

Equality and Development: A Comparative & Historical Perspective 1800-2025

M. Andreescu, M. Arias-Osorio, L. Bauluz, N. Bharti, P. Bothe,
P. Brassac, L. Chancel, J. Dietrich, D. El Hariri, M. Fisher-Post,
I. Flores, V. Gabrielli, A. Gethin, R. Gomez-Carrera, S. Hong,
T. Jenmana, R. Loubes, C. Martinez-Toledano, Z. Mo,
C. Mohren, M. Morgan, R. Moshrif, S. Mutti, T. Neef, G. Nieves,
M. Odersky, T. Piketty, A.S. Robillard, E. Saez, A. Sodano,
A. Somanchi, L. Yang, G. Zucman, A. Zuniga-Cordero

World Inequality Lab, October 2025

What We Do in this Research

We use WID series on global income & wealth inequality and productivity growth 1800-2025 in order to reinvestigate the relation between equality and development, with a broader comparative and historical perspective than previous studies

We find a strong positive association between equality & growth: more inclusive and egalitarian societies are also more productive

We use our findings to estimate the ideal income scale (≈ 1 -to-5) and ideal wealth scale (≈ 1 -to-10) for future sustainable development trajectories 2025-2100

Of course, the compression of income & wealth scales is not supposed to be in itself a sufficient condition for prosperity: productivity growth requires investment in human capital (education, health), a decentralized economic system (social-democracy rather than central planning), stable political & legal institutions (electoral democracy), etc.

But assuming that these other conditions are met, then **equality appears to have a positive long-run impact on growth, in addition to the positive effect of human capital & other factors** (albeit probably of a smaller magnitude & difficult to distinguish empirically: one should be modest about causality & identification)

Best example of **high-equality, high-productivity countries: Western Europe (DE FR GB) & esp. Nordic Europe (SE DK NO NL)**. Our estimates of ideal income & wealth scale are largely based on the analysis of the development trajectory of these 7 countries compared to others.

Western & Nordic Europe: more equal than US & similar productivity (or higher), in spite of smaller human k expenditure (& smaller material footprint). Public education & health more equal & more efficient?

Western & Nordic Europe: more equal than Soviet Russia or Mao China, & a lot more productive. Pb with Soviet Russia or Mao China was central planning & authoritarian regime, not excessive equality.

Ideal income and wealth scale: simulations for the future

On the basis of comparative-historical evidence, we propose an **ideal income scale (\approx 1-to-5)** (preliminary) and **ideal wealth scale (\approx 1-to-10)** (in-progress) for future sustainable development trajectories 2025-2100

Our ideal world income scale stands in the **continuation of the rise of equality in Europe 1910-2025**, and is relatively close to **Nordic Europe 1990**

Nothing very revolutionary: continuation of 20c European social democracy, but with a global and sustainable 21c dimension

Outline of the talk

(1) World maps & descriptive comparative-historical evidence
on the relation between **income inequality** on development

(2) Assessing the social-democratic narrative: high-productivity social-democratic Europe, the legacy of communism and colonialism, the Europe-US comparison

(3) The limited long-run compression of the wealth scale
(as compared to the huge historical compression of the income scale)

(4) Regression results on the positive effect of equality on productivity
(less decisive in our view than descriptive-comparative evidence)

(1) World maps & descriptive comparative-historical evidence

Basic fact 1. The most equal countries in the world in 2025 are also the richest and most productive.

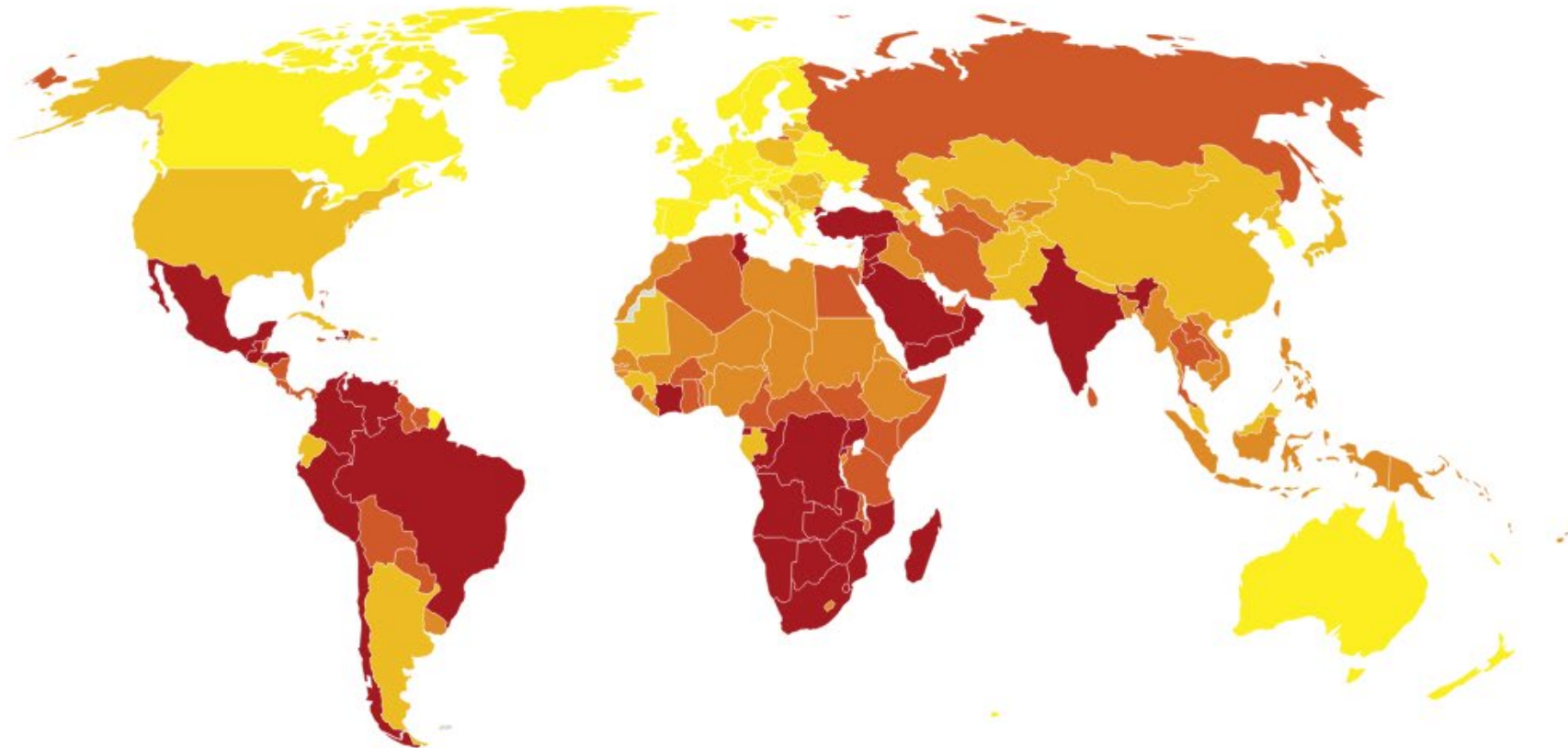
Europe, North America/Oceania: posttax income ratio $T10/B50 \approx 5$ or less vs $T10/B50 \approx 20-30$ or more in global South

Basic fact 2. Today's rich countries have not always been more equal: they became more equal during 20c (especially postwar period) & this is when they enjoyed the fastest productivity growth. I.e. this helped them to become rich (or at the very least this did not hurt).

Ratio P99/P10 Nordic Europe: ≈ 50 1910 to < 5 1990-2025

Ratio P99.9/P10 Nordic Europe: ≈ 150 1910 to < 10 1990-2025

Top 10% post-tax national income share (2024)

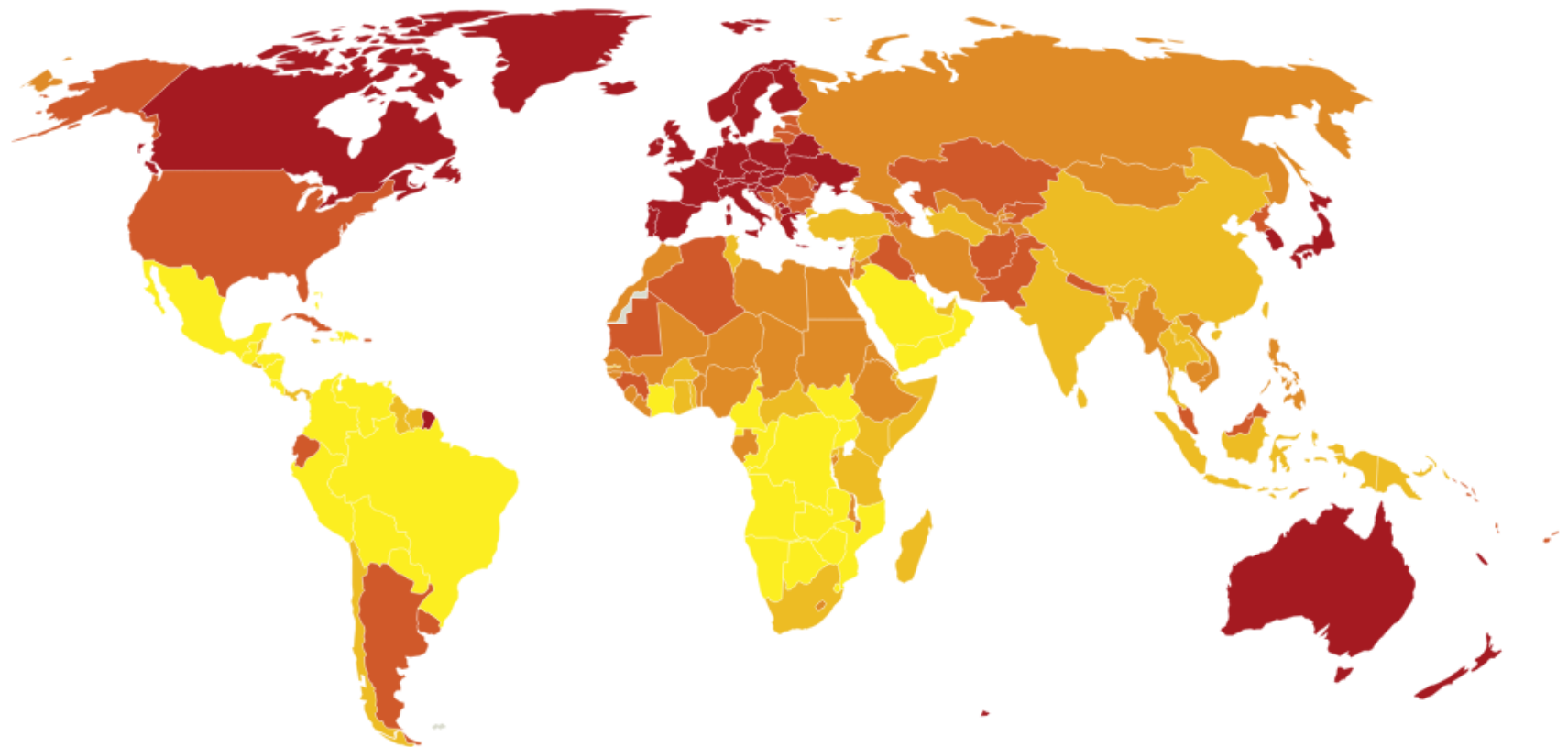


Share of total (%)

19 - 32 32 - 41 41 - 45 45 - 49 49 - 58

Graph provided by www.wid.world

Bottom 50% post-tax national income share (2024)



Share of total (%)

9.4 - 13.1

13 - 15

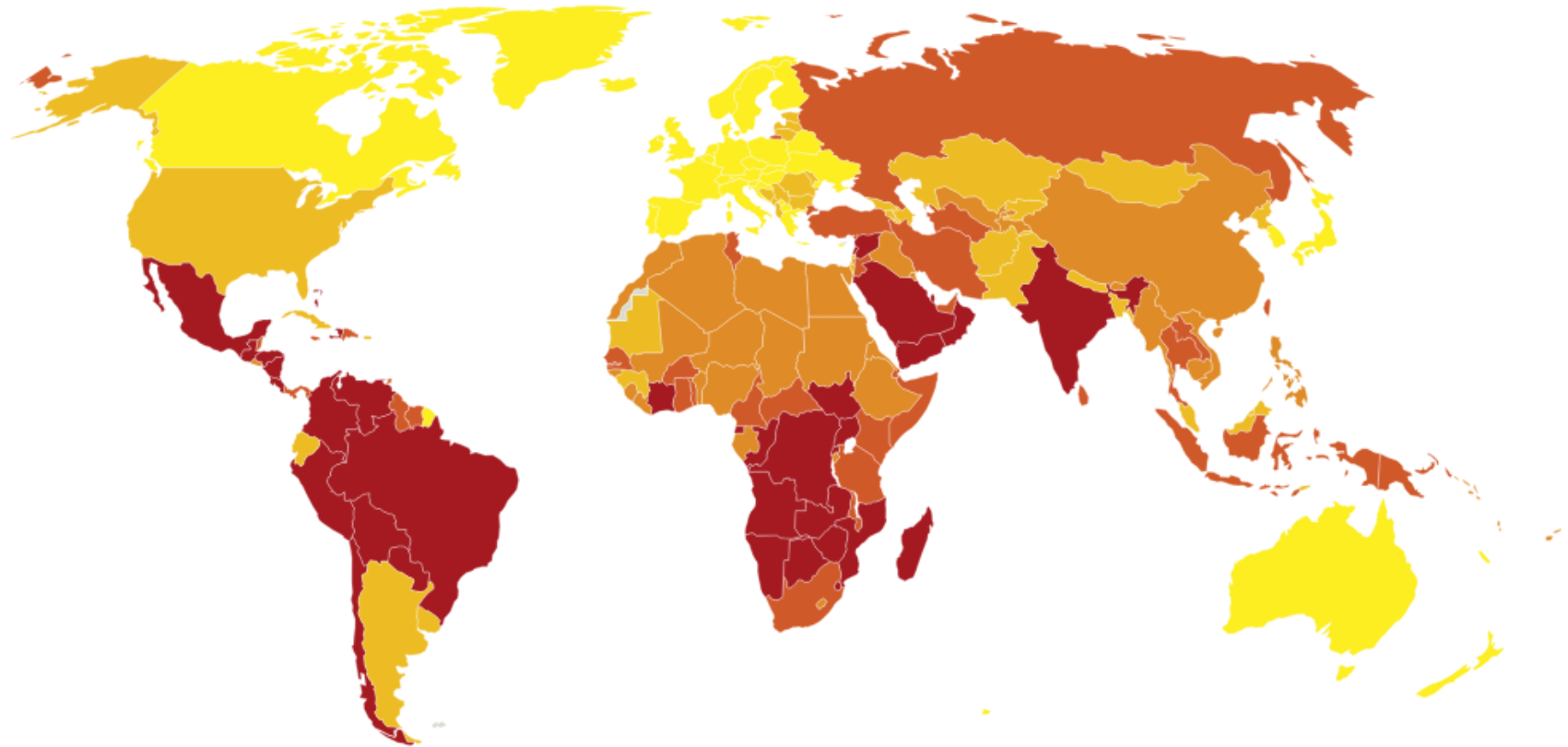
15 - 18

18 - 23

23 - 36

Graph provided by www.wid.world

Top10/Bottom50 ratio of post-tax national income (2024)

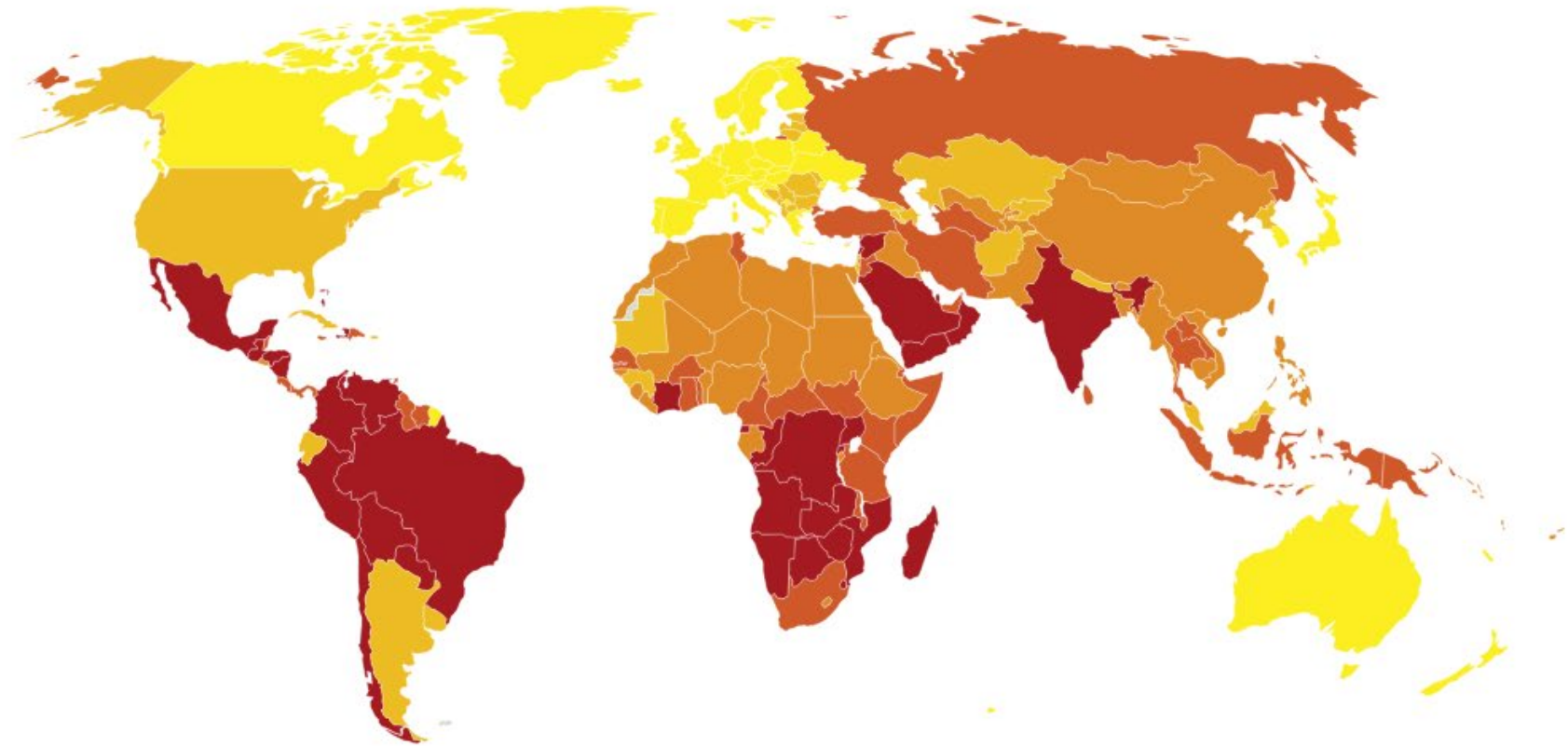


Top 10 / Bottom 50 ratio



Graph provided by www.wid.world

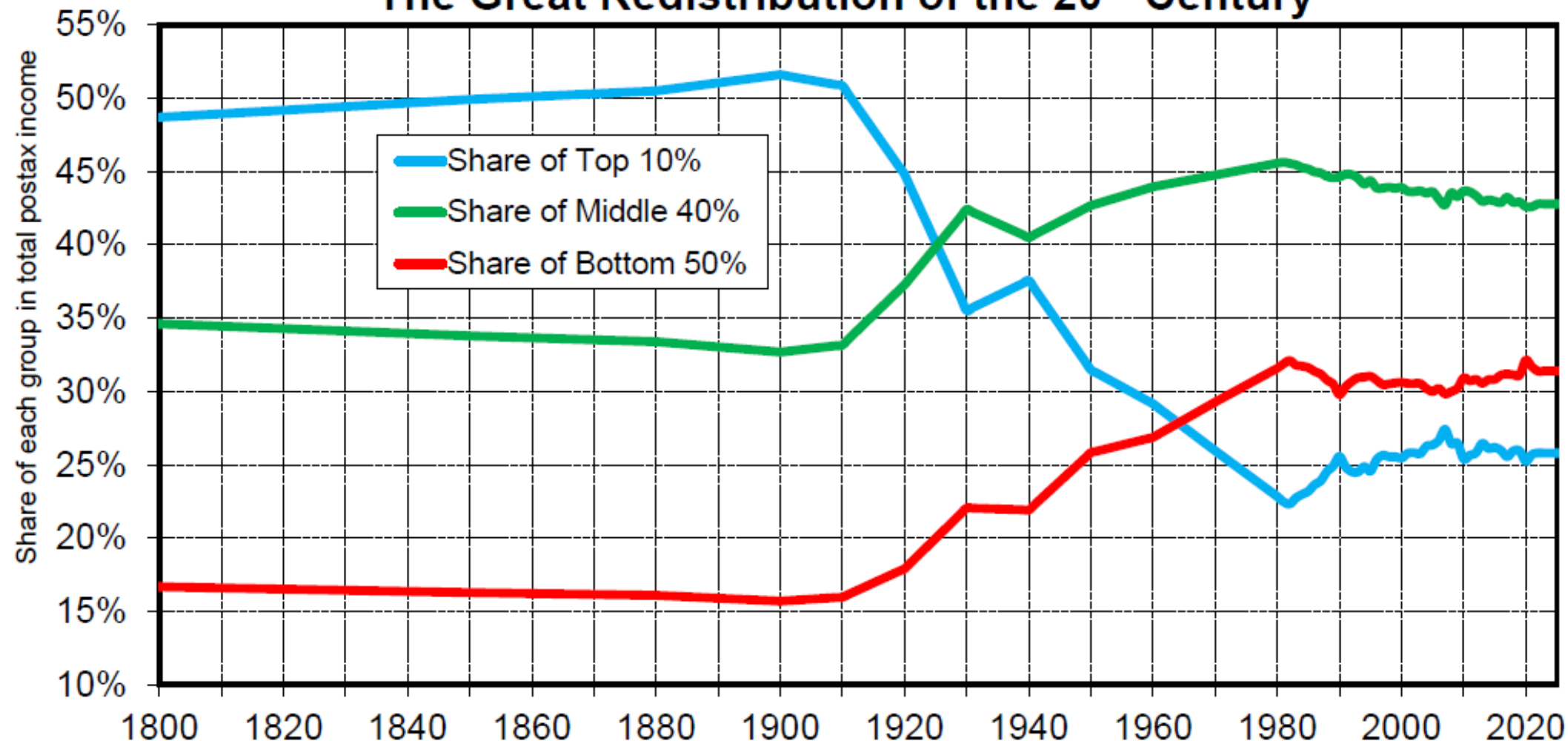
Gini index of post-tax national income (2024)



Gini coefficient

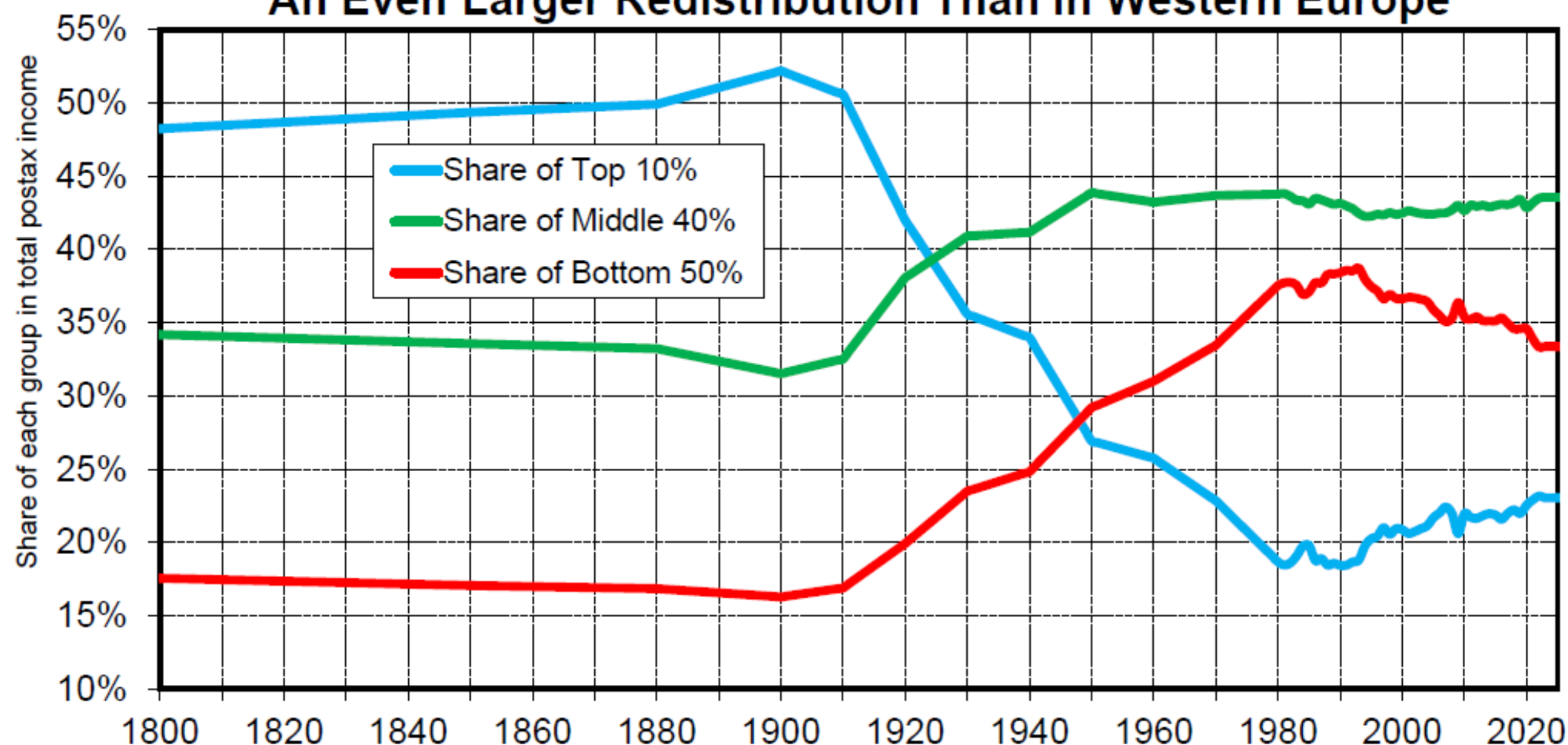


Income Shares in Western Europe: The Great Redistribution of the 20th Century



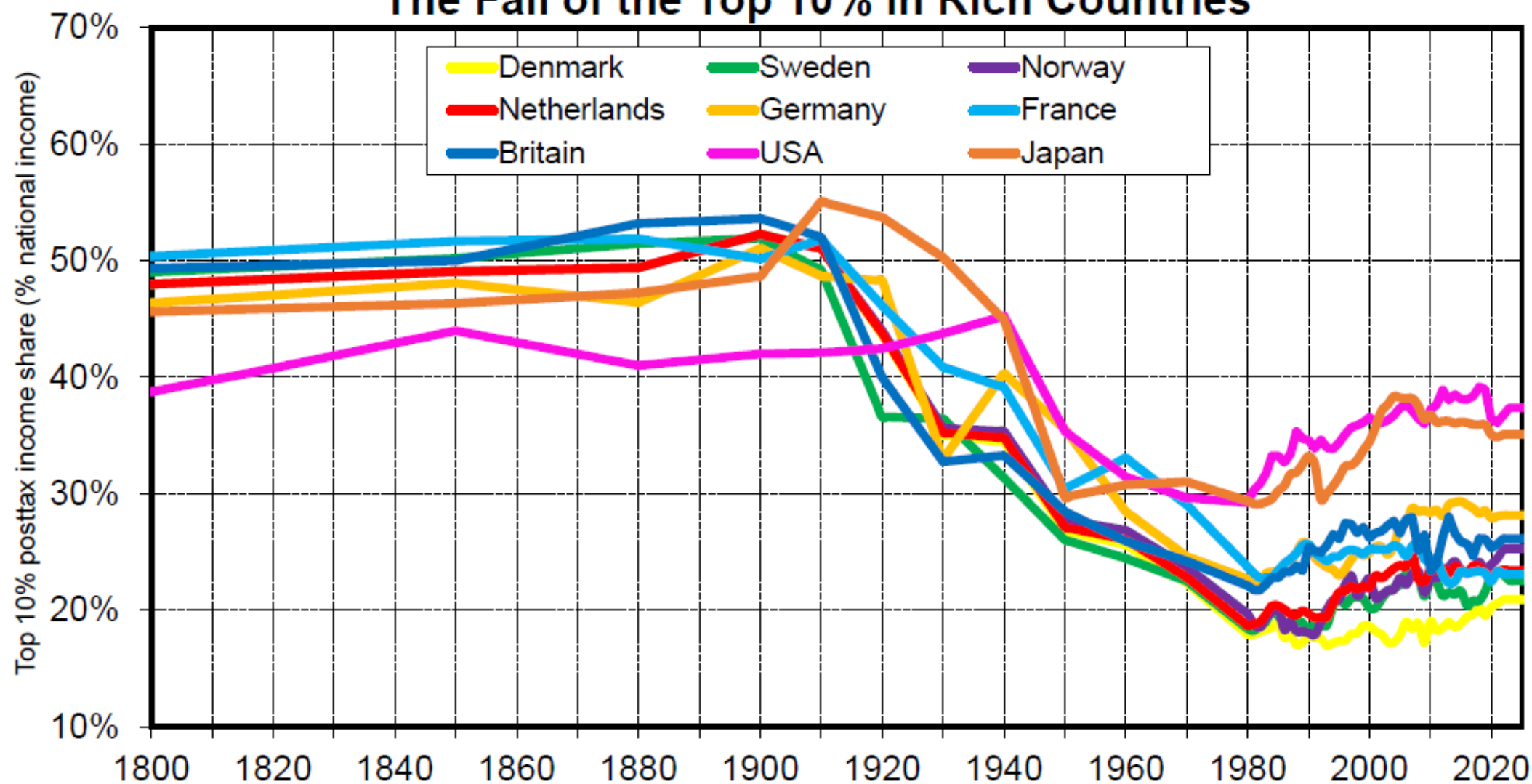
Interpretation. In Western Europe (which we define as the average Germany-France-Britain), the share of the top 10% highest incomes in total posttax income (including capital income - rent, dividends, interest, profits - & labour income - wages, self-employment income, pensions, unemployment benefits, other transfers) fell from over 50% in 1910 to less than 25% in 1980. It has stabilized around 25% since 1980-1990 (with a moderate increase), i.e. at a lower level than the share of the bottom 50% (about 30%). **Sources and series:** wid.world (A1a)

