WID INCOME AND WEALTH DISTRIBUTIONAL SERIES UPDATED AND EXTENDED COVERAGE, 1800-2024

MANUEL ARIAS-OSORIO
LUIS BAULUZ
PIERRE BRASSAC
LUCAS CHANCEL
CLARA MARTINEZ-TOLEDANO
ROWAIDA MOSHRIF
THOMAS PIKETTY

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WID Income and Wealth Distributional Series: Updated and Extended Coverage, 1800-2024

Manuel Arias-Osorio[1], Luis Bauluz[2], Pierre Brassac[3], Lucas Chancel[4], Clara Martinez-Toledano[5], Rowaida Moshrif[1], Thomas Piketty[1]

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Abstract. This technical note describes the new extended set of distributional series available in the World Inequality Database (WID), including series on pretax income distribution, posttax income distribution and wealth distribution. All benchmark series cover the entire world, which is defined as a sum of a stable set of 216 core countries and jurisdictions over the 1980-2024 period and as the sum of a stable set of 57 core territories (48 main countries + 9 residual regions) over the 1820-2024 period. Our benchmark series are annual over the 1980-2024 period and cover years 1820, 1850, 1880, 1900, 1910, and every ten years until 1980 over the 1820-1980 period. We also provide the list of countries-years for which we offer additional coverage.

[1]WIL (World Inequality Lab), PSE (Paris School of Economics). [2]WIL & CUNEF (Madrid). [3]WIL & UC3M (Madrid). [4]WIL & Sciences Po (CRIS). [5]WIL & Imperial College (London).

1. Introduction

This technical note describes the new extended set of distributional series available in the World Inequality Database (WID), including series on pretax income distribution, posttax income distribution and wealth distribution. All benchmark series cover the entire world, which is defined as a sum of stable set of 216 core countries and jurisdictions over the 1980-2024 period and as the sum of stable set of 57 core territories (48 main countries + 9 residual regions) over the 1820-2024 period. Our benchmark series are annual over the 1980-2024 period and cover years 1820, 1850, 1880, 1900, 1910, and every ten years until 1980 over the 1820-1980 period. We also provide the list of countries-years for which we offer additional coverage.

The rest of this technical note is organized as follows. We describe in section 2 the historical and geographical coverage of our benchmark income and wealth distribution series. We describe in section 3 the set of additional countries-years which are available in our database. Finally, we provide concluding comments in section 4. The online replication package includes all tables, figures and computer codes. The central WID code on distributional series is available on WID GitHub page.

2. WID Benchmark Distributional Series

The structure of WID benchmark distributional series is described on Table 1. These new extended series are used by Andreescu et al (2025) in order to revisit the relation between inequality and development.

The main novelty is that we now provide the same geographical and historical coverage for income and wealth distributional series. Namely, WID benchmark distributional series for pretax income, posttax income and net household wealth now cover all 216 WID core countries and jurisdictions for all years over the 1980-2024 period. Prior to 1980, WID benchmark income and wealth distributional series are restricted to 57 core territories (48 main countries + 9 residual regions) and to a selected number of benchmark years (namely 1820, 1850, 1880, 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970) (see Table 2). For now, posttax series are not available in a systematic manner in WID prior to 1980. They will be completed in the near future (see section 4).

The 48 main countries were chosen on the basis of population size, GDP, regional representativity and data availability. Throughout the 1800-2025 period, the 48 main

countries cover about 85-90% of the world population and GDP, while the 9 residual regions cover 10-15% (see Nievas and Piketty (2025)).

WID benchmark series always all cover all income and wealth shares, average income and wealth, income and wealth thresholds for all 127 g-percentiles[1] and all benchmark years countries (variables sptinc, aptinc, tptinc for pretax income, variables sdiinc, adiinc, tdiinc for posttax income, variables shweal, ahweal, thweal for wealth). WID benchmark series also include for all countries-years a number of inequality indicators T10/B50 ratio (r), Gini coefficients (g), inverted Pareto-Lorenz coefficients (b).

WID benchmark series for pretax income, posttax income and personal wealth are always equal-split series (ind=j). They always cover both per capita (ag=999) and per adult (ag=992) income and wealth concepts. By default, the series for normalized distributions (income shares and wealth shares) are the same for per capita and per adult income and wealth.[2]

All WID benchmark series strictly follow the latest edition of DINA Guidelines (see Chancel et al (2025)). Generally speaking, historical pretax income distribution series covering the 1820-1970 period are based upon Chancel and Piketty (2021), with three main novelties. First, the distributions were revised for several fractiles in specific country-year combinations. Next, the series were extended to the new set of 57 core territories. In the absence of any specific country study, we attribute to the country the normalized distribution of the corresponding residual region. Finally, the full historical series for all 127 g-percentiles were homogenized using gpinter (Blanchet et al (2022)).[3]

Regarding posttax income distribution, for now the series that we have made available online in the World Inequality Database only cover the 1980-2024 period. The pre-1980 posttax series used in Andreescu et al (2025) are based upon simplifying assumptions. Namely, we assume that pretax and posttax inequality levels are the same until 1910, and then that the magnitude of redistribution evolves linearly between

[1] Generalized percentiles (or g-percentiles) refer to the 127 quantiles defined by the bottom 99 percentile, the 9 tenth-of-percentile at the top 1%, the 9 hundredth-of-percentile at the bottom of the top 0.1% and the 10 thousandth-of-percentile within the top 0.01%. Lower threshold and average income for each of the 127 g-percentiles provide the basic distributional data that is being stored in WID.world for each country-year. Country-level and sub-regional-level data by g-percentile can be aggregated up to the regional and world levels using the gpinter (generalized Pareto interpolation) facility available online at wid.world/gpinter. See Blanchet, Fournier and Piketty (2022).
[2] For now, per capita and per adult series differ only for a small subset of countries-years.
[3] See online replication package.

1910 and 1980 at the country level.[4] This can be justified by the general evolution of public revenue and expenditure over the past century (from less than 10% of GDP in all countries until 1910, up to 40-50% of GDP in recent decades in rich countries) An alternative estimation strategy consists of using detailed country-level series on public expenditure and revenue by categories (see Bharti et al (2025) and explicit assumptions on their distributional incidence (based upon post-1980 observed profiles and other sources; see Fisher-Post and Gethin (2023) and Gethin (2024)). Preliminary estimates suggest that this would make very little difference. We plan to release extended posttax series following such a methodology in the future.

Regarding wealth distribution series, we have put together a large number of historical estimates published by WIL fellows and other researchers covering the entire 1820-2024 period, and we have made imputations for missing countries-years on the basis of their position in terms of income distribution (see section 2.2. below).

2.1 Revision of Selected Fractiles of Pretax Historical Series

The integration of the extended macroeconomic series by Nievas and Piketty (2025) provided an opportunity to revisit the historical pretax income distributions before 1970. First, this reassessment led to two rounds of revisions. The first round involved single modifications to top 10% income shares for a limited number of main countries and residual regions. The second round consisted of a broader set of adjustments, including both single and multiple modifications to income shares and/or bracket thresholds at specific fractiles. These adjustments were implemented through four algorithms, each designed to preserve internal consistency and maintain close resemblance to the original distribution.

Prior to any modification, the first step was always to collapse the available historical distributions for the countries concerned into a reduced, standard fractile structure: P0–P10, P10–P25, P25–P50, P75–P90, P90–P99, and P99–P100. This simplified distribution, tailored to the targeted values, preserves the main features of the original distribution curve, with particular emphasis on the upper tail[5]. This version of the distribution was then normalized so that average income equals 1, both at bracket averages and at thresholds.

2.2.1. First Round of Revisions

In principle, a simple way to modify a distributional series to aim a target value at a specific percentile can be achieved through two operations. First, all income shares at

[4] See online replication package and computer code associated to Andreescu et al (2025) for all details.
[5] Without the P99–P100 bracket, the corrected distributions would lose a substantial amount of precision (see Blanchet, Fournier, and Piketty, 2022).

or above the targeted fractile must be multiplied by a coefficient *k* so that the targeted percentile share reaches its desired value. Second, all income shares below the targeted percentile must be divided by the same coefficient in order to preserve total average income and ensure that income shares remain balanced.

To implement this procedure, we first compute the coefficient *k*, defined as the ratio between the target value (see the target values used for the corrections in the Annex 1) and the currently available value in the WID for the same country–year–percentile combination in the pre-tax adult income series, as seen below, where the feature are the shares:

$$k = \frac{\text{TargetFeatureValue}}{\text{CurrentFeatureVaue}}$$

Please note that all the corrections in this revision round target the Top 10% income share [P90–P100]. As a result, the coefficient k represents the correction factor that would apply if the fractile structure contained no explicit Top 1% [P99–P100]. However, since the reduced standard fractile structure explicitly distinguish between the next 9% [P90–P99] and the Top 1%, multiplying both components by k proportionally does not, in general, yield the desired Top 10% share when they are recombined.

