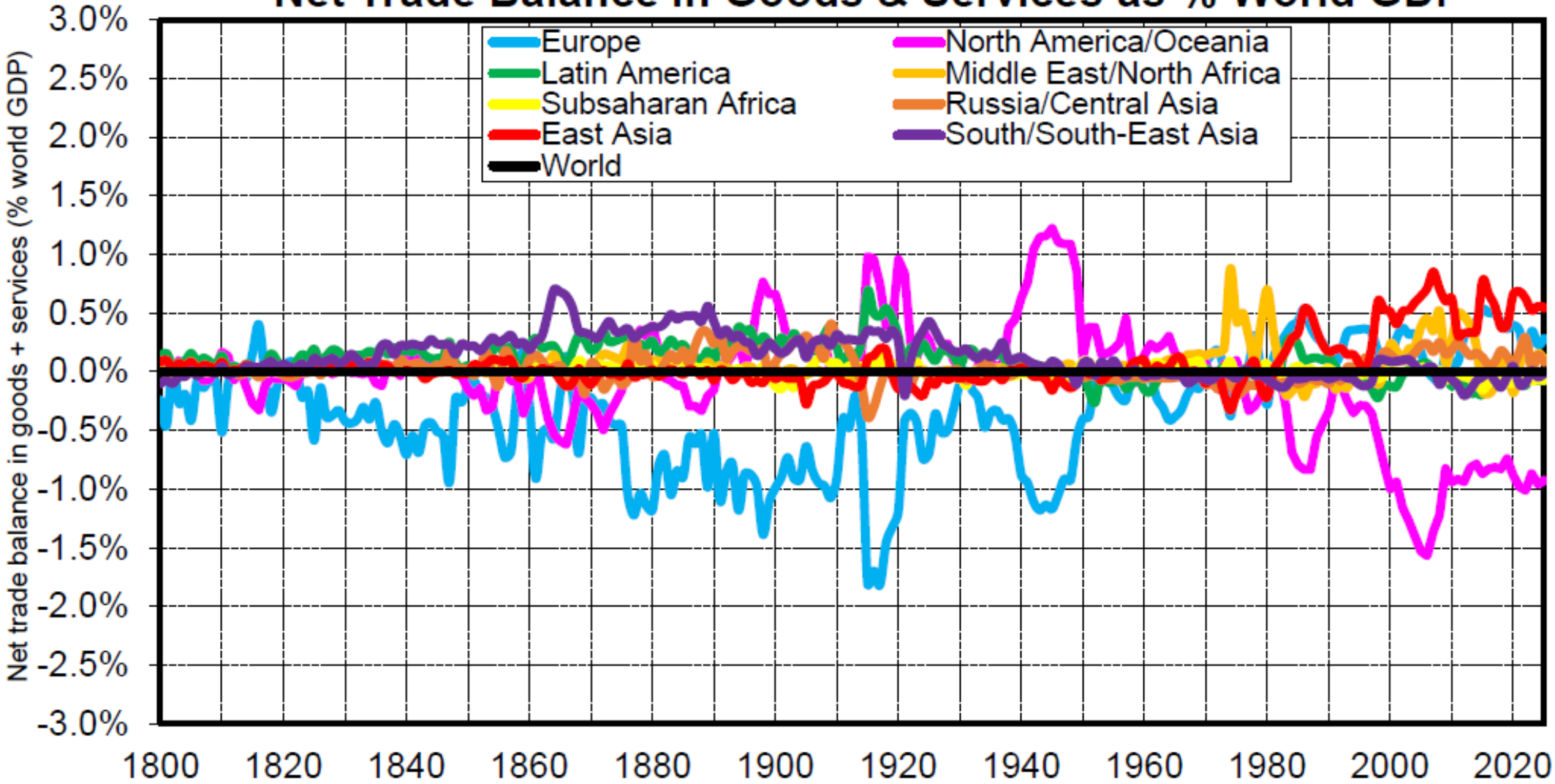
Interpretation. Between 1800 & 1914, Europe is making a large trade surplus in manufactured goods (especially Britain), but it is insufficient to compensate for the huge deficit in primary commodities. In contrast, the trade surplus in manufactured goods of East Asia in recent decades has been of sufficient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

Net Trade Balance in Services (% World GDP)



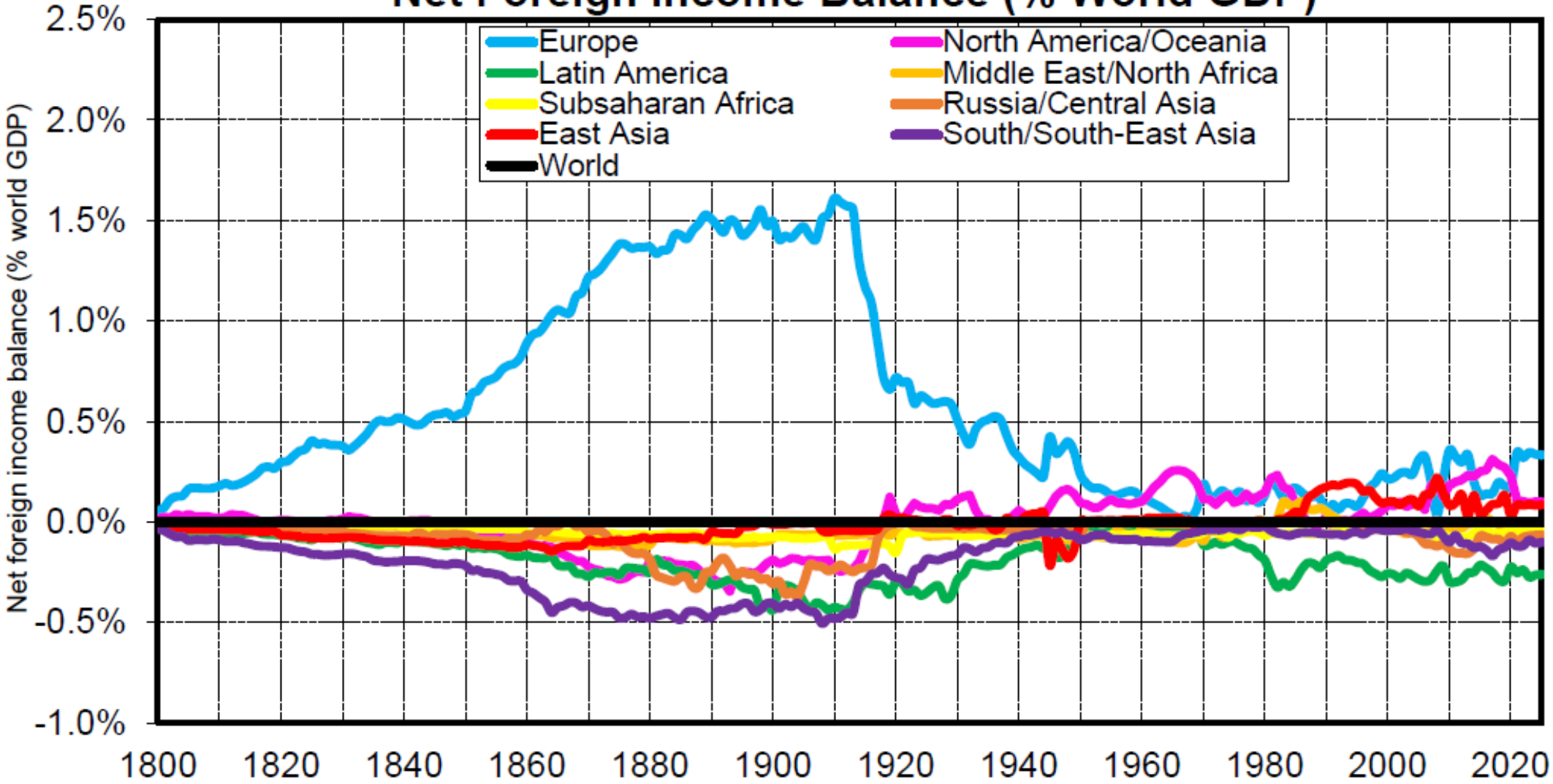
Interpretation. Between 1800 and 1914, Europe is making a permanent surplus in trade for services, particularly Britain in maritime transport, trading services, insurance, etc. (except during Napoleonic wars when US fleet gets a bigger share of freight). However this surplus alone is insufficient to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

Net Trade Balance in Goods & Services as % World GDP



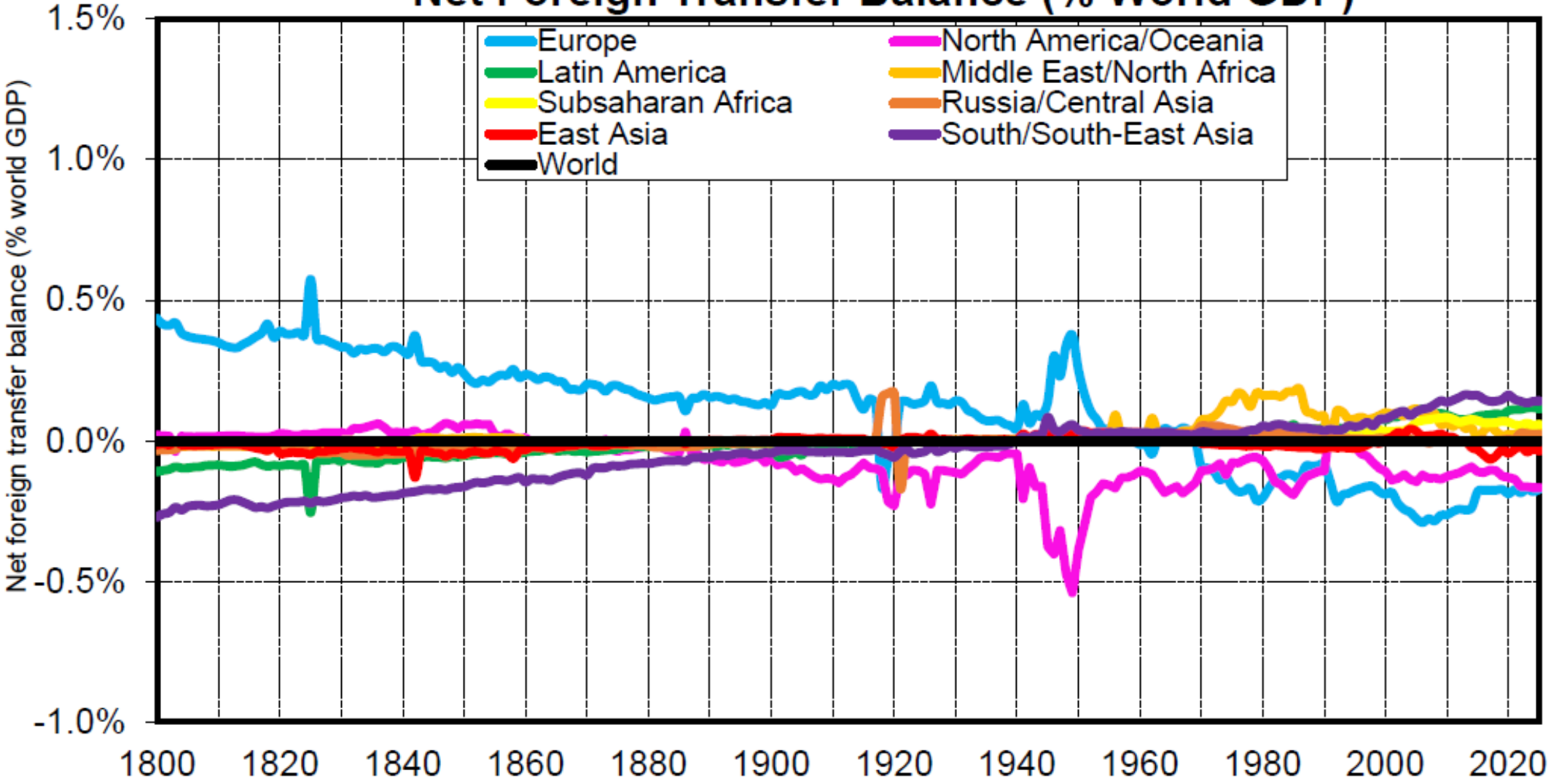
Interpretation. Between 1800 and 1914, Europe has a large permanent deficit in trade for goods, which is only partially compensated by the trade surplus in trade for services (in particular freight/insurance & trading services). I.e. Europe's large current account surplus over this period comes entirely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

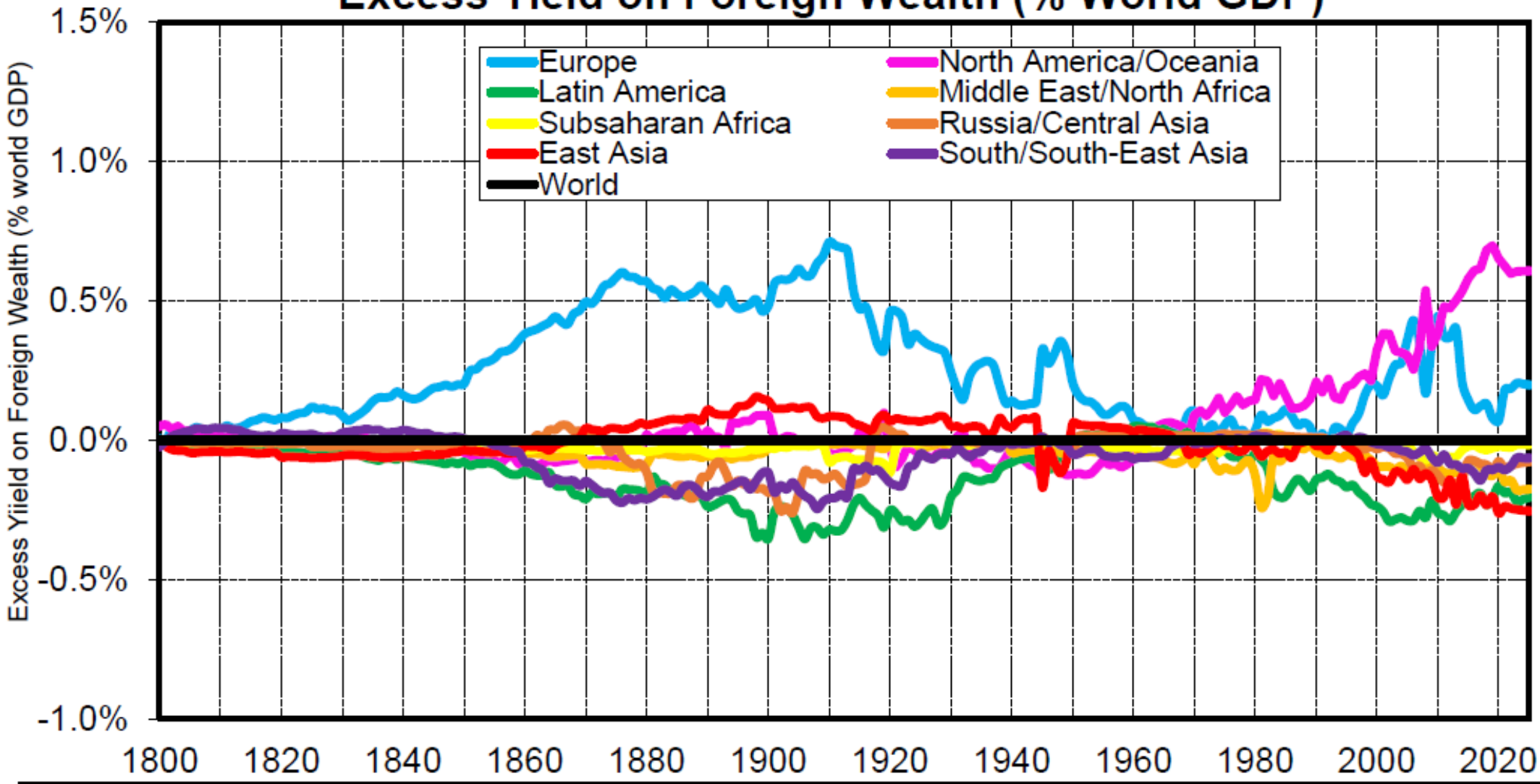
Interpretation. The net foreign wealth of European powers (GB-FR-DE-NL) rose from 3% to 138% of GDP between 1800 and 1914. Their cumulated trade deficit for goods was equal to -141% but it was more compensated by invisible BoP items (trade in services, foreign income and foreign transfers). **Sources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