Income Shares in Nordic Europe: An Even Larger Redistribution Than in Western Europe



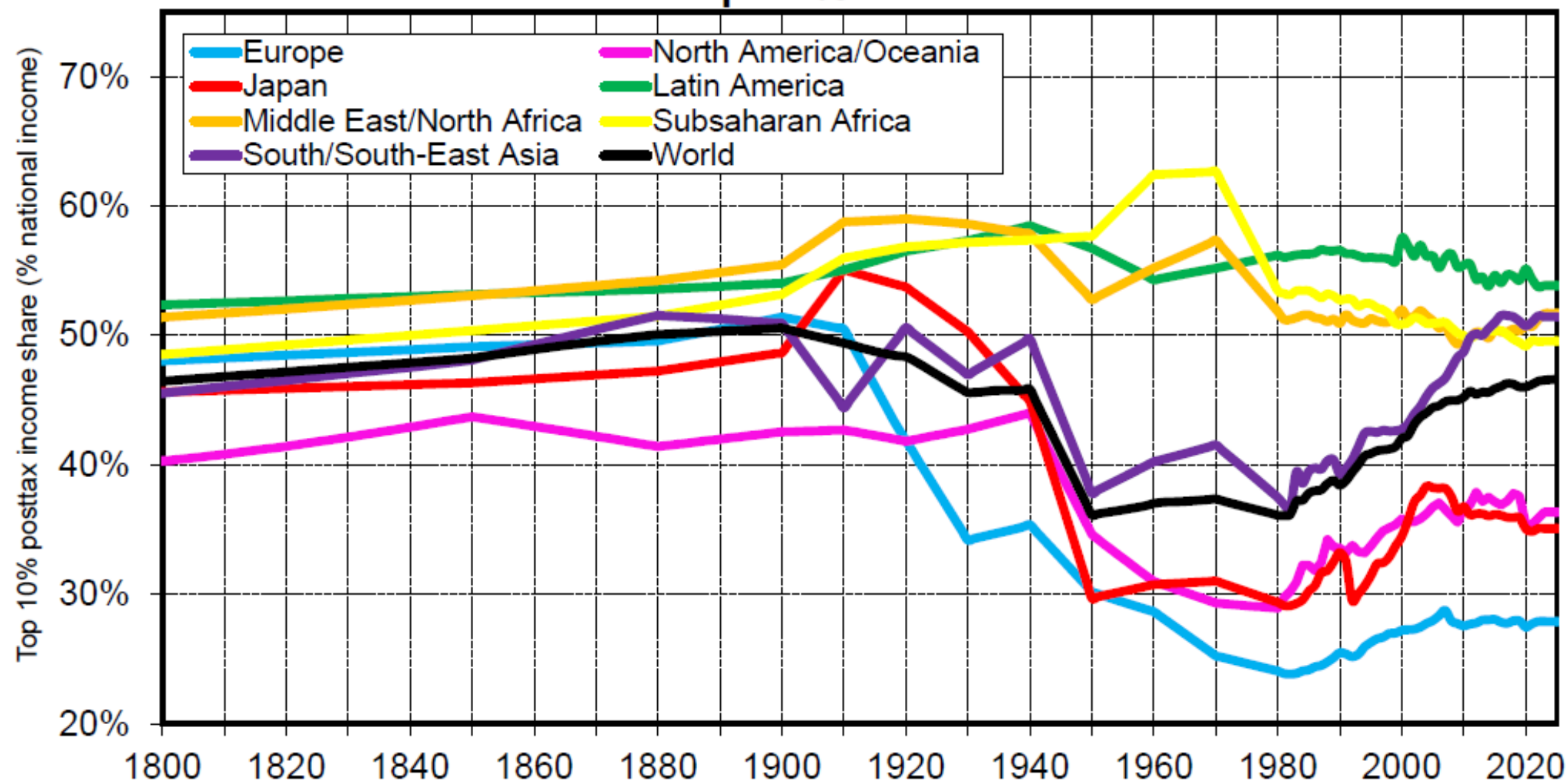
Interpretation. In Nordic Europe (which we define as the average Sweden-Denmark-Norway-Netherlands), the top 10% posttax income share fell from over 50% in 1910 to less than 20% in 1980-1990 (i.e. even more than in Western Europe). It has increased since 1990, but it remains at a lower level than in Western Europe, and at a much lower level than the bottom 50% income share. **Sources and series:** wid.world (A1b)

The Fall of the Top 10% in Rich Countries



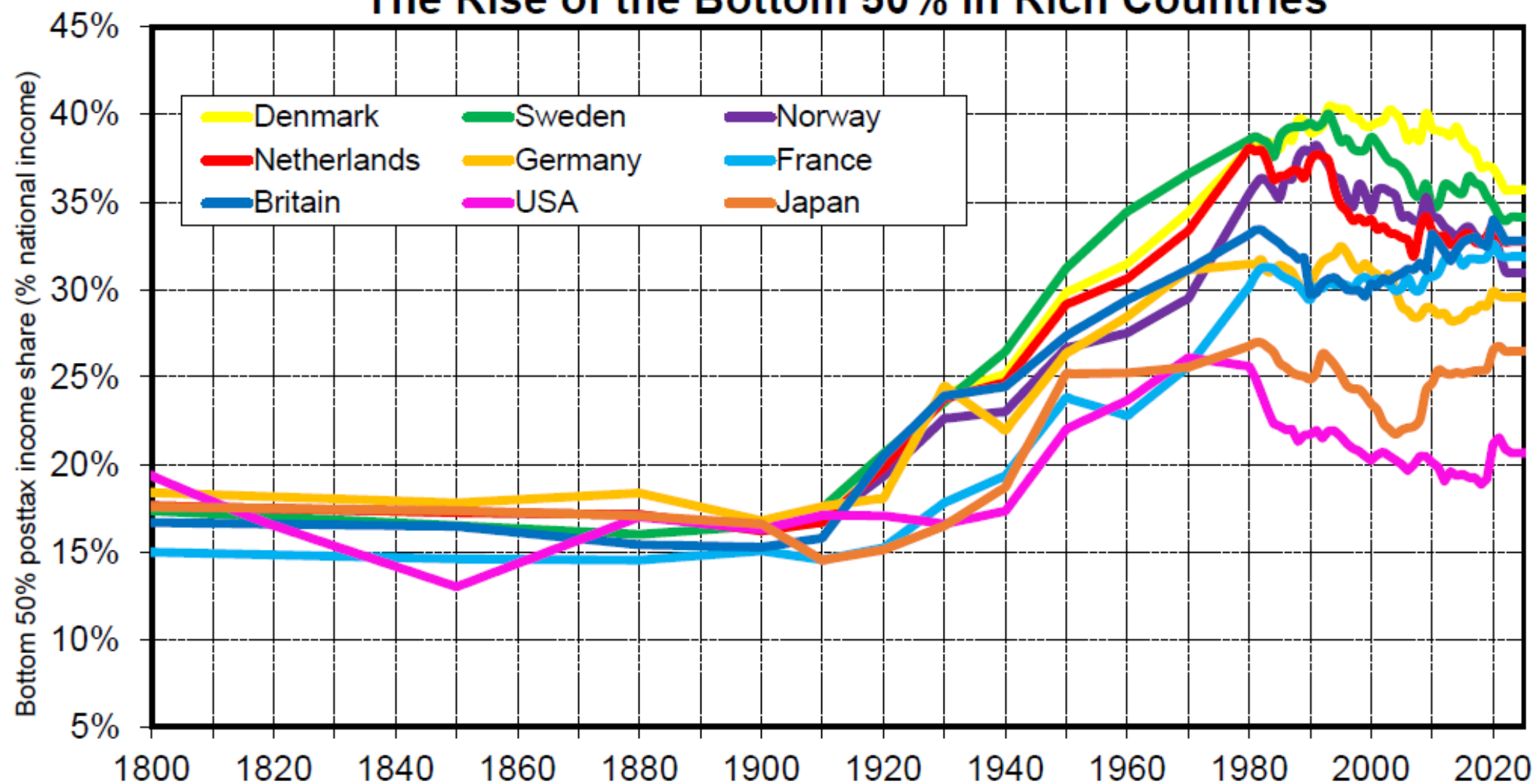
Interpretation. We observe a substantial decline of the top 10% posttax income share in all rich countries in the long-run (including in the USA, and in spite of rising inequality since 1980-1990). The fall was particularly strong in Western and Nordic Europe, and especially in Nordic Europe, with a decline from over 50% of total income in 1900-1910 to about 20-25% in 2010-2025 (with a modest increase since 1980-1990). **Sources and series:** wid.world (A1c)

The Fall of the Top 10%: Rich Countries vs Others



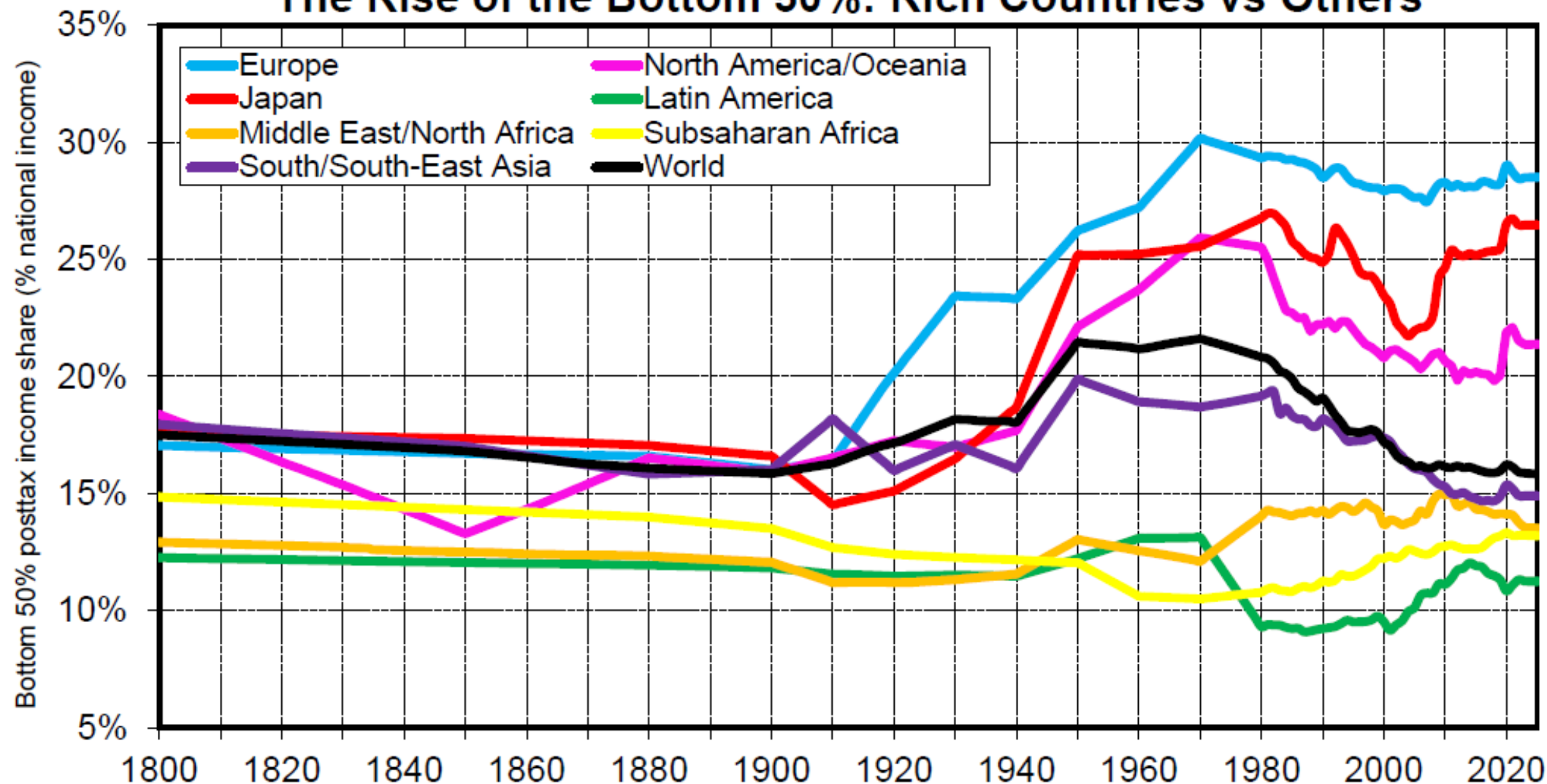
Interpretation. In Europe, the top 10% posttax income share was over 50% of total income until WW1 and was divided by two between 1910 & 1980, before stabilizing around 25-30% since 1980-1990 (with a moderate increase). We also observe a significant long-run decline in North America/Oceania and Japan (from about 45-50% to 35%). In contrast, the top 10% income share almost did not decline at all in the long-run in Latin America, Subsaharan Africa and Middle East/North Africa (around 50-55% throughout the period). **Sources and series:** wid.world (A1d)

The Rise of the Bottom 50% in Rich Countries



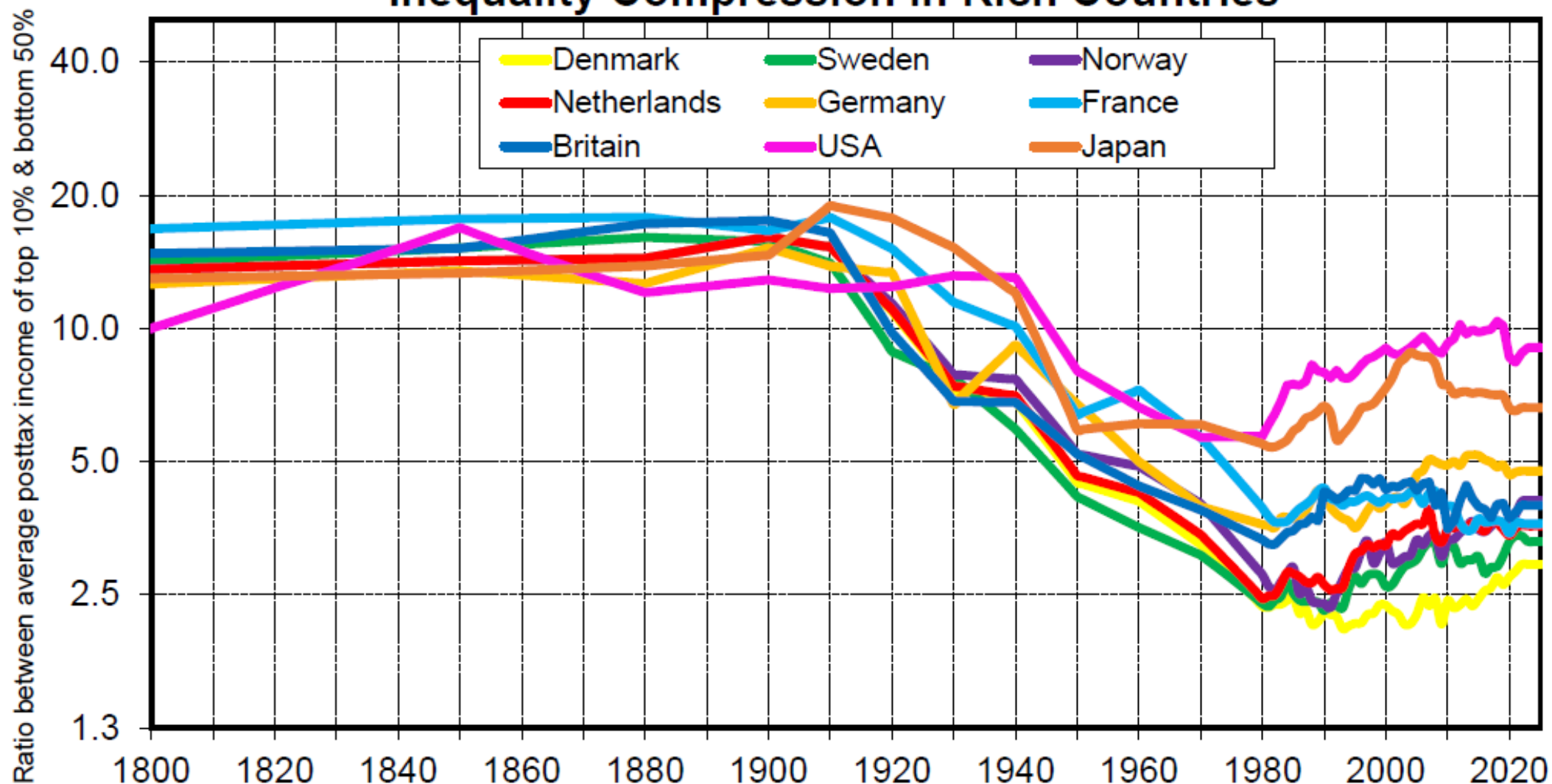
Interpretation. We observe a substantial rise of the bottom 50% posttax income share in all rich countries over the past 100 years (including in the USA, and in spite of rising inequality since 1980-1990). The rise was particularly strong in Western and Nordic Europe, and especially in Nordic Europe, with an increase from from about 15% of total income in 1900-1910 to about 30-40% in 2010-2025 (with a modest decline since 1980-1990). **Sources and series:** wid.world (A1e)

The Rise of the Bottom 50%: Rich Countries vs Others



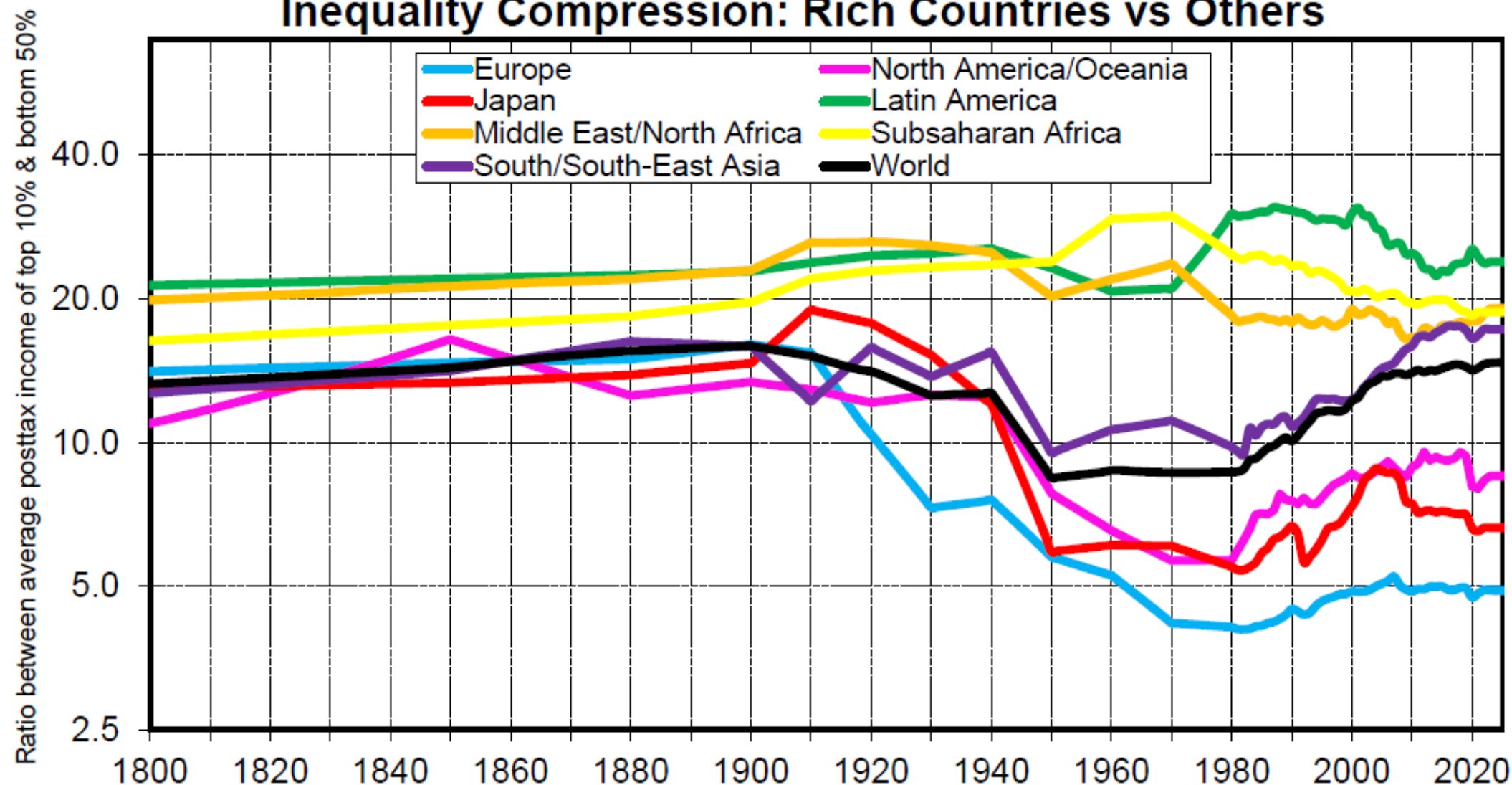
Interpretation. In Europe, the bottom 50% posttax income share rose from about 15% until 1910 to about 30% by 1980, before stabilizing around 30% since 1980-1990 (with a moderate decline). We also observe a significant long-run rise in North America/Oceania and Japan (from about 15% to 20-25%). In contrast, the bottom 50% income share almost did not rise at all in the long-run in Latin America, Subsaharan Africa and Middle East/North Africa (around 10-15% throughout the period). **Sources and series:** wid.world (A1f)

Inequality Compression in Rich Countries



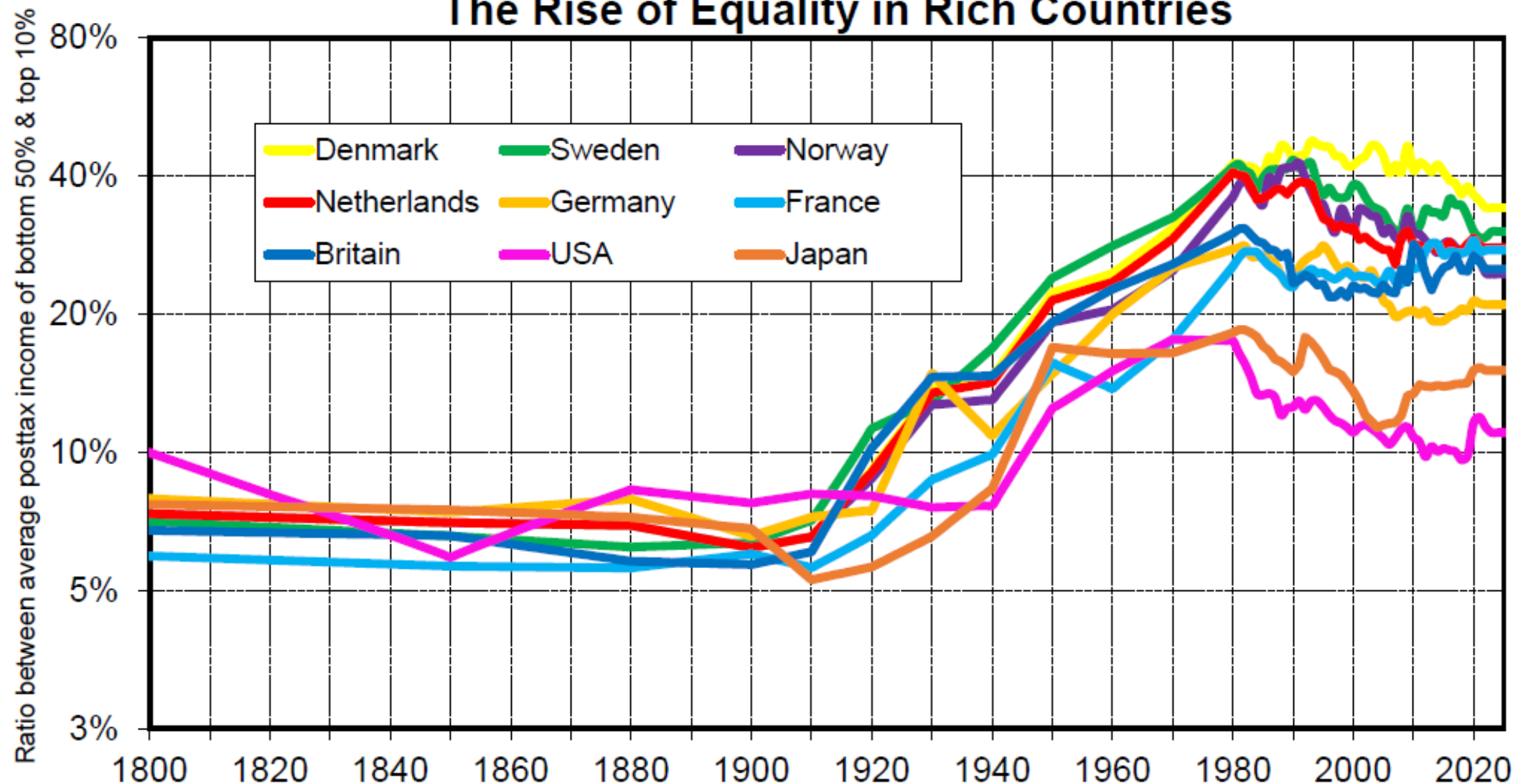
Interpretation. The long-run compression of the income scale has been particularly strong in Western and Nordic Europe, and especially in Nordic Europe. E.g. the T10/B50 income ratio between the average posttax incomes of the top 10% and bottom 50% fell from about 15-20 in all countries before WW1 to about 2.5-3 in recent decades in Sweden, Denmark, Norway and the Netherlands (and around 4-5 in Germany, France and Britain). We also observe a substantial long-run compression of the income scale in other rich countries, including US and Japan (with a ratio T10/B50 around 7-9 in recent decades), albeit of smaller magnitude. **Sources and series:** wid.world (A2a)