To address this issue, we introduce an adjustment term α, such that the corrected coefficient k+α ensures that the sum of the adjusted P90–P99 and P99–P100 shares exactly matches the target Top 10% value, while preserving the internal consistency of the remainder of the distribution. In this sense, k+α acts as the effective correction coefficient for the next 9% rather than for the full Top 10%.

Starting from the initial value of k, the adjusted coefficient k+α is obtained numerically as the solution to the following equation:

$$0 = S_{p^{selected}}^{Target} * \left(\frac{\left(\frac{\sum_{i=p0p25}^{one\ before\ the\ p^{selected}} S_i}{k+\alpha} \right) + \left(\left(\sum_{i=p^{selected}}^{p99p100} S_i \right) * (k+\alpha) \right)}{\sum_{i=p^{selected}}^{p99p100} S_i} \right) - k - \alpha$$

In this application, p^{selected} corresponds to $P90$–$P100$, and the percentile immediately below ($one\ before\ the\ p^{\text{selected}}$) to $P75$–$P90$.

Once the adjusted coefficient is obtained, all bracket averages and income shares for percentiles $p \geq 90$ are multiplied by $k + \alpha$ leaving only the threshold at $P90$ unchanged, while all thresholds, and shares (and therefore the bracket averages) below $P90$ are divided by the same coefficient and rescaled to ensure that all the shares add up to 1. Finally, the gpinter tool is applied to the corrected

distributions to generate the 127 g-percentiles included in the central WID production code, which are subsequently calibrated using the macroeconomic national income series from Nievas and Piketty (2025). These corrections were implemented in April 2025.

2.2.2. Second Round of Revisions

For the second revision round, conducted in September 2025, the updates involved a substantially larger number of country–year–percentile corrections (see the target values used for the corrections in the Annex 2). These revisions included both country–year observations involving a single adjustment to a specific income share and country–year observations requiring multiple simultaneous corrections to income shares and/or thresholds at different percentiles, which can be grouped into four distinct cases.

As a first step, in all cases, the corrections were applied starting from the reduced standard fractile structure of the distribution.

Case 1: Single corrections of inner shares

Some corrections—such as the Bottom 50% share for Sweden between 1820 and 1950, or the Top 10% share for Other Sub-Saharan Africa in 1920 and 1930—required adjustments to percentile shares that are *not* boundary fractiles (i.e. neither $P0–P10$ nor $P99–P100$). These cases do not differ conceptually from those discussed in Section 2.1, and the same correction algorithm can therefore be applied, with the grouping of fractiles in equation above adjusted to reflect the selected percentile (P^{selected}). As in the previous cases, a coefficient $k + \alpha$ is computed and applied so that the corrected distribution exactly matches the target share at P^{selected}, while preserving total income and internal consistency.

Case 2: Single boundary changes

Whenever revisions affected only a single *boundary* share—that is, the Bottom 10% $[P0–P10]$ or the Top 1% $[P99–P100]$—for specific country–years, the target values directly substituted the corresponding WID values (and as a consequence, the sum of income shares no longer equaled one). As in the benchmark case described in Section 2.2.1, the remaining fractile shares were therefore rescaled so that, together with the modified boundary share, total income shares summed to one.

The same rescaling factor was applied to the corresponding thresholds in order to keep them proportional to the updated shares. New bracket averages were then recomputed from the corrected shares. Finally, the resulting reduced standard fractile distributions were passed through the gpinter procedure to generate the complete set of 127 g-percentiles.

Case 3: Compiled boundary changes

In some cases, revisions were required simultaneously for multiple contiguous fractiles, such as $P0–P10$ and $P10–P25$, $P90–P99$ and $P99–P100$, or even $P0–P10$, $P10–P25$, and $P25–P50$, as in the case of Other MENA (OE-PPP) in 1820. These corrections involve adjacent fractiles located near the boundaries of the distribution ($P0–P10$ or $P99–P100$). In this setting, the adjustment can be implemented in a manner closely analogous to the procedure described in Case 2, as if the distribution had undergone a single correction over an enlarged boundary percentile.

First, target values defined for grouped percentiles must be translated into their equivalents in the reduced standard fractile structure. Boundary fractiles can be kept unchanged, while shares for contiguous interior fractiles are obtained by differencing, that is, by subtracting the value of the previous fractile. This conversion is illustrated in the example below:

Grouped fractile		Correspondence
P0p10	→	P0p10
P10p25	→	p10p25 - P0p10 (= next 15 of 25)
P25p50	→	p25p50 - p10p25 (= next 25 of 50)

Second, these translated share values are directly substituted into the distributions, keeping the corresponding thresholds unchanged. Third, the remaining fractile shares are rescaled so that, together with the modified fractiles, total income shares sum to one. The same rescaling factor can be applied to thresholds not affected by the revision.

Using the resulting corrected shares, proportional bracket averages are recomputed. Finally, the corrected reduced standard fractile distributions are passed through the gpinter procedure to generate the complete set of 127 homogenous g-percentiles.

Case 4: Changes exclusively to the thresholds

In a limited number of cases—such as France in 1900 (revisions at $P10$ and $P50$), Great Britain in 1920, 1930, and 1940 (revisions at $P50$ and $P90$), and Other Sub-Saharan Africa (OJ-PPP) in 1880 and 1900 (revisions at $P10$and $P50$)—the required corrections affected only threshold values, with no direct modification of income shares. For these cases, the revision and rebalancing of the distribution were carried out as follows.

First, each targeted threshold was replaced by its target value by multiplying the original threshold by a coefficient *k* (let the feature is the threshold in this case), computed separately for each affected fractile. This implies, for example, that in the case of France in 1900, one coefficient is applied to the $P10$ threshold and another to

the $P50$ threshold. Please note that, all target threshold values in this revision round correspond to interior percentiles rather than boundary fractiles.

Second, to preserve internal consistency, the same coefficient k applied to the most extreme interior percentile (i.e. $P10$ or $P90$) is also applied to the threshold of the corresponding contiguous boundary percentile (i.e. $P0$ or $P99$). To maintain consistency between thresholds and bracket averages, this adjustment is replicated using the same coefficients for the income shares at the same fractile levels.

After this step, the distribution is in the same configuration as Case 3. Accordingly, the third step consists in rescaling the remaining fractile shares and as described in the previous sections, adjusting the thresholds on the same scale, recomputing proportional bracket averages using the revised shares, and finally applying the gpinter procedure to expand the reduced standard fractile structure into the full set of 127 g-percentiles.

2.2. Imputation Method for Missing Wealth Distribution

We have put together a large number of historical estimates published by WIL fellows and other researchers covering the entire 1820-2024 period. For missing countries-years, we use an imputation method that is similar to the method described in Bajard et al (2025), and that is based on the observation that top income shares are a strong predictor of top wealth shares in countries with missing wealth data. The key difference is that we now apply this method not only to the 1995-2024 sub-period but to the entire 1820-2024 period.

More precisely, we describe on Table 4 the set of countries-years with wealth distribution estimates which we use for imputing missing observations. As one can see from Figure 1, the relationship between top 10% income shares and top 10% wealth shares is very strong. It is also striking to see that the relationship holds within each sub-period, namely 1800-1909, 1910-1979 and 1980-2024 (see Figures 2-4). We apply two different bandwidths over the 1820-1979 (h = 0.11) and 1980-2024 (h = 0.27) periods to predict the distribution of wealth (see Bajard et al (2025)). It ensures the best possible fit with existing recent estimates while producing reasonable historical ones. These two bandwidths are both small, exploiting the strong correlation found between wealth and income inequality. We have tried several alternative methods and this appears to be the most robust method.[6]

[6] See online replication package.

2.3. Imputation Method for MER Historical Distributions

Using the PPP distributions of the residual regions, we construct MER versions for benchmark years prior to 1980. Following, these residual regions can be aggregated with the core countries for estimating MER distributions for the continental regions and the world, exactly as it is done for from 1980 on.

First, we collapsed the distribution of each residual region in 1980 into the percentile structure described above:

i. Standard structure: 0–10, 10–25, 25–50, 50–75, 75–90, 90–99, and 99–100 which will later be homogenized using gpinter tool.

Given data availability in 1980, we observe percentile-level values in both PPP and MER terms, allowing us to compute the differences in shares between the two valuation currencies for each residual region.