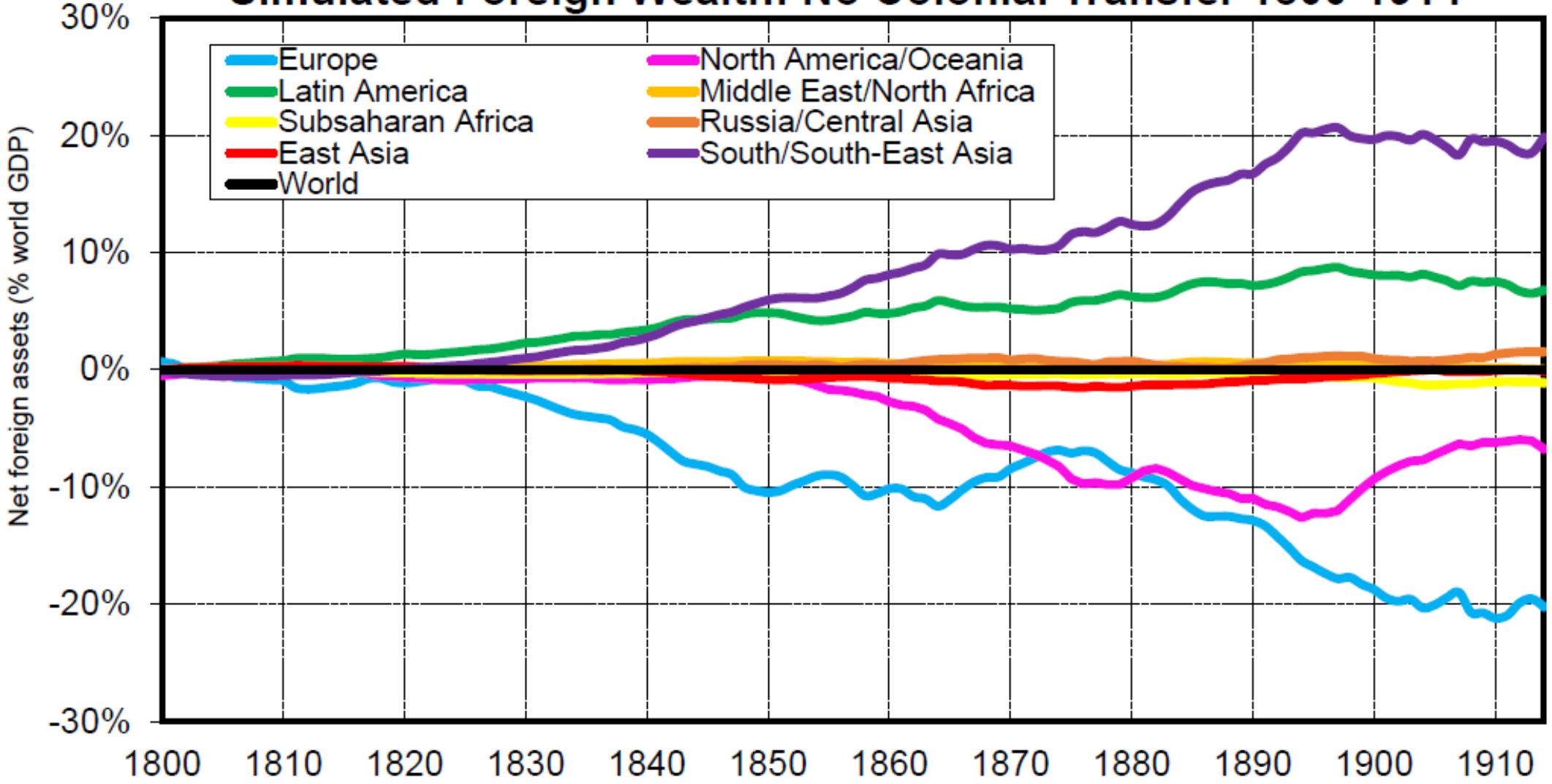
Economic simulations. Ideally we should also take into account the impact on domestic investment/productivity & global convergence in per capita GDP by 2025
(+ sectoral specialization/sustainability/carbon emissions)
(ignored here, left for future research)

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.**

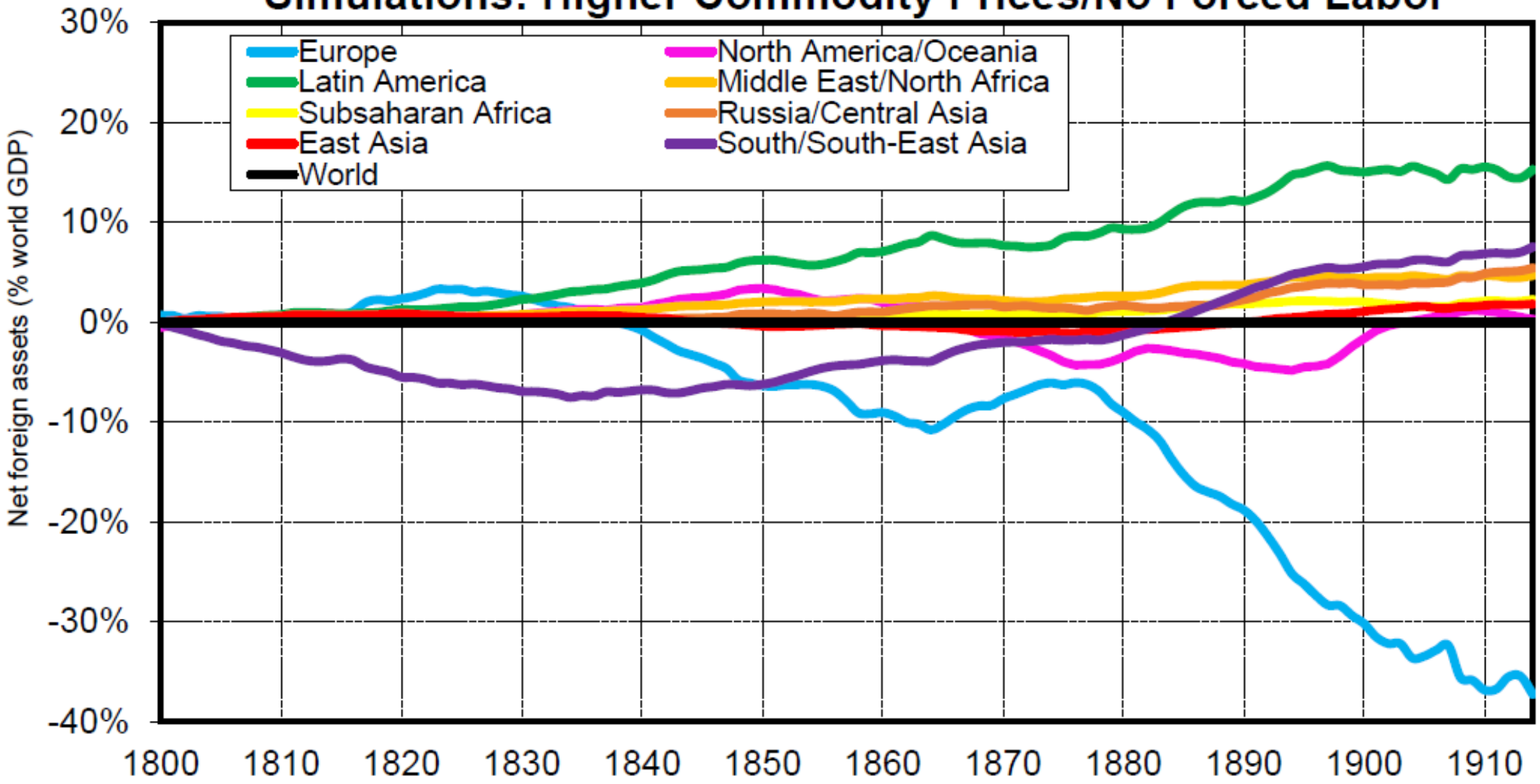
1970-2025. **If primary commodity prices are raised by 20%** (still a lot less than PPP), **then Subsaharan Africa owns substantial positive foreign wealth in 2025** (larger than East Asia).

Simulated Foreign Wealth: No Colonial Transfer 1800-1914



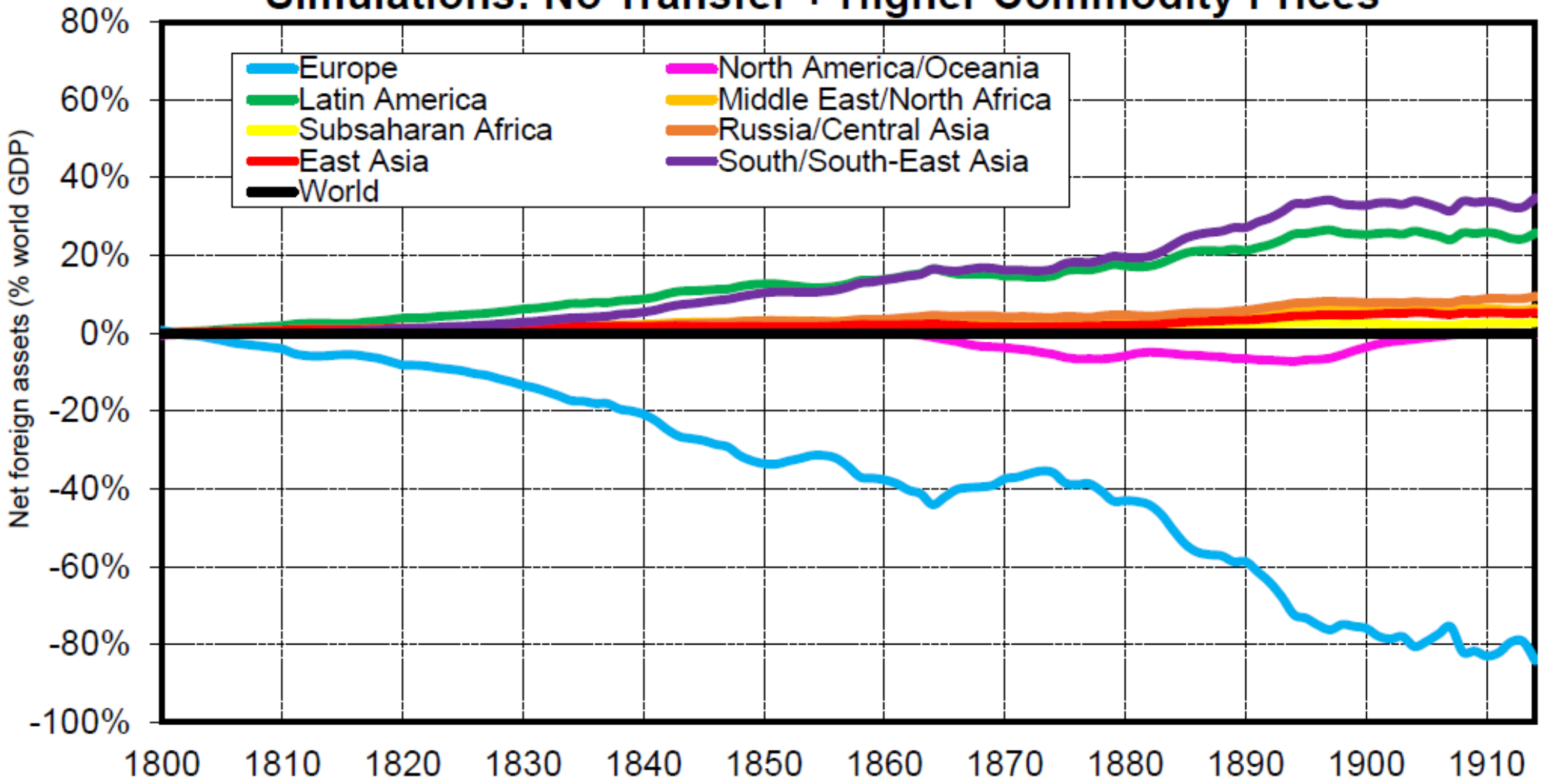
Interpretation. In the absence of the net transfer flows received by Europe in 1800-1914 (war tributes paid by Haïti and China to France and Britain, "Home charges" paid by India and Indonesia to Britain and the Netherlands, etc.)., and leaving all other flows unchanged, Europe would have had a very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



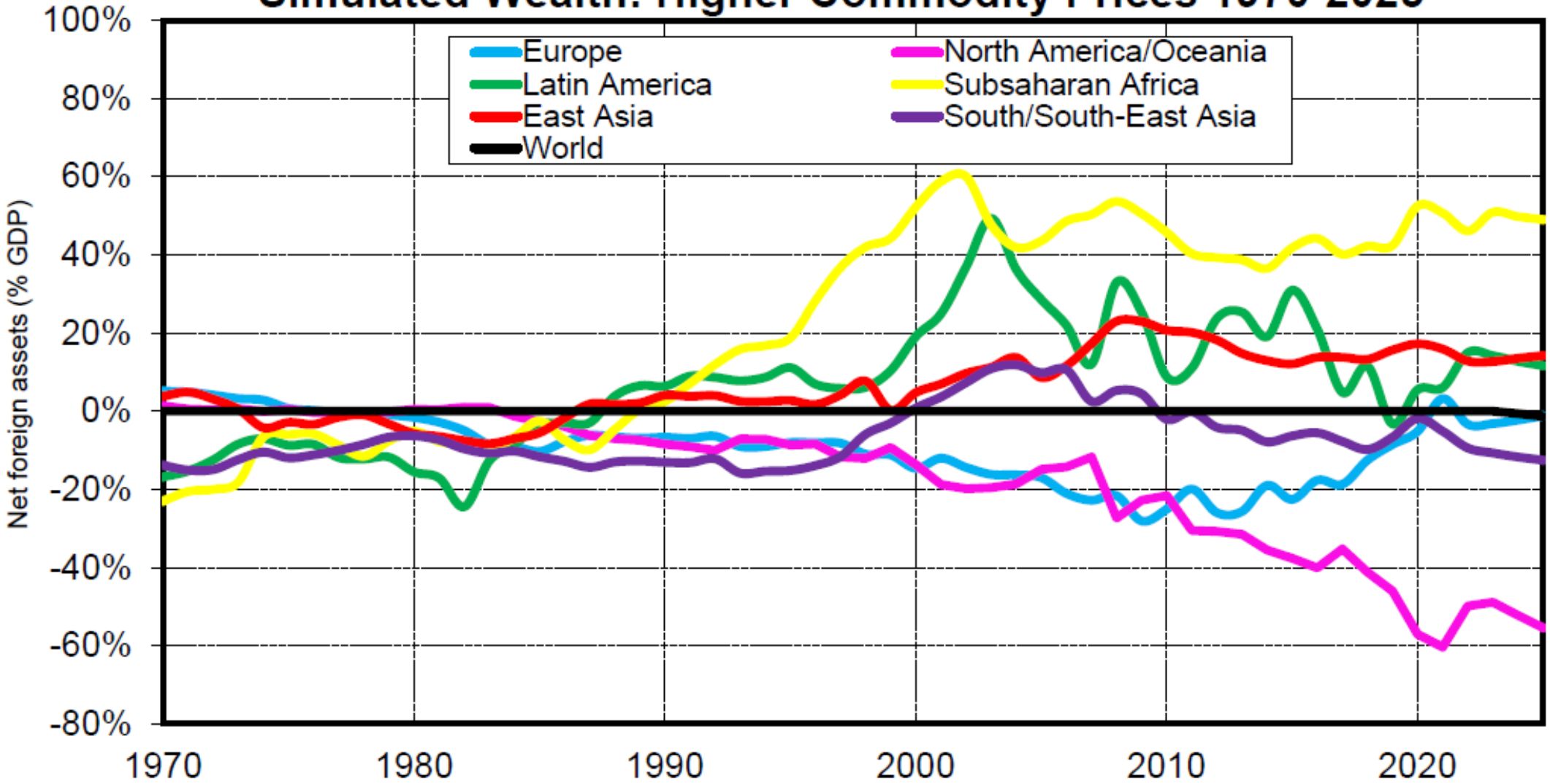
Interpretation. Assuming that primary commodity prices would have been 20% higher than what they were betwen 1800 and 1914 (which corresponds to a lower bound estimate of the value of unpaid forced labor in the export production of cotton, sugar, grain, etc.. over this period), and leaving all other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