Inequality Compression: Rich Countries vs Others



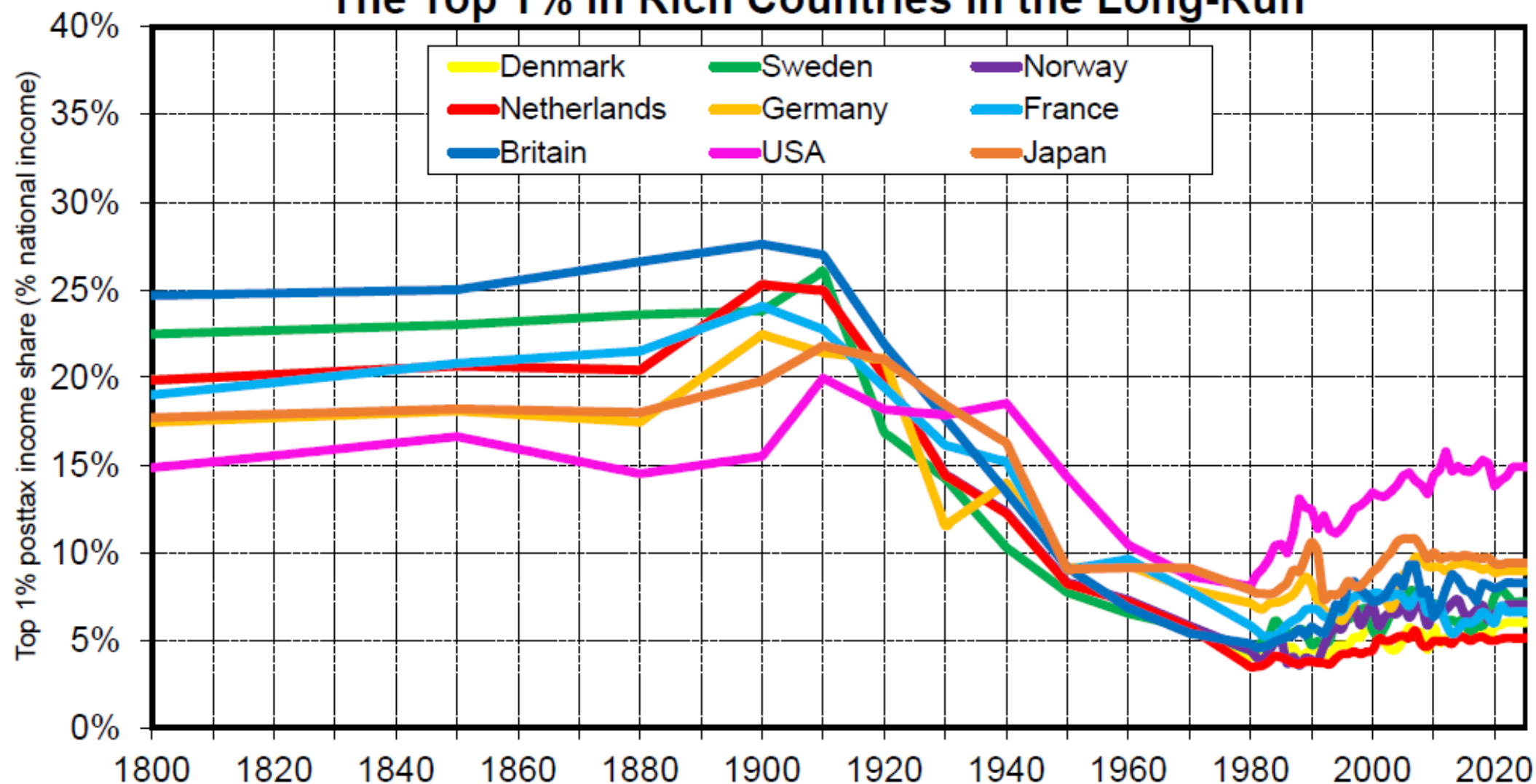
Interpretation. The income scale was substantially compressed during the 20th century in the world's richest countries. I.e. the ratio T10/B50 between the average posttax incomes of the top 10% and the bottom 50% was about 15-20 in Europe, North America/Oceania and Japan until WW1, and it is about 5 in Europe and 6-8 in NAOC and Japan in 2020-2025. In contrast, the 10/B50 ratios almost did not change at all in the long-run in Latin America, Subsaharan Africa or Middle East/North Africa (around 20 throughout the period). **Sources and series:** wid.world (A2b)

The Rise of Equality in Rich Countries



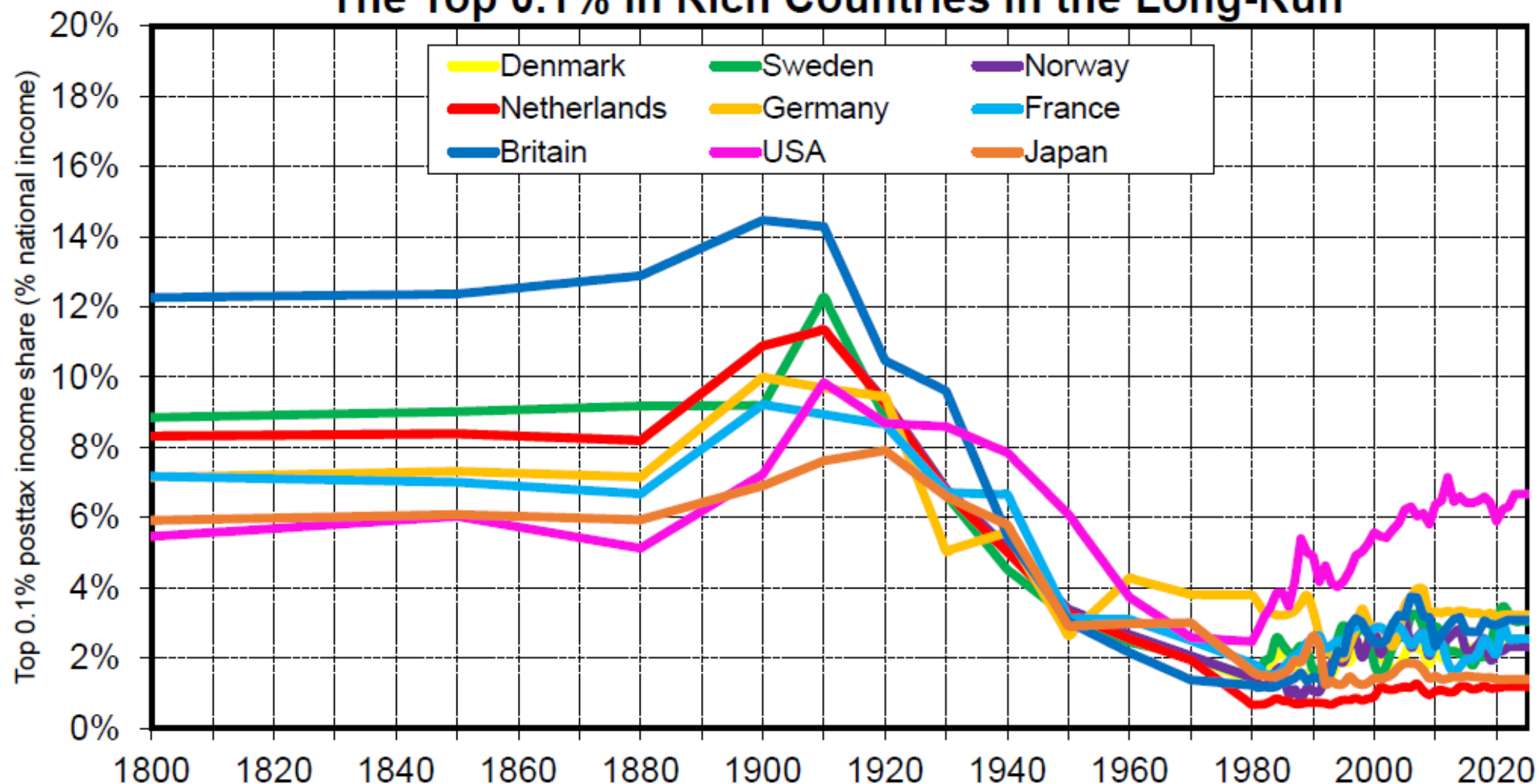
Interpretation. The average posttax income of the bottom 50% was about 5-8% of the average posttax income of the top 10% in most countries before WW1 (corresponding to an income scale of 1-to-15 or 1-to-20). During the 20th century, the ratio between the average posttax income of bottom 50% and top 10% rose to as much as 40% in a number of European countries (corresponding to an income scale of 1-to-2.5). **Sources and series:** wid.world (A2c)

The Top 1% in Rich Countries in the Long-Run



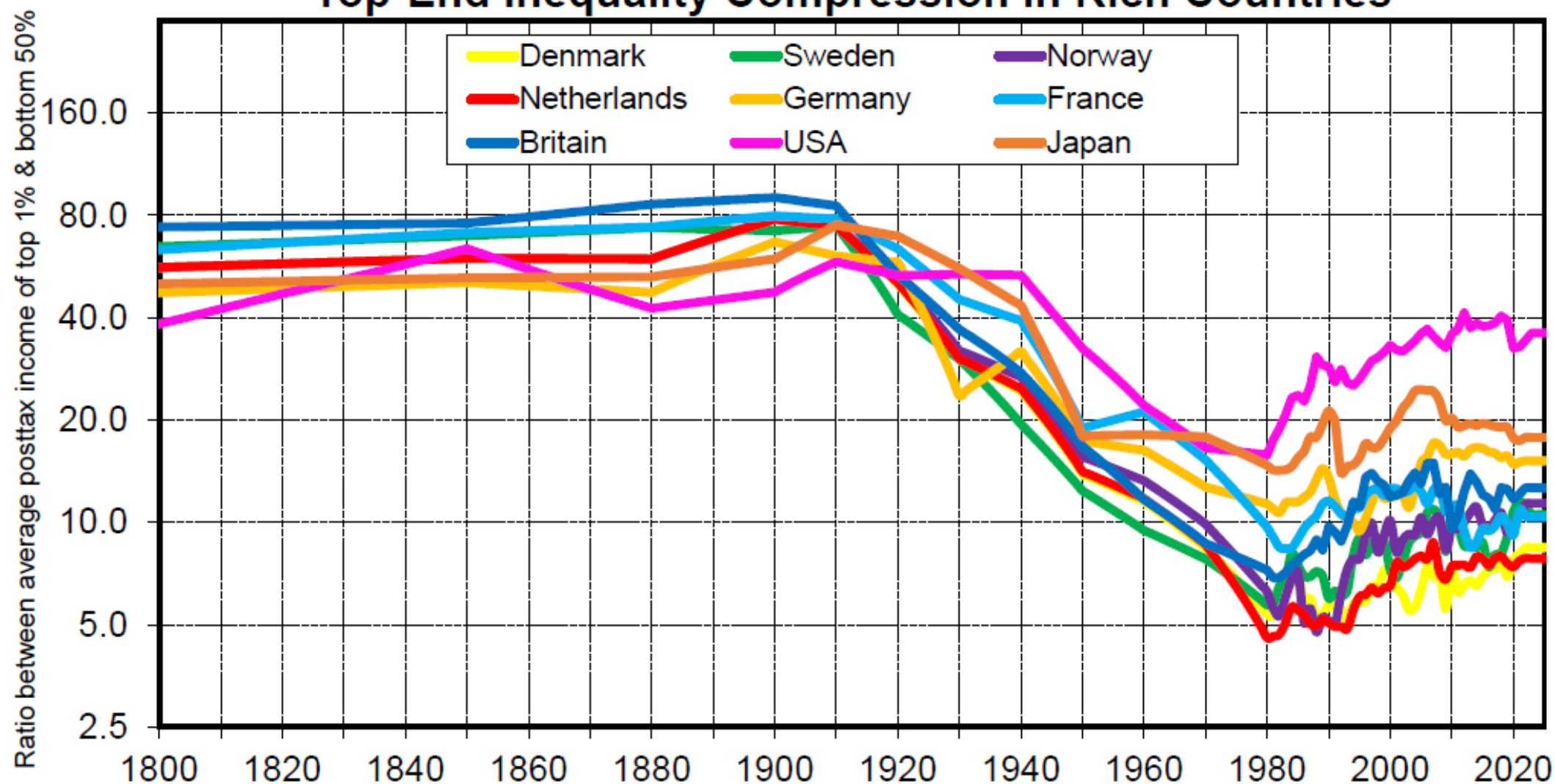
Interpretation. We observe a decline of the top 1% posttax income share in all rich countries in the long-run (including in the USA, and in spite of a large rise in inequality since 1980-1990). The fall was particularly strong in Western and Nordic Europe, and especially in Nordic Europe, with a decline from over 20% of total income in 1900-1910 to about 5-10% in 2010-2025 (in spite of the significant increase since 1980-1990). **Sources and series:** wid.world (A1n)

The Top 0.1% in Rich Countries in the Long-Run



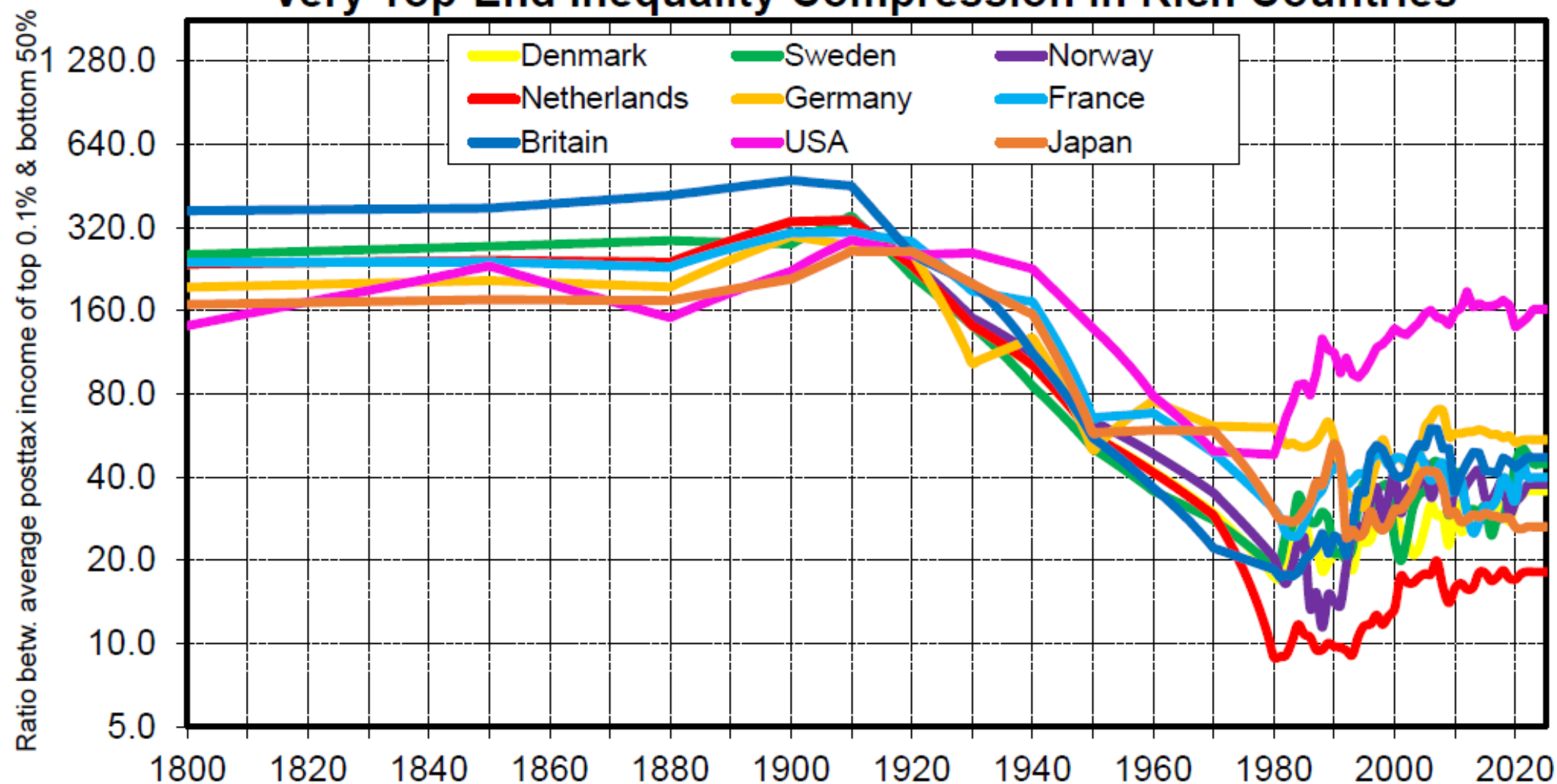
Interpretation. We observe a decline of the top 0.1% posttax income share in all rich countries in the long-run (except in the USA, where this has been almost completely undone by the large rise in inequality since 1980-1990). The fall was particularly strong in Western and Nordic Europe, and especially in Nordic Europe, with a decline from about 10-12% of total income in 1900-1910 to about 1-3% in 2010-2025 (in spite of the significant increase since 1980-1990). **Sources and series:** wid.world (A1o)

Top-End Inequality Compression in Rich Countries



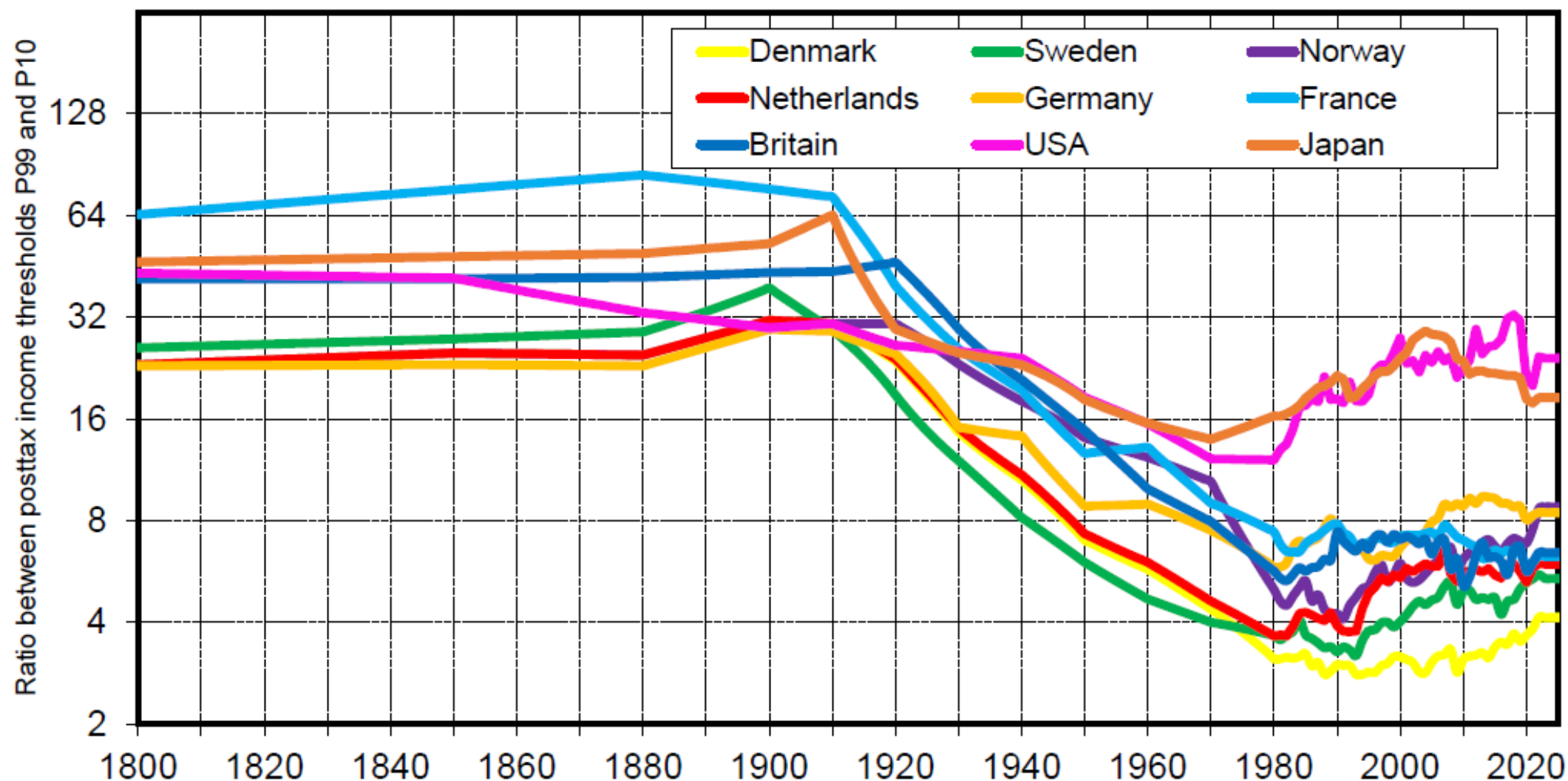
Interpretation. The long-run compression of the income scale has been particularly strong in social-democratic Europe, and especially in nordic countries. E.g. the T1/B50 income ratio between the average posttax incomes of the top 1% and bottom 50% fell from about 60-80 in all countries before WW1 to about 5-8 in recent decades in Sweden, Denmark, Norway and the Netherlands (and around 10-15 in Germany, France and Britain). We also observe a long-run compression of the T1/B50 in other rich countries, albeit of smaller magnitude (especially in the USA, where recent rise in inequality has almost completely offset the long-run fall). **Sources and series:** wid.world (A2i)

Very Top-End Inequality Compression in Rich Countries



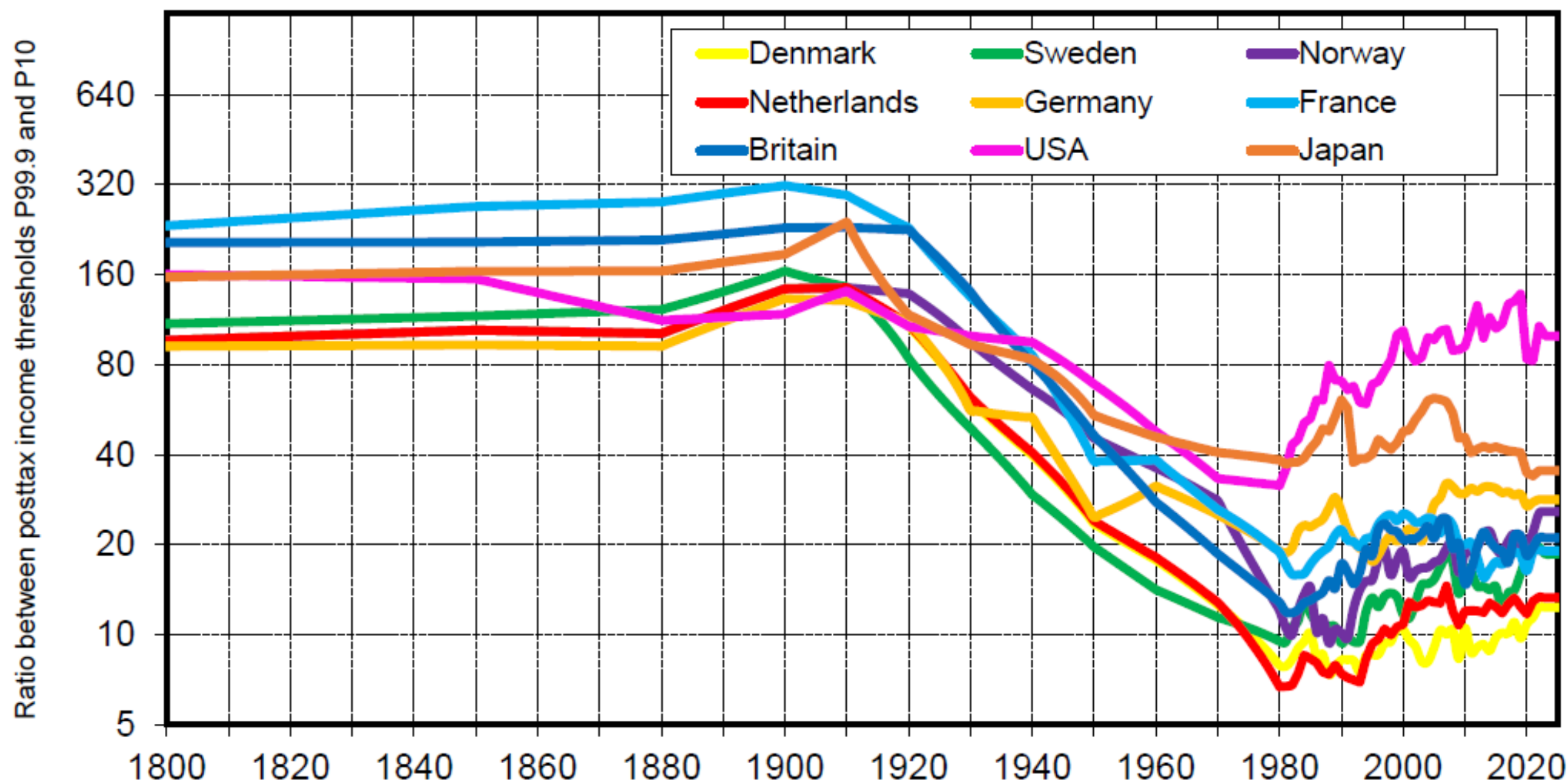
Interpretation. The long-run compression of the income scale has been particularly strong in social-democratic Europe, and especially in Nordic countries. E.g. the T0.1/B50 income ratio between the average posttax incomes of the top 0.1% and bottom 50% fell from about 300-400 in all countries before WW1 to about 10-20 in recent decades in Sweden, Denmark, Norway and the Netherlands (and around 20-50 in Germany, France and Britain). We also observe a long-run compression of the T0.1/B50 in other rich countries, albeit of smaller magnitude (especially in the USA, where recent rise in inequality has almost completely offset the long-run fall). **Sources and series:** wid.world (A2j)

The Fall of the P99/P10 Ratio in Rich Countries



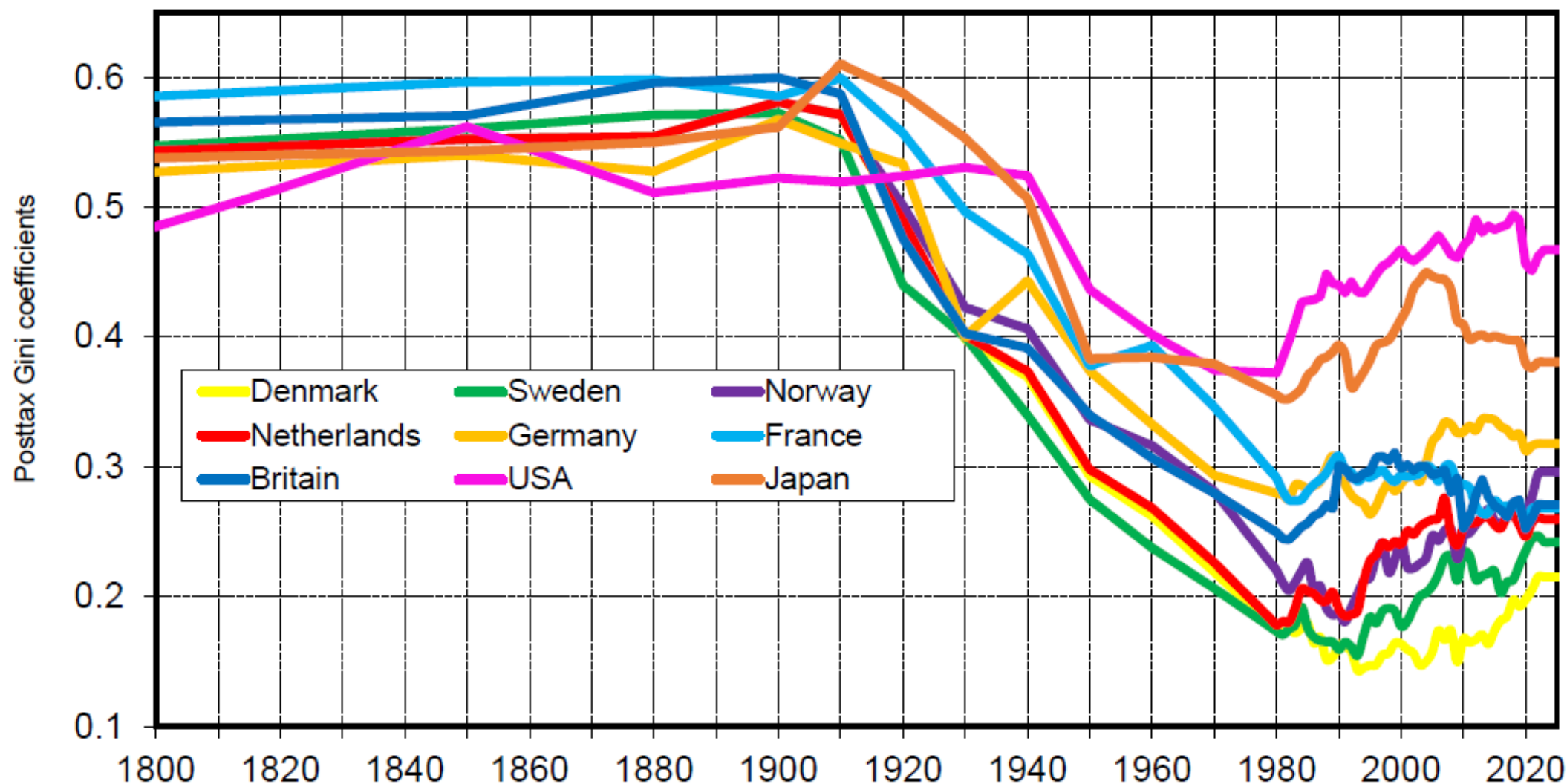
Interpretation. The long-run compression of the income scale has been particularly strong in social-democratic Europe, and especially in Nordic countries. E.g. the P99/P10 ratio between the 99th and 10th percentile thresholds fell from about 30-60 in all countries before WW1 to about 3-6 in recent decades in Sweden, Denmark, Norway and the Netherlands (and around 5-8 in Germany, France and Britain). We also observe a long-run compression of the P99/P10 ratio in other rich countries, albeit of much smaller magnitude (especially in the USA, where recent rise in inequality has almost completely offset the long-run fall). **Sources and series:** wid.world (A4a)