We then applied a two-step adjustment procedure. First, we added the calculated differences to the PPP shares for each percentile and for each benchmark year from 1820 to 1970. This produces percentile series that follow the PPP dynamics but are anchored at the observed MER levels in 1980. We then recalculated bracket averages based on the adjusted shares.

While this simultaneous adjustment performs well in most cases, in a few regions—most notably Other South and Southeast Asia and Other North America—it led to non-monotonically increasing bracket averages at percentiles 10, 25, and 50 (sometimes one of them, sometimes all three). The second step of the adjustment involved **dropping** these non-monotonic observations and replacing them using an interpolation method slightly modified from that used in the WID central code to correct the pretax bottom 20 percentiles for certain countries. The interpolation formula used is

$$a_p = a_L + (a_U - a_L) * (\frac{p - p_L}{p_U - p_L})^{1+\alpha}$$

where a_L and a_U are the lower and upper observed bracket averages (i.e., the last ones satisfying the monotonicity condition), p_L and p_U are the corresponding

percentiles, and p is the percentile being interpolated. The parameter α controls the concavity of the interpolated curve and is computed as[7]

$$\alpha = \frac{a_{99}}{mean(a_{75}, a_{90}, a_{75})} - 1$$

To preserve internal consistency, new shares were estimated from the corrected bracket averages, and the entire series was rescaled so that shares sum to one and averages match the average national income.

For thresholds, we estimated the difference between the new MER bracket averages and the original PPP bracket averages at $p = 0$, and added this difference to the PPP threshold value. For the other percentiles, threshold values were set to the midpoint between adjacent bracket averages, in line with standard WID methods for regional aggregation.

These adjusted standardized series were then introduced into the gpinter tool to generate a generalised distribution. The normalized full distributions were subsequently processed by the WID central code, which calibrated averages and thresholds using available macroeconomic data for the residual regions. Finally, these were aggregated with core countries to construct continental and World regional distributions (also calibrated using WID macroeconomic data). The result is a complete set of pretax income and wealth distributions in both MER and PPP terms for benchmark years from 1820 to 1970 for the 57 core territories, as well as full coverage for all countries and regions from 1980 onward.

3. Additional Countries-Years Available in WID

In addition to the set of benchmark countries and years described on Tables 1-2, WID income and wealth distribution series also cover additional years for a number of countries (see Table 3).

We should make clear that all series described on Table 3 cover all income and wealth shares, average income and wealth, income and wealth thresholds for all 127 g-percentiles. All series were homogenized using gpinter.[8] Also, in the same way as the benchmark series described on Tables 1-2, all additional series described on Table 3 are always equal-split series (ind=j). They systematically cover both per capita

[7] We use the bracket averages at percentiles 75, 90, and 99 as reference points because they always satisfy the monotonicity condition.

[8] See online replication package.

(ag=999) and per adult (ag=992) income and wealth concepts. By default, the series for normalized distributions (income shares and wealth shares) are the same for per capita and per adult income and wealth.[9] They also include for all countries-years a number of inequality indicators T10/B50 ratio (r), Gini coefficients (g), inverted Pareto-Lorenz coefficients (b).

Note that full WID distributional series available on wid.world also cover other observation units (individuals, tax units, etc.) and income concepts (factor income, fiscal income, etc.), but only for a relatively small and irregular subset of countries-years-percentiles (not listed here). We do not recommend to use these incomplete series for economic or historical analysis, as they are not representative of the database as a whole and may not be fully comparable across countries-years. In particular, the notion of fiscal income varies with the tax legislation, so that fiscal income series are not fully comparable across countries and years. They have been gradually superseded by DINA pretax and posttax national income concepts, which have been designed in order to allow for more meaningful comparisons.

3.1. Imputation Method for Distributional data for Additional Countries-Years

Following the methodology exposed in Piketty, Saez and Zucman (2018), at the very top of the distributions the fiscal income - where individuals are more likely to be observed and subject to tax collection-, can be a strong predictor of the top of the pretax income. Based on this assumption, part of the additional country–year observations (see Table 3) for which pretax income data were unavailable prior to 1980 were constructed using information on top percentiles from the fiscal income distribution. The fiscal income data (with a fiinc code in WID) was used either to adjust the benchmark trajectory or to refine the trajectory of the residual region to which the country–year observations belong. The implementation of these new data in the WID also required extending the macroeconomic variables necessary for the calibration of the distributions, namely the price index, the exchange rate, and net national income.

After identifying the countries to which this process would be applied (with some availability of top fiscal income shares), we retrieved the historical distributions for the benchmark years for all core territories and extended the distributions of the residual regions to the corresponding countries for years prior to 1980 (for instance, the historical distribution of “Other Eastern Europe” was extended to Bulgaria, Hungary, Croatia, and Poland).

[9] For now, per capita and per adult series differ only for a small subset of countries-years.

As a result, both core and non-core countries have income distributions, but only for benchmark years. Since our objective is to estimate distributions for the intervening years, we interpolated the series between these benchmarks in order to ensure continuity with the historical regional series. The resulting full series (*baseline benchmark-based shares*) were collapsed into the standard percentile structure (presented in section 2.1) and a detailed structure – 0–10, 10–25, 25–50, 50–75, 75–90, 90–99, 99–99.9, and 99.9–100 —which is used as a last resort to complete Top 1% fiscal income data.

Parallelly, we extracted the top values of the fiscal income distributions. Owing to the scarcity of these data, the available brackets are heterogeneous across countries, differing in percentile cutoffs as well as population and age groups. In some cases, the data are directly available for the Top 1%, as desired, for population–age groups such as 992i, 992j, or 992t. In other cases, we completed the data (Top 1% share) using two methods.

First, we used bracket averages, taking advantage of their correspondence with income shares and re-estimated shares. Second, we calculated ratios between Top 10% and Top 1%, Top 1% and Top 0.1%, and Top 0.1% and Top 0.01% in the pretax income distributions for each country-year. These ratios were then interpolated between benchmark years—most often relying on ratios observed in non-core countries, typically from 1980 onward—to proportionally estimate the Top 10%, Top 1%, and Top 0.1% for all relevant countries and years.

For Bulgaria, Cameroon, Ghana, Tanzania, and Uganda, fiscal income observations are located too far from 1980 (around 30 years before), making extrapolation not trustable. For these countries, we instead collapsed into the detailed percentile structure described above, and we applied the ratios calculated from the corresponding residual regions. As a result, we obtain full coverage of the p99p100 sfiinc for all intended countries, as shown below.

- Sfiinc992i AR, AU, CA, ES, FI, GB, GH, GR, HU, IT, JP, KE, KR, MW, NO, NZ, SC, SG, TZ, UG, ZA, ZM, ZW
- Sfiinc992j BG, CL, CN, FR, HR, MY, NO, PL, RU, US
- Sfiinc992t CH, CM, DE, DK, DZ, FI, FR, GB, HU, ID, IE, IN, MU, NL, NZ, PT, SE, TN, TW, US, VN, ZA

Using these two elements—the fiscal income Top 1% share and the interpolated historical pretax series— we compute adjustment ratios at the benchmark years and these ratios interpolate to obtain a continuous measure of the fiscal–pretax income adjustment for the p99p100 percentile. Multiplying the fiscal income shares by these ratios yields a new series that exactly matches pretax income at the benchmark years (thus remaining consistent with the regional pretax estimations available for those years) and, for the intervening years, follows pretax income levels while varying in line with fiscal income dynamics (*directly adjusted shares*).

While this outcome is consistent with our objective, we observe that, for country–year observations where both series are available (e.g. the United States, Canada, India, and France), fiscal income series often display pronounced year-to-year fluctuations that are not present in pretax income series, even over the same years. As a result, this direct adjustment may induce exaggerated variability in the estimated pretax Top 1% pretax income shares. To mitigate this issue, we apply a robust shrinkage correction to the raw difference between the *baseline benchmark-based shares* and the *directly adjusted shares*. This correction is implemented by adding a penalization term to the estimation.

The penalization term is computed as described in the equation below

$$penalisation = \frac{raw\ difference}{1 + \left|\frac{raw\ difference}{\lambda * StandardDeviation_{coutry}(raw\ difference)}\right|}$$

As can be seen, the degree of shrinkage applied to the series depends on the parameter λ. The optimal value of λ was determined numerically; that is, by pooling all country–year observations for which both pretax income shares and fiscal income shares are available, computing penalized adjustments on the *directly adjusted shares* over a grid of possible λ values, and comparing the mean squared error of the difference between each penalized series and the observed pretax distributions. This procedure yielded a hypothetical optimal λ of 4.6 for all country–year observations.