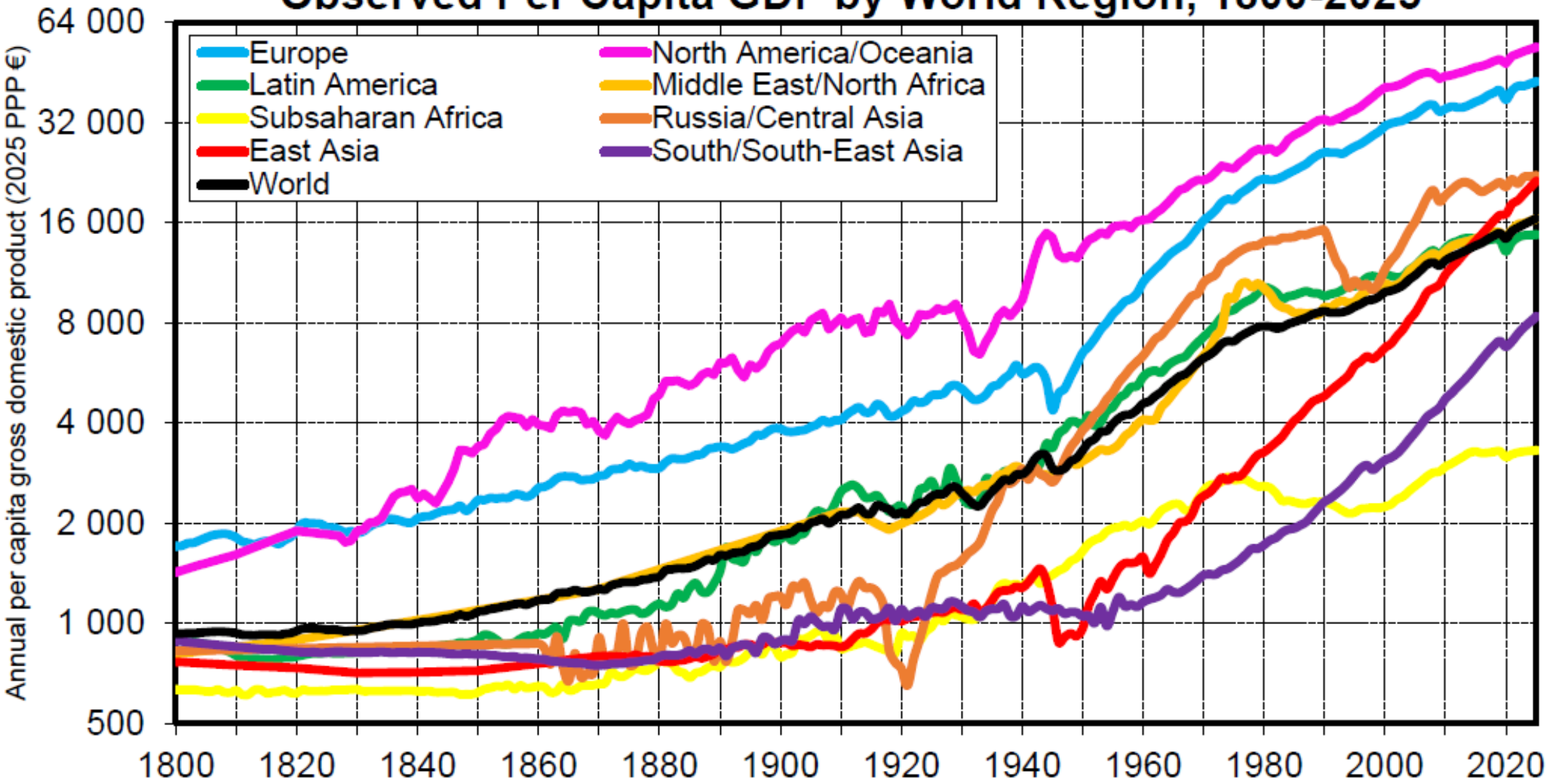
Sources and series: wid.world

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

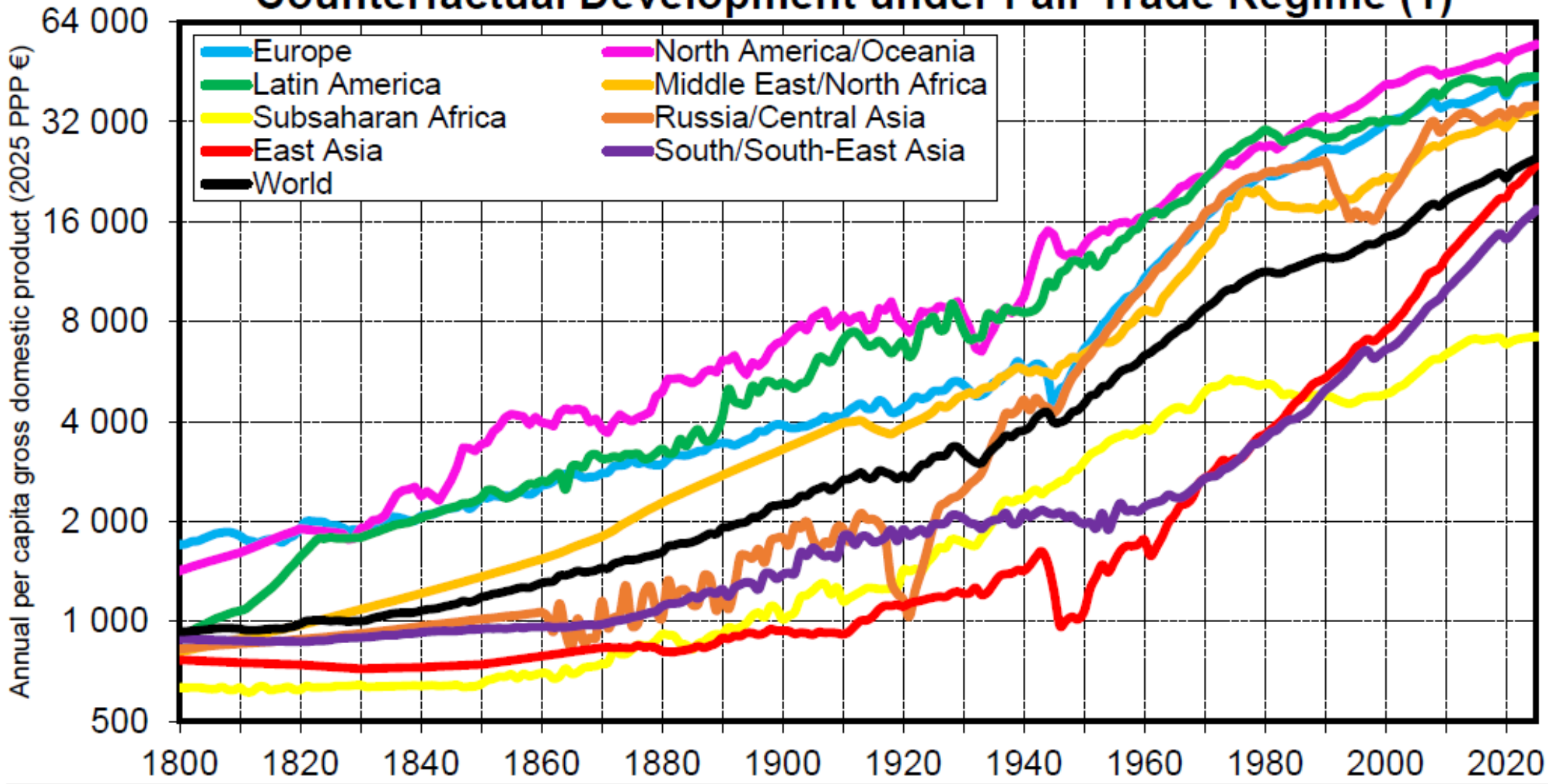
1800-2025. **In order to obtain further convergence** (including for Subsaharan Africa), **one also needs to assume a 30% rise in terms of exchange for poor countries**, e.g. via Global Clearing Union and/or Common International Currency

Observed Per Capita GDP by World Region, 1800-2025



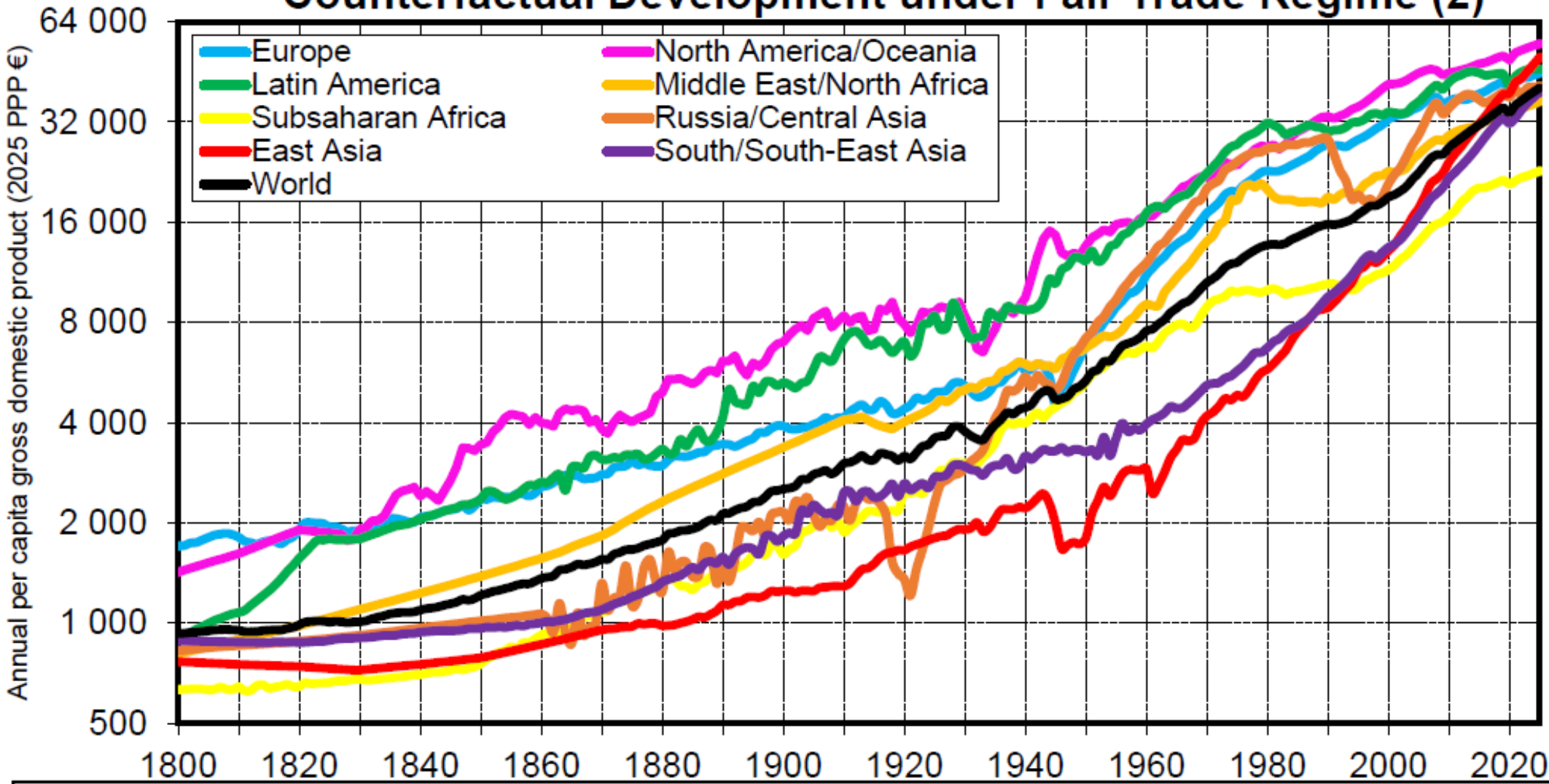
Interpretation. Expressed in 2025 PPP €, annual per capita gross domestic product (GDP) rose from about 900€ in 1800 to about 16 000€ in 2025 at the global level, with large disparities across world region: about 3 000€ in Subsaharan Africa, vs 40 000-50 000€ in Europe and North America/Oceania. Between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

Terms of Trade and North-South Relations: Implications for Foreign Wealth Accumulation and Comparative Development (1962-2025)