The Fall of the P99.9/P10 Ratio in Rich Countries



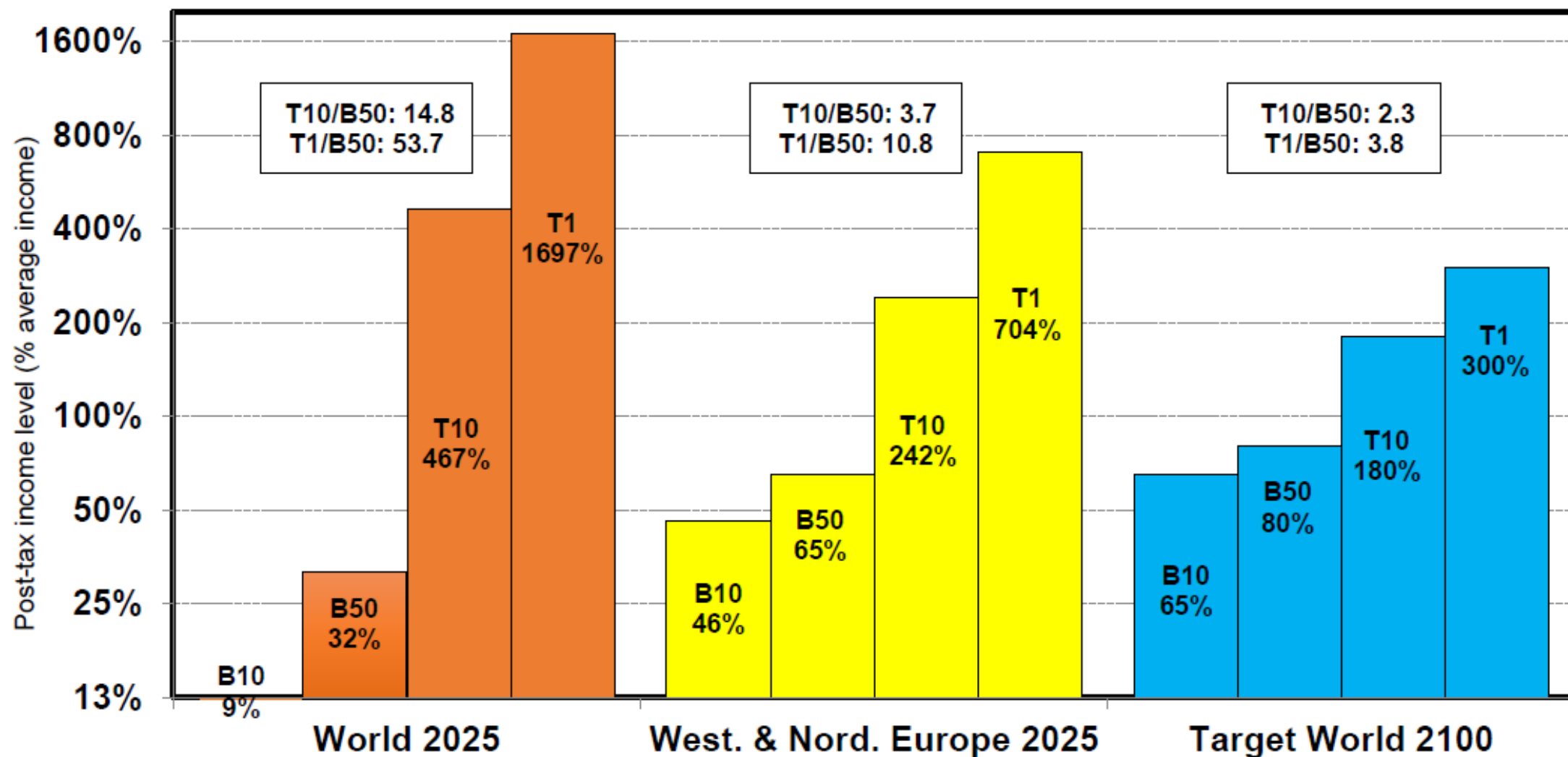
Interpretation. The long-run compression of the income scale has been particularly strong in social-democratic Europe, and especially in Nordic countries. E.g. the P99.9/P10 ratio between the 99.9th and 10th percentile thresholds fell from about 150-250 in all countries before WW1 to about 8-15 in recent decades in Sweden, Denmark, Norway and the Netherlands (and around 15-20 in Germany, France and Britain). We also observe a long-run compression of the P99.9/P10 ratio in other rich countries, albeit of much smaller magnitude (especially in the USA, where recent rise in inequality has almost completely offset the long-run fall). **Sources and series:** wid.world (A4b)

Posttax Gini Coefficients in Rich Countries



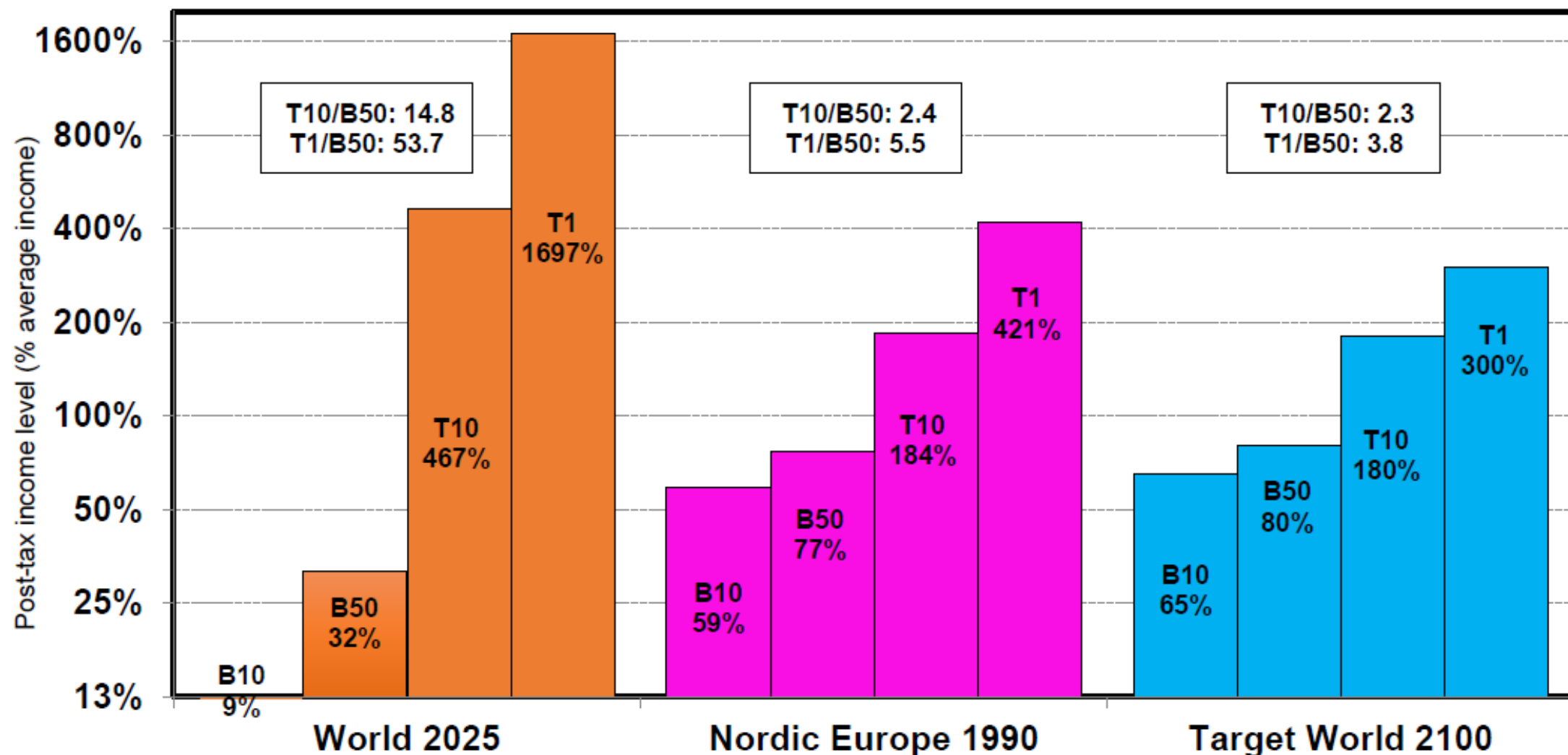
Interpretation. The long-run compression of the income scale has been particularly strong in Western and Nordic Europe, and especially in Nordic Europe. E.g. the posttax Gini coefficient fell from about 0.5-0.6 in all countries before WW1 to about 0.15-0.25 in recent decades in Sweden, Denmark, Norway and the Netherlands (and around 0.25-0.3 in Germany, France and Britain). We also observe a substantial long-run compression of the posttax Gini coefficient in other rich countries, including US and Japan (with a Gini coefficient around 0.4-0.5 in recent decades), albeit of smaller magnitude. **Sources and series:** wid.world (A6a)

The Proper Level of the Income Scale: Present and Future



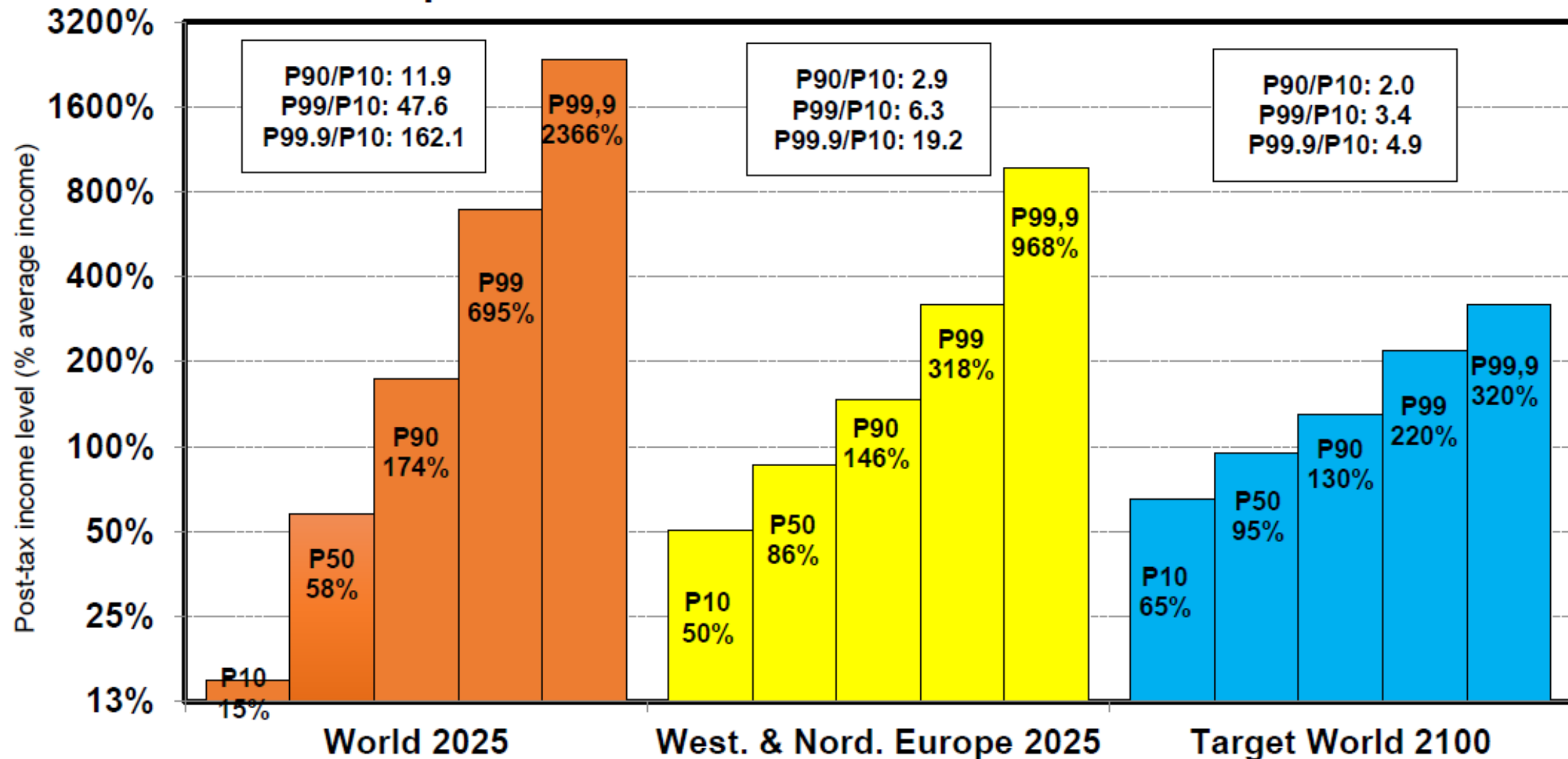
Interpretation. In Western and Nordic Europe 2025 (average DE FR GB SE DK NO NL), the T10/B50 ratio between the posttax average income of the top 10% and the bottom 50% is equal to 3.7 and the T1/B50 ratio is equal to 10.8. In the target level inequality for the world 2100, the T10/B50 ratio is equal to 2.3 and the T1/B50 ratio is equal to 3.8. **Sources and series:** wid.world (A5a)

The Proper Level of the Income Scale: Present and Future



Interpretation. In Nordic Europe 1990 (average SE DK NO NL), the T10/B50 ratio between the posttax average income of the top 10% and the bottom 50% is equal to 2.4 and the T1/B50 ratio is equal to 5.5. In the target level inequality for the world 2100, the T10/B50 ratio is equal to 2.3 and the T1/B50 ratio is equal to 3.8. **Sources and series:** wid.world (A5b)

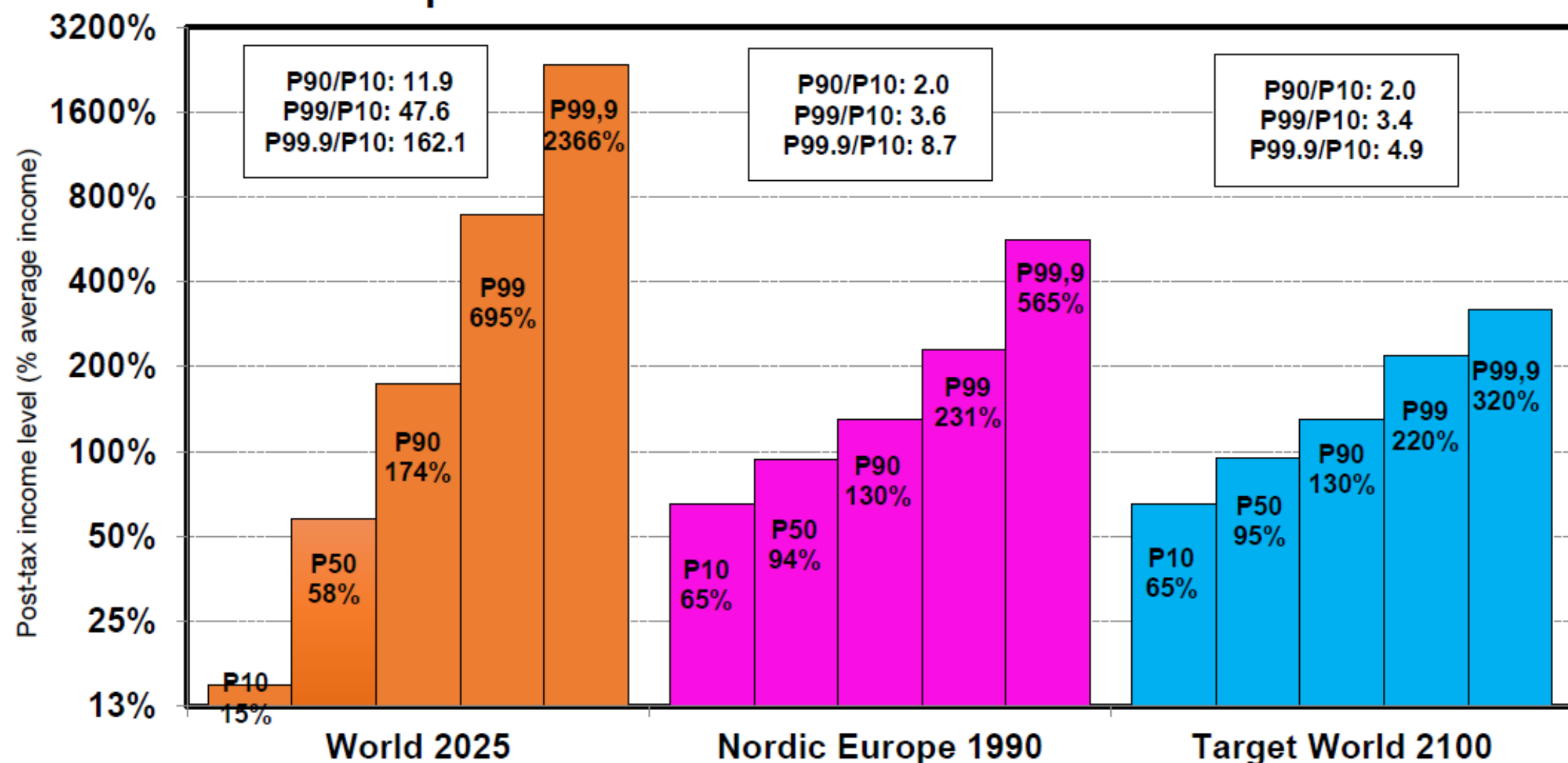
The Proper Level of the Income Scale: Present and Future



Interpretation. In Europe 2025 (average DE FR GB SE DK NO NL), the posttax P99/P10 income ratio is equal to 6.3 and the P99.9/P10 ratio is equal to 19.2. In the target level inequality for the world 2100, the P99/P10 ratio is equal to 3.4 and the P99.9/P10 ratio is equal to 4.9.

Sources and series: wid.world (A5g)

The Proper Level of the Income Scale: Present and Future



Interpretation. In Nordic Europe 1990 (average SE DK NO NL), the posttax P99/P10 income ratio is equal to 3.6 and the P99.9/P10 ratio is equal to 8.7. In the target level inequality for the world 2100, the P99/P10 ratio is equal to 3.4 and the P99.9/P10 ratio is equal to 4.9.

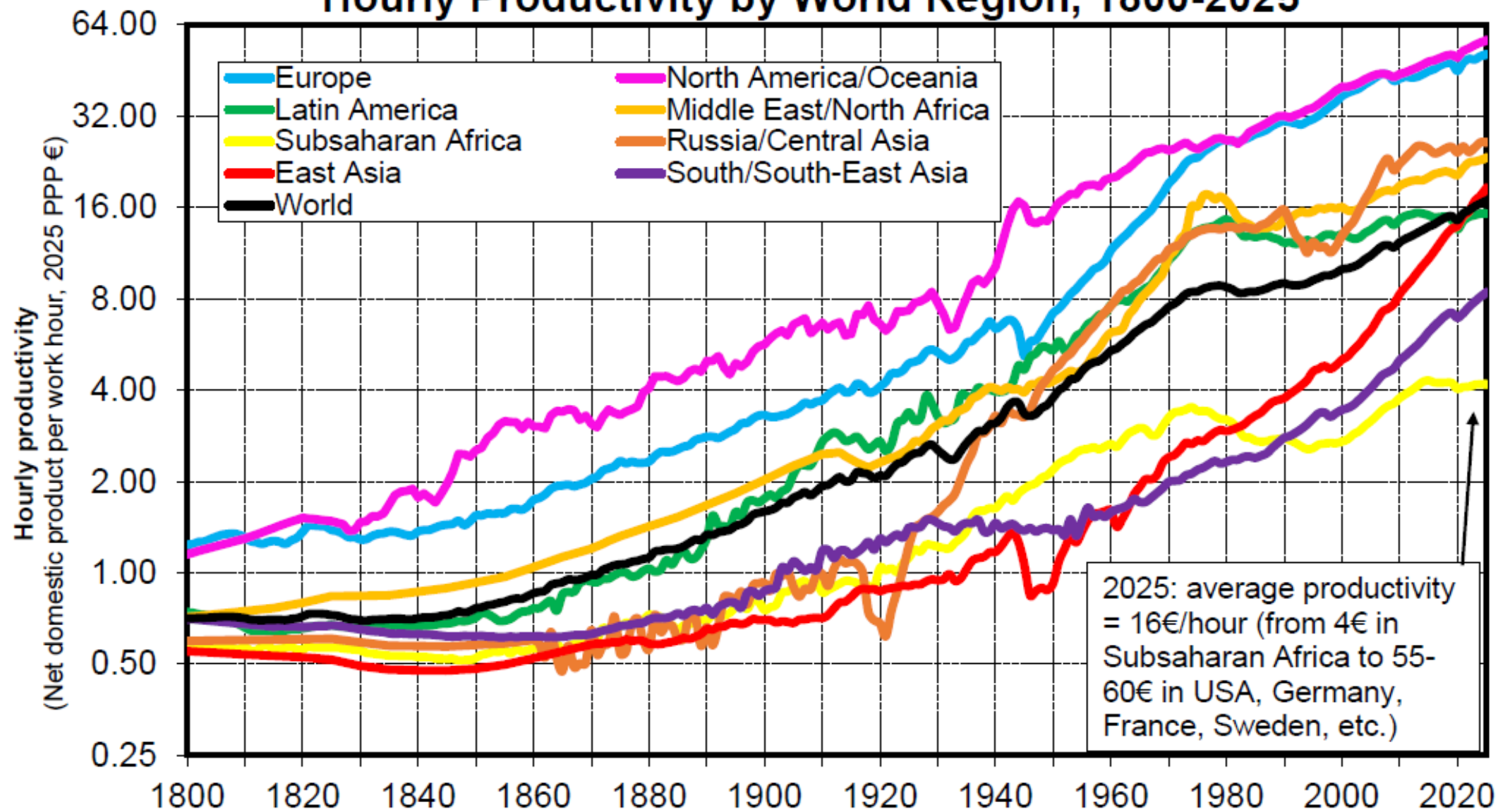
Sources and series: wid.world (A5h)

(2) Assessing the social-democratic narrative

Basic fact: The enormous compression of income scale in Nordic Europe did not prevent Nordic countries from reaching the highest productivity level in the world (higher than the US in spite of lower total public + private expenditure in education)

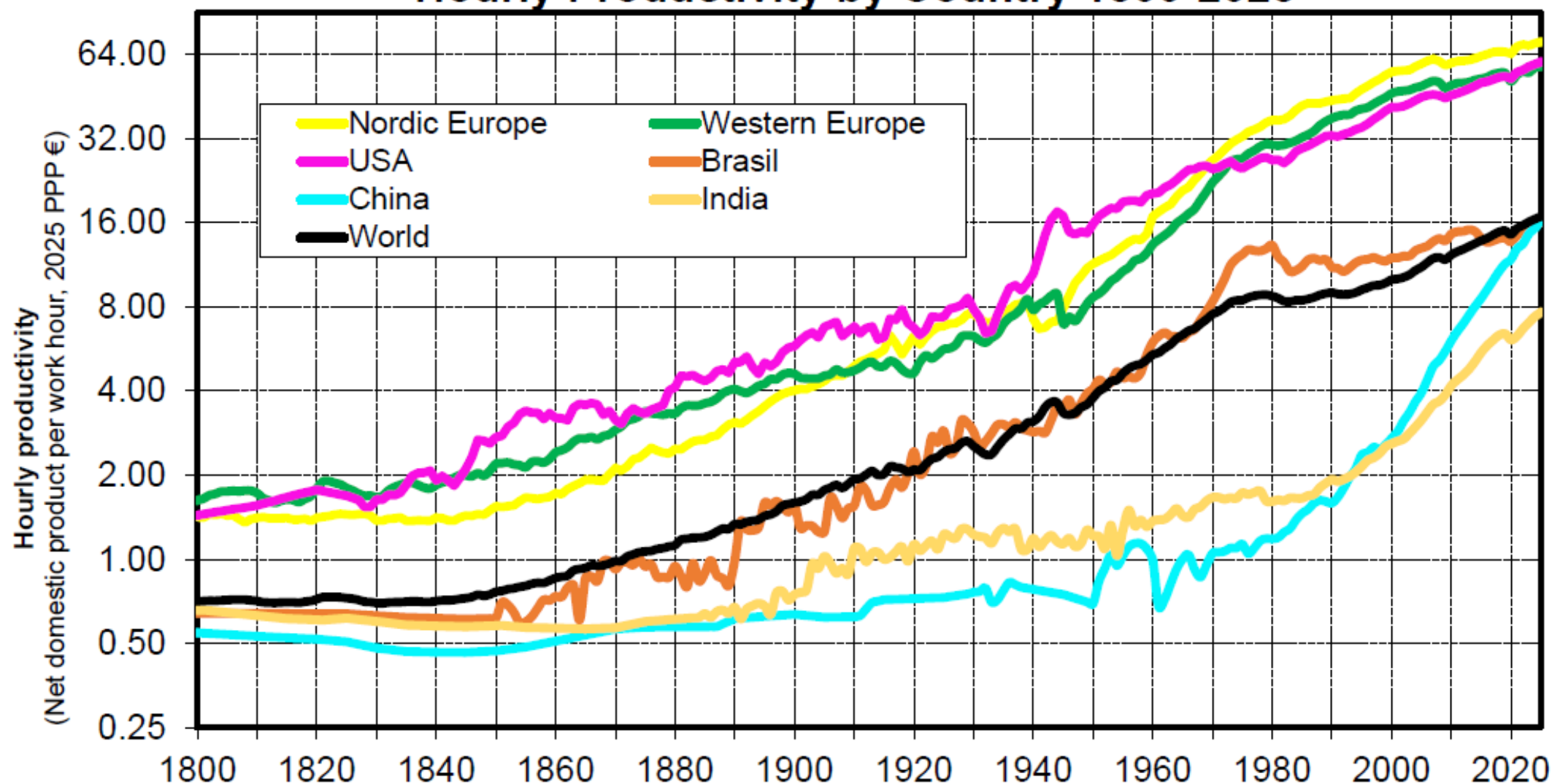
Challenges to the equality narrative: the communist legacy, and the US vs Europe comparison

Hourly Productivity by World Region, 1800-2025



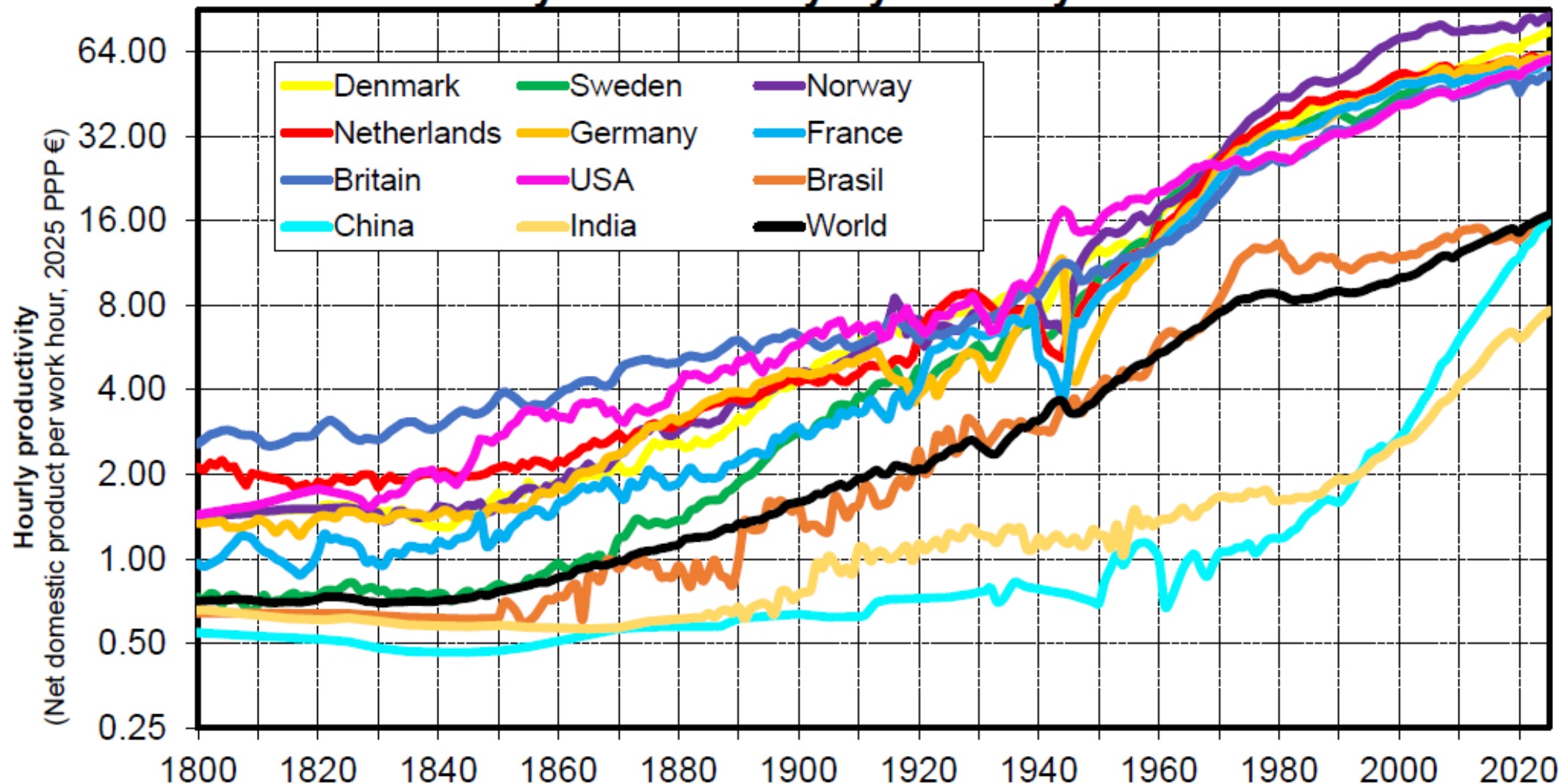
Interpretation. Expressed in 2025 PPP €, hourly productivity (net domestic product per labour hour) rose from about 0.7€ in 1800 to 16€ in 2025 at the global level. Europe's productivity was about half of North America/Oceania level in 1950 and has been approximately the same since 1980-1990. **Sources and series:** wid.world (B1a)