Using this penalization, we produce, for each country, a regularized (*shrinkage-adjusted*) series, which is retained as the final Top 1% value. Given this series, the next step consists of rebalancing the entire distribution within the standard percentile structure described above. This involves computing a proportional bracket threshold for the new Top 1% that is consistent with the revised share, and then redistributing the difference between the original and adjusted Top 1% values across the remaining

percentiles, in proportion to their population weights within each relevant tranche and adding up 100%.

Finally, the resulting series are homogenized using gpinter. The detailed final availability of full series can be seen in the Table 3.

3.2. Imputation Method for Additional Countries-Years Macroeconomic data

The calibration of the normalized bracket averages and thresholds of the income distributions using macroeconomic data relies on the availability of net national income series in the WID. Although this variable is fully available for the main countries covered through the implementation of Nievas & Piketty's (2025) World Historical Balance of Payments Database, this is not the case for non-core countries. To construct this variable for those countries, we generate series of price indices, MER USD exchange rates (and their counterparties PPP USD exchange), and gross national product.

Price index: This variable is available for the majority of countries in the WID from 1950 onward. To extend the series backward, we relied on several additional data sources, including the Consumer Price Index from the Central Statistics Office of Ireland (available from 1922), Reinhart and Rogoff (2011) data for all covered countries and years, the consumer price indices reported in International Historical Statistics by Mitchell (2013), and inflation data from Franses and Janssens (2018) for African countries.

Following the same methodology as in the main WID code, we computed the logarithms of the raw price level series and calculated their annual differences. These differences were then chained to cover as many years as possible for each country and accumulated backward from 2024 to the earliest available year. Taking the exponential of the resulting cumulative sums yields the price index.

Also, we applied the following exceptions: For the Central Statistics Office data, we assumed that inflation in 1921 was equal to that observed in January 1922. In Reinhart and Rogoff (2011) (i) Poland's inflation for 1940–1945 was completed using Germany's inflation rates; and (ii) Hungary's inflation in 1946 was interpolated. Finally, Bulgaria's missing observations prior to 1925 were completed using the regression estimated by Ljungberg (2025) on Hungary's and Austria's consumer price indices, setting the same parameters found by the author.

Exchange rates: This variable was manually compiled for countries with available fiscal income data, using information from World Bank documents, central banks, academic journals, other public reports and other primary sources. In a more systematic approach, exchange rate series for the remaining countries were retrieved from Harald Müller's tabulations available at liganda.ch.

We also ensured data availability wherever possible by imputing common exchange rates across countries. For example, we used the exchange rates of former colonizing countries (typically core countries) for their former colonies prior to independence, and extended exchange rate series from core countries to other countries sharing the same currency (see Annex 3).

GDP: Some non-core countries with available fiscal income data already have gross domestic product series in the WID prior to 1970. To extend this coverage backward, we relied on data from the Maddison Project (2023) for the countries included, which are already used in the WID but over a shorter time span. We interpolated missing years in order to construct complete series back to 1900.

The Maddison database reports output aggregates in 2010 international dollars, a currency unit that is not compatible with WID series. For matching the series, following the methodology implemented in the WID core code, we transformed both the Maddison and WID series into logarithms, computed annual growth rates, and reconstructed GDP backward from the last observed retaining always the WID available observations. This procedure yields unified GDP series expressed in constant 2024 prices. However, while the trend underlined is useful, because the WID does not provide exchange rates to "international dollars," this approach may overlook changes in inflation and exchange rates, potentially leading to over- or undervaluation of GDP levels when expressed in constant prices.

To address this issue, we ensured that the extended country-year GDP series remained coherent with amounts of their corresponding residual regions, as estimated in Nievas and Piketty (2025). For this we partially replicated the way the regional aggregations in the WID main code are constructed adding values in current USD values. As so, we first converted all country–year GDP observations with available

exchange rate and price index data into current USD. Then, we rescaled the sum of GDP across countries within each residual region (QM, OC, OE, and OI) to match the regional totals reported in Nievas and Piketty (2025) for all years from 1970 to 1900.

As we move backward in time and country-level observations progressively disappear, missing country values are imputed sequentially by fixing each country's GDP share within its residual region at its last observed value (year n + 1). The regional aggregate for year n is then rescaled accordingly, along with its components—the country aggregates. This procedure ensures that countries with available data transmit their observed dynamics to their share of the regional aggregate, while countries without data remain static and adjust residually in the opposite direction, so that the overall regional total remains consistent with the target value reported in Nievas and Piketty (2025).

The outcome of this procedure is a complete set of theoretical GDP series in current USD from 1900 onward for all countries. Only countries with available exchange rate and price index data prior to 1970 can subsequently be converted back into constant local currency units (LCU) in 2024 prices. Moreover, only the GDP extensions corresponding to targeted countries, and starting from the first year with available fiscal income data, are ultimately imported into the WID.

Net National income: Finally, we applied a similar approach to net national income (NNINC). We first extended historical NNINC series by extrapolating the last observed NNINC-to-GDP ratio and generating proportional historical NNINC estimates. Second, these series were then adjusted with the same method described to the GDP, to match the residual-region NNINC aggregates reported in Nievas and Piketty (2025). As before, only the data corresponding to the targeted country–year observations were retained.

4. Concluding Comments

In this technical note, we have presented the new extended set of WID income and wealth distributional series. There are still many limitations which will need to be addressed in the future. In particular, our historical coverage for income and wealth

distribution series has been substantially improved, but it could be further extended in future years. The posttax series could and will also be extended backward. For now, posttax series are not available in a systematic manner in WID prior to 1980. They will be completed in the near future.[10] This will be explained in future WIL technical notes.

References

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. Nievas, M. Odersky, T. Piketty, A.S. Robillard, E. Saez, A. Sodano, A. Somanchi, L. Yang, G. Zucman, A. Zuniga-Cordero, "Equality and Development A Comparative & Historical Perspective 1800-2025", WIL Working Paper 2025/25

F. Bajard, L. Bauluz, P. Brassac, L. Chancel, C. Martinez-Toledano, T. Piketty, A. Sodano, "Global Wealth Inequality on WID.world Estimates and Imputations", WIL Technical Note 2025/01

N. Bharti, A. Gethin, T. Jenmana, Z. Mo, T. Piketty L. Yang. "Human Capital, Unequal Opportunities and Productivity Convergence A Global Historical Perspective 1800–2100." WIL Working Paper 2025/15

T. Blanchet, J. Fournier, T.Piketty, "Generalized Pareto Curves Theory and Applications", Review of Income and Wealth, 2022, vol.68(1), p.263-288 (WIL WP 2017/03)

L. Chancel, T. Piketty, "Global Income Inequality, 1820-2020 The Persistence and Mutation of Extreme Inequality", *Journal of the European Economic Association*, 2021 (WIL Working Paper 2021/19)

[10] Andreescu et al (2025) assume that pre-tax and post-tax inequality levels are the same until 1910, and then that the magnitude of redistribution evolves linearly between 1910 and 1980 at the country level. This simplifying assumption can be justified by the fact that redistribution was relatively small in all countries prior to 1910 and rose significantly between 1910 and 1980. An alternative estimation strategy consists of using newly-constructed country-level 1800-2025 series on public expenditure and revenue by categories (see Bharti et al (2025)) and explicit assumptions on their distributional incidence (based upon post-1980 observed profiles and other sources). Preliminary estimates suggest that this would make relatively little difference (as far as the broad evolutions are concerned). More research on this important issue will be released in the future.

L. Chancel, I. Flores, R. Moshrif, G. Nievas, T. Piketty (editors), *Distributional National Accounts Guidelines Methods and Concepts used in the World Inequality Database*, WIL, 2025

M. Fisher-Post, A. Gethin, "Government Redistribution and Development Global Estimates of Tax and Transfer Progressivity 1980-2019", WIL WP 2023/17

A. Gethin, "A New Database of General Government Revenue and Expenditure by Function, 1980-2023", WIL WP 2024/01

G. Nievas, T. Piketty, "WID National Accounts Series Updated and Extended Coverage 1800-2023", WIL Technical Note 2025/02

T. Piketty, E. Saez, G. Zucman, "Distributional National Accounts: Methods and Estimates for the United States", *Quarterly Journal of Economics*, 2018, vol.133(2), p 553-609

Sources for Macroeconomic variables extensions

Bolt Van Zanden, *Maddison style estimates of the evolution of the world economy: A new 2023 update*, 2024, Journal of Economic Surveys, p. 1–41.