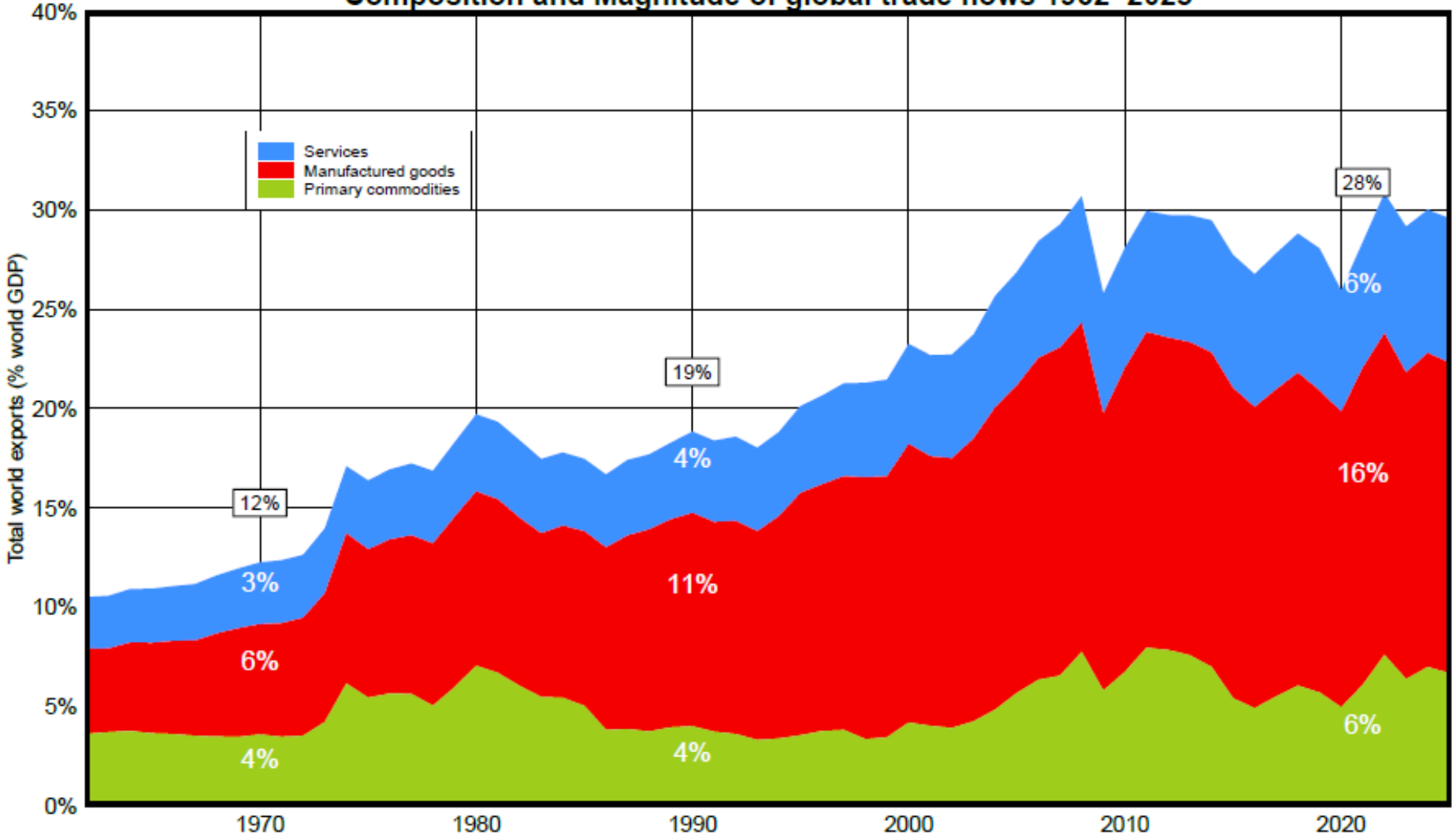
Simon Keller*

Supervisor: Thomas Piketty
Referee: Pamina Koenig

Abstract

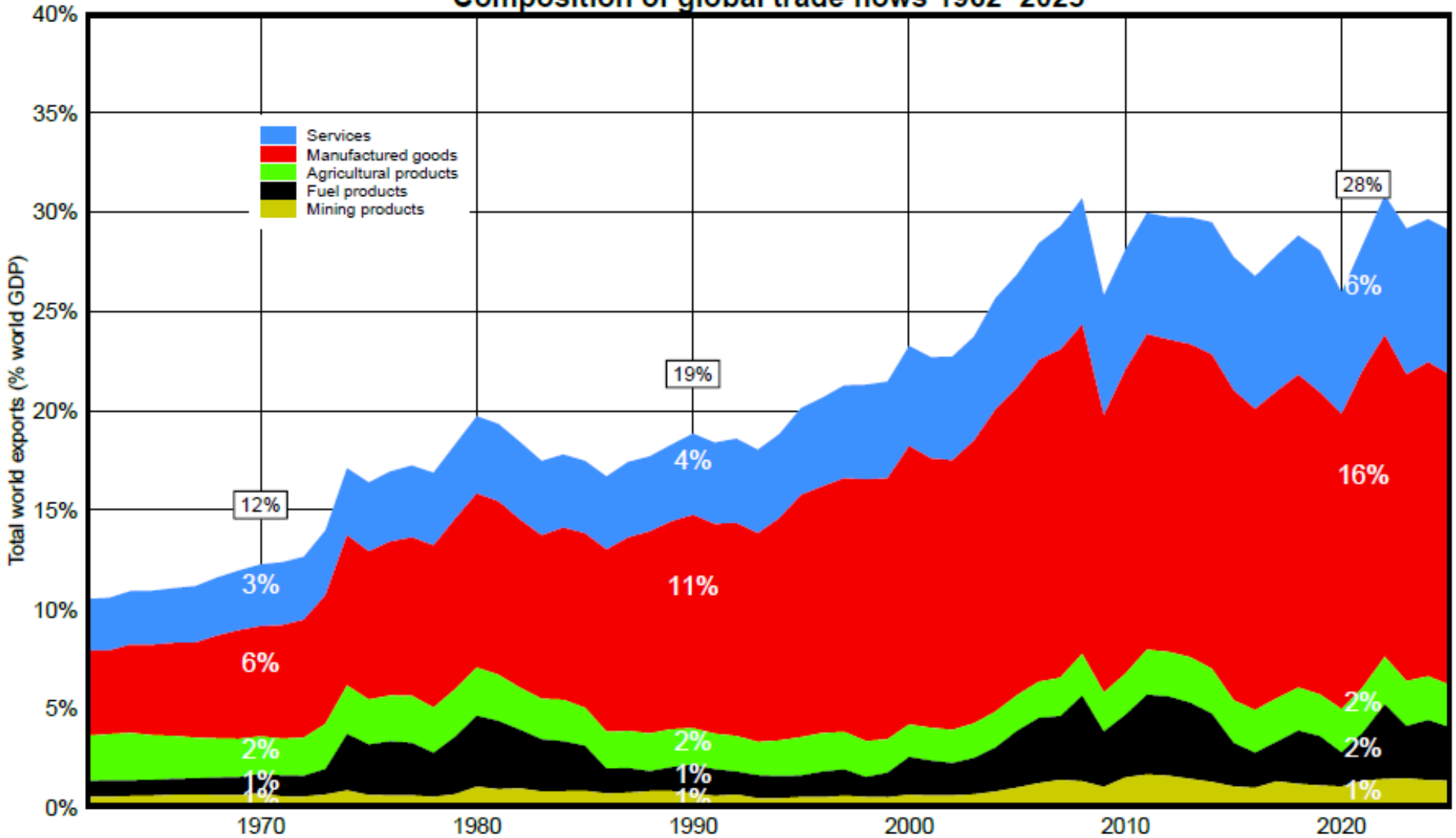
How critical are terms of trade (and in particular prices of primary goods) in the geography of foreign wealth accumulation and the comparative development of world regions in the postwar globalization? To address this question, I rely on the global coverage of the new WBOP dataset and further split the primary commodities unilateral trade into agricultural, fuel, and mining products categories for the 1962-2025 period. I also construct a world price index of exports for each category of goods relying on the unit value of all 5-digit subheading reported and gathered in UN comtrade. I find that for non-fuel primary commodities the increase in the value exchanged throughout this period is explained by a faster rise in volumes than the increase in prices. I run counterfactual simulations in order to get an estimation of the importance of long-run prices of these primary commodities in the accumulation patterns of foreign wealth and development paths of world regions. For example, if mining products exporting countries would have organized and increased their prices in a similar way as the OPEC, Sub-Saharan Africa would own a substantial foreign wealth in 2025 (+1400% of its GDP vs -43% in reality). Similarly, if agricultural product prices would have followed fuel prices in 1962-2025, it would have allowed Latin America to own a foreign wealth of +490% of its GDP (vs - 30% in reality). I also illustrate the impact of such scenarios on the per capita growth of countries. These results aim at estimating the relevance of the discussion about the role of global trade organization and the correlative set price of commodities in the unequal development of countries around the world.

Composition and Magnitude of global trade flows 1962–2025

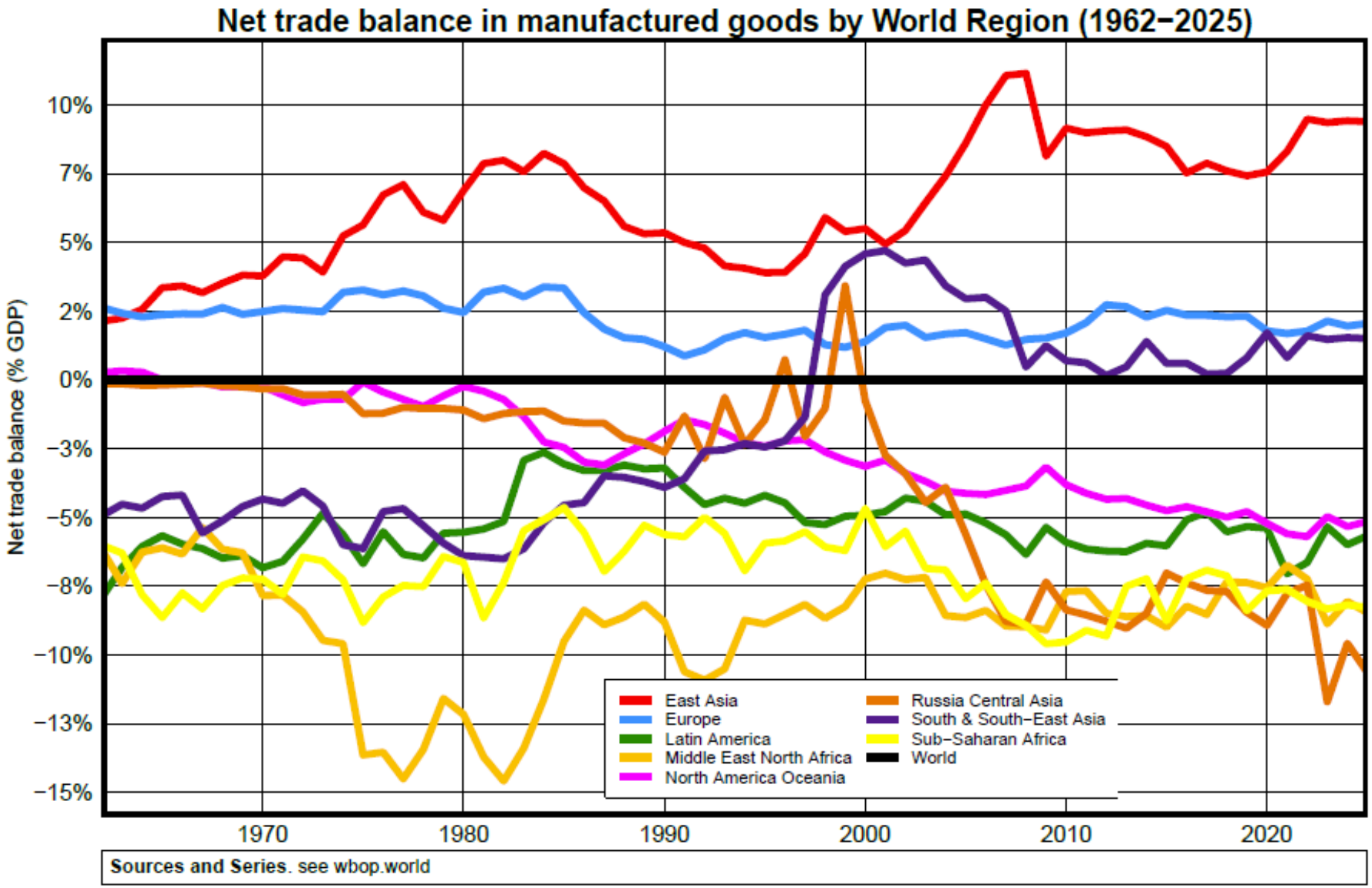


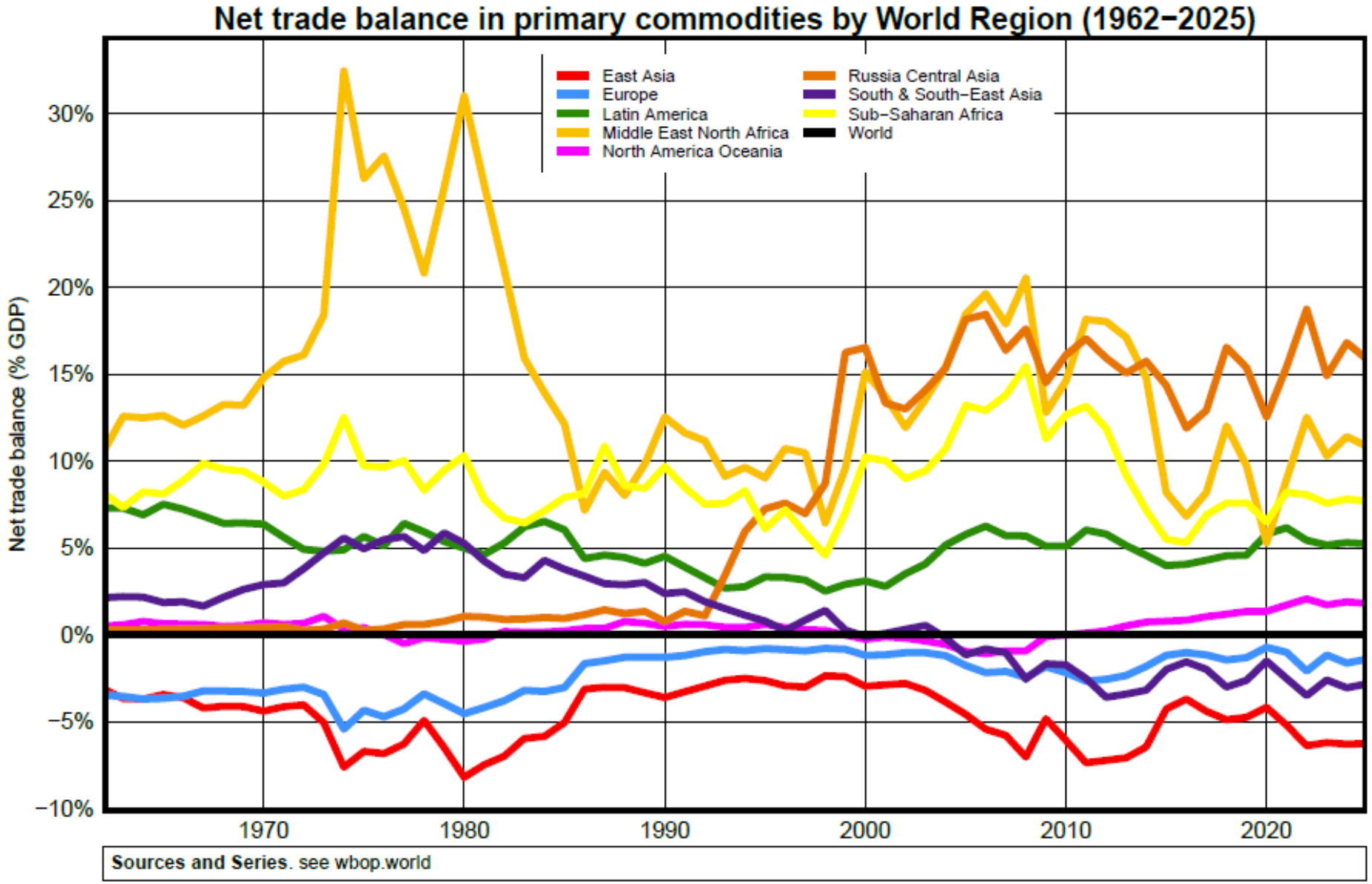
Interpretation. The share of global trade in world GDP has stagnated since the Great Recession to 28% after a long period of rise from 12% in 1970. This rise is mainly due to the increase in Manufacturing good trade which share in world GDP almost triple and Service which doubled. **Sources and Series**. see wbop.world.

Composition of global trade flows 1962−2025

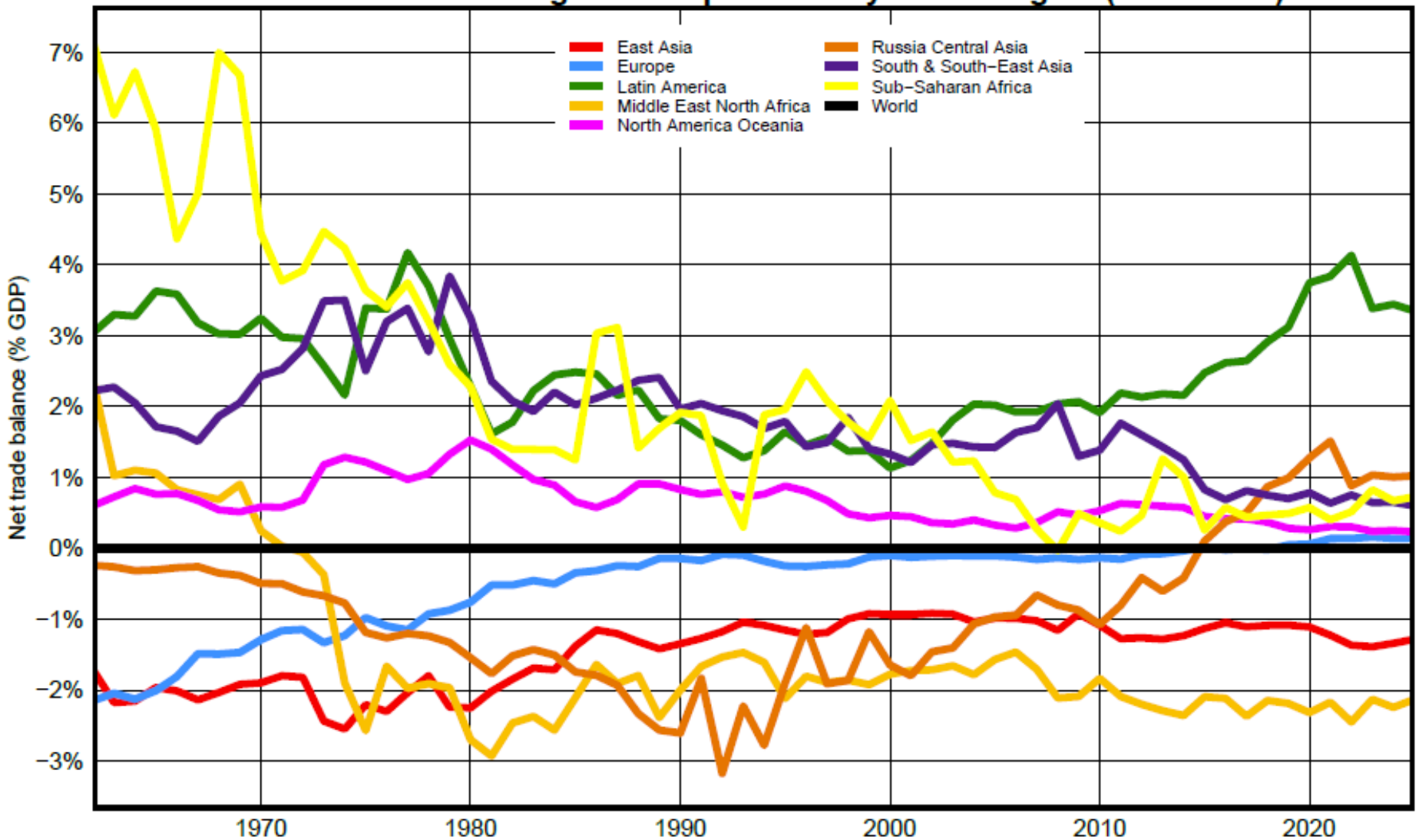


Interpretation. Total exports increased from 12% in world GDP in 1970 to 28% in 2021. The main contributor is the increase in manufacturing goods which rose from 6% to 16%. While the trade in primary commodities followed closely the increase in world GDP. Unless, for the two steep rise in oil prices of the 1970s and 2000s.