Hourly Productivity by Country 1800-2025



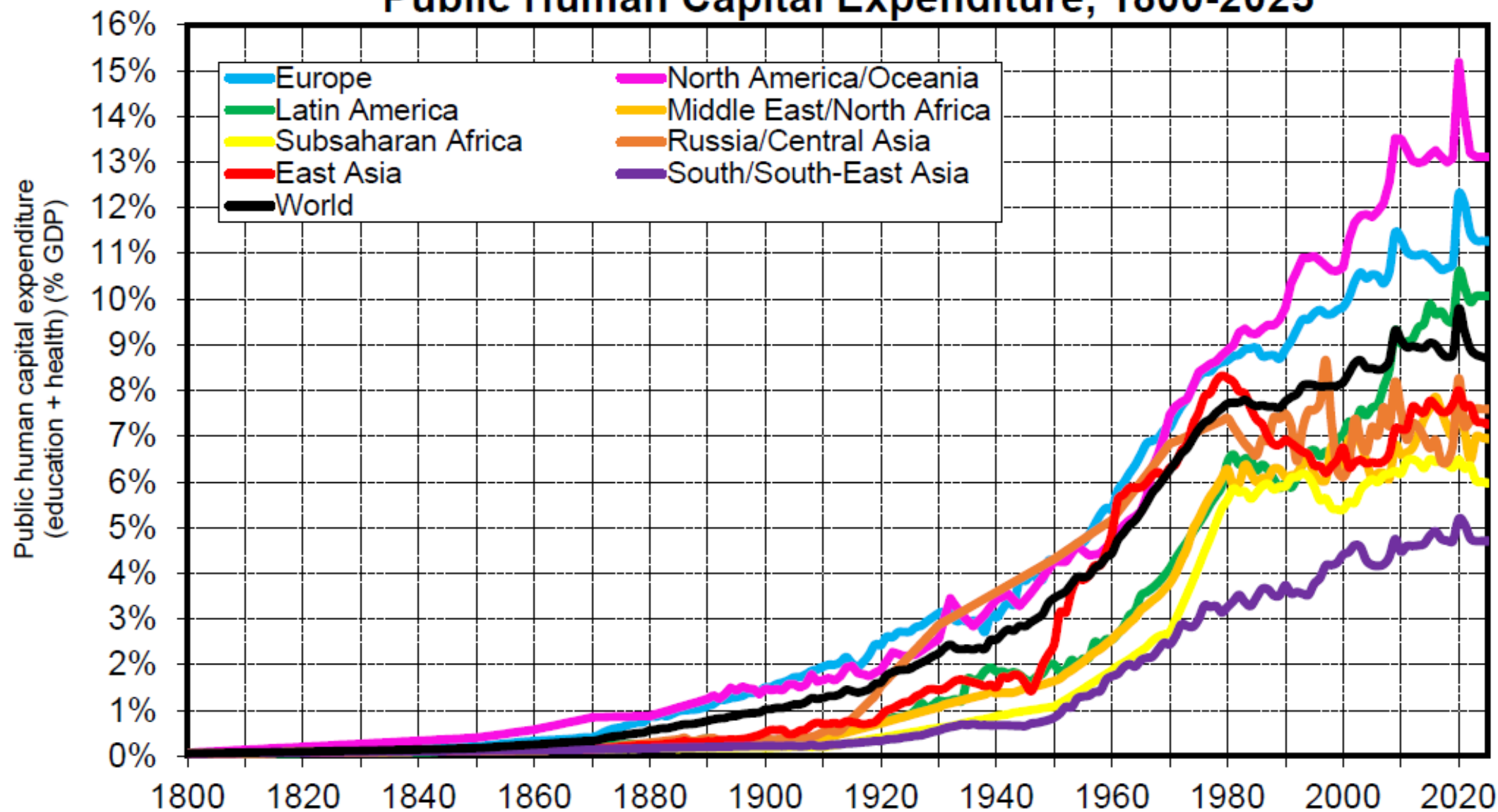
Interpretation. Western and Nordic European countries exhibit similar or higher productivity as the US since 1980. Within Europe, the highest productivity countries tend to be the most equal (especially in Nordic Europe), reflecting the increasing role of human capital & inclusiveness for prosperity. This was not the case in 1800-1900, when the productivity leader (GB) was as unequal as other countries, reflecting the role of other factors (coal, cotton, colonies, etc.). In 1900-1970, the productivity leader (US) did exhibit large educational advance over all other countries (incl. GB, FR, DE, JP, etc.) and was also less unequal. **Sources and series:** wid.world (B1b)

Hourly Productivity by Country 1800-2025



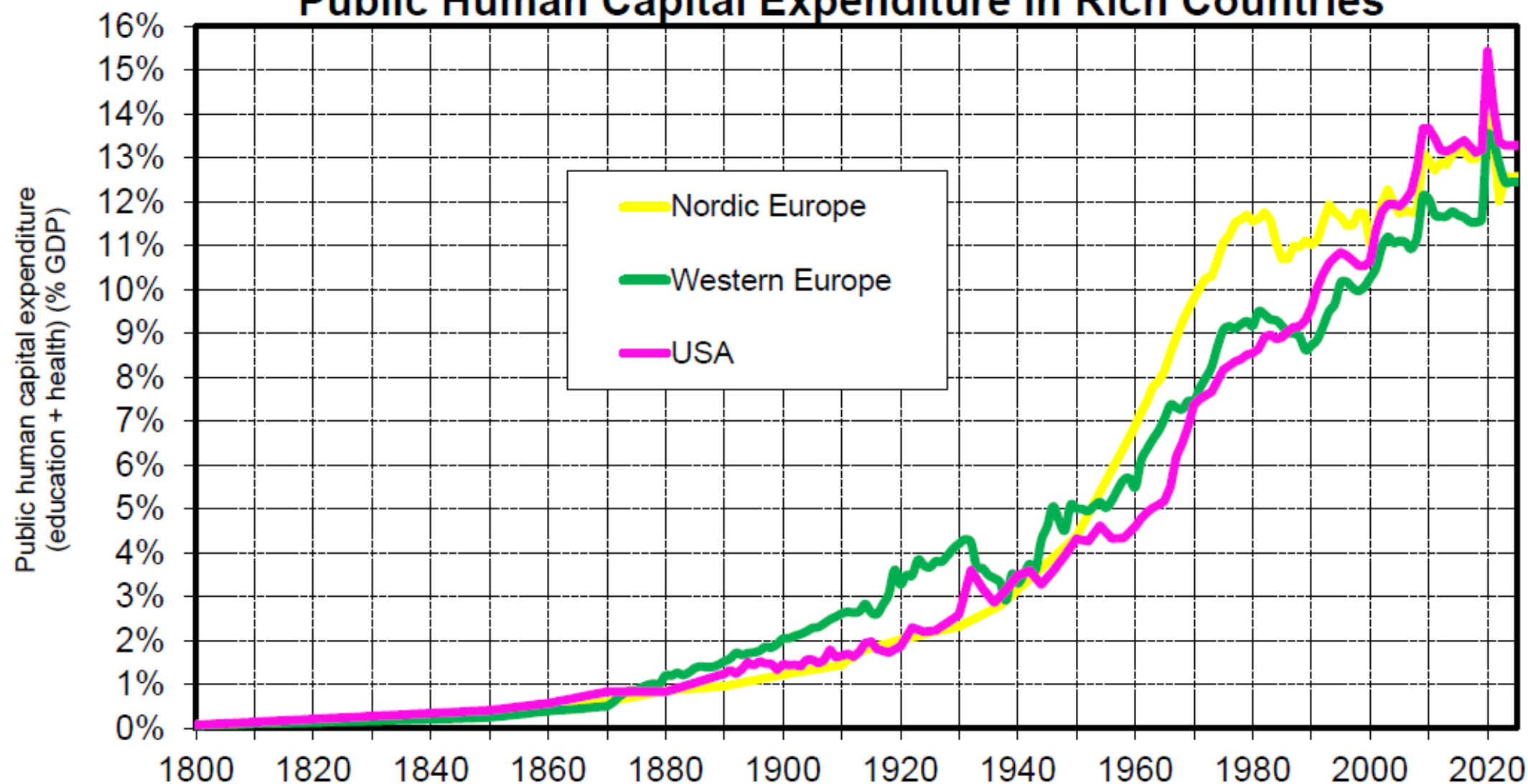
Interpretation. Western and Nordic European countries exhibit similar or higher productivity as the US since 1980. Within Europe, the highest productivity countries tend to be the most equal (especially in Nordic Europe), reflecting the increasing role of human capital & inclusiveness for prosperity. This was not the case in 1800-1900, when the productivity leader (GB) was as unequal as other countries, reflecting the role of other factors (coal, cotton, colonies, etc.). In 1900-1970, the productivity leader (US) did exhibit large educational advance over all other countries (incl. GB, FR, DE, JP, etc.) and was also less unequal. **Sources and series:** wid.world (B1c)

Public Human Capital Expenditure, 1800-2025



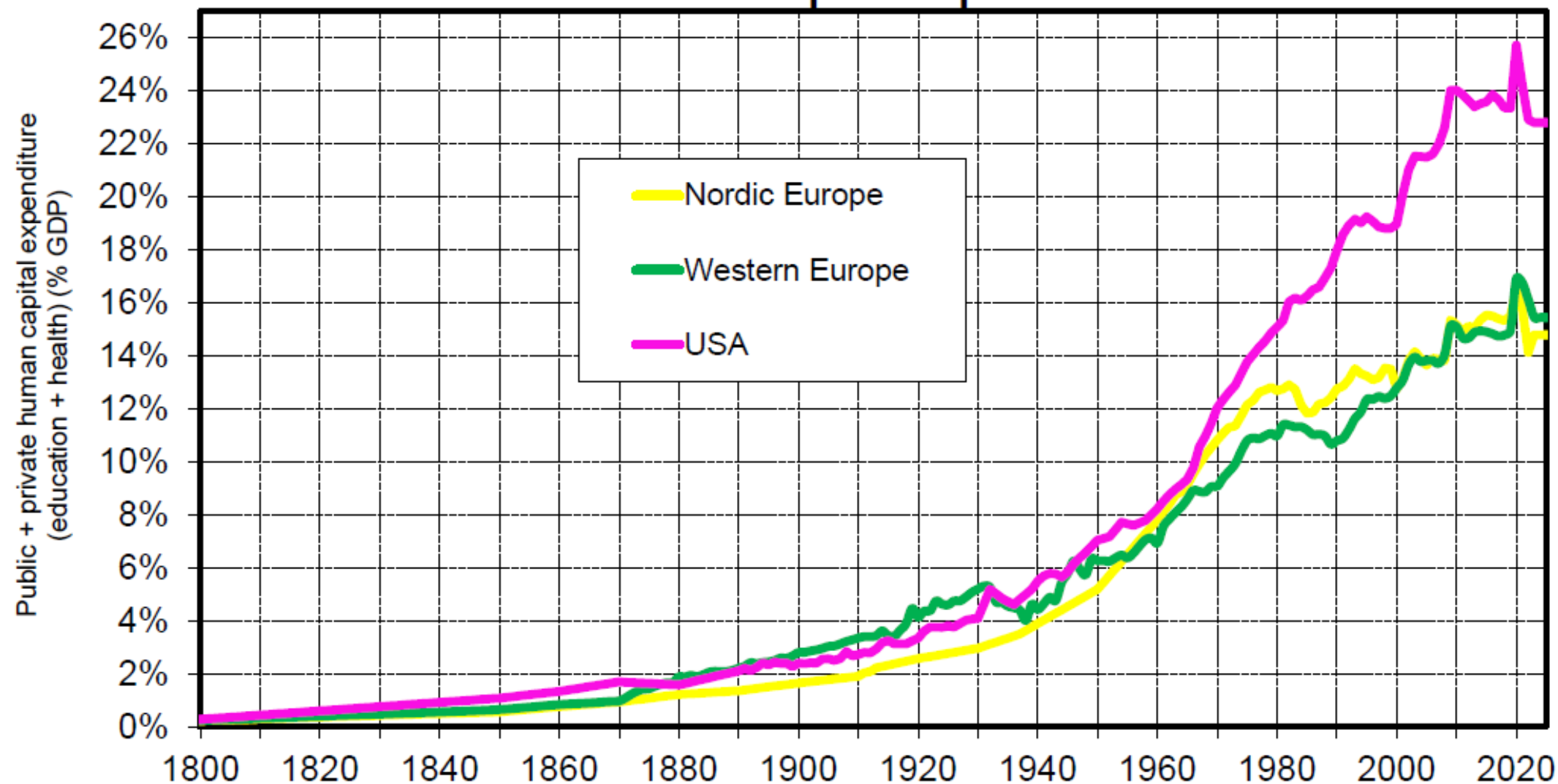
Interpretation. Public human capital expenditure (education and health) has risen enormously as a fraction of GDP in all world regions in the long run. The rise has been the strongest in North America/Oceania and Europe and the smallest in Subsaharan Africa and South & South-East Asia, which can contribute to explain the large differential in productivity growth rates. **Sources and series:** wid.world (B2a)

Public Human Capital Expenditure in Rich Countries



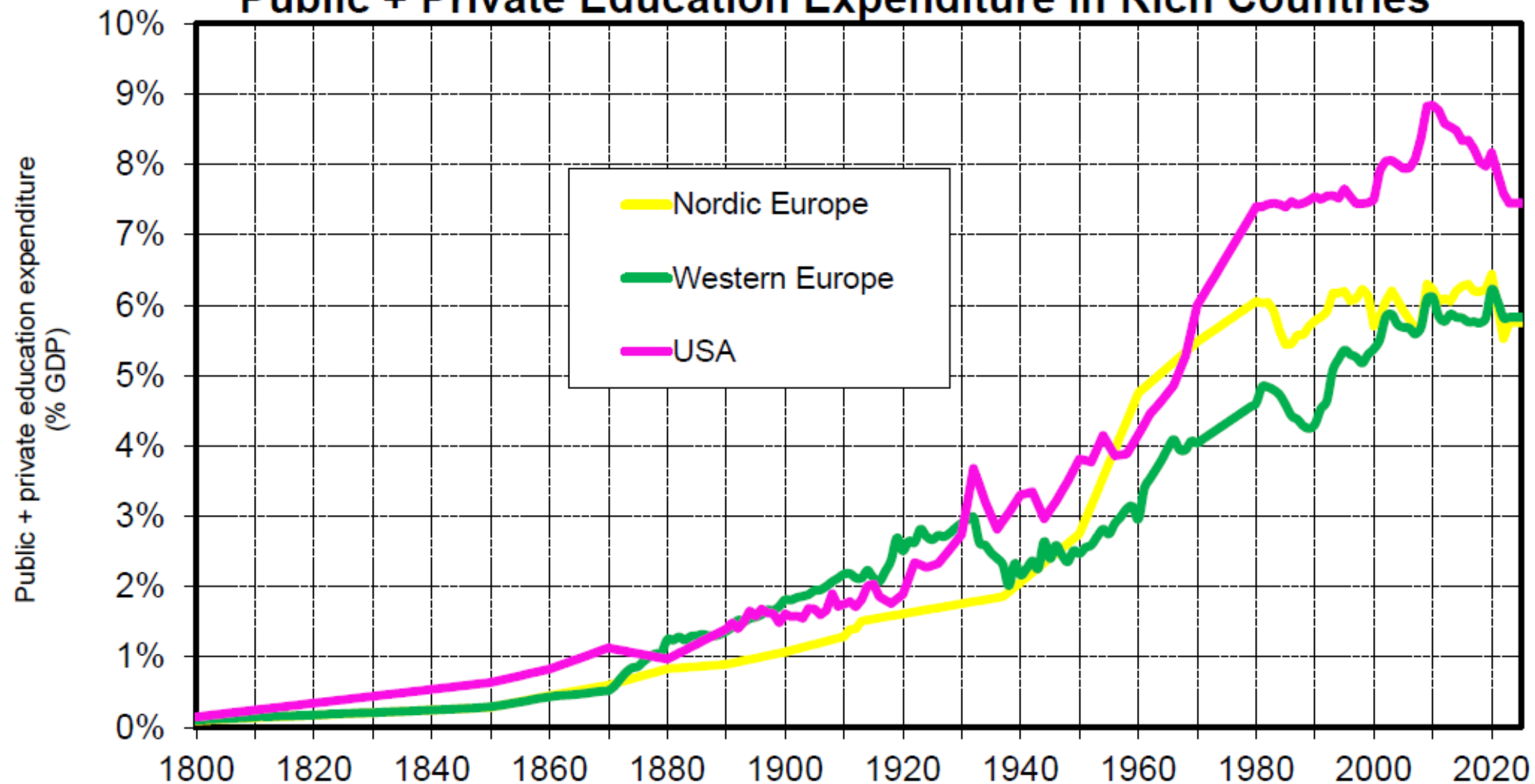
Interpretation. Public human capital expenditure (education and health) has risen enormously as a fraction of GDP in the world's richest regions in the long run. Between the 1950s and the 1990s, the rise has been stronger in Nordic Europe (Sweden-Denmark-Norway-Netherlands) than in Western Europe (Germany-France-Britain) and the USA, which can contribute to explain why productivity has reached particularly high levels in Nordic Europe. **Sources and series:** wid.world (B2b)

Public + Private Human Capital Expenditure in Rich Countries



Interpretation. If we include both public and private human capital expenditure (education and health), we find that the rise in total human capital expenditure has been much larger in the USA than in Europe, due to very high private health expenditure (and to a lesser extent to private education expenditure). **Sources and series:** wid.world (B2c)

Public + Private Education Expenditure in Rich Countries



Interpretation. If we include both public and private education expenditure, we find that the rise in total education expenditure has been larger in the USA than in either Nordic Europe (Sweden-Denmark-Norway-Netherlands) or Western Europe (Germany-France-Britain).

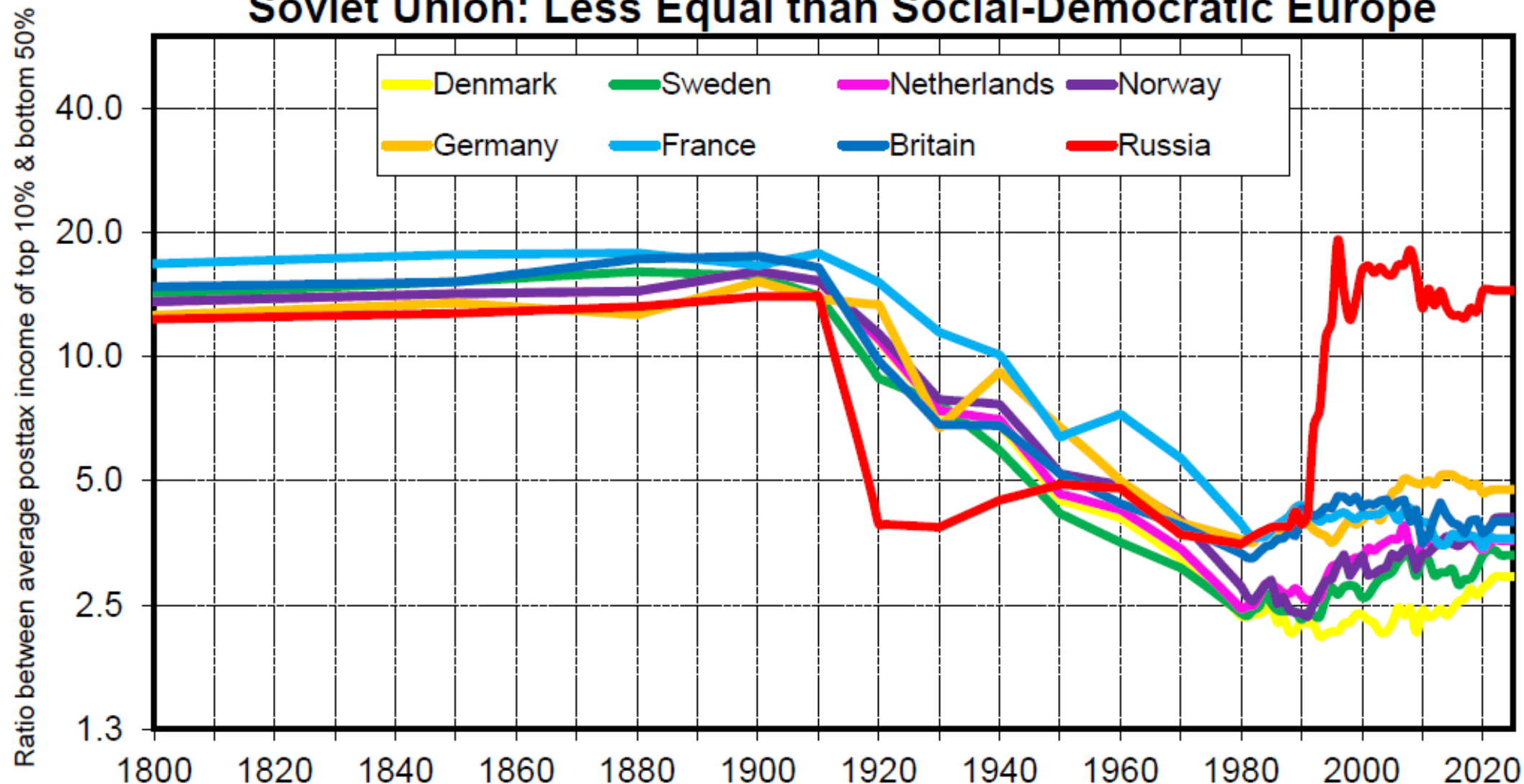
Sources and series: wid.world (B2d)

“Communism in USSR or in Mao China was a disaster. This proves that inequality is good and that excessive equality leads to poverty”

Except that USSR was not particularly egalitarian: in the 1980s, income scale was more compressed in Sweden (and other social-democratic European countries) than in USSR, and Sweden had one of the highest productivity in the world. Soviet failure was not due to excessive equality, but rather to authoritarian political & economic system, lack of decentralization, rigid central planning, etc.

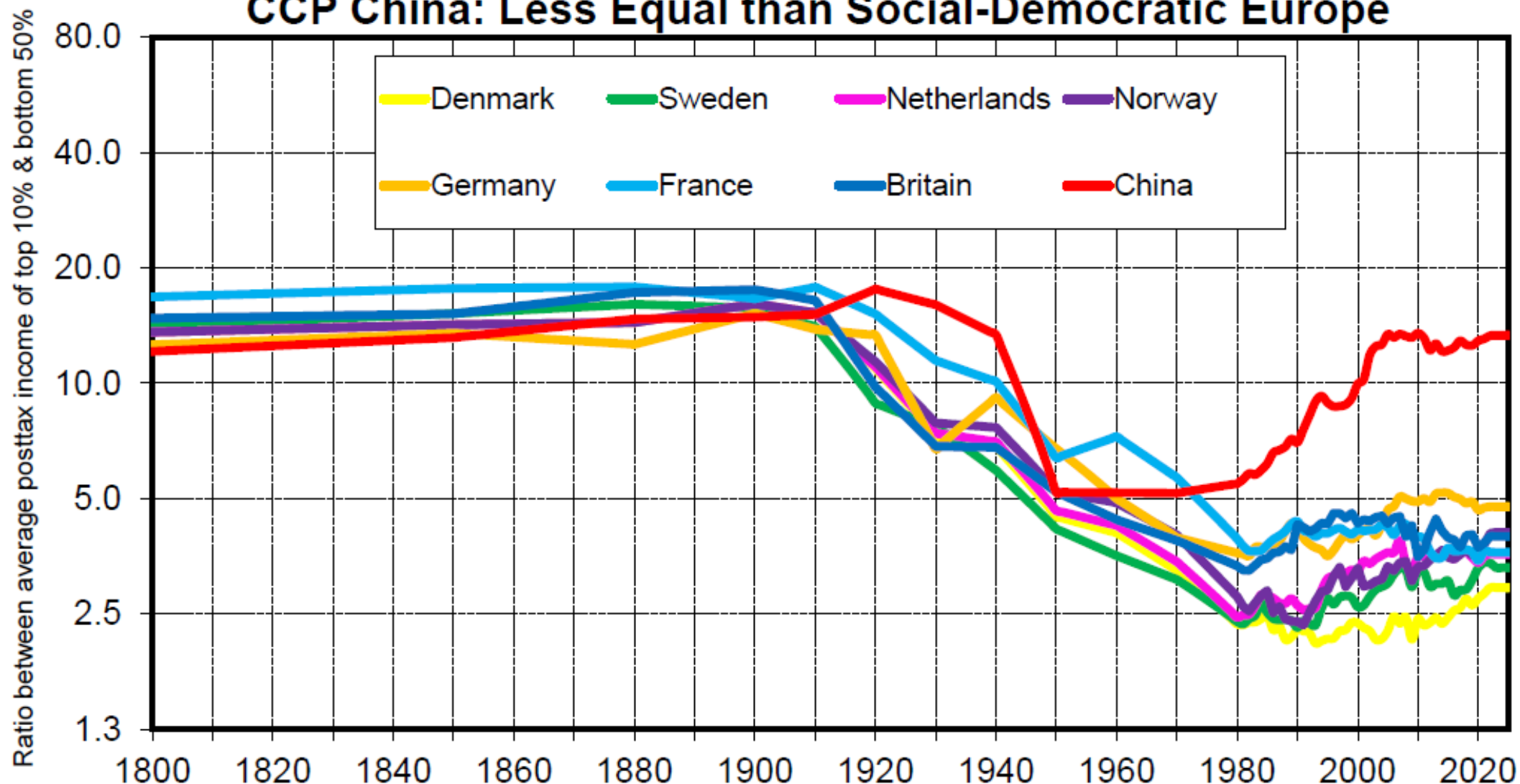
Regarding socioeconomic equality, 20c European social-democracy (democratic socialism) was both more radical and a lot more successful than Russian-Chinese communism