M. Borg, *L'industrie du papier en Finlande*, Doctoral thesis, University of Neuchâtel, 1932.

Central Statistics Office (CSO), Consumer Price Index (1922-1967), Ireland, Table CPM07, data retrieved from data.cso.ie, accessed 2025.

P. Franses, E. Janssens, "Inflation in Africa, 1960–2015", Journal of International Markets, 2018, Institutions and Money, vol.57, p. 261-292.

J. George, "*The Malayan Currency Board (1938–1967)*", *Studies in Applied Economics*, SAE/No. 53, March ,2016, Johns Hopkins Institute for Applied Economics, Global Health, and Study of Business Enterprise.

E. Lafaye de Micheaux, "British Malayan Capitalism, 1874–1957 An Economic-Historical Perspective," *Economic History Malaysia*, online article, accessed

2025, https//www.ehm.my/publications/articles/british-malayan-capitalism-1874–1957-an-economic-historical-perspective

J. Ljungberg, “European Consumer Price Indices since 1870”, Cliometrica, 2024, vol.19, p. 29-80

B. Mitchell, “International Historical Statistics”, 2013, Palgrave Macmillan, doi https//doi.org/10.1057/978-1-137-30568-8

H. Müller (n.d.), “*End-year Forex Rates” Tabulations*, Liganda.ch, online database, accessed 2025.

C. Reinhart, K. Rogoff, “From Financial Crash to Debt Crisis,” *American Economic Review, 2011,* vol.11(5)

K. Schuler, *Historical Financial Statistics*. Center for Financial Stability, 2015. Available at Center for Financial Stability, accessed 2025.

Obserwator Finansowy, “Building the Strength of the Polish Zloty,” online article, *ObserwatorFinansowy.pl*, 2018, accessed 2025.

Magyar Nemezeti Bank. Exchange rates data retrieved from https//www.mnb.hu/, accessed 2025.

Annex 1. Target values for the first round of corrections

- Brazil: Top10% share (1820) 0,532, (1850) 0,538, (1880) 0,544, (1900) 0,549, (1910) 0,56.
- China: Top10% share (1820) 0,465, (1850) 0,477, (1880) 0,505, (1900) 0,508, (1910) 0,512.
- France: Top10% share (1820) 0,491, (1850) 0,498, (1880) 0,482, (1900) 0,502, (1910) 0,518.
- Japan: Top10% share (1820) 0,446, (1850) 0,45, (1880) 0,46, (1900) 0,474, (1910) 0,551.
- Spain: Top10% share (1820) 0,484, (1850) 0,491, (1880) 0,494, (1900) 0,523, (1910) 0,51.
- South Africa: Top10% share (1820) 0,493, (1850) 0,504, (1880) 0,515, (1900) 0,532, (1910) 0,56.
- Italy: Top10% share (1820) 0,484, (1850) 0,491, (1880) 0,494, (1900) 0,523, (1910) 0,51.
- Sweden: Top10% share (1820) 0,479, (1850) 0,484, (1880) 0,496, (1900) 0,506, (1910) 0,479.
- Other East Asia (OB-PPP): Top10% share (1820) 0,465, (1850) 0,477, (1880) 0,505, (1900) 0,508, (1910) 0,512.

- Other Western Europe (OC-PPP): Top10% share (1820) 0,484, (1850) 0,491, (1880) 0,494, (1900) 0,523, (1910) 0,51.
- Other MENA (OE-PPP): Top10% share (1820) 0,522, (1850) 0,532, (1880) 0,543, (1900) 0,555, (1910) 0,592.
- Other Sub-Saharan Africa (OJ -PPP): Top10% share (1820) 0,493, (1850) 0,504, (1880) 0,515, (1900) 0,532, (1910) 0,56.
- Eastern Europe (QM-PPP): Top10% share (1820) 0,467, (1850) 0,473, (1880) 0,479, (1900) 0,501, (1910) 0,494.

Annex 2. Target values for the second round of corrections

- Canada: Top 1% share (1820) 0,155, (1850) 0,14, (1880) 0,16, (1900) 0,165, (1910) 0,17.
- China: Bottom10% (1880) 0,018, (1900) 0,017, (1930) 0,018,
- France:
    - Top1% share (1820) 0,197, (1850) 0,208, (1880) 0,215.
    - P50 threshold (1900) 0,55.
    - P10 threshold (1900) 0,15.
- Great Britain:
    - Top1% share (1900) 0,276, (1910) 0,27.
    - P50 threshold (1920) 0,8, (1930) 0,85, (1940) 0,88.
    - P90 threshold (1920) 1,4, (1930) 1,45, (1940) 1,42.
- Japan: Top 1% share (1820) 0,179, (1850) 0,182, (1880) 0,18, (1900) 0,198.
- United States:
    - Bottom50% share (1850) 0,13.
    - Bottom10% share (1820) 0,007, (1850) 0,006, (1880) 0,01, (1900) 0,007, (1910) 0,01, (1920) 0,01, (1930) 0,01, (1940) 0,011, (1950) 0,012, (1960) 0,011.
    - Bottom 25% share (1820) 0,048, (1850) 0,04, (1880) 0,057, (1900) 0,048, (1910) 0,046, (1920) 0,054, (1930) 0,051, (1940) 0,054, (1950) 0,052, (1960) 0,055.
    - Top 10% share (1880) 0,41, (1900) 0,42.
    - Top 1% share (1880) 0,145, (1900) 0,155.
    - P10 threshold (1820) 0,158, (1850) 0,173, (1880) 0,203, (1900) 0,19, (1910) 0,209, (1920) 0,219, (1930) 0,203, (1940) 0,225, (1950) 0,212, (1960) 0,207.
    - P25 threshold (1820) 0,28, (1850) 0,25, (1880) 0,32, (1900) 0,28, (1910) 0,27, (1940) 0,3.
    - P50 threshold (1820) 0,56, (1850) 0,53, (1880) 0,573, (1900) 0,593, (1910) 0,57.
    - P75 threshold (1820) 0,92, (1850) 0,92, (1880) 0,95, (1900) 0,94, (1910) 0,98.
- Russia: Top 10% share (1980) 0,24.
- Sweden: Bottom 50% share (1820) 0,17, (1850) 0,165, (1880) 0,16, (1900) 0,165, (1910) 0,175, (1920) 0,194, (1930) 0,21, (1940) 0,223, (1950) 0,25.
- Other MENA (OE-PPP):
    - Bottom50% share (1820) 0,117, (1850) 0,115, (1880) 0,112, (1900) 0,109, (1910) 0,1, (1920) 0,096, (1930) 0,096, (1940) 0,098, (1950) 0,113, (1960) 0,098, (1970) 0,082.
    - Bottom25% share (1820) 0,035, (1850) 0,03, (1880) 0,035, (1900) 0,025, (1910) 0,03, (1920) 0,025, (1930) 0,02, (1940) 0,025, (1950) 0,025, (1960) 0,02, (1970) 0,015.
    - Bottom 10% share (1820) 0,002, (1850) 0,002, (1880) 0,002, (1900) 0,003, (1910) 0,002, (1920) 0,002, (1930) 0,002, (1940) 0,002, (1950) 0,003, (1960) 0,002, (1970) 0,003.
    - P10 threshold (1820) 0,15, (1850) 0,14, (1880) 0,18, (1900) 0,13, (1910) 0,18, (1920) 0,15, (1930) 0,12, (1940) 0,15, (1950) 0,14, (1960) 0,12, (1970) 0,08.
    - P25 threshold (1820) 0,28, (1850) 0,25, (1880) 0,3, (1900) 0,25, (1910) 0,25, (1920) 0,25, (1930) 0,3, (1940) 0,25, (1950) 0,28, (1960) 0,25, (1970) 0,18.
    - P99 threshold (1960) 11,5, (1970) 10,5.

- Other Sub-Saharan Africa (OJ-PPP):
    - Top10% share (1920) 0,565, (1930) 0,57, (1940) 0,576, (1950) 0,581.
    - Top1% share (1940) 0,21, (1950) 0,2, (1960) 0,22, (1970) 0,23.
    - P10 threshold (1880) 0,15, (1900) 0,17.
    - P50 threshold (1880) 0,4, (1900) 0,45,
    - P90 threshold (1940) 2,2, (1950) 2,18, (1960) 2,15, (1970) 2,2.
    - P99 threshold (1960) 11,5, (1970) 10,5.