Net trade balance in manufactured goods by World Region (1962–2025)
Net trade balance (% GDP)
10%
7%
5%
2%
0%
−3%
−5%
−8%
−10%
−13%
−15%
1970
1980
1990
2000
2010
2020
East Asia
Europe
Latin America
Middle East North Africa
North America Oceania
Russia Central Asia
South & South−East Asia
Sub−Saharan Africa
World
Sources and Series. see wbop.world

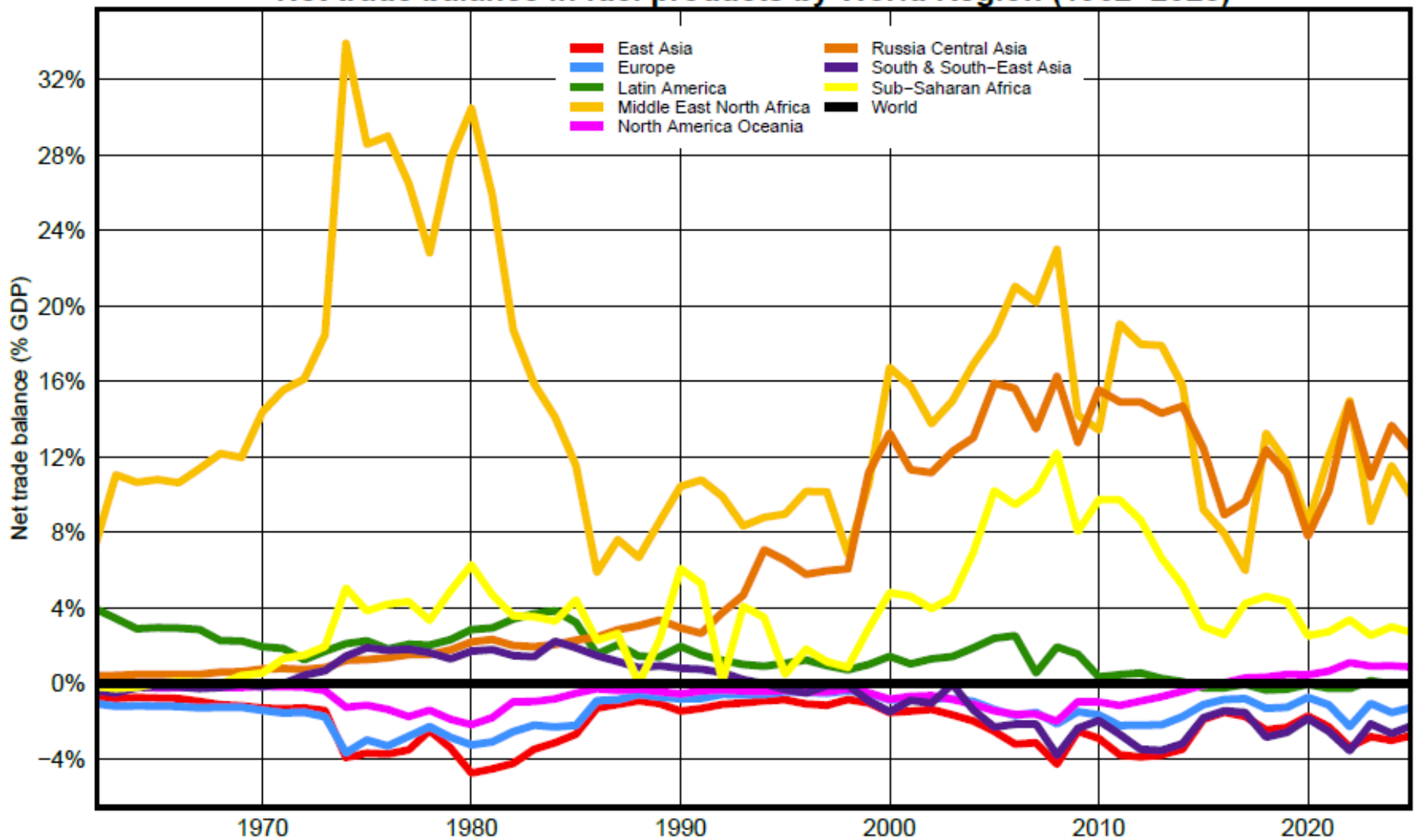

Net trade balance in primary commodities by World Region (1962–2025)
East Asia
Europe
Latin America
Middle East North Africa
North America Oceania
Russia Central Asia
South & South-East Asia
Sub-Saharan Africa
World
Net trade balance (% GDP)
30%
25%
20%
15%
10%
5%
0%
−5%
−10%
1970
1980
1990
2000
2010
2020
Sources and Series. see wbop.world

Net trade balance in agricultural products by World Region (1962−2025)



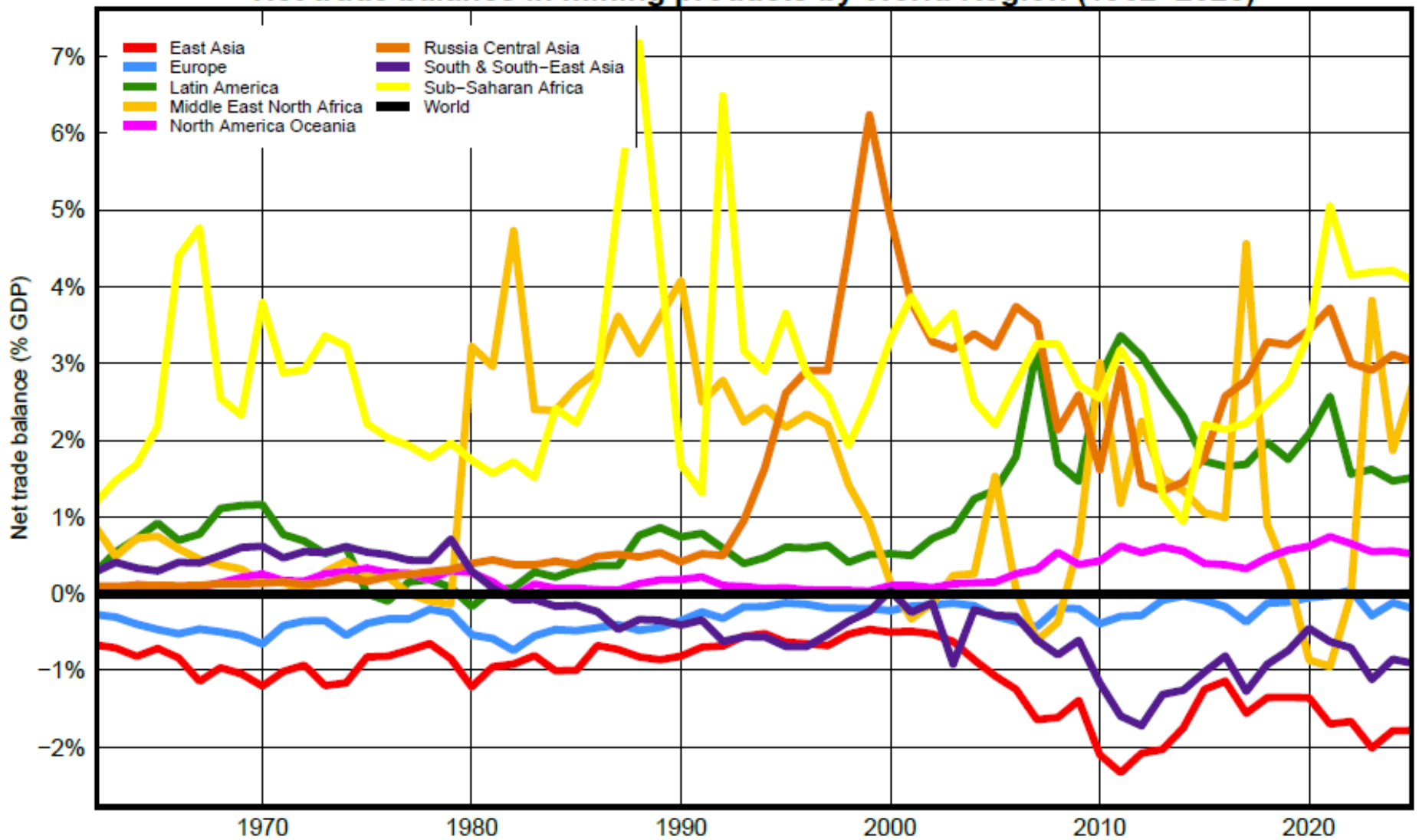
Sources and Series. see wbop.world, own calculations.

Net trade balance in fuel products by World Region (1962−2025)

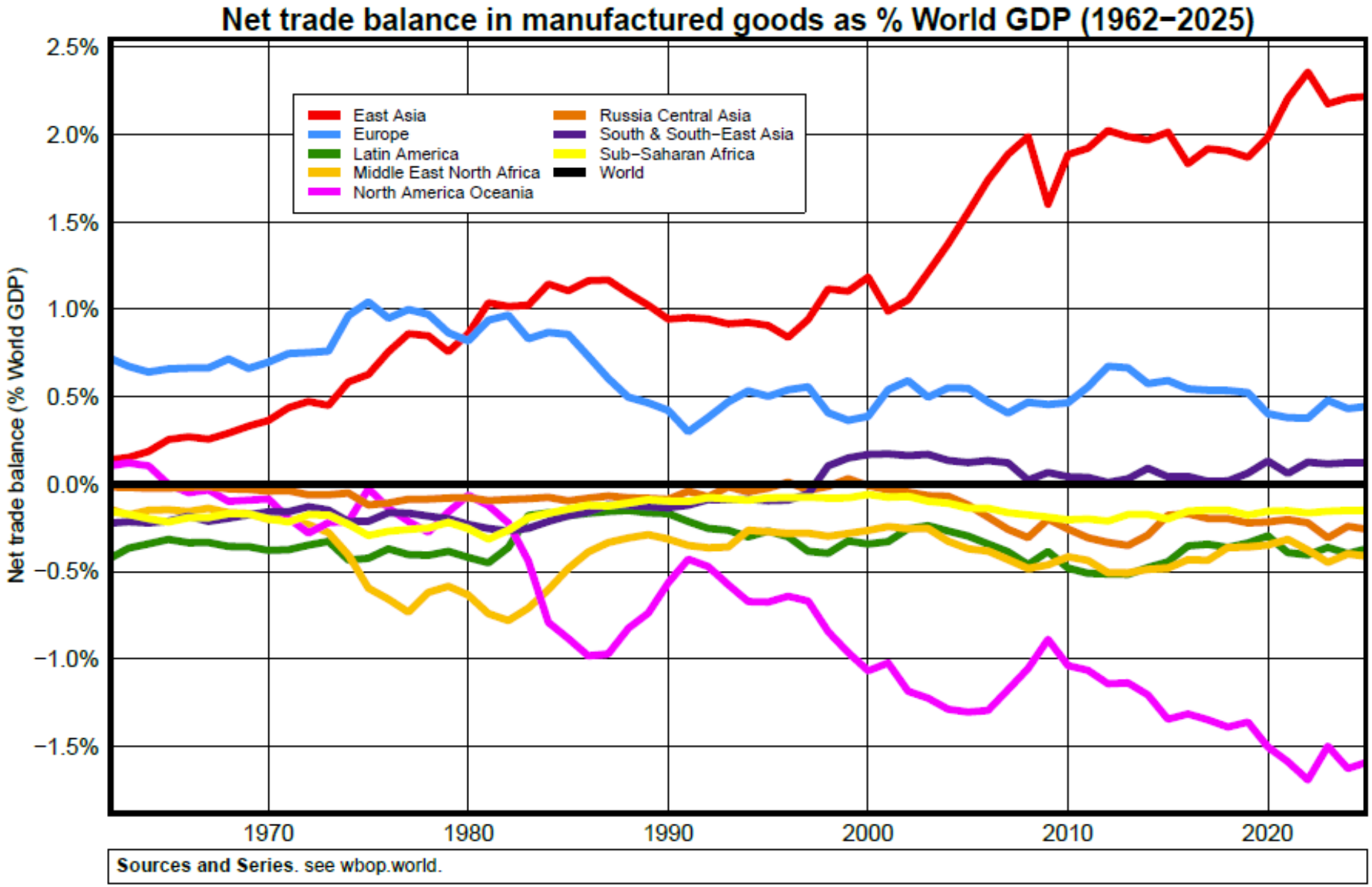


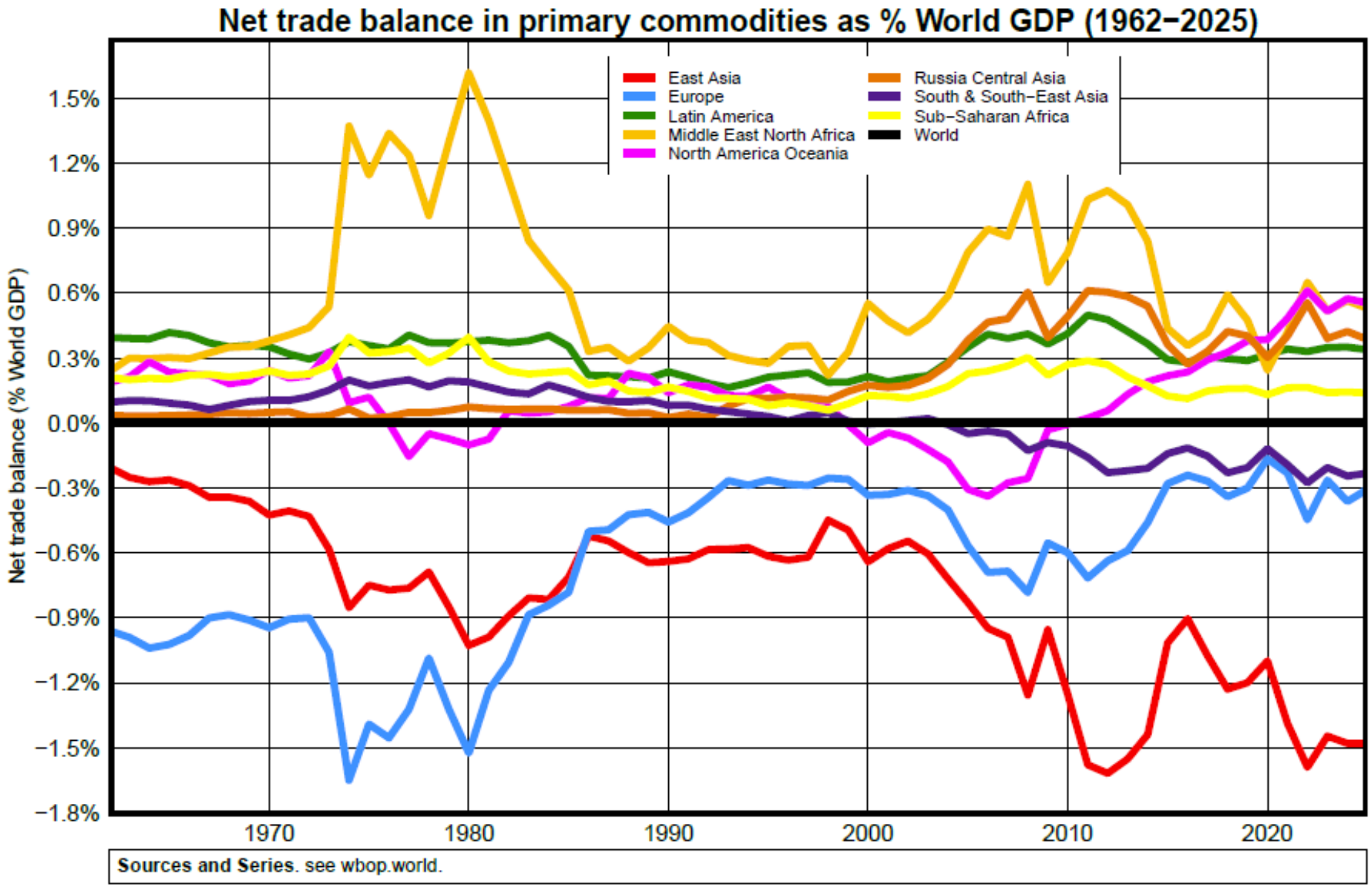
Sources and Series. UN comtrade, own calculations