Soviet Union: Less Equal than Social-Democratic Europe



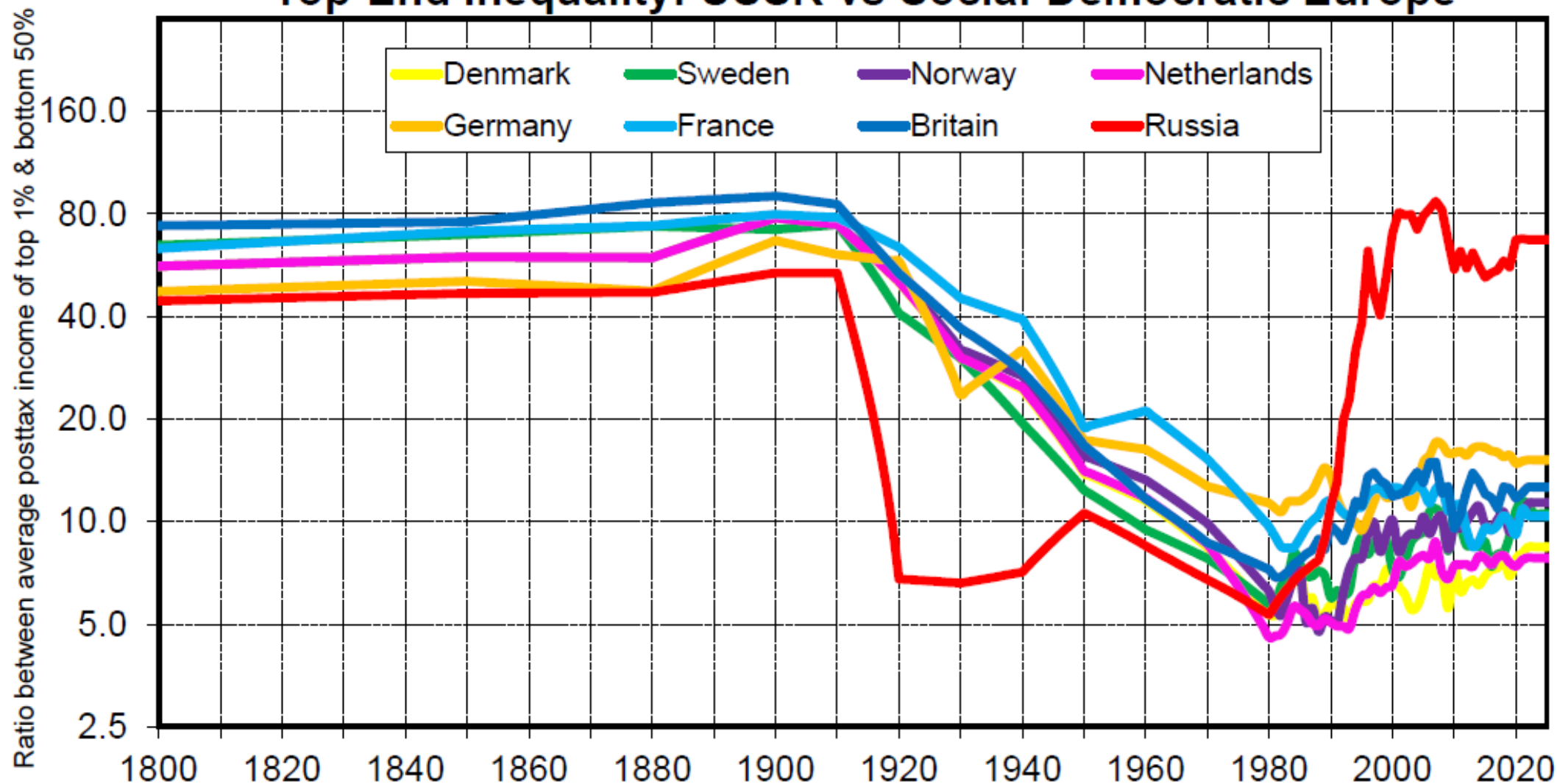
Interpretation. The income scale between the top 10% and the bottom 50% was substantially compressed in Soviet Russia (with a T10/50 income ratio around 5, vs about 15-20 in Tsarist Russia and post-communist Russia). However it remained higher than the income scale around 2,5-3 observed since the 1980s in Sweden, Denmark, Norway or the Netherlands (and around 4-5 in Germany, France and Britain).
Sources and series: wid.world (A2n)

CCP China: Less Equal than Social-Democratic Europe



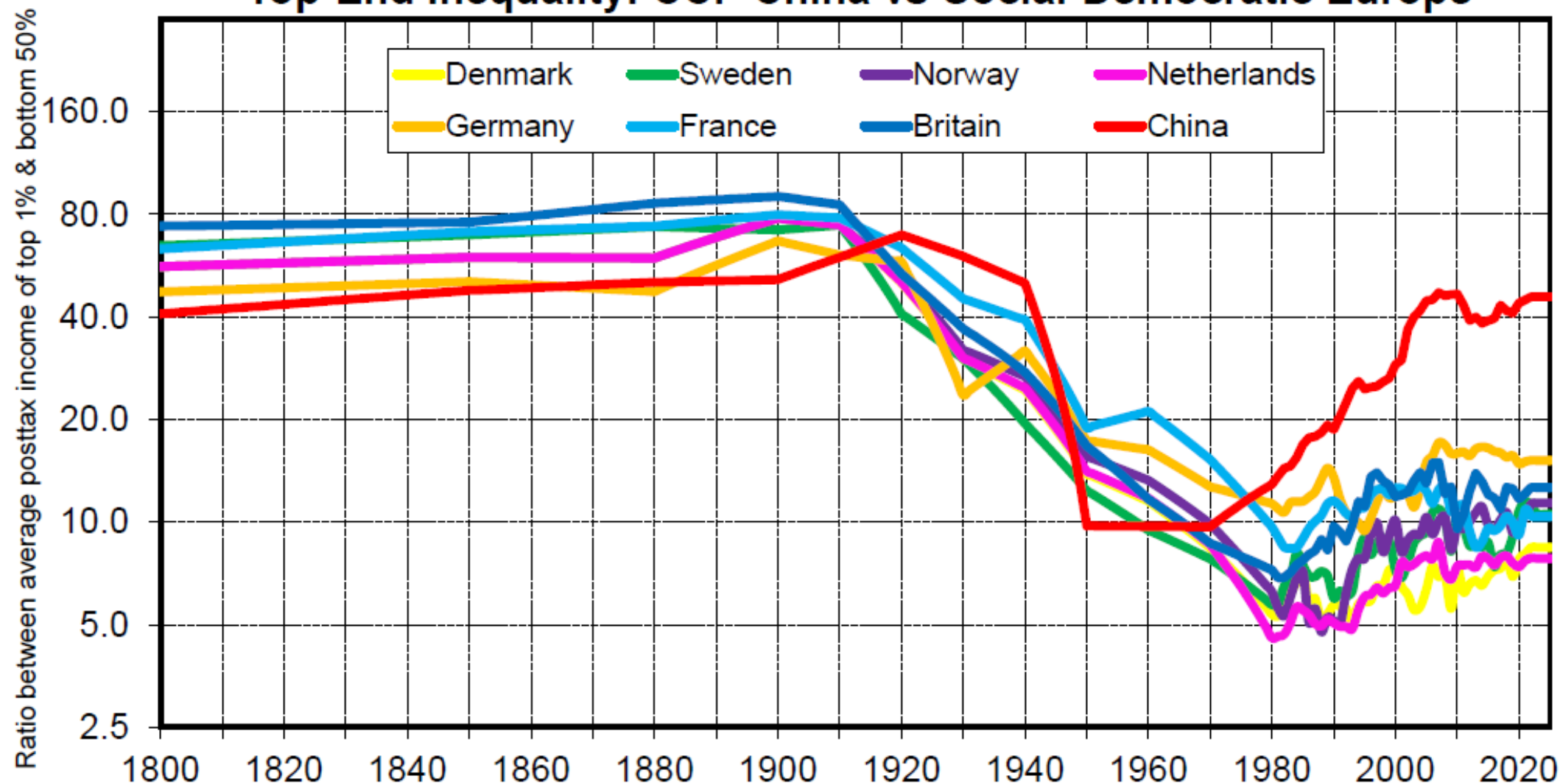
Interpretation. The income scale between the top 10% and the bottom 50% was substantially compressed in CCP China during Maoist period (with a T10/50 income ratio around 5, vs about 15-20 in pre-CCP China and 10-15 post-reform CCP China). However it remained higher than the income scale around 2,5-3 observed since the 1980s in Sweden, Denmark, Norway or the Netherlands (and around 4-5 in Germany, France and Britain). **Sources and series:** wid.world (A2o)

Top-End Inequality: USSR vs Social-Democratic Europe



Interpretation. The income scale between the top 1% and the bottom 50% was substantially compressed in Soviet Russia (with a T1/B50 income ratio around 7-9, vs about 50-80 in Tsarist Russia and post-communist Russia). However it remained higher than the T1/B50 income scale around 5-6 observed in Nordic countries in the 1980s-1990s. **Sources and series:** wid.world (A2p)

Top-End Inequality: CCP China vs Social-Democratic Europe



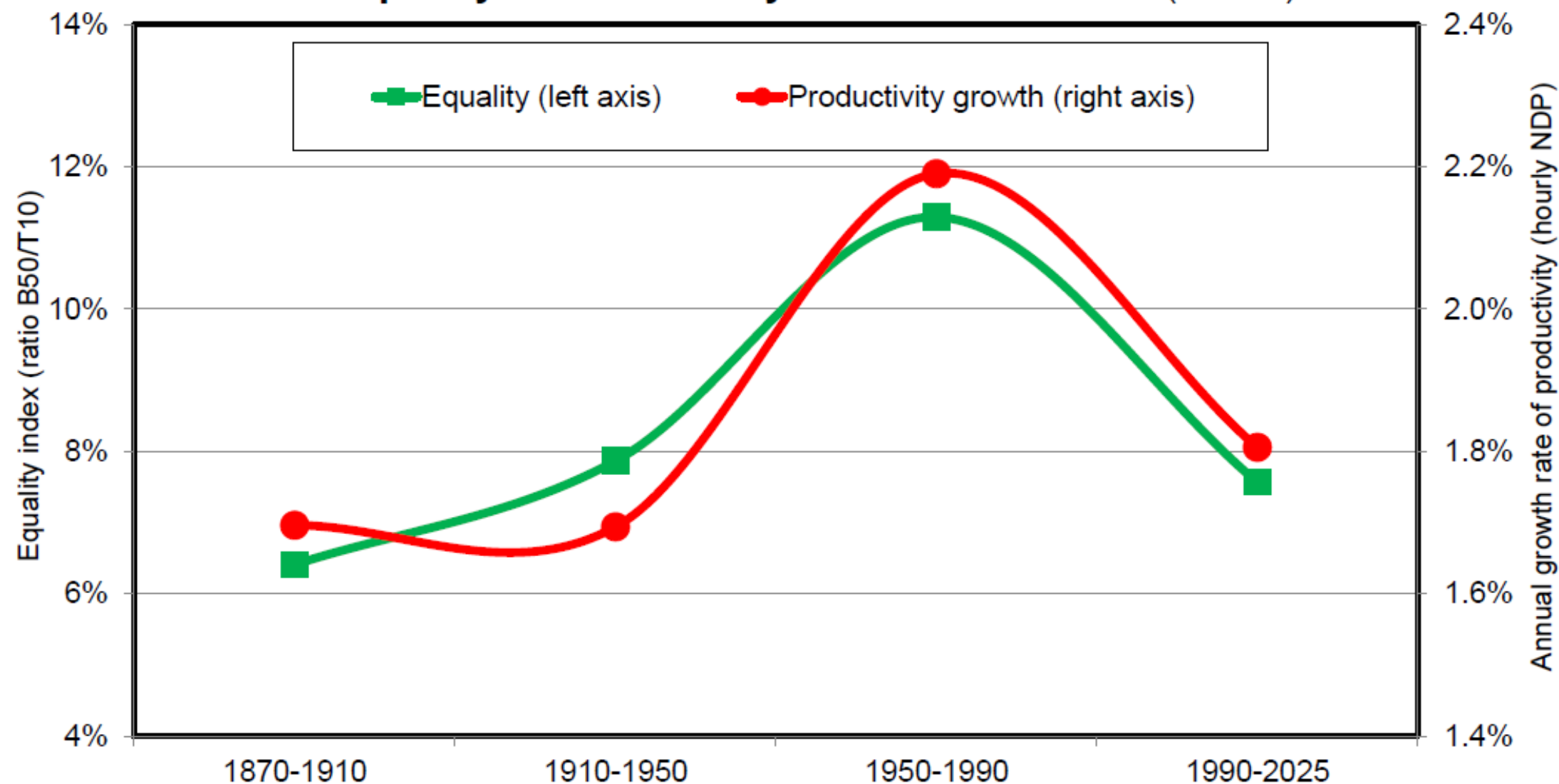
Interpretation. The income scale between the top 1% and the bottom 50% was substantially compressed in CCP China during Maoist period (with a T1/B50 income ratio around 10-12, vs about 50-80 in pre-CCP China and post-reform CCP China). However it remained higher than the T1/B50 income scale around 5-6 observed in Nordic countries in the 1980s-1990s. **Sources and series:** wid.world (A2q)

“US is more unequal than Europe and is more productive and innovative, therefore inequality is good”

Except that US is no longer more productive than Europe: higher US per capita GDP is obtained only via longer working hours (and bad well-being outcomes) and high exchange rate. If one looks at **PPP hourly productivity (NDP per work hour)**, then the most productive and most equal European countries (DK DE FR GB NL NO SE) have the same productivity as the US since the 1980s-1990s, if not higher, in spite of lower education and health investment (public+private)

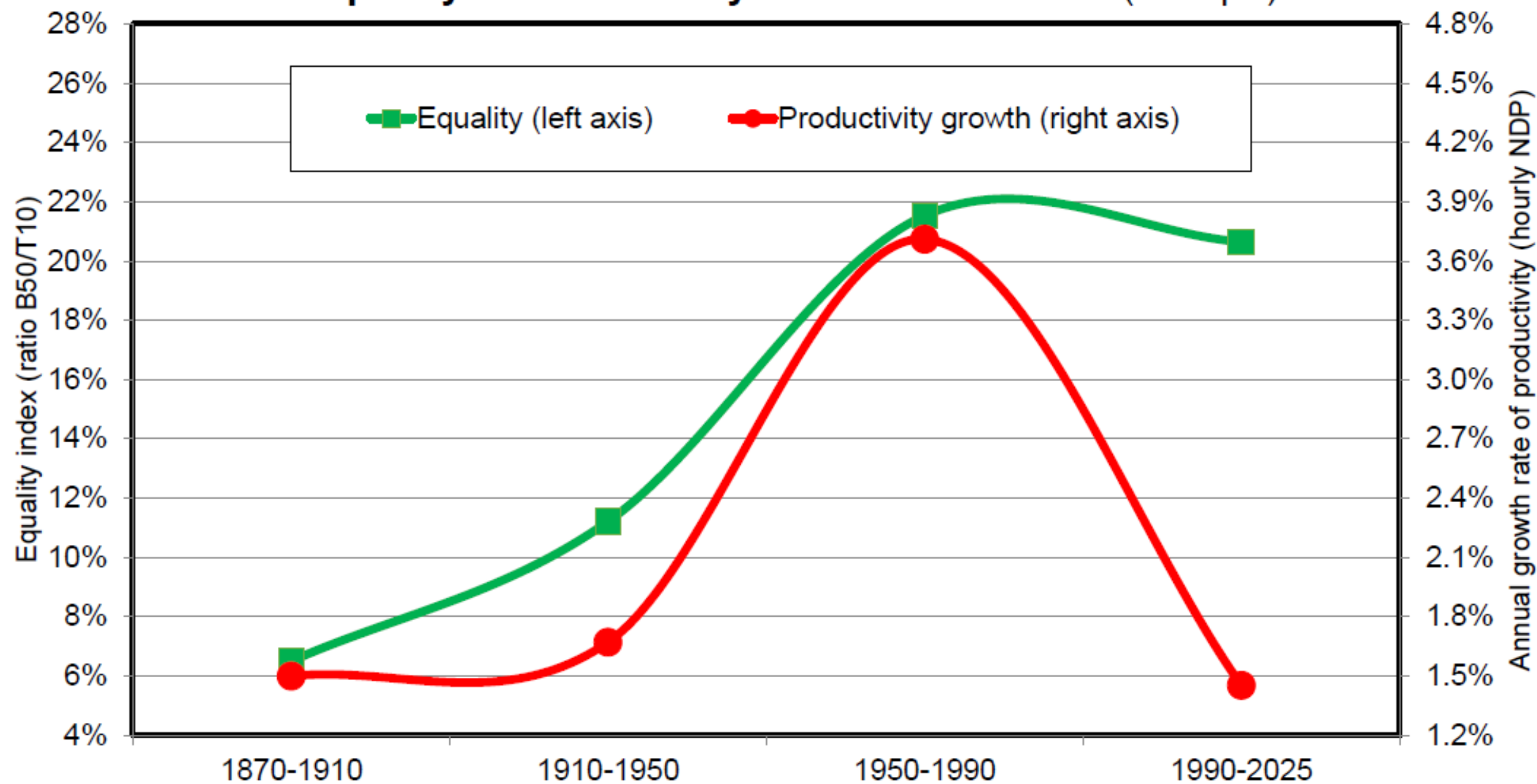
High US productivity in 19c-20c came from educational advance and from relatively low inequality compared to Europe

Equality & Productivity Growth 1870-2025 (World)



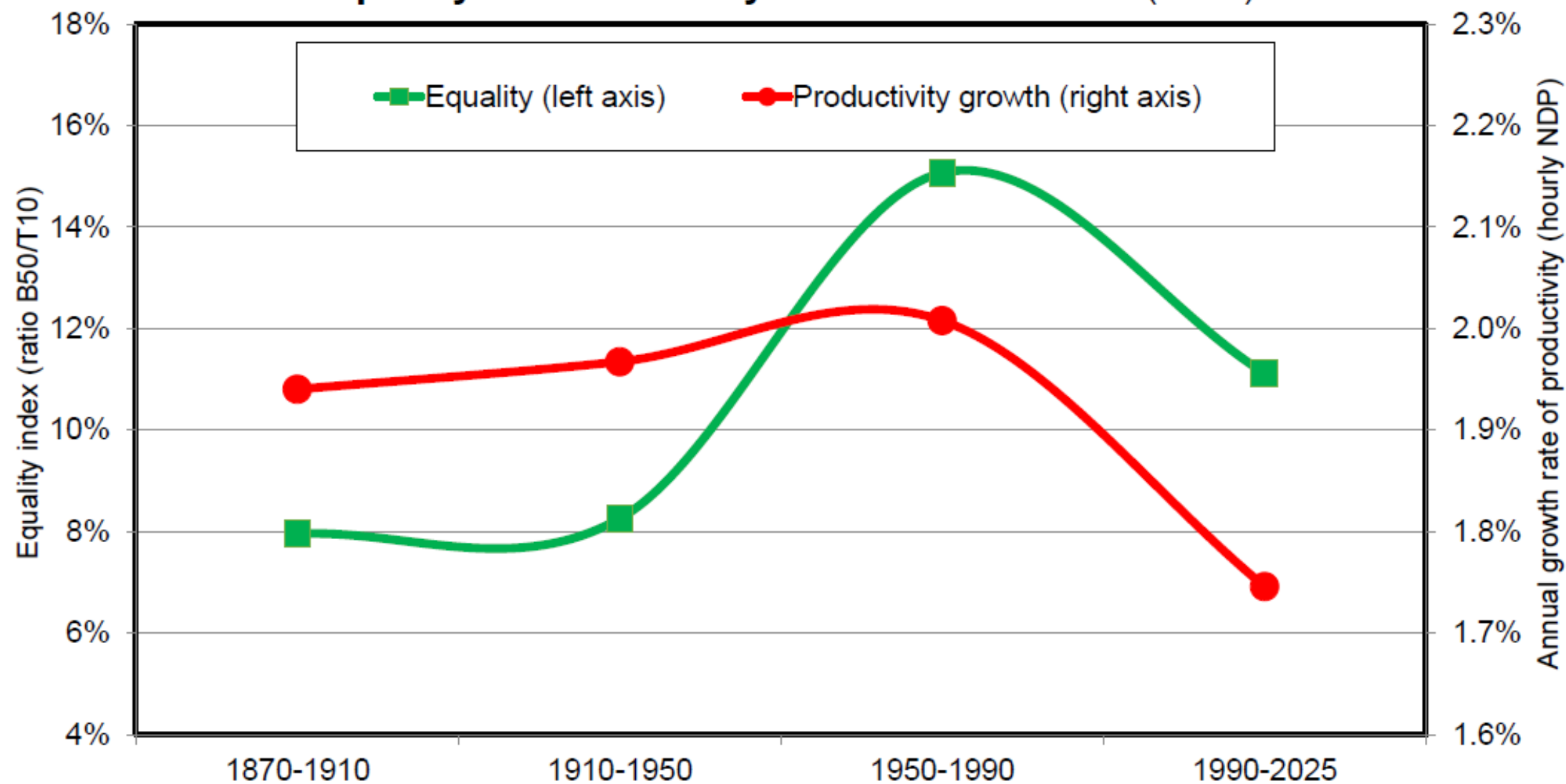
Interpretation. Generally speaking, more equality tends to be associated to more productivity growth, either in time-series or in cross section. In particular, rising inequality since 1990 was supposed to boost productivity growth but led to a decline. The time-series relation holds at the world level as well as in high-income countries and low- and middle-income countries. **Sources and series:** wid.world (C1a)

Equality & Productivity Growth 1870-2025 (Europe)



Interpretation. Generally speaking, more equality tends to be associated to more productivity growth, either in time-series or in cross section. In particular, rising inequality since 1990 was supposed to boost productivity growth but led to a decline. The time-series relation holds at the world level as well as in high-income countries and low- and middle-income countries. **Sources and series:** wid.world (C1b)

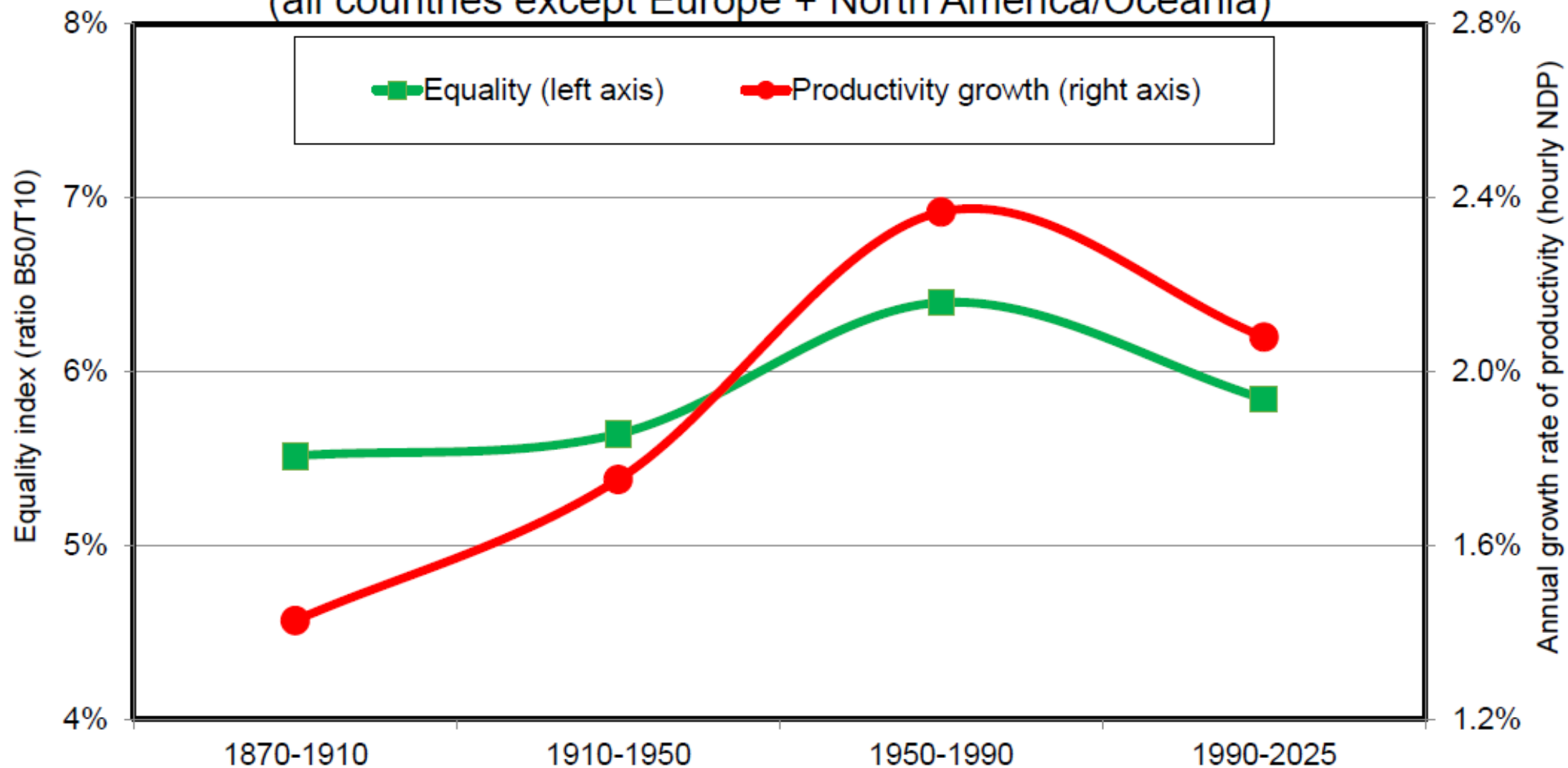
Equality & Productivity Growth 1870-2025 (USA)



Interpretation. Generally speaking, more equality tends to be associated to more productivity growth, either in time-series or in cross section. In particular, rising inequality since 1990 was supposed to boost productivity growth but led to a decline. The time-series relation holds at the world level as well as in high-income countries and low- and middle-income countries. **Sources and series:** wid.world (C1c)

Equality & Productivity Growth 1870-2025

(all countries except Europe + North America/Oceania)



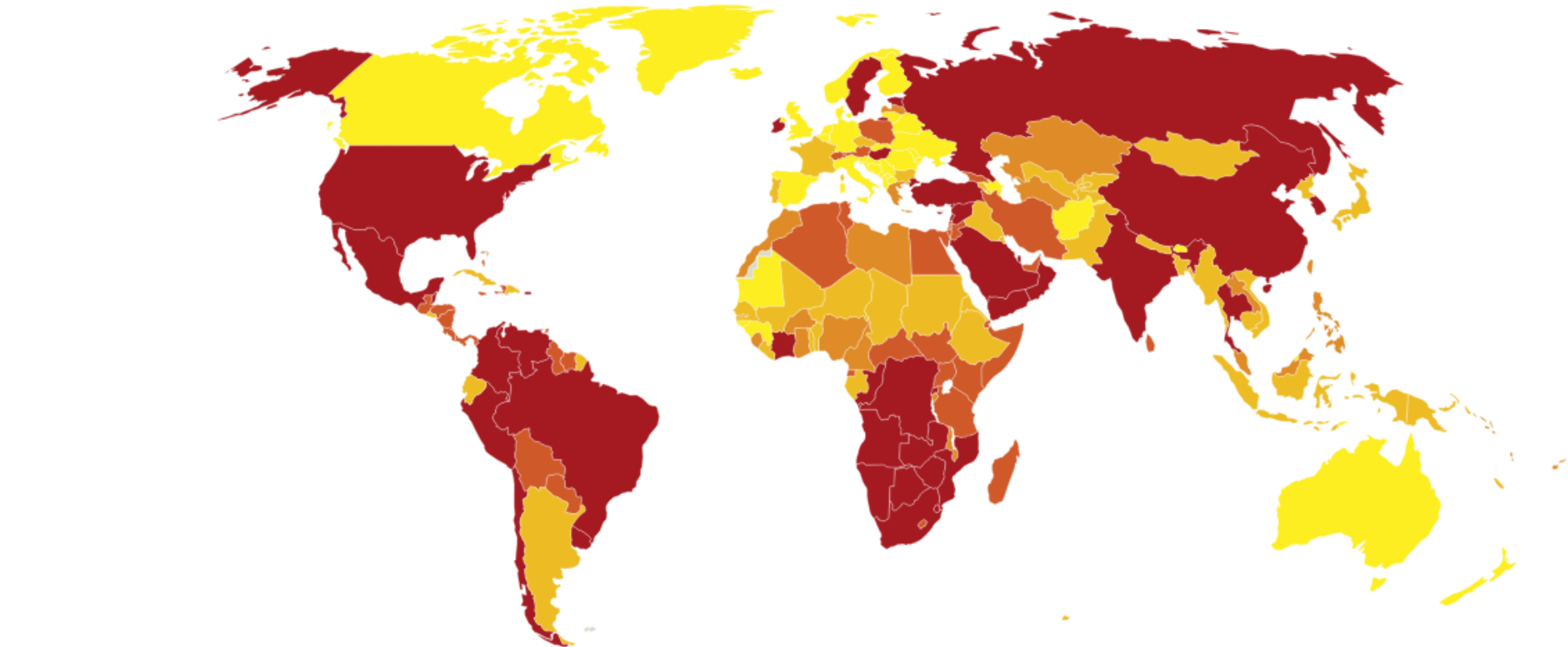
Interpretation. Generally speaking, more equality tends to be associated to more productivity growth, either in time-series or in cross section. In particular, rising inequality since 1990 was supposed to boost productivity growth but led to a decline. The time-series relation holds at the world level as well as in high-income countries and low- and middle-income countries. **Sources and series:** wid.world (C1d)

(3) The Limited Long-Run Compression of Wealth Scale

Basic fact. The long-run compression of the wealth scale in rich countries was less substantial than for the income scale (the bottom 50% wealth has remained close to zero everywhere), but still substantial if we look at the T10/M40 ratio or P90/P50 and P99/P50 ratios.

In the long-run, the rise of the patrimonial middle classe (middle 40%) was arguably good for mobility and efficiency. In the future, the same could happen with bottom 50%.