Annex 3. Sources of Exchange rate by country

- Bulgaria: 1913–1947 Schuler (2015). 1948–1970 Müller (n.d.).
- Switzerland: 1936–1970 Müller (n.d.).
- Cameroon: Exchange rate extended from France, adjusted by a factor of 1.7.
- Finland : 1914–1924 Borg (1932). 1925–1938 Müller (n.d.). Indexed to the United Kingdom exchange rate. 1939–1970 Müller (n.d.).
- Ghana: 1943–1957 Indexed to the United Kingdom. 1958–1970 Indexed to Kenya.
- Greece: 1913–1943 Schuler (2015). 1944 Set equal to the 1943 value. 1945–1970 Müller (n.d.).
- Croatia: 1965–1970 Projected backward from the 1970 observation.
- Hungary: 1900–1913 Schuler (2015), using data for Austria. 1914–1919 Müller (n.d.), using data for Austria. 1919–1948 Müller (n.d.). 1949–1970 Magyar Nemzeti Bank.
- Ireland: 1927–1970 Indexed to the United Kingdom.
- Mauritius and Seychelles: 1914–1935 Indexed to India. 1936–1970 Indexed to the United Kingdom and adjusted by a factor of 40/3, following Schuler (2015).
- Malawi, Tanzania, Uganda, and Zambia: Indexed to the United Kingdom.
- Malaysia and Singapore: 1903–1952 Indexed to the United Kingdom, adjusted following George (2016). 1953–1970 Indexed to the United Kingdom, adjusted following Lafaye de Micheaux (n.d.).
- Poland: 1918–1924 Obserwator Finansowy (2018). 1924–1970 Müller (n.d.).
- Portugal: 1931–1970 Müller (n.d.).
- Tunisia: Indexed to France and adjusted following Müller (n.d.).
- Zimbabwe: Treated as in the WID, with values expressed directly in USD.

Table 1. WID Benchmark Distributional Series: Geographical and Historical Coverage

Pretax income (sptinc, aptinc, tptinc) **Posttax income** (sdiinc, adiinc, tdiinc) **Net household wealth** (shweal, ahweal, thweal) (equal-split, per capita and per adult)	All 216 core countries	1980-2024 (annual series)	All 127 g-percentiles
	All 57 core territories (48 main countries + 9 residual regions)	1820, 1850, 1880, 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970, 1980-2024 (annual series)	All 127 g-percentiles

WID benchmark distributional series for pretax income, posttax income and net household wealth cover all 216 core countries and jurisdictions for all years over the 1980-2024 period, and are restricted to 57 core territories (48 main countries + 9 residual regions) and to a selected number of benchmark years over the 1800-1980 period (1820, 1850, 1880, 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970). WID benchmark series also include for all countries-years a number of inequality indicators: T10/B50 ratio (r), Gini coefficients (g), inverted Pareto-Lorenz coefficients (b). See wid.world/code-dictionary for variable names and the list of core countries and territories. WID series also cover additional years for a number of countries (see Tables 3). WID benchmark series for pretax income, posttax income and personal wealth are always equal-split series (ind=j). They always cover both per capita (ag=999) and per adult (ag=992) income and wealth concepts. By default, the series are the same for per capita and per adult income and wealth. They differ only for a subset of countries-years. WID distributional series also cover other observation units (individualistic, tax units, etc.) and income concepts (factor income, fiscal income, etc.), but only for a relatively small and irregular subset of countries-years-gpercentiles. **Note**. For now, posttax series are not available in a systematic manner in WID prior to 1980. They will be completed in the near future.

Table 2. Core Territories Used in WID Benchmark Historical Series
(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

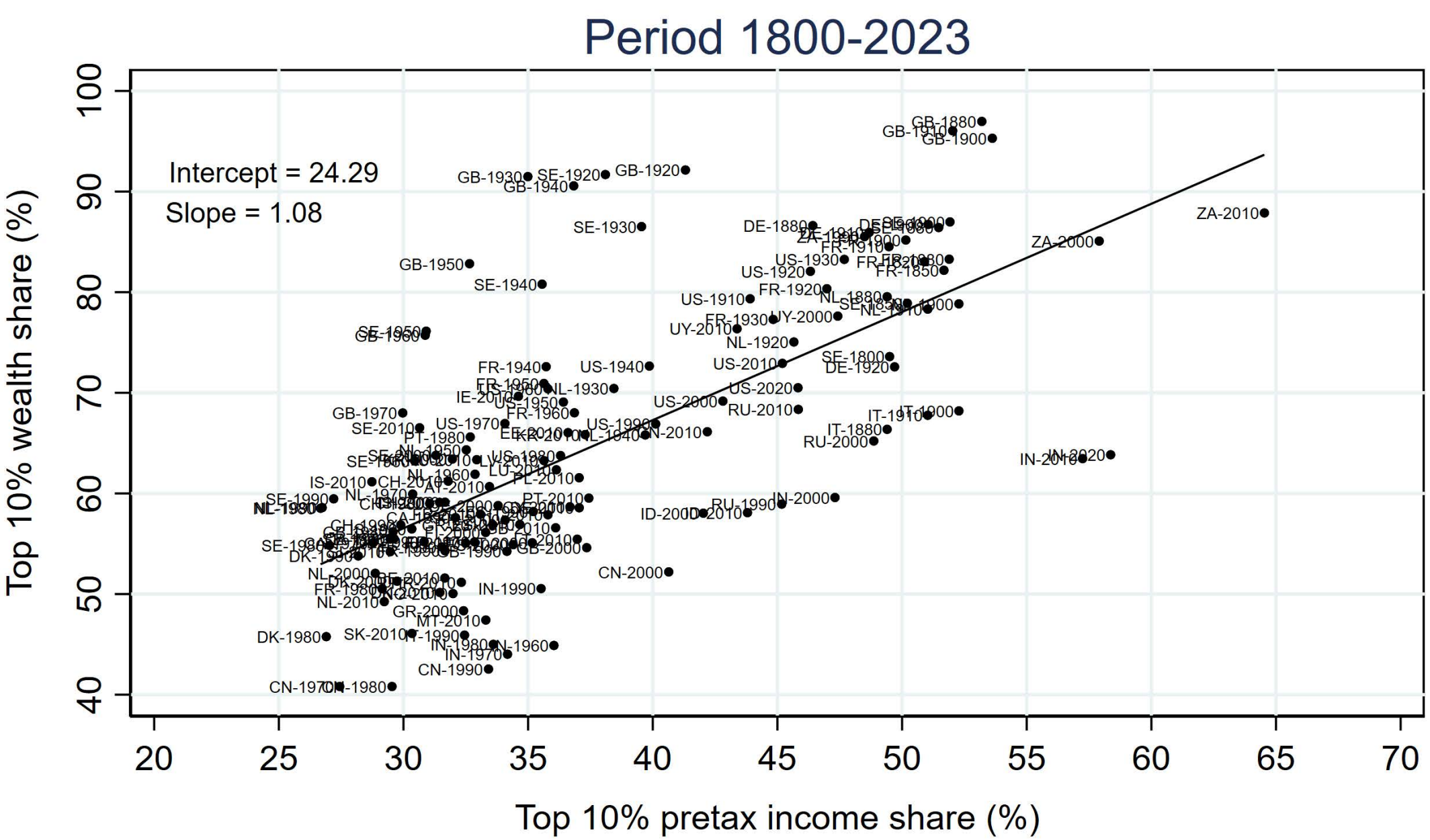
For recent decades (1980-2024), WID series cover all 216 WID core countries and jurisdictions for all years. Regarding long-run historical series (1800-1980), WID series generally cover all 57 core territories (48 main countries + 9 residual regions) for all years (national accounts) or for a selected set of benchmark years (1820, 1850, 1880, 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970). The 48 main countries were chosen on the basis of population size, GDP, regional representativity and data availability. Throughout the 1800-2025 period, the 48 main countries cover about 85-90% of the world population and GDP, while the 9 residual regions cover 10-15%. See Nievas and Piketty (2025).