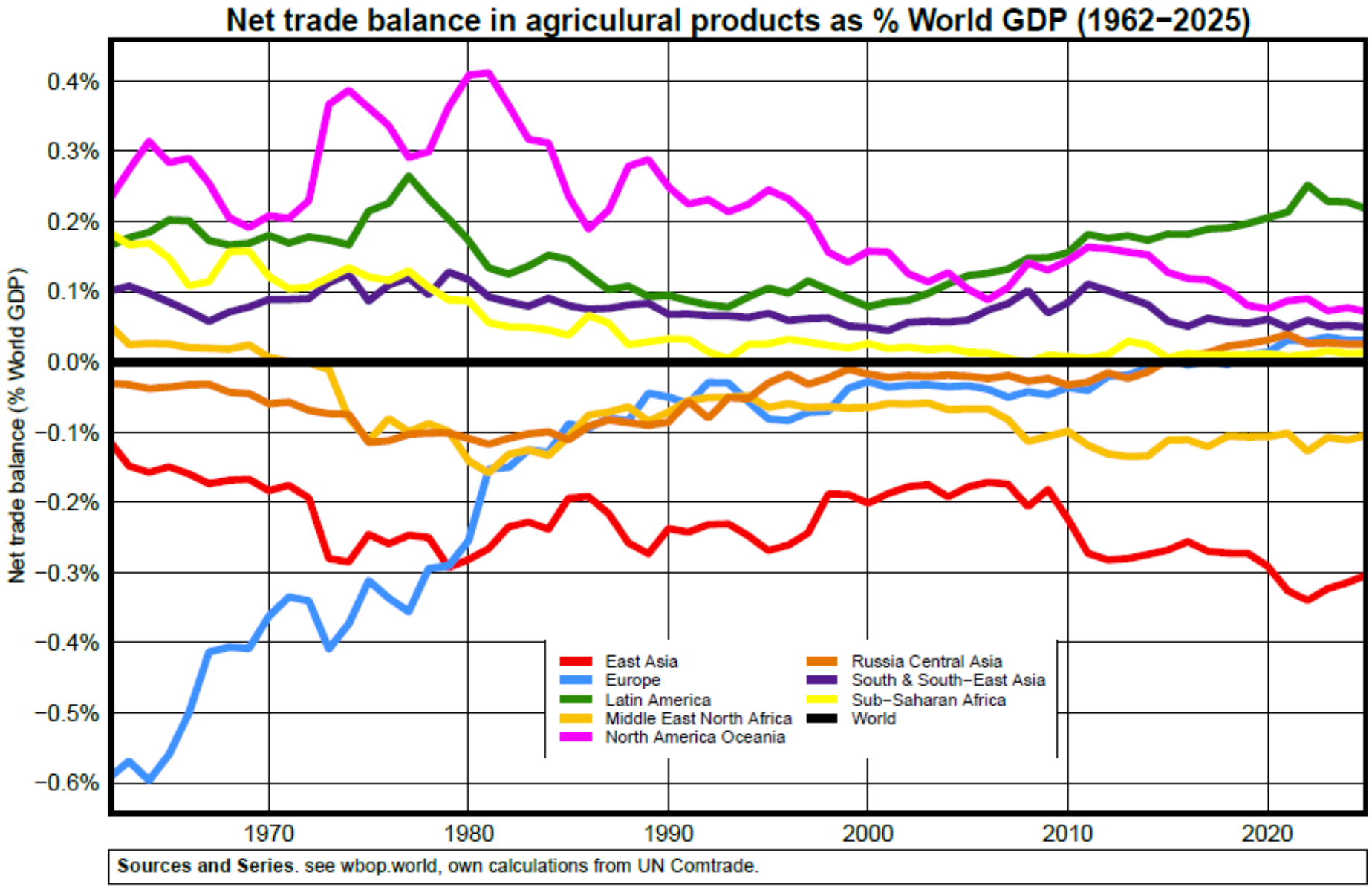
Net trade balance in mining products by World Region (1962–2025)

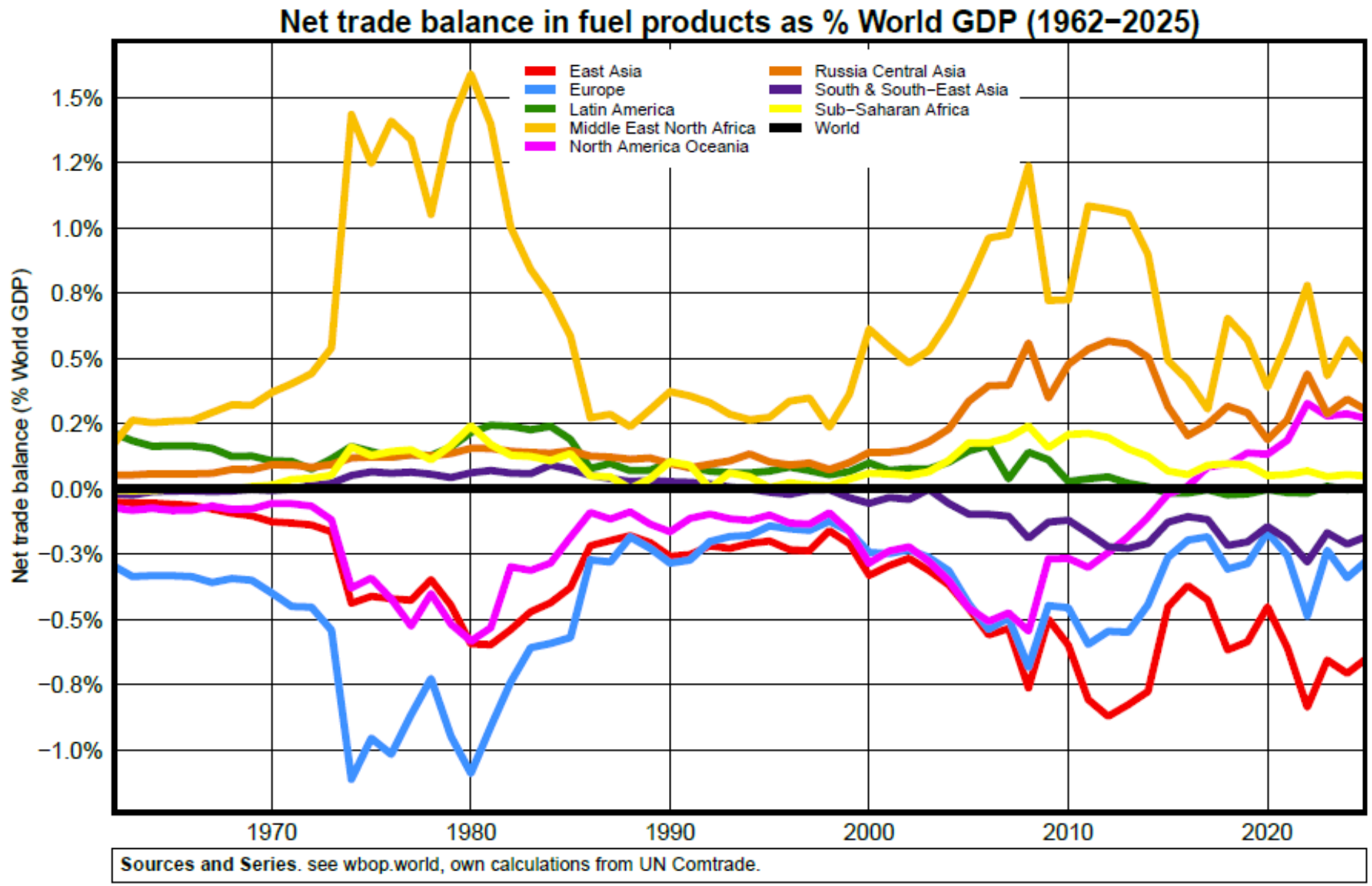


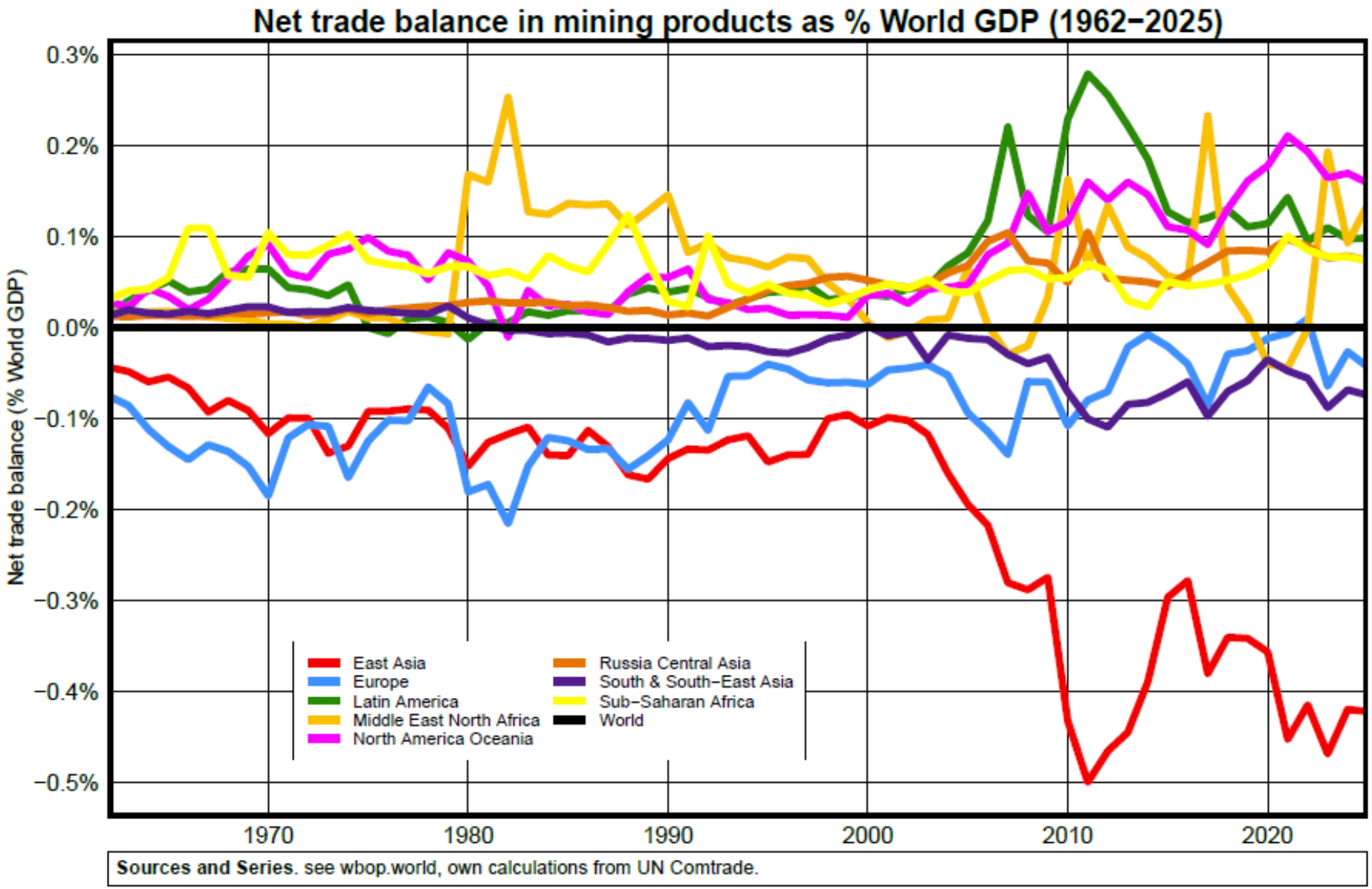
Sources and Series. UN comtrade, own calculations


Net trade balance in manufactured goods as % World GDP (1962–2025)
Net trade balance (% World GDP)
2.5%
2.0%
1.5%
1.0%
0.5%
0.0%
−0.5%
−1.0%
−1.5%
East Asia
Europe
Latin America
Middle East North Africa
North America Oceania
Russia Central Asia
South & South−East Asia
Sub−Saharan Africa
World
1970
1980
1990
2000
2010
2020
Sources and Series. see wbop.world.

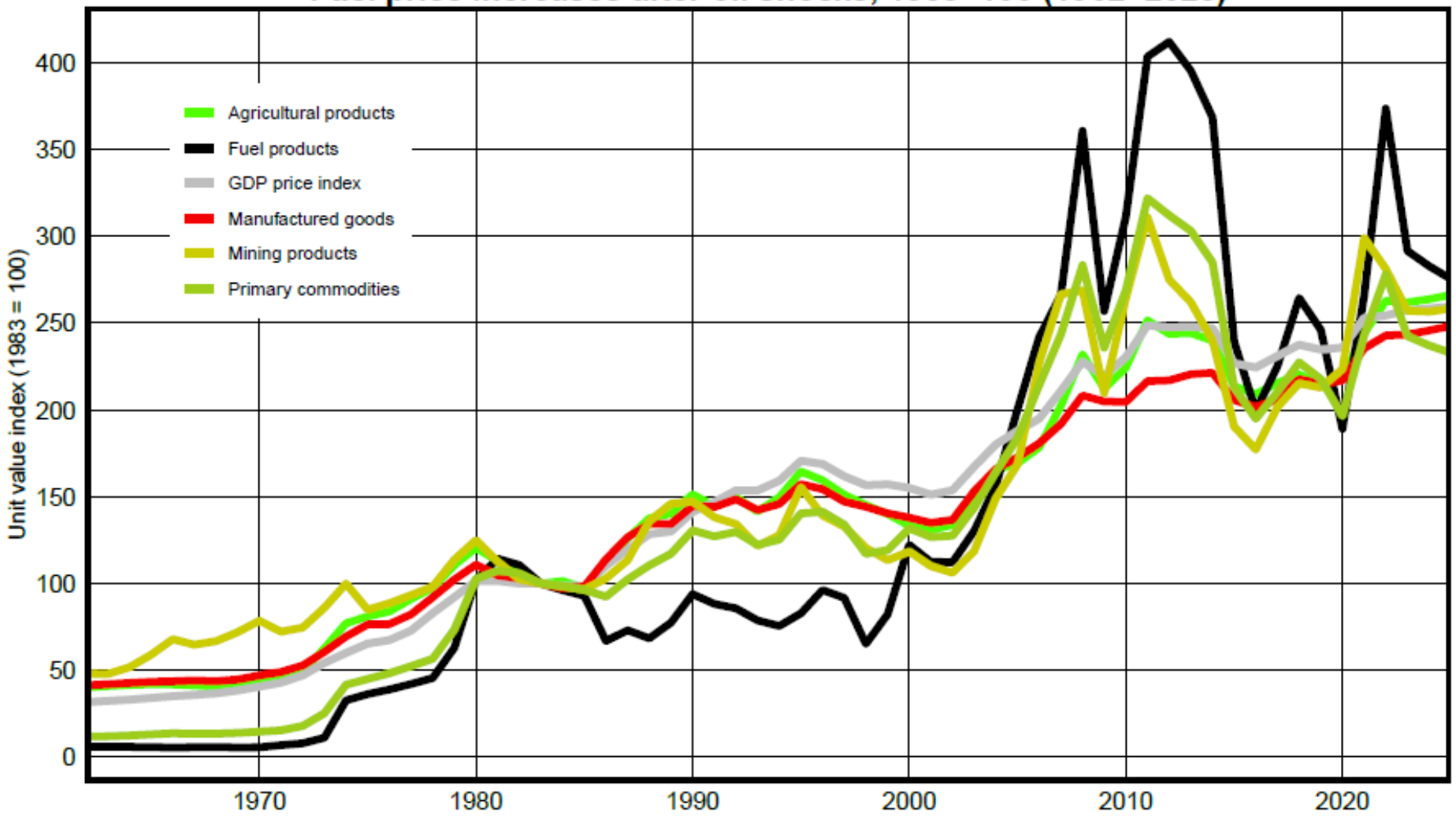

Net trade balance in primary commodities as % World GDP (1962−2025)
East Asia
Europe
Latin America
Middle East North Africa
North America Oceania
Russia Central Asia
South & South−East Asia
Sub−Saharan Africa
World
Net trade balance (% World GDP)
1.5%
1.2%
0.9%
0.6%
0.3%
0.0%
−0.3%
−0.6%
−0.9%
−1.2%
−1.5%
−1.8%
1970
1980
1990
2000
2010
2020
Sources and Series. see wbop.world.