Top 10% net personal wealth share (2024)

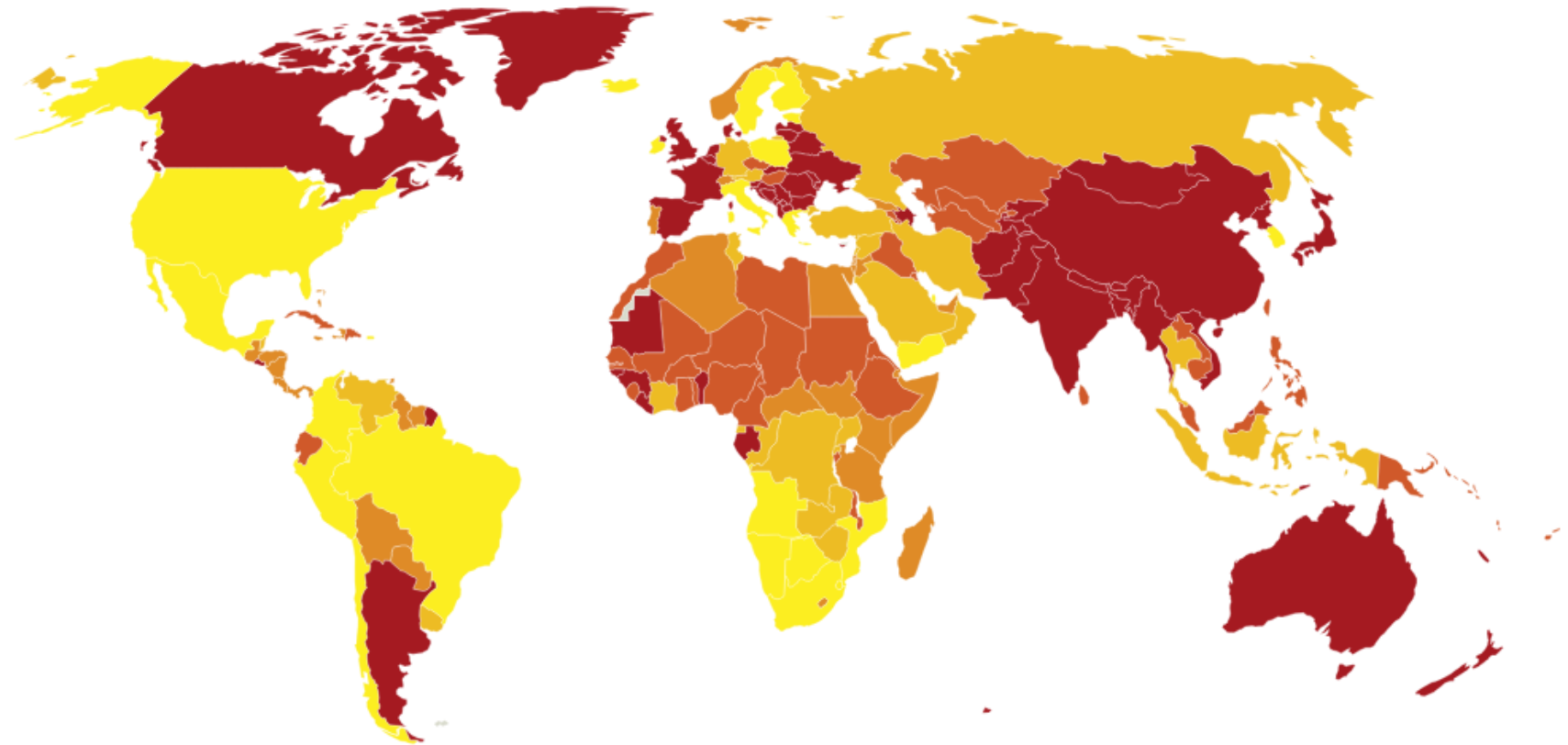


Share of total (%)



Graph provided by www.wid.world

Bottom 50% net personal wealth share (2024)

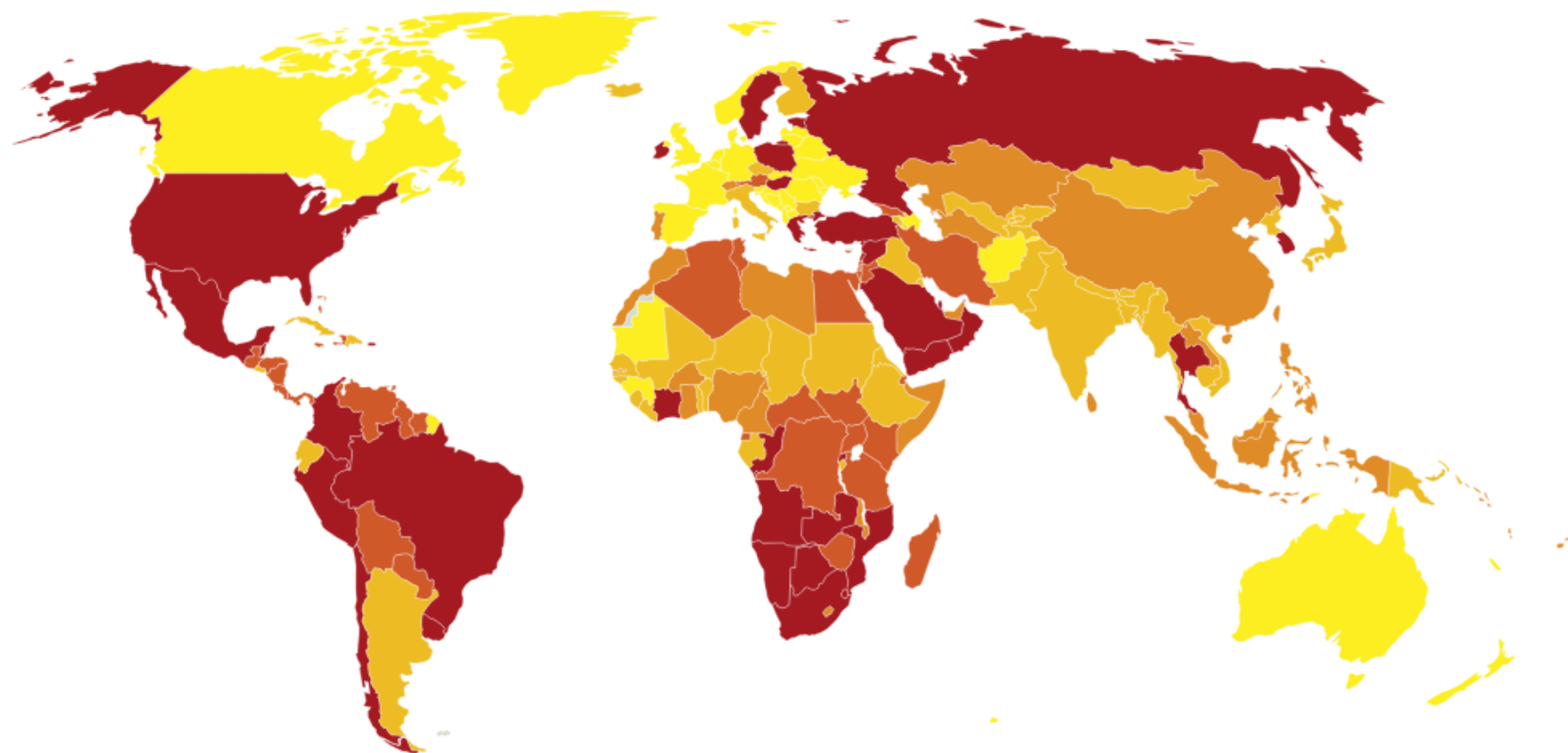


Share of total (%)



Graph provided by www.wid.world

Gini index of net personal wealth (2024)

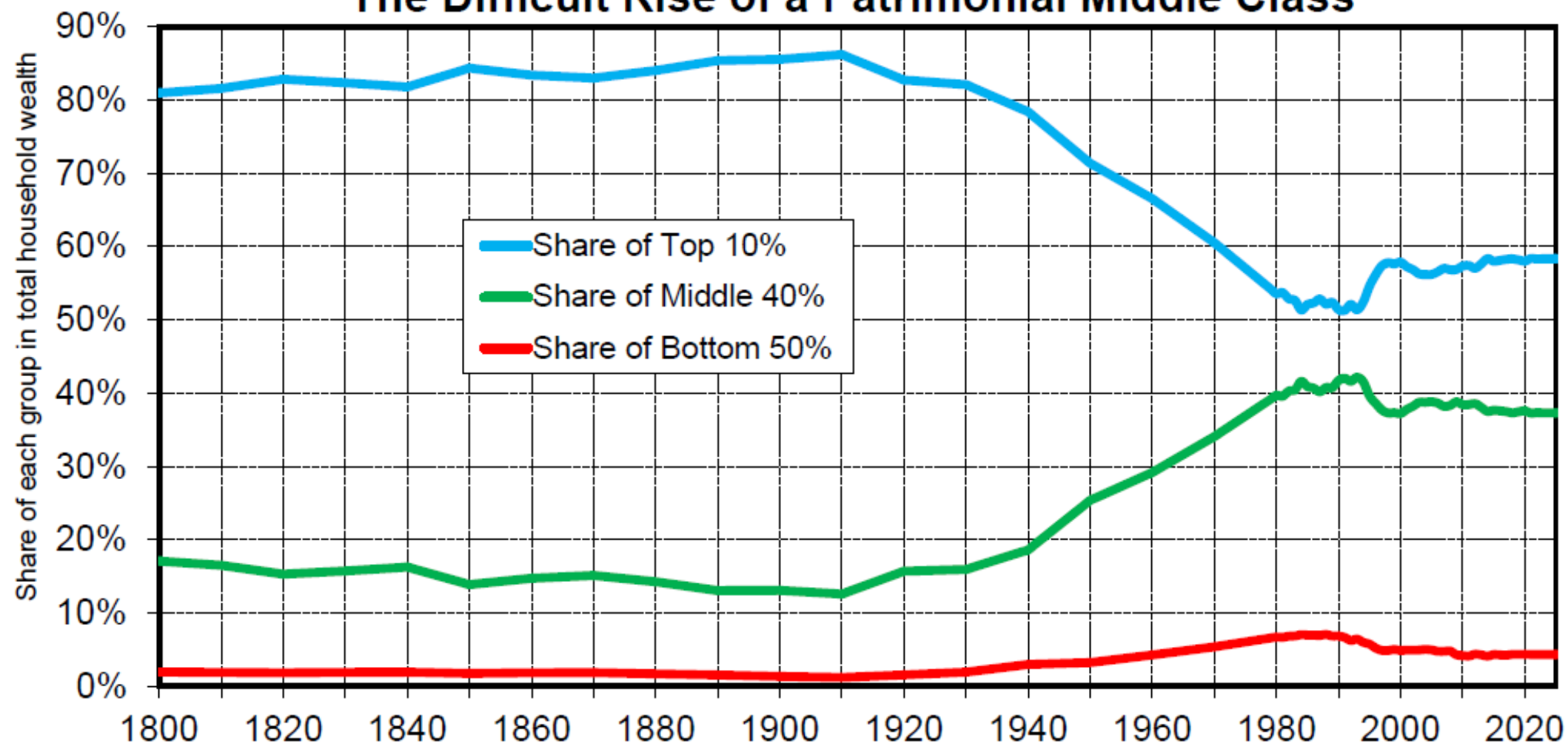


Gini coefficient



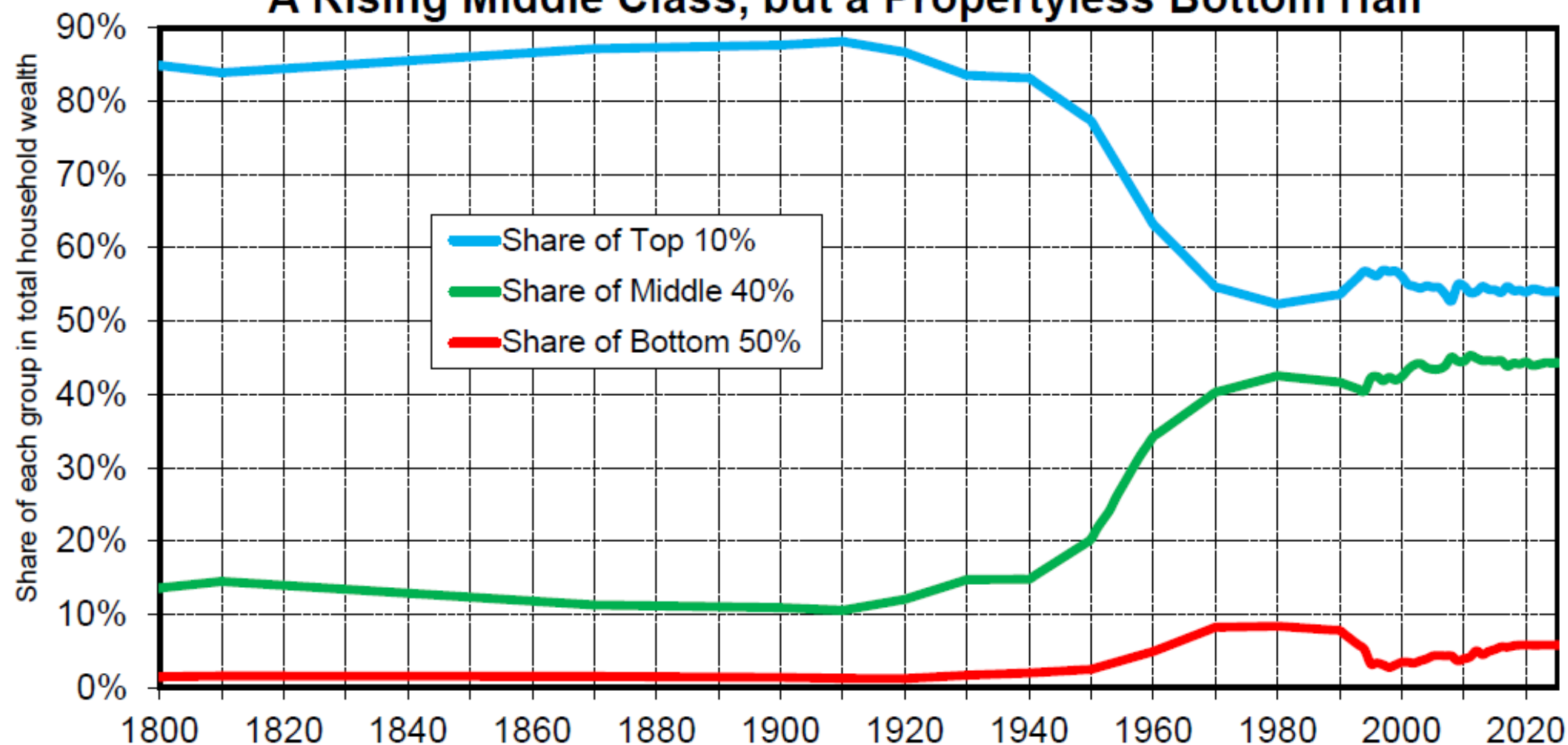
Graph provided by www.wid.world

Wealth Shares in Western Europe: The Difficult Rise of a Patrimonial Middle Class



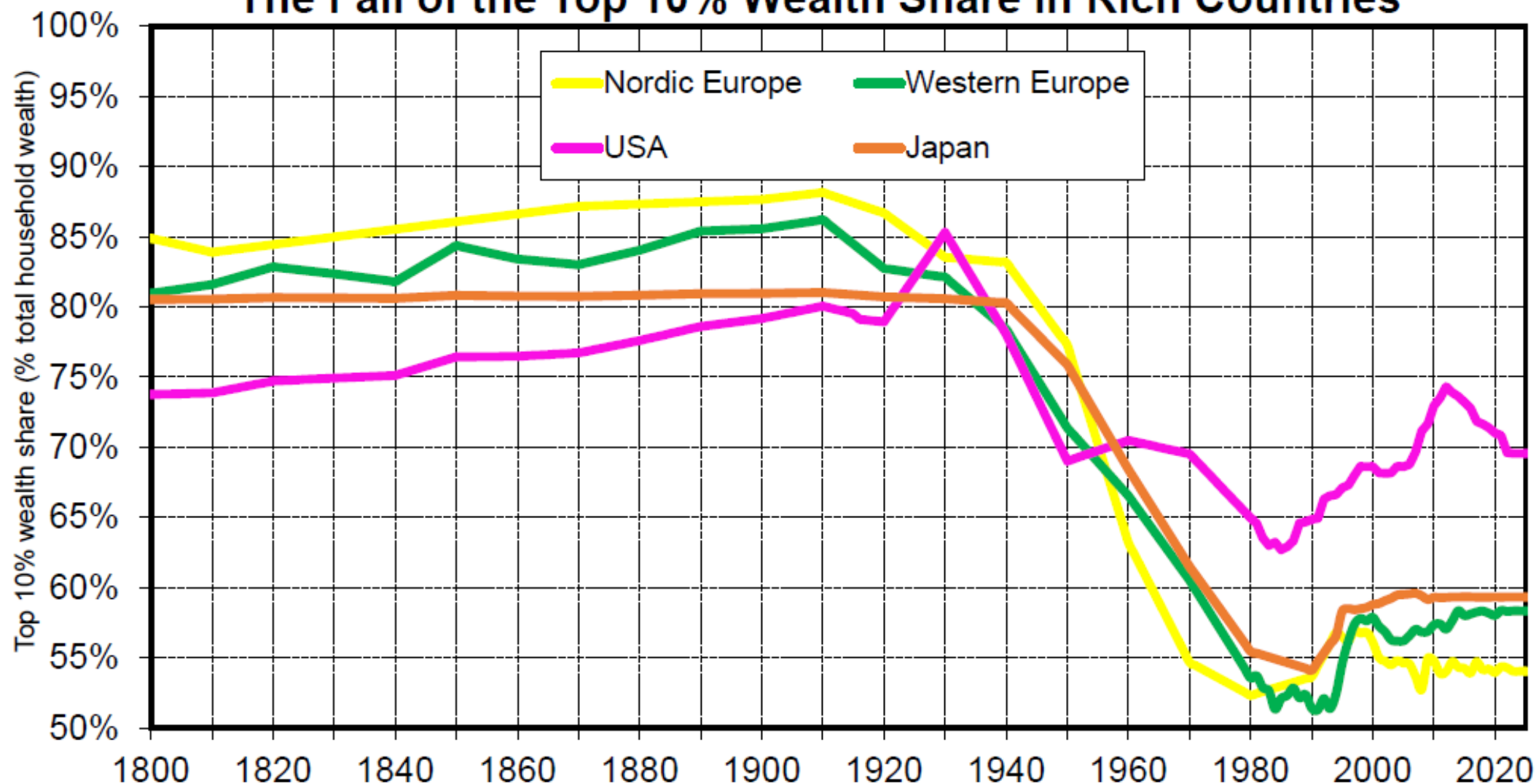
Interpretation. In Western Europe (which we define as the average Germany-France-Britain), the share of the top 10% highest wealth holders in total household wealth (including housing, business and financial assets, net of debt) fell from over 80% in 1910 to about 50-60% since 1980-1990, with a moderate rise in recent decades. The long-run fall of the top 10% share benefited mostly to the next 40% (the "patrimonial middle class") and very little to the bottom 50%. **Sources and series:** wid.world (E1a)

Wealth Shares in Nordic Europe: A Rising Middle Class, but a Propertyless Bottom Half



Interpretation. In Nordic Europe (which we define as the average Sweden-Denmark-Norway-Netherlands), the share of the top 10% highest wealth holders in total household wealth (including housing, business and financial assets, net of debt) fell from over 80% in 1910 to about 50-55% since 1980-1990, with a moderate rise in recent decades. The long-run fall of the top 10% share benefited mostly to the next 40% (the "patrimonial middle class") and very little to the bottom 50%. **Sources and series:** wid.world (E1b)

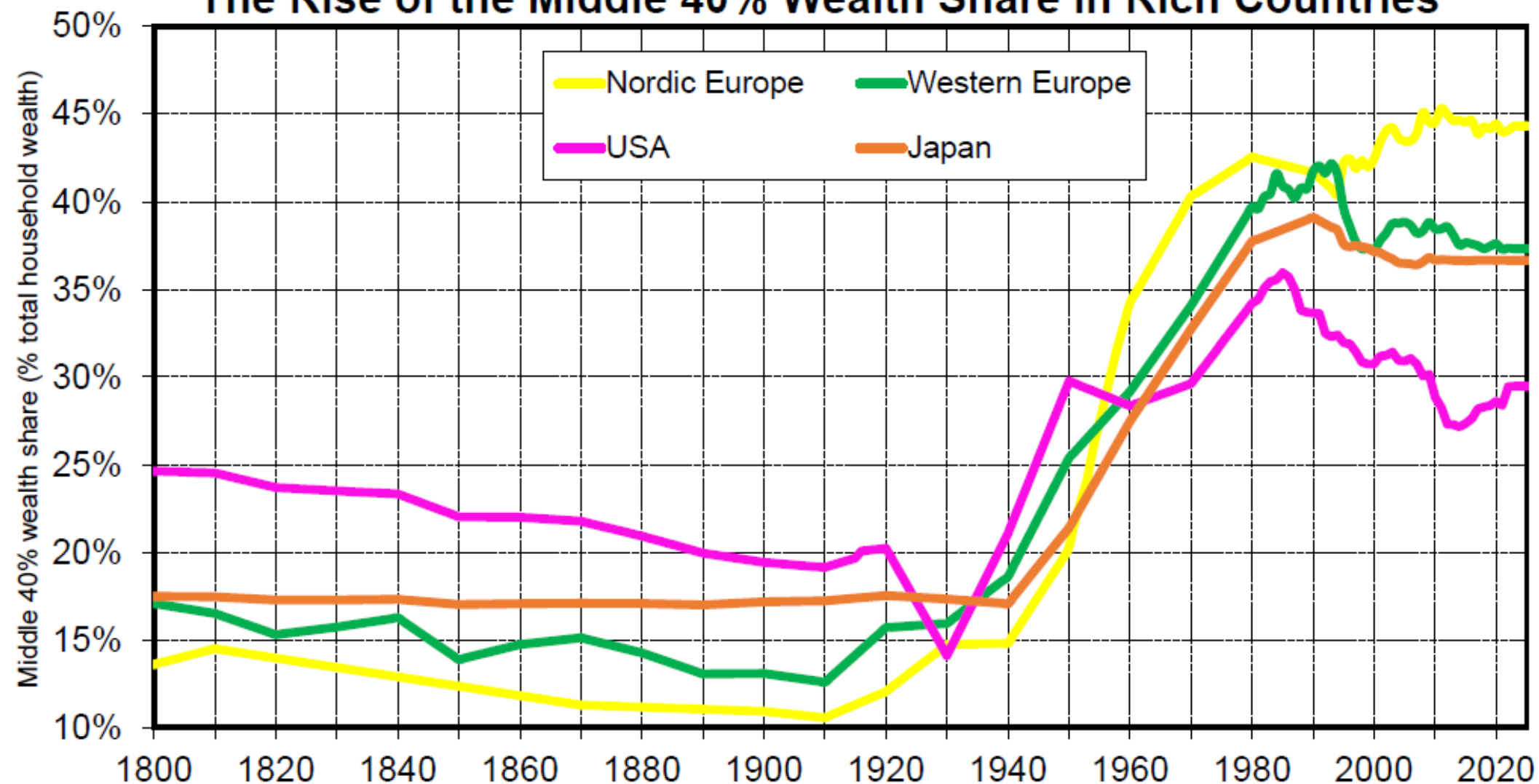
The Fall of the Top 10% Wealth Share in Rich Countries



Interpretation. We observe in all rich countries a significant fall of the top 10% wealth share between 1910 and 1980. In the USA, the fall was less massive than in Western Europe or Nordic Europe, and was partly undone by rising wealth concentration since 1980-1990.

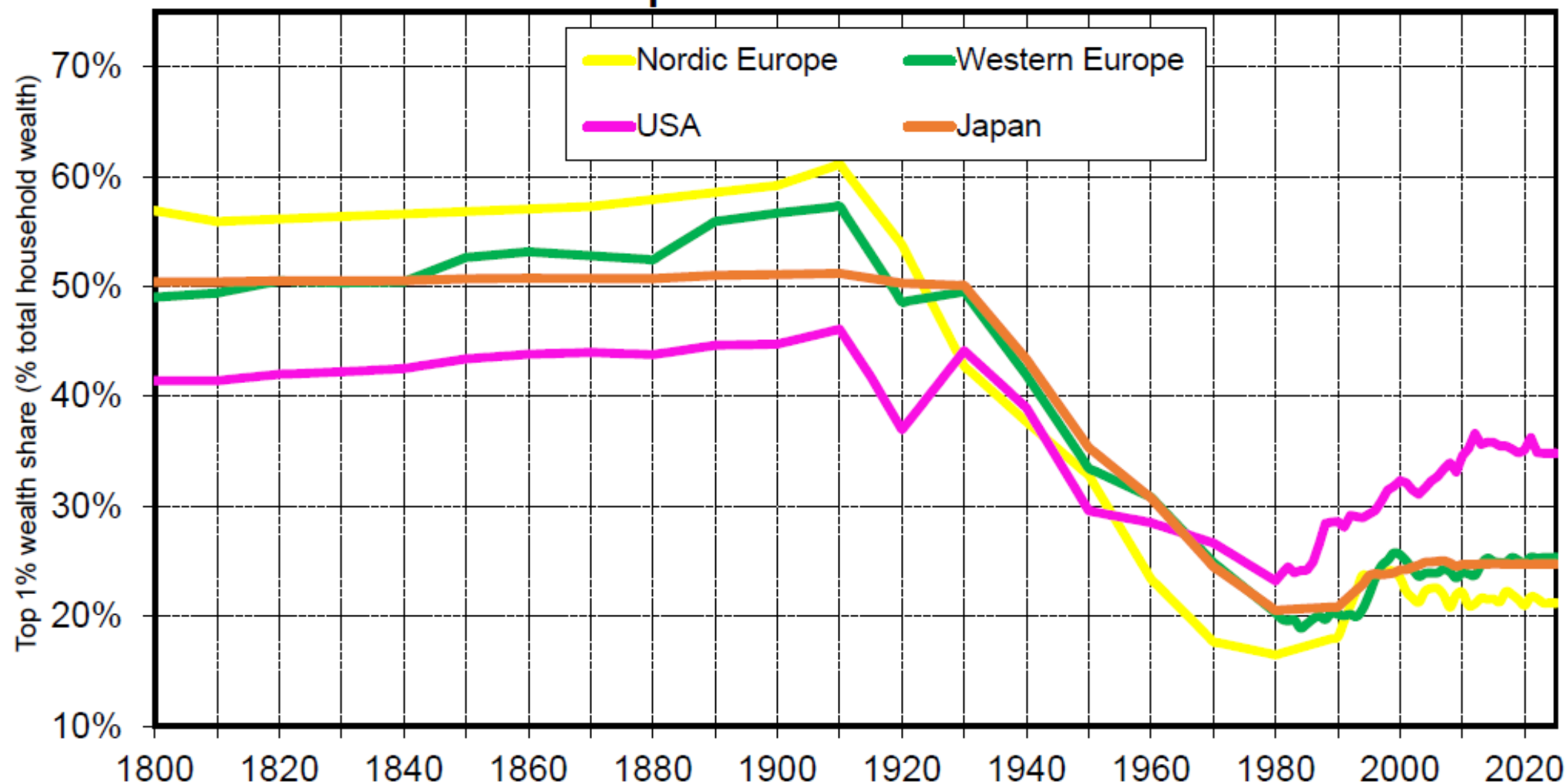
Sources and series: wid.world (E1c)

The Rise of the Middle 40% Wealth Share in Rich Countries



Interpretation. Between 1910 and 1980, we observe in all rich countries a significant rise of the wealth share of the "patrimonial middle class" (the middle 40%, in between the top 10% and the bottom 50%). In the USA, the rise was less massive than in Western Europe or Nordic Europe, and was partly undone by rising wealth concentration since 1980-1990. **Sources and series:** wid.world (E1d)

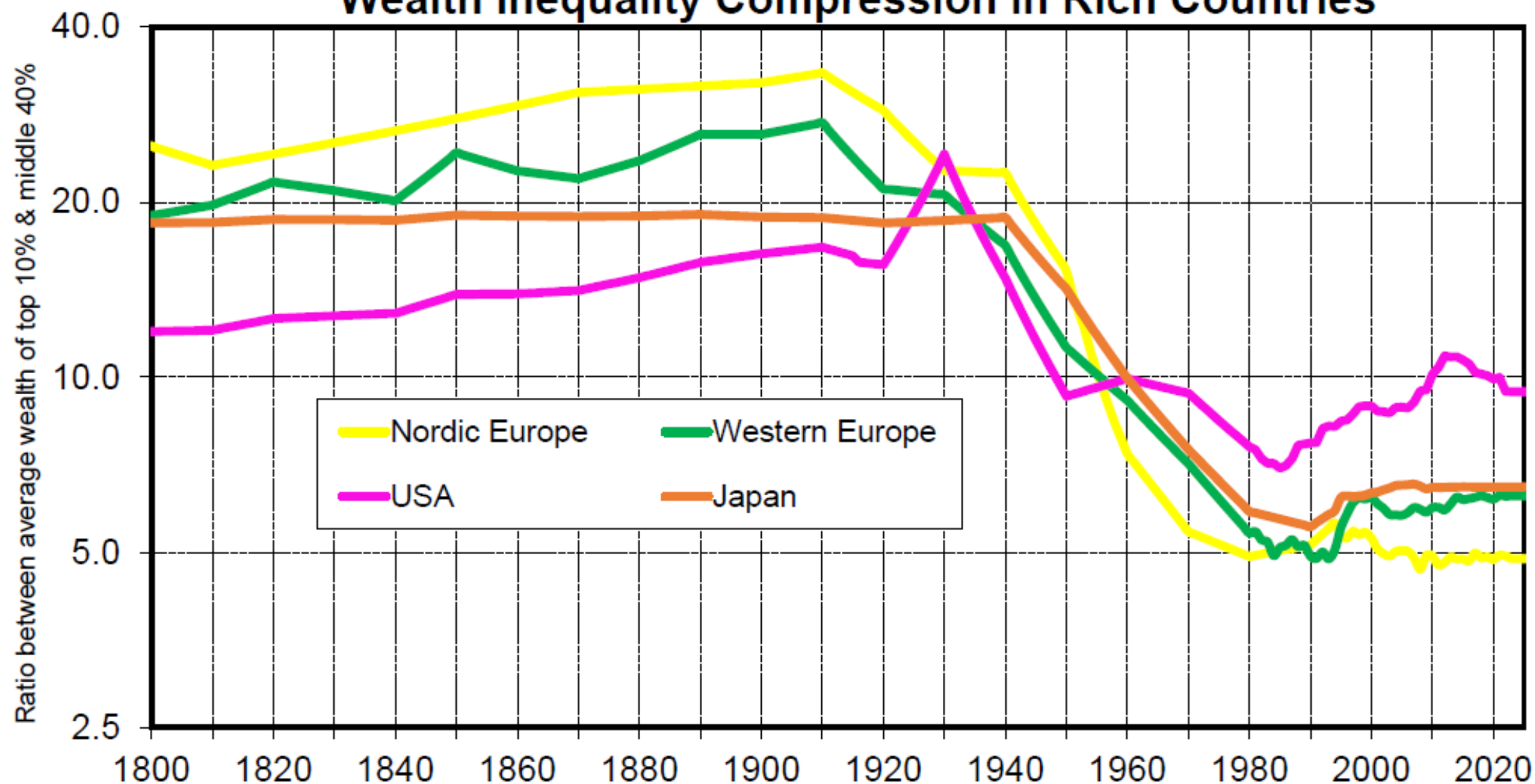
The Fall of the Top 1% Wealth Share in Rich Countries



Interpretation. We observe in all rich countries a very large fall of the top 1% wealth share between 1910 and 1980. In the USA, the fall was less massive than in Western Europe or Nordic Europe, and was partly undone by rising wealth concentration since 1980-1990.