Table 3. WID Distributional Series: Additional Coverage

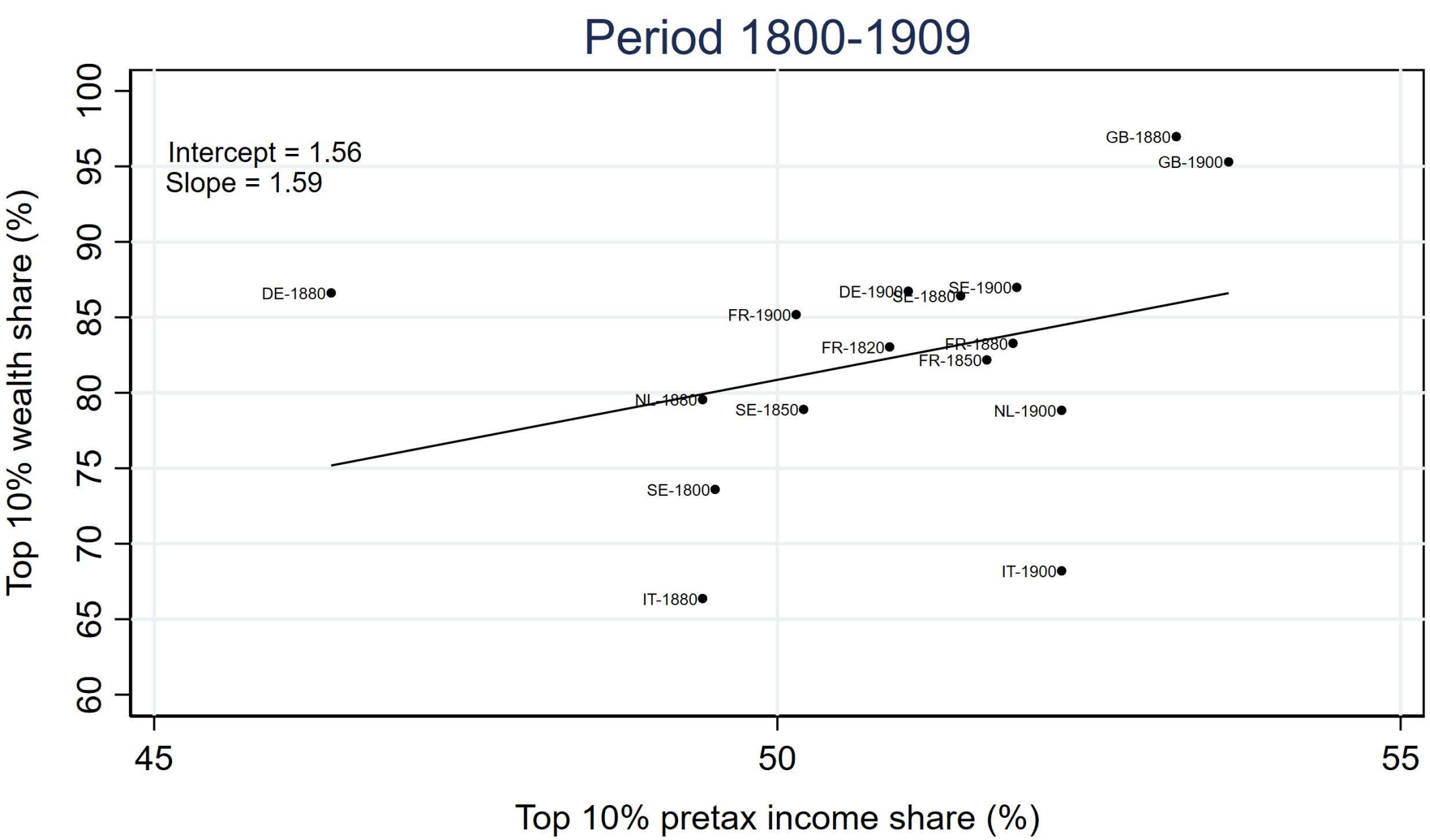
Pretax national income (variables sptinc, aptinc, tptinc) (equal-split, per capita & per adult)	AR 1932-1961; AU 1911-1979; BG 1924-1945; CA 1921-1979; CH 1933, 1934, 1936, 1939, 1941, 1943, 1945, 1947, 1949, 1951, 1953, 1955, 1957, 1959, 1961, 1963, 1965, 1967, 1969, 1971, 1973, 1975, 1977, 1979; CL 1964-1979; CM 1945; CN 1978-1979; DE 1871-1938, 1940, 1949, 1954, 1957, 1961, 1965, 1968, 1971, 1974, 1977; DK 1903,1908,1910,1915, 1917-1979; DZ 1932-1941, 1946-1955, 1957; ES 1933-1935, 1941-1955, 1957-1961, 1971; FI 1920-1979; FR 1915-1979; GB 1908-1979; GH 1943, 1951-1959; GR 1967-1979; HR 1967,1968, 1973,1974,1977-1979; HU 1914,1915,1927,1930-1940, 1951, 1955-1966, 1968, 1970, 1972, 1974, 1976, 1978; ID 1921-1939; IE 1922-1927, 1929-1953, 1964-1973, 1975-1979; IN 1922-1949, 1953-1968, 1971-1979; IL 1979; IN 1951-1979; IT 1974-1979; JP 1886-1979; KE 1936,1943,1948-1969; KR 1933-1979; MU 1933-1979; MW 1938, 1945, 1953-1958,1964-1979; MY 1948-1975; NG 1952-1959; NL 1914-1941, 1946, 1952, 1953, 1957-1959, 1962, 1964, 1966,1967,1973,1975,1977; NO 1875,1888,1892-1903, 1906, 1913, 1929,1938, 1948-1955, 1957-1979; NZ 1921-1979; PL 1924-1931, 1935,1936,1947,1955-1965, 1967,1970, 1972, 1976, 1978; PT 1936-1979; RU 1905-1976; SC 1955, 1961-1971; SE 1903, 1907, 1910-1912, 1916, 1919, 1934, 1935, 1941, 1943-1979; SG 1947-1954, 1956-1979; TN 1946-1948, 1952-1956; TW 1977-1979; TZ 1948-1970; UG 1948-1970; US 1913-1979; VN 1921, 1926-1935, 1937-1939, 1942; ZA 1913-1949, 1954-1965, 1967, 1969-1971, 1974, 1975, 1978, 1979; ZM 1929-1937, 1943-1958, 1963, 1968, 1970; ZW 1917-1939, 1945-1978	All 127 g-percentiles
Net household wealth (variables shweal, ahweal, thweal) (equal-split, per capita & per adult)	CA 1945-1953, 1961-1968, 1970; CN 1978-1979; DE 1895-1897, 1899, 1902, 1905, 1908, 1911, 1914, 1924, 1927, 1930, 1934, 1953, 1957, 1960, 1963, 1966, 1969, 1972, 1974, 1977; FR 1807, 1817, 1827, 1837, 1847, 1857, 1867, 1877, 1887, 1902-1905, 1907, 1909-1979; GB 1895-1914, 1919-1941, 1946-1979; IN 1961, 1971; IT 1891, 1894, 1901-1915; NL 1894-1938, 1947, 1951, 1953-1956, 1958-1961, 1963-1967, 1968-1971, 1973-1974, 1976-1979; SE 1800, 1850, 1873-1877, 1900, 1906-1908, 1920, 1930, 1935, 1937, 1945-1951, 1966, 1970, 1975, 1978; US 1913-1979	All 127 g-percentiles

In addition to the benchmark set of countries/territories/years described on Table 1, WID distributional series (equal-split, per capita & per adult) are also available for a number of countries-years described on this table. In addition, WID distributional series also cover other observation units (individualistic, tax units, etc.) and income concepts (factor income, fiscal income, etc.), but only for a relatively small and irregular subset of countries-years-gpercentiles (not listed here).