Net trade balance in agricultural products as % World GDP (1962−2025)
Net trade balance (% World GDP)
0.4%
0.3%
0.2%
0.1%
0.0%
−0.1%
−0.2%
−0.3%
−0.4%
−0.5%
−0.6%
1970
1980
1990
2000
2010
2020
East Asia
Europe
Latin America
Middle East North Africa
North America Oceania
Russia Central Asia
South & South−East Asia
Sub−Saharan Africa
World
Sources and Series. see wbop.world, own calculations from UN Comtrade.


Net trade balance in fuel products as % World GDP (1962−2025)
East Asia
Europe
Latin America
Middle East North Africa
North America Oceania
Russia Central Asia
South & South−East Asia
Sub−Saharan Africa
World
Net trade balance (% World GDP)
1.5%
1.2%
1.0%
0.8%
0.5%
0.2%
0.0%
−0.3%
−0.5%
−0.8%
−1.0%
1970
1980
1990
2000
2010
2020
Sources and Series. see wbop.world, own calculations from UN Comtrade.

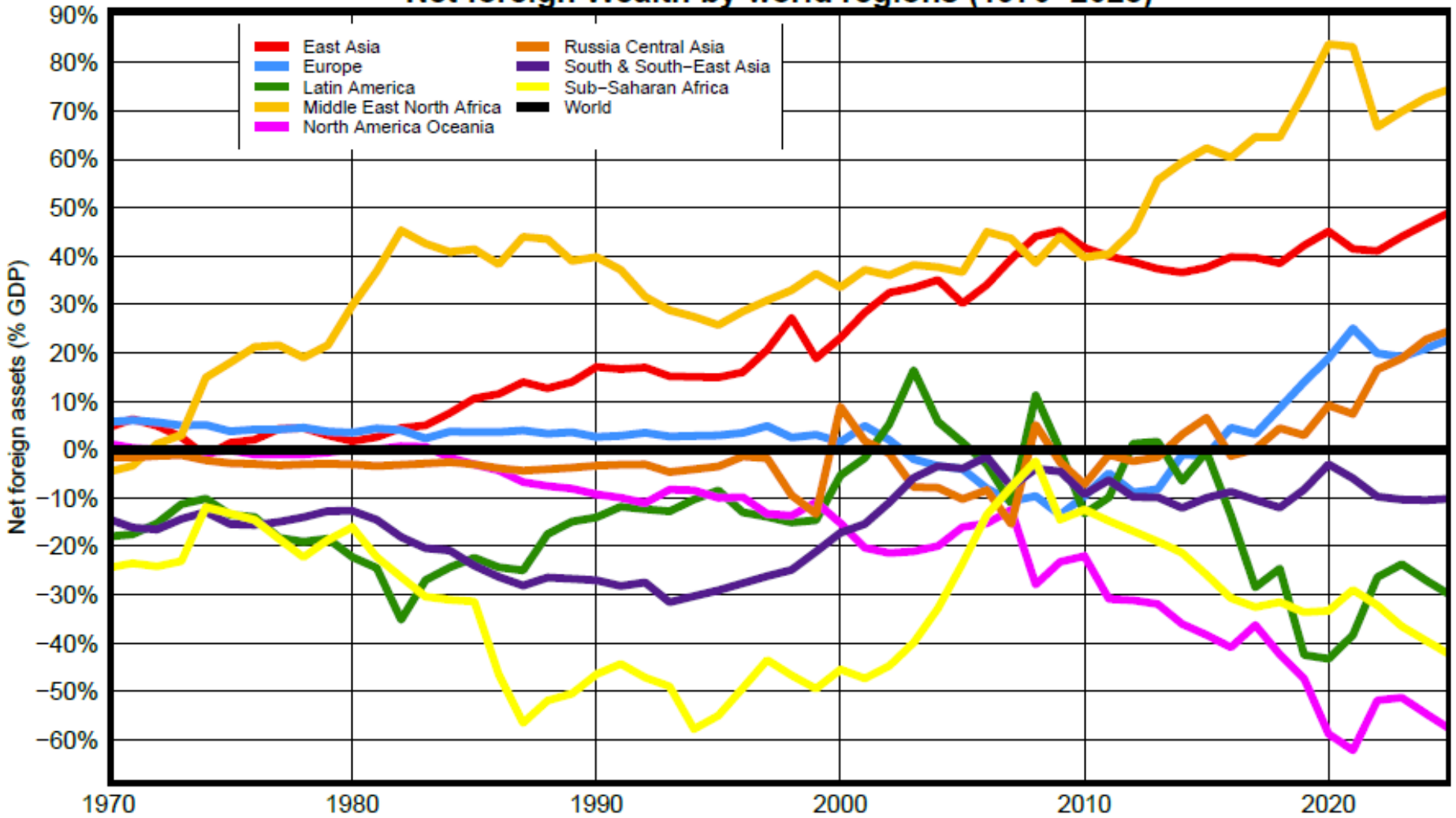

Net trade balance in mining products as % World GDP (1962–2025)
Net trade balance (% World GDP)
0.3%
0.2%
0.1%
0.0%
−0.1%
−0.2%
−0.3%
−0.4%
−0.5%
1970
1980
1990
2000
2010
2020
East Asia
Europe
Latin America
Middle East North Africa
North America Oceania
Russia Central Asia
South & South−East Asia
Sub−Saharan Africa
World
Sources and Series. see wbop.world, own calculations from UN Comtrade.

Fuel price increases after oil shocks, 1983=100 (1962−2025)



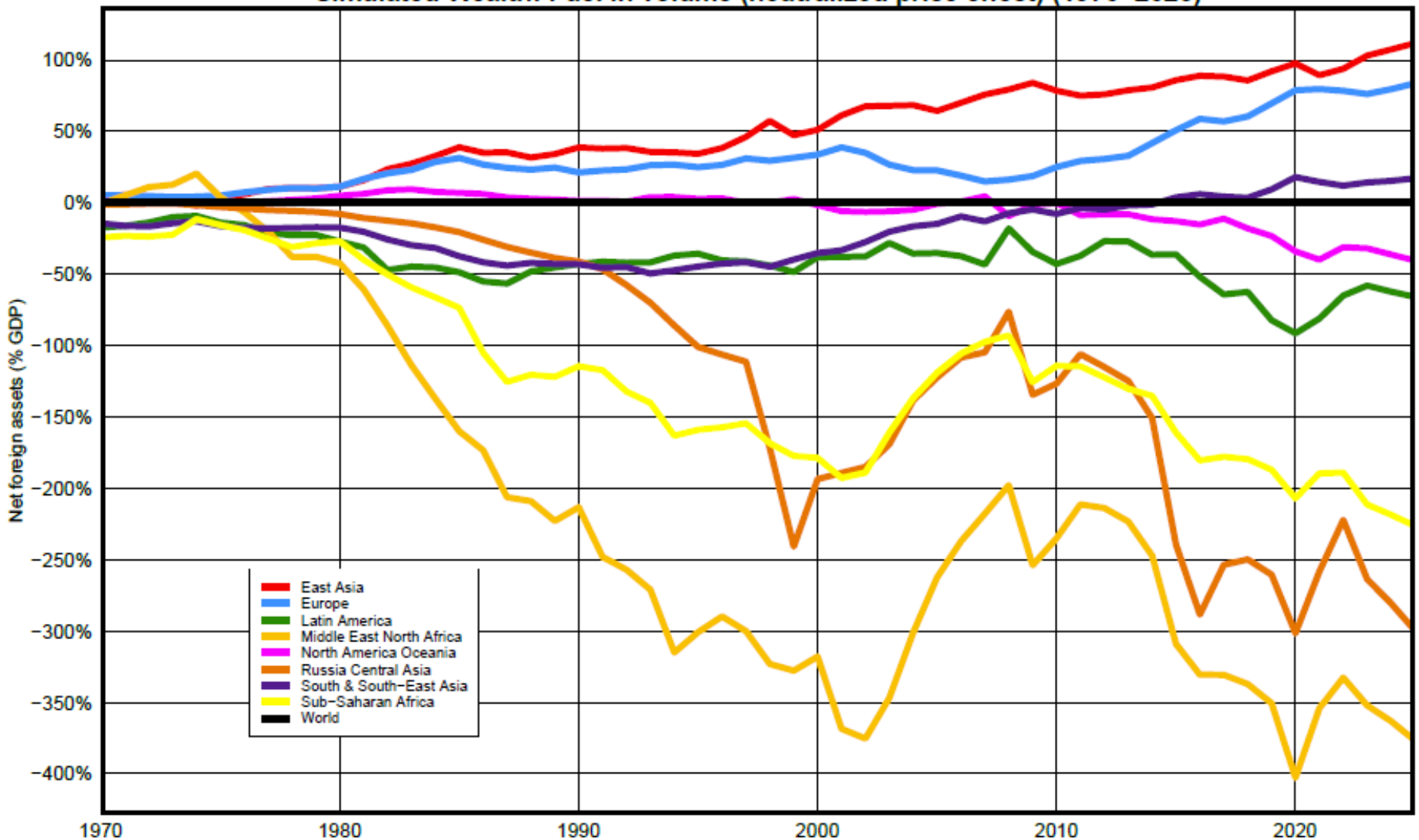
Interpretation. Price indices are set to 1983 because it is after the two oil shocks (1973 and 1979) and before the counter−oil shock of 1985−6. The price index cumulate annual variations starting from the reference year. This allows us to show more clearly that very high relative fuel price as compared to 1962 levels are mainly due to the bargaining power of the OPEC in the 1970s.

Net foreign Wealth by world regions (1970−2025)



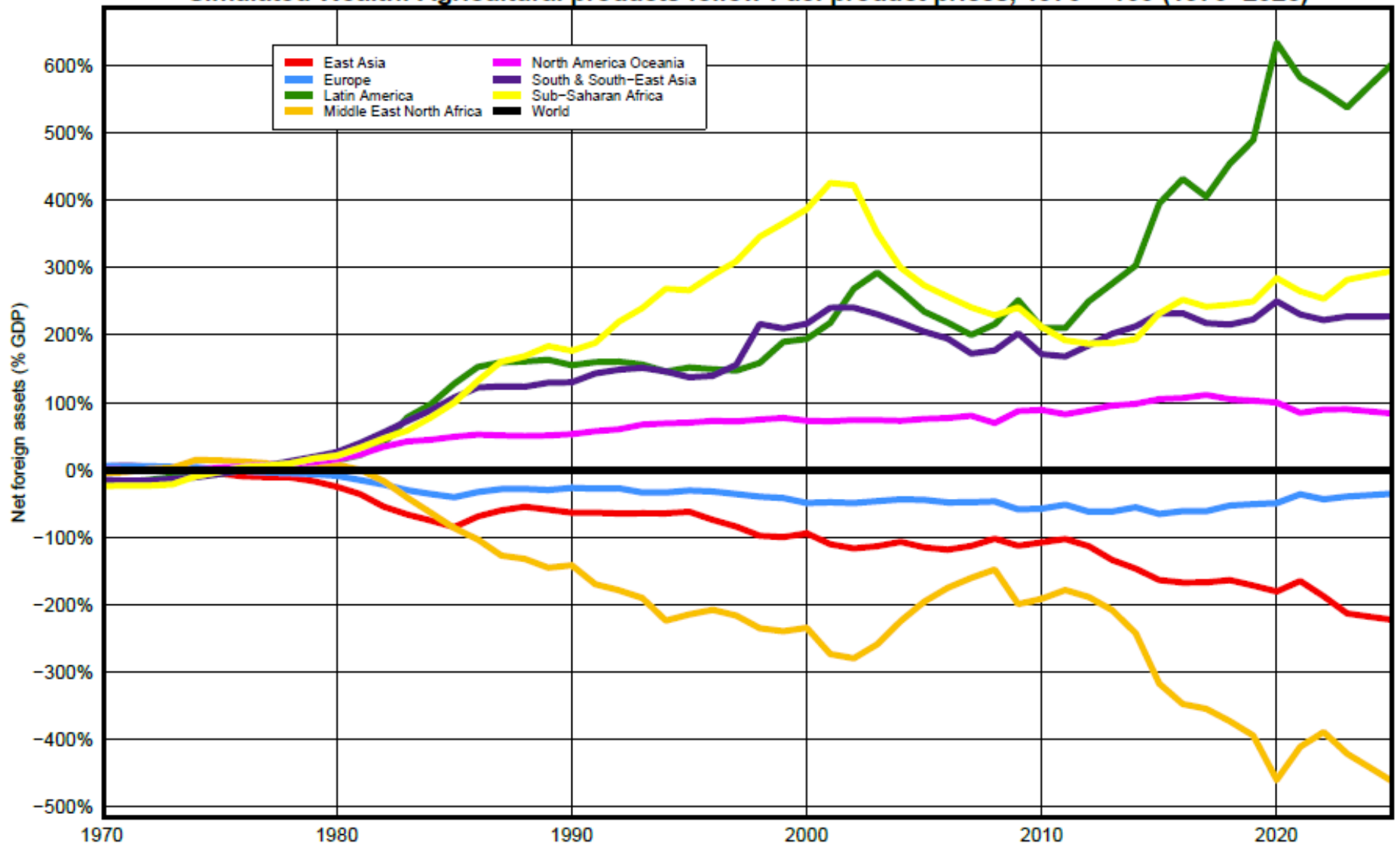
Interpretation. The new manufacturing power in East Asia (mainly China and Japan) accumulated a substential foreign wealth (49% of its GDP in 2025) together with oil countries in the MENA (75%). However for the latter it has to be noted that their GDP represent a small part of the world GDP. **Sources and series** : wbop.world

Simulated Wealth: Fuel in volume (neutralized price effect) (1970−2025)