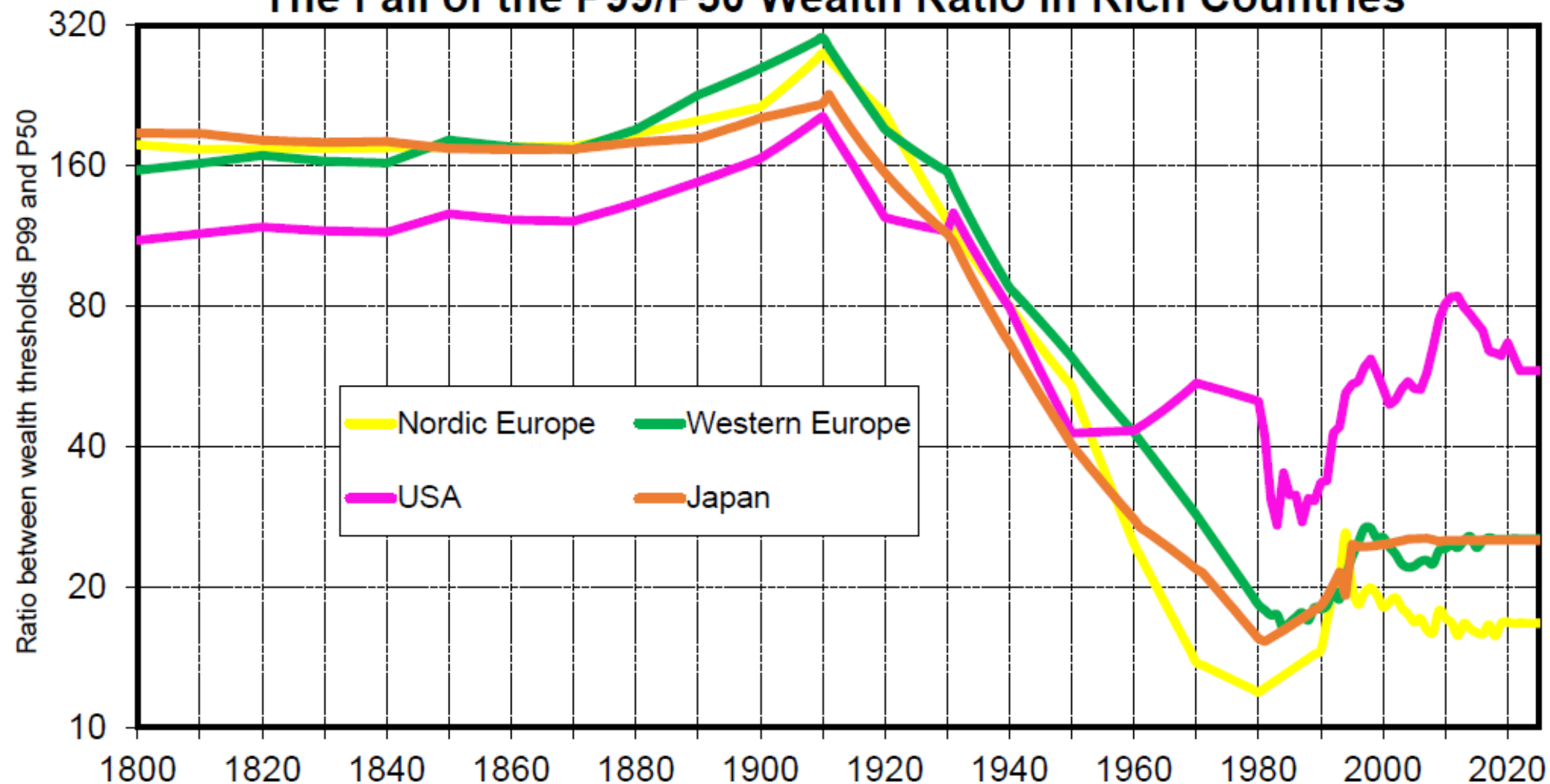
Sources and series: wid.world (E1e)

Wealth Inequality Compression in Rich Countries



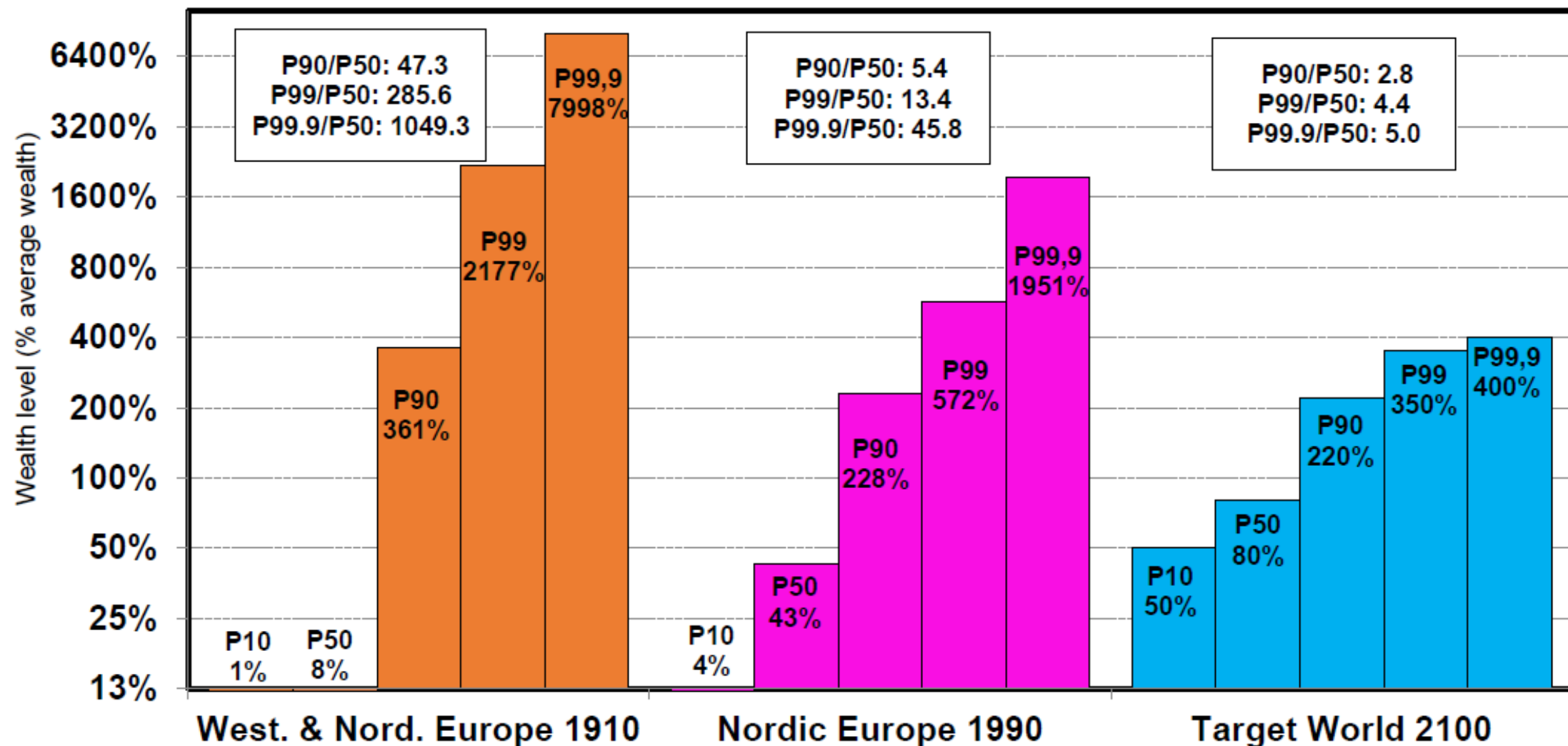
Interpretation. The ratio T10/M40 between the average wealth of the top 10% and the middle 40% has declined in all rich countries in the long run, from about 20-30 in 1900-1910 to about 5-7 in Nordic and Western Europe since 1980-1990. In the USA, the compression of the wealth scale was less massive than in Europe, and was partly undone by rising wealth concentration since 1980-1990. **Sources and series:** wid.world (E2a)

The Fall of the P99/P50 Wealth Ratio in Rich Countries



Interpretation. The ratio P99/P50 between the 99th and the 50th wealth percentiles has declined in all rich countries in the long run, from about 200-300 in 1900-1910 to about 10-20 in Nordic and Western Europe since 1980-1990. In the USA, the compression of the wealth scale was less massive than in Europe, and was partly undone by rising wealth concentration since 1980-1990. **Sources and series:** wid.world (E4a)

The Proper Level of the Wealth Scale: Present and Future



Interpretation. Over the course of the 20th century, the ratio P90/P50 between the 90th and the 50th percentiles of the wealth distribution has been divided by almost 10, while the P99/P50 and P99.9/P50 ratios have been divided by more than 20. In the target level inequality for the world 2100, the P99/P50 is further divided by about 2, the P99.9/P50 by 3 and the P99.9/P50 by 10. In addition, the bottom of the distribution rises to significant levels, possibly via universal minimal inheritance. **Sources and series:** wid.world (E5a)

(4) Regression results on the effect of equality on productivity

In theory the equality effect could be either <0 (equality bad for incentives) or >0 (equality good for inclusiveness, e.g. via more extended opportunities for poor children and adults)

We use multiple specifications in order to test for $b < 0$ or $b > 0$:

$$\mathbf{Prod}_{it} = a + \mathbf{b\ Equal}_{it} + \epsilon_{it}$$

$$\mathbf{ProdGrowthRate}_{it} = a + \mathbf{b\ Equal}_{it} + \epsilon_{it}$$

(+ controls: education expenditure, country-fixed effects, etc.)

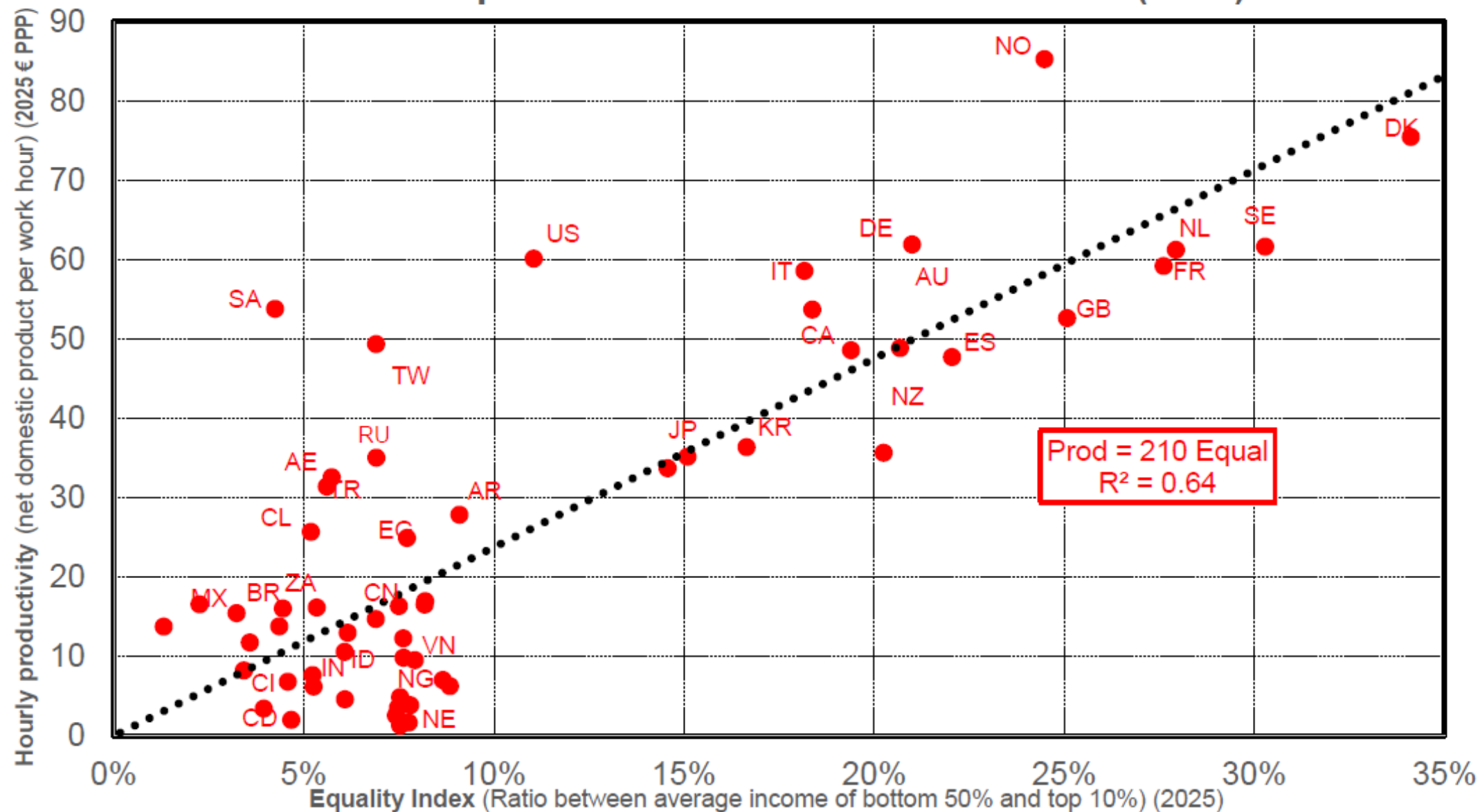
With \mathbf{Equal}_{it} = B50/T10 posttax income ratio, wealth ratio (in-progress)

Of course cross-country regression results will always be imperfect and disputed (and should be).

However our **broad comparative-historical coverage** does deliver very robust results: **equality appears to have a positive impact on growth, in addition to the positive effect of human capital** (albeit probably of a smaller magnitude)

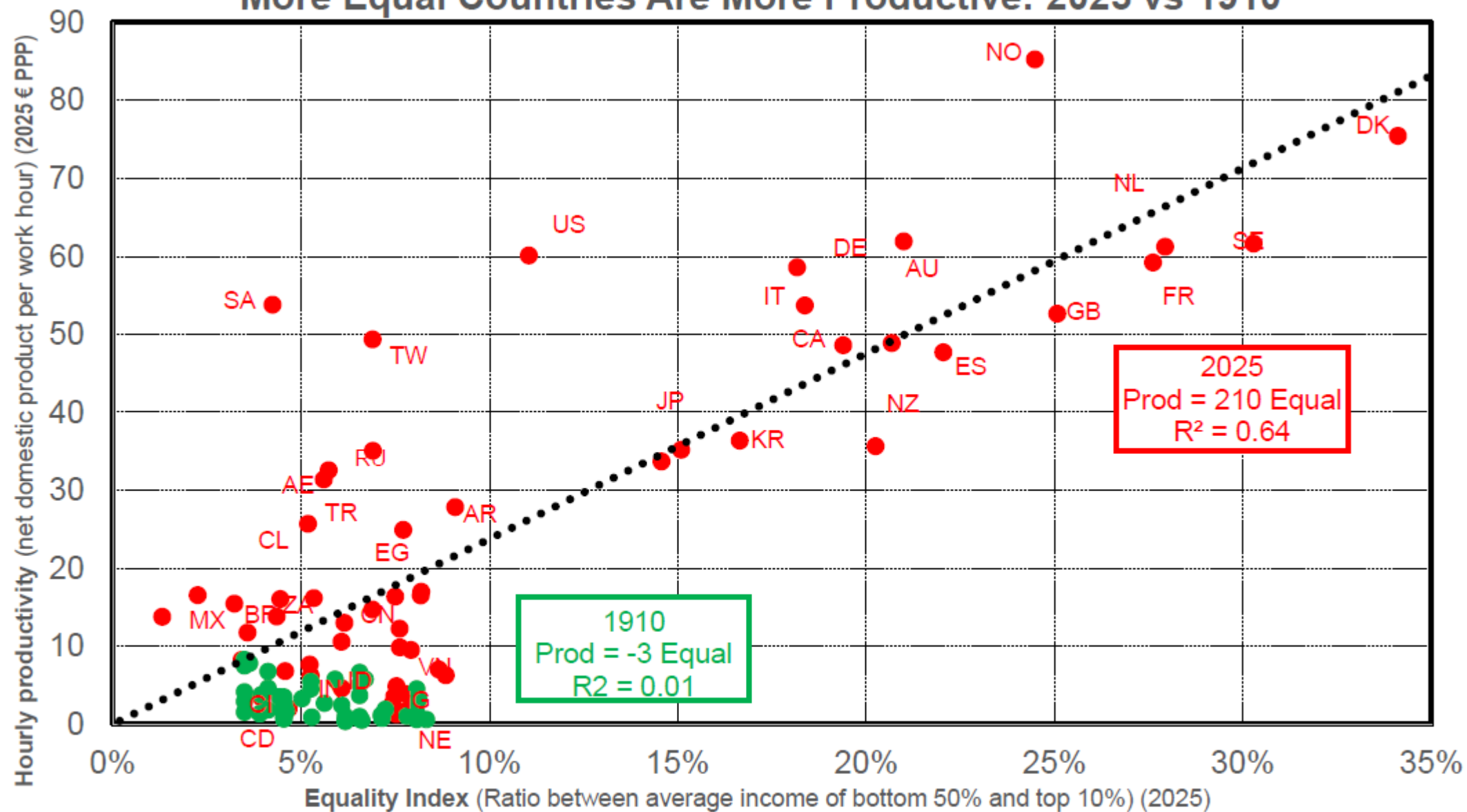
At the very least, everybody should agree that high equality (\approx Nordic Europe 1990-2025) is not necessarily bad for prosperity & is compatible with highest world productivity

More Equal Countries Are More Productive (2025)



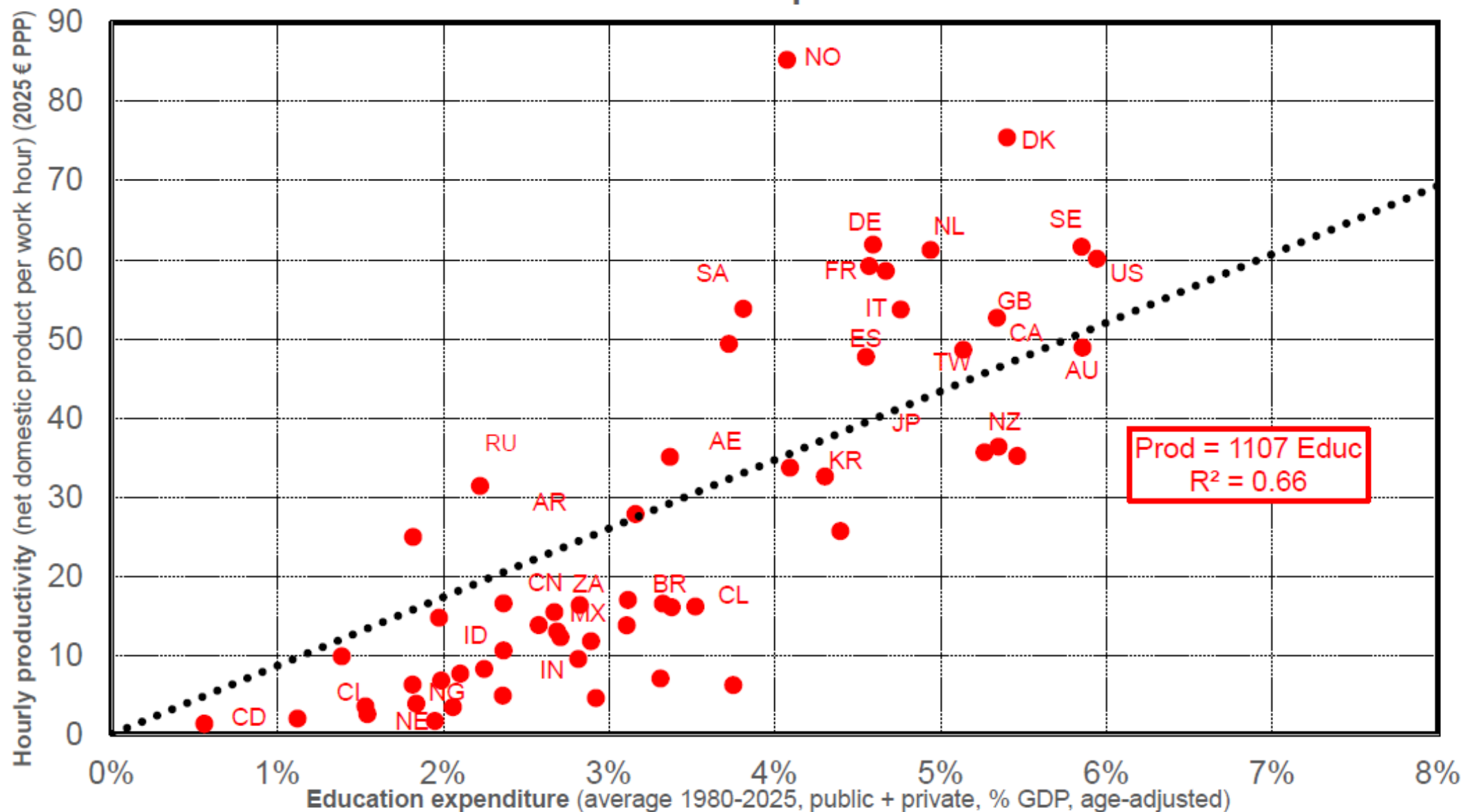
Interpretation. On average, more equal countries are also more productive. Using a simple cross-country linear regression in 2025 (48 main countries), we find that if the equality index B50/T10 rises by 10 percentage points (say from 10% to 20%, i.e. from an income scale of 1-to-10 to 1-to-5), then hourly productivity increases by 21€. **Note.** Oil-rich countries (SA, US, NO) have unusually high productivities. **Sources and series:** wid.world (C2a)

More Equal Countries Are More Productive: 2025 vs 1910



Interpretation. In 2025, we see a highly significant positive relation between equality and productivity, reflecting the rising role of human capital and inclusiveness for prosperity. In 1910, there is no such relation (either positive or negative). Even the highest productivity countries (GB, US) were relatively poor by modern standards (less than 7-8€ in hourly productivity in 2025 PPP) and they were as unequal as other countries, reflecting the role of other factors (coal, cotton, colonies, etc.). **Sources and series:** wid.world (C2b)

Countries with More Education Expenditure Are More Productive



Interpretation. On average, countries with larger education expenditures are also more productive. Using a simple cross-country linear regression in 2025 (48 main countries), we find that if the education expenditure rises by 1 percentage points (say from 4% to 5%, of GDP), then hourly productivity increases by 11€. **Sources and series:** wid.world (C2c)

The Impact of Equality on Productivity (1990-2025)

	$Prod_{it} = a + b Equal_{it} + e_{it}$			$\log(Prod_{it}) = a + b \log(Equal_{it}) + e_{it}$		
Equality Index (B50/T10)	144.2***	104.9***	84.2***	0.926***	0.481***	0.197***
(s.e.)	(3.4)	(3.5)	(3.9)	(0.035)	(0.036)	(0.036)
Human Capital Expenditure (% GDP)		174.3***	103.7***		174.3***	103.7***
(s.e.)		(8.2)	(10.3)		(8.2)	(10.3)
incl. Education			343.5***			343.5***
(s.e.)			(31.4)			(31.4)
R2	0.52	0.62	0.64	0.27	0.47	0.55
N.obs	1728	1728	1728	1728	1728	1728

Interpretation. Using a cross-country regression (48 main countries) over 1990-2025 period, we find a positive impact of equality on productivity. I.e. hourly productivity increases by 14.42€ if the equality index B50/T10 rises by 10 percentage points (say from 10% to 20%, i.e. from an income scale of 1-to-10 to 1-to-5). If we use a log specification rather than a liner regression, we find that productivity rises by 0.926% if the equality index rises by 1%. The positive impact of equality on growth declines as we introduce human capital expenditure (education + health, public + private, % GDP, average over previous 30 years), and especially when we introduce education, but the equality effect remains positive and significant.

The Impact of Equality on Productivity (1800-2025)

	ProductivityGrowthRate _{it} = a + b Equal _{it} + e _{it}		
Equality Index (B50/T10) (s.e.)	0.086*** (0.002)	0.094*** (0.002)	0.090*** (0.004)
Human Capital Expenditure (% GDP) (s.e.)			0.008* (0.004)
Country Fixed Effects	NO	YES	YES
R2	0.11	0.20	0.21
N.obs	9408	9408	9408
<p>Interpretation. Using a panel regression (48 main countries) over the 1800-2025 period, we find that the annual productivity growth rate rises by about 0.9% per year (say from 1.0% to 1.9% per year) if the equality index B50/T10 rises by 10 percentage points (say from 10% to 20%, i.e. from an income scale of 1-to-10 to 1-to-5). The effect is virtually unaffected by the inclusion of country fixed effects and human capital expenditure. Note. Growth rates are computed as average growth rates over past 30 years. Equality index and human capital expenditure are also computed as averages over past 30 years.</p>			

Concluding comments

Thanks to WID series on income & wealth inequality and productivity growth 1800-2025, it is possible to reinvestigate the relation between inequality and growth, with a broader comparative and historical perspective than previous studies

We find a strong positive impact of equality on growth: more inclusive and egalitarian societies are more productive

We use our findings to estimate the ideal income scale (\approx 1-to-5) (preliminary) and ideal wealth scale (\approx 1-to-10) (in-progress) for future sustainable development trajectories 2025-2100

→ This will be further developed in the context of the Global Justice Project: the objective is to describe counterfactual development trajectories with specific patterns of income and wealth scale compression, labour hours reduction, increased human capital expenditure, and sectoral reallocation of labour, capital and trade so as to meet sustainability and habitability targets