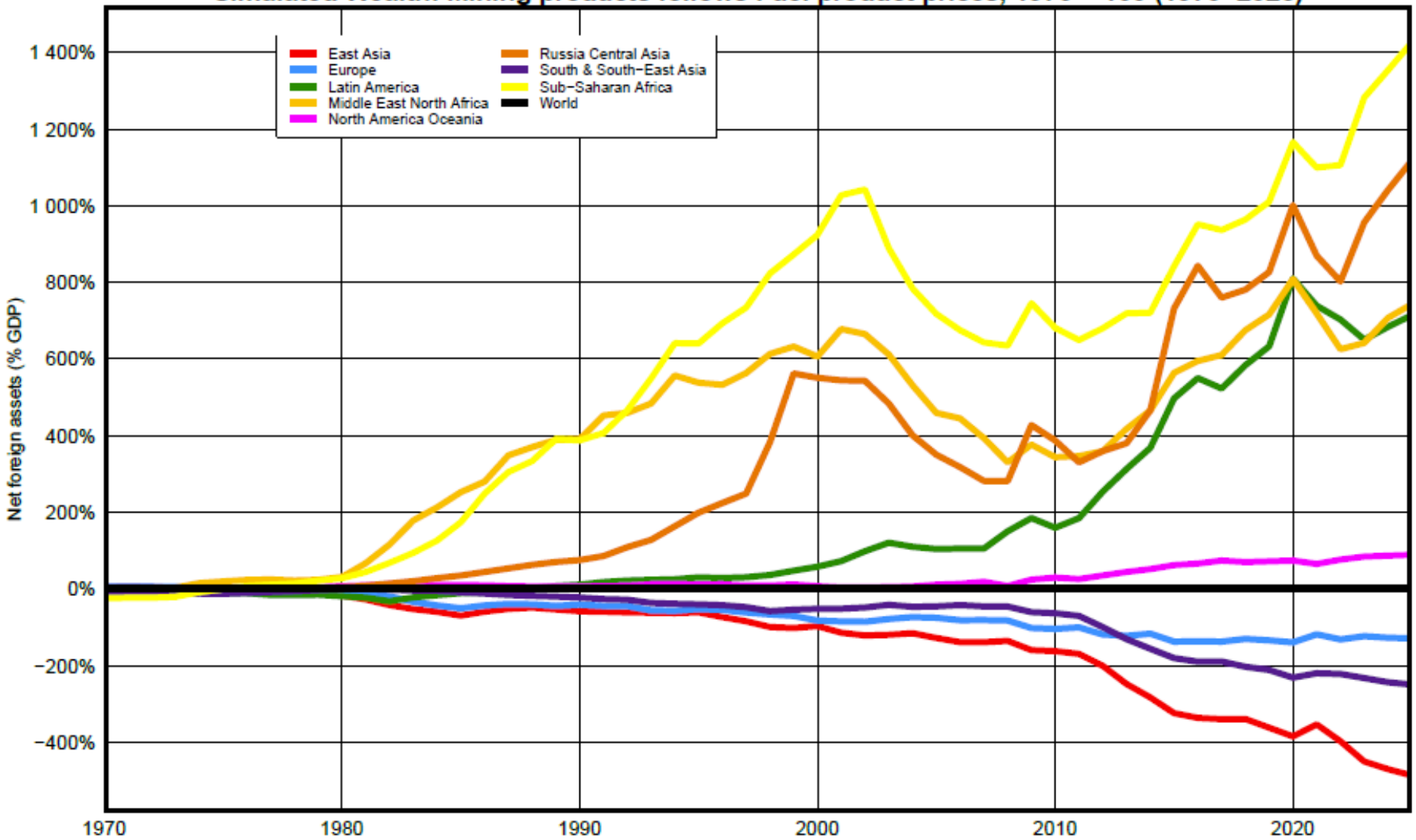
Interpretation. We assume fuel products price would have followed world GDP price idex. It neutralizes the dramatic rise in fuel prices during the period. The result is clear, without the transfer of value from high fuel prices the MENA would owe a substantial foreign debt (−377% of its GDP vs +75% in reality). The international indebtness position of Sub−Saharan Africa and Russia Central Asia would have significantly deteriorate.

Simulated Wealth: Agricultural products follow Fuel product prices, 1970 = 100 (1970−2025)



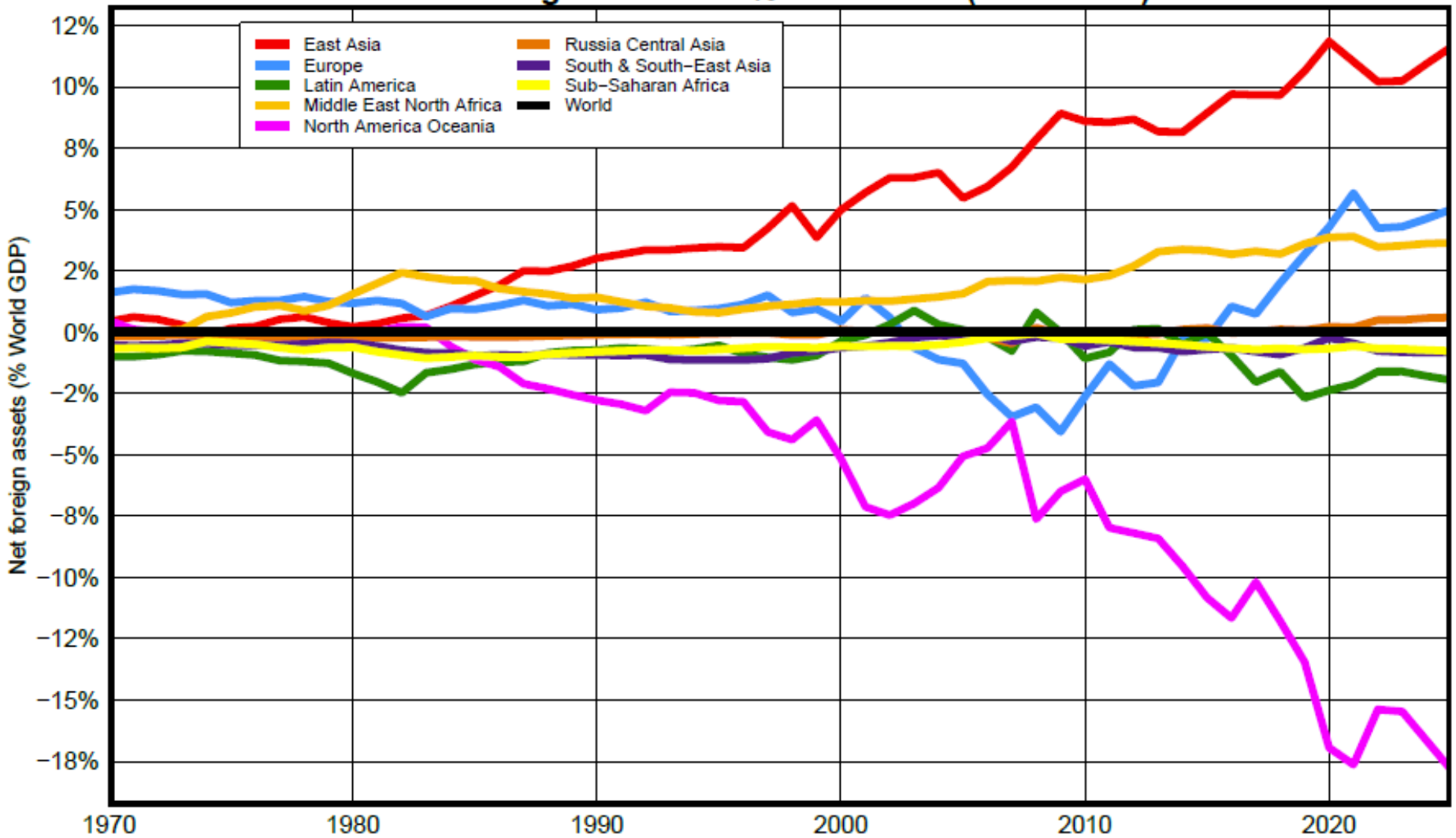
Interpretation. Price indices of fuel and of mining products are at the 1970 reference year. Assuming that world Agricultural product prices would have increased as much as Fuel products between 1970 and 2025, leaving all other flows unchanged, then Latin America would own a substantial foreign wealth (+600% of its GDP, vs −30% in reality).

Simulated Wealth: Mining products follows Fuel product prices, 1970 = 100 (1970–2025)

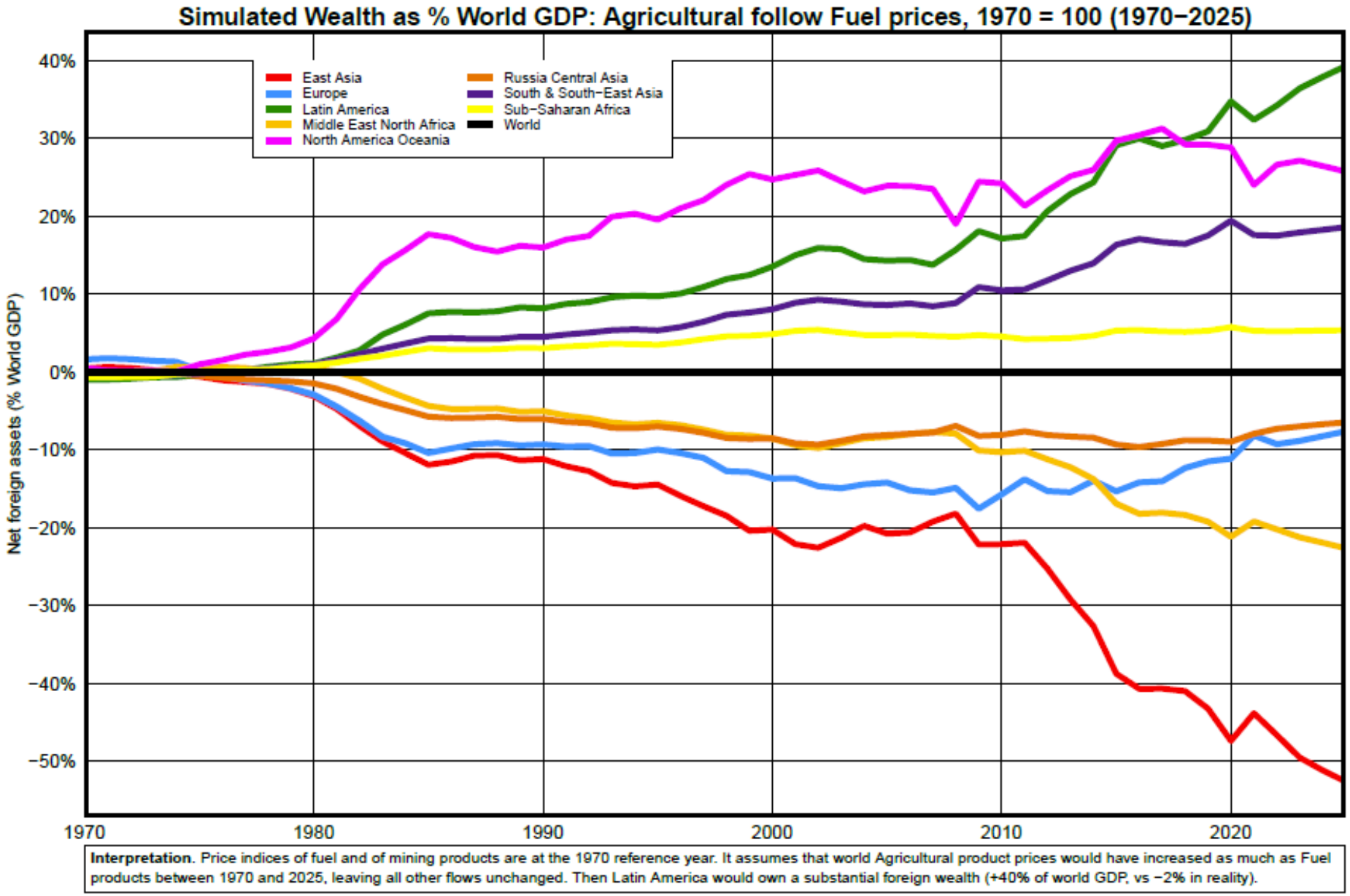


Interpretation. Price indices of fuel and of mining products are at the 1970 reference year. Assuming that world mining product prices would have increased as much as fuel products between 1970 and 2025, leaving all other flows unchanged, then Sub-Saharan Africa would own a substantial foreign wealth (+1426% of its GDP, vs −42% in reality) and East asia becomes a net debtor (−487% of its GDP, vs +49% in reality).

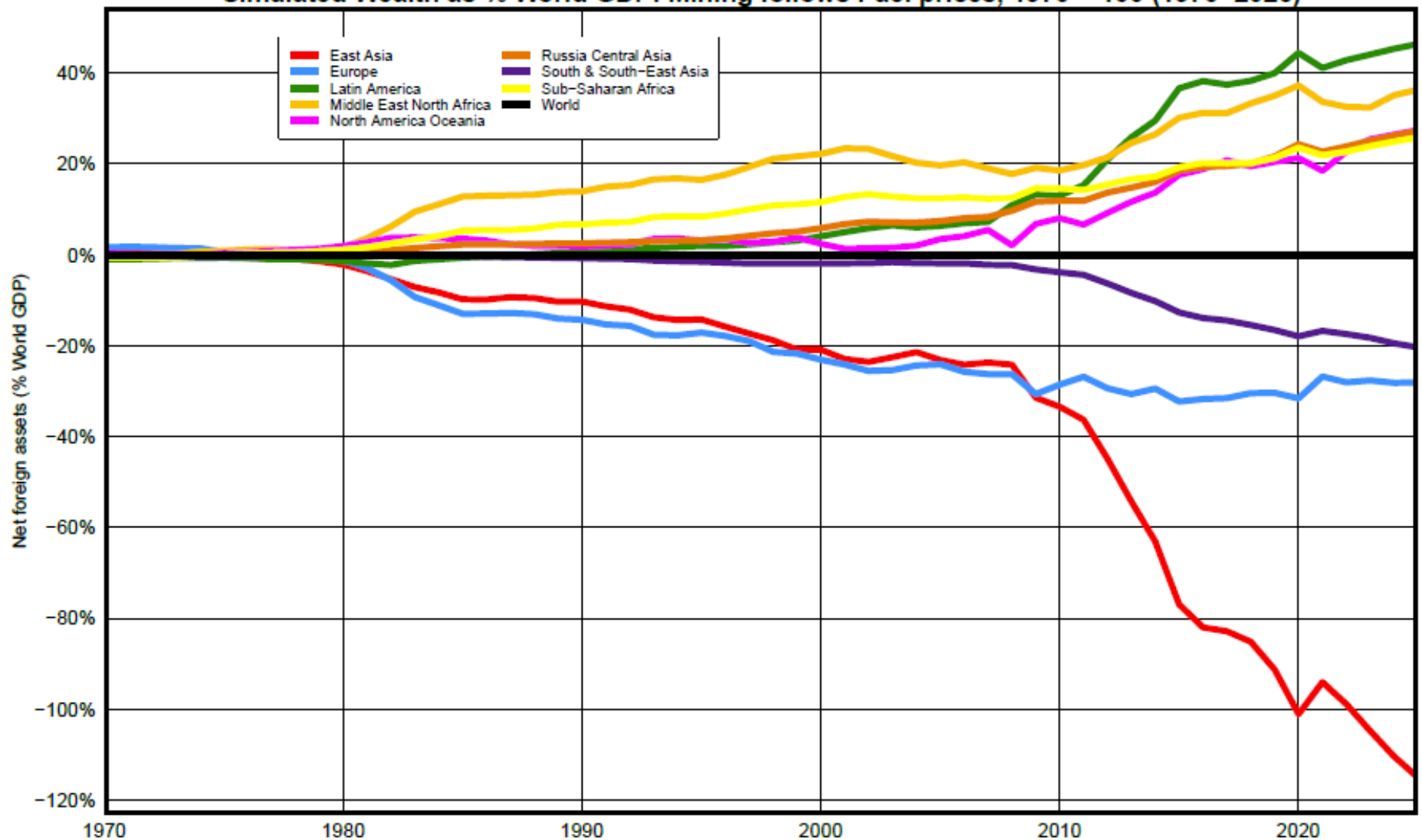
Net foreign Wealth as % World GDP (1970−2025)



Interpretation. When represented in proportion of the World GDP global imbalances are mainly due to East Asia accumulated net foreign wealth (11,6% of world GDP) financing North America and Oceania indebtness (17,8%). **Sources and series** : wbop.world


Simulated Wealth as % World GDP: Agricultural follow Fuel prices, 1970 = 100 (1970−2025)
East Asia
Europe
Latin America
Middle East North Africa
North America Oceania
Russia Central Asia
South & South−East Asia
Sub−Saharan Africa
World
Net foreign assets (% World GDP)
40%
30%
20%
10%
0%
−10%
−20%
−30%
−40%
−50%
1970
1980
1990
2000
2010
2020
Interpretation. Price indices of fuel and of mining products are at the 1970 reference year. It assumes that world Agricultural product prices would have increased as much as Fuel products between 1970 and 2025, leaving all other flows unchanged. Then Latin America would own a substantial foreign wealth (+40% of world GDP, vs −2% in reality).

Simulated Wealth as % World GDP: Mining follows Fuel prices, 1970 = 100 (1970−2025)



Interpretation. Price indices of fuel and of mining products are at the 1970 reference year. It assumes that world mining product prices would have increased as much as fuel products between 1970 and 2025. As a percentage of world GDP, the figure informs about the change in the ranking of foreign wealth by regions. Latin America replace East Asia as main owner of the world, with +46% (vs −2% in reality) in 2025 while East Asia net foreign asset represents −115% (vs +12% in reality) of world GDP.