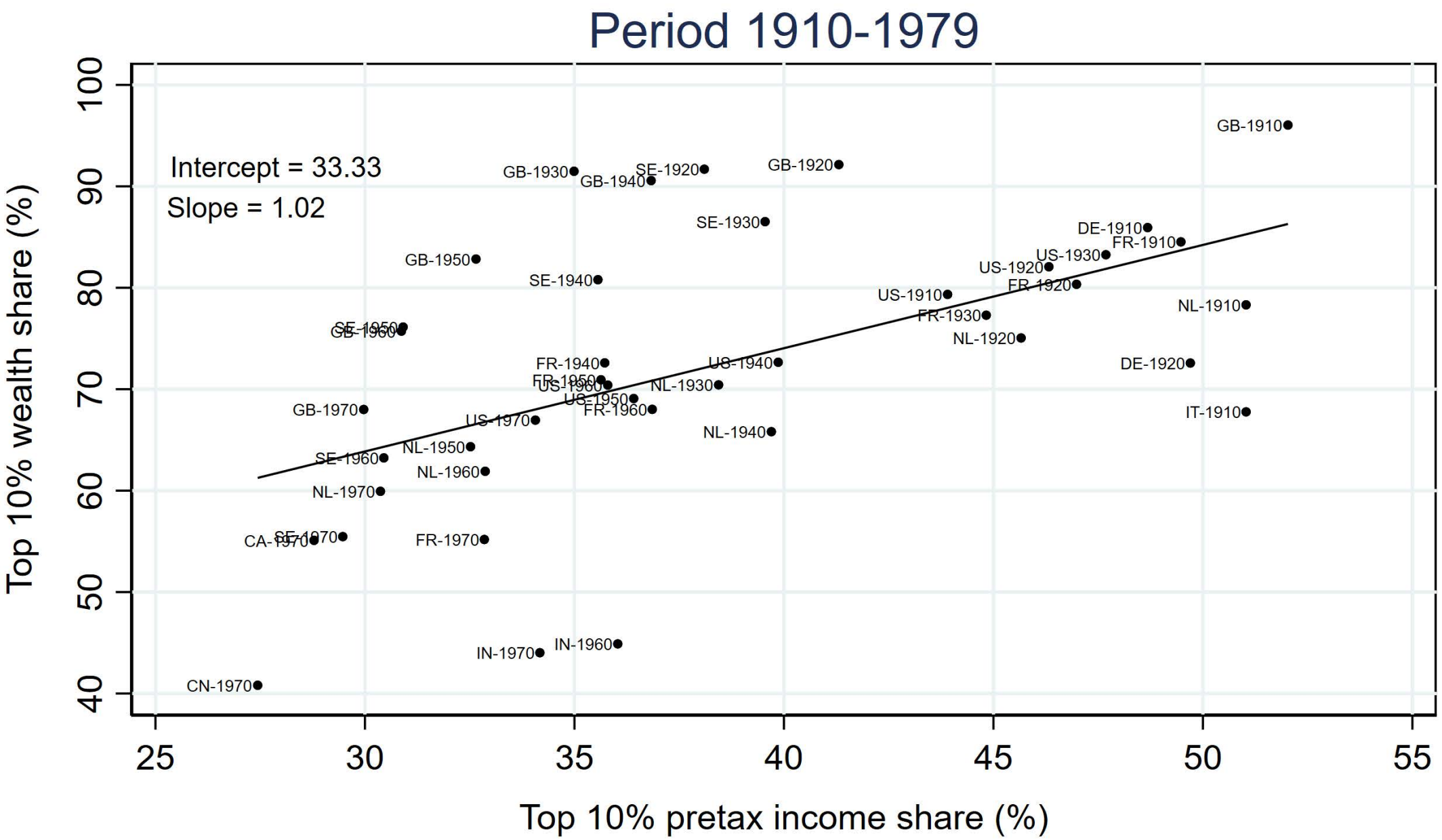
Table 4. Countries-Years with Wealth Distribution Estimates used in Imputations for Missing Observations	
Period 1800-1909	CA 1892, 1902; DE 1895-1897, 1899, 1902, 1905, 1908; FR 1807, 1817, 1827, 1837, 1847, 1857, 1867, 1877, 1887, 1902-1905, 1907, 1909; GB 1895-1909; IT 1891, 1894, 1901-1909; NL 1894-1909; SE 1800, 1850, 1873-1877, 1900, 1906-1908
Period 1910-1979	CA 1945-1953, 1961-1968, 1970; CN 1978-1979; DE 1911, 1914, 1924, 1927, 1930, 1934, 1953, 1957, 1960, 1963, 1966, 1969, 1972, 1974, 1977; FR 1910-1979; GB 1910-1914, 1919-1941, 1946-1979; IN 1961, 1971; IT 1910-1915; NL 1910-1938, 1947, 1951, 1953-1956, 1958-1961, 1963-1967, 1968-1971, 1973-1974, 1976-1979; SE 1920, 1930, 1935, 1937, 1945-1951, 1966, 1970, 1975, 1978; US 1913-1979
Period 1980-2024	AT 2010-2017; BE 2010-2017; CA 1984, 1999, 2012, 2016; CH 1981, 1991, 1997-2017; CN 1980-2015; CY 2010-2017; DE 1993, 1998, 2003, 2008, 2013, 2018; DK 1980-2012; EE 2013-2017; ES 1995-2015; FI 1995-2017; FR 1980-2014; GB 1980-2018; GR 2009-2018; HR 2017; HU 2014-2017; ID 2000-2014; IE 2013-2018; IN 1981, 1991, 2002-2022; IS 1997-2019; IT 1995, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016; KR 2000-2007, 2010-2013; LT 2018; LU 2010-2018; LV 2014-2017; MT 2010-2017; NL 1980, 1982, 1984, 1986, 1988-2019; NO 2010-2019; PL 2014-2016; PT 1980-1982, 2010-2017; RU 1995-2015; SE 1983, 1985, 1988, 1990, 1992, 1997, 1999-2012; SI 2010-2017; SK 2010-2017; US 1980-2022; UY 2009-2016; ZA 1993-2017
We describe in this table the set of countries-years with wealth distribution estimates which we use in imputations for missing observations (see Figures 1-4). Other countries-years reported on Tables 1-3 were estimated using the imputation equation.	



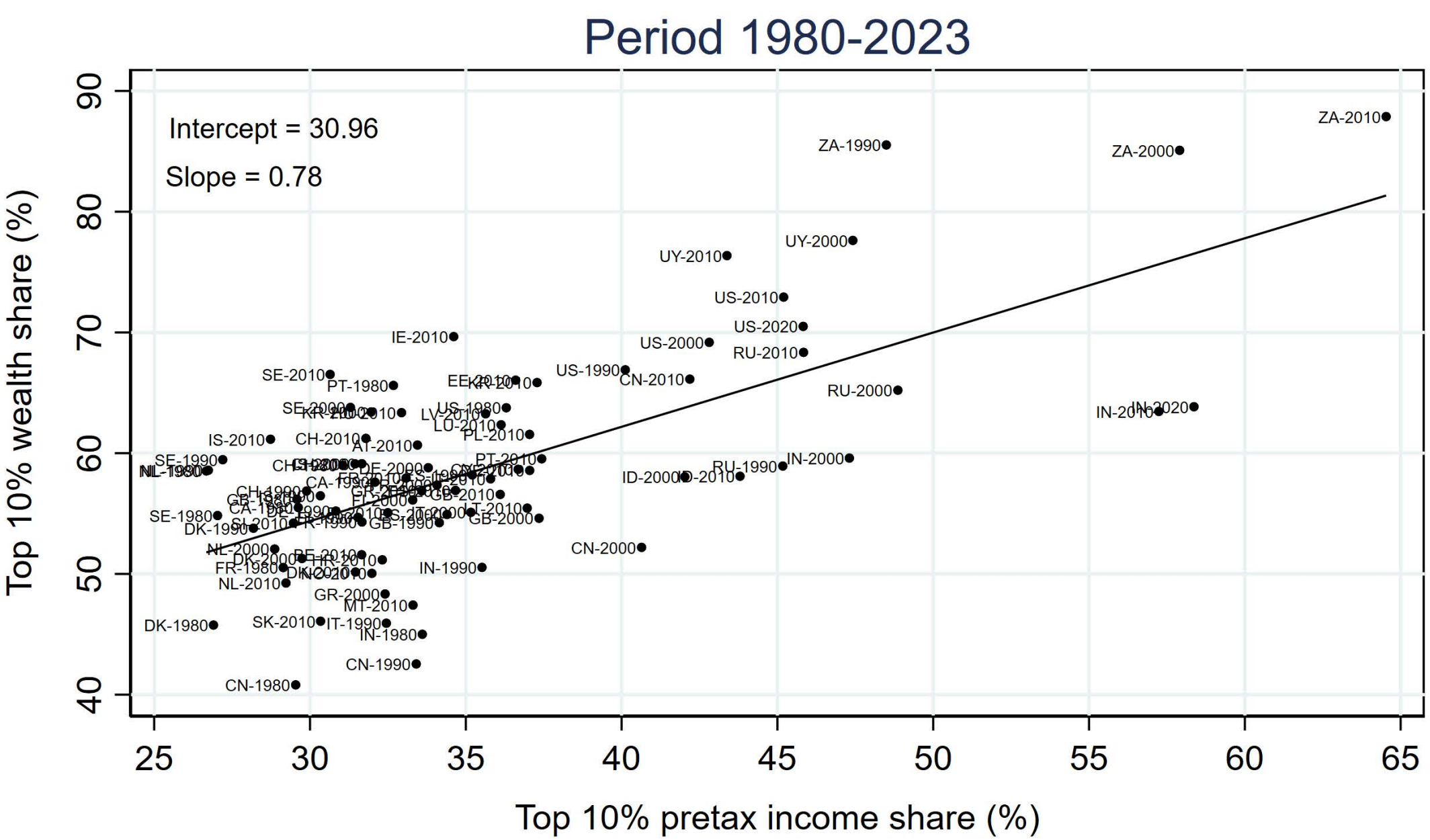
N.B.: The figure plots average top 10% income and wealth shares over subperiods 1800–1819, 1820–1849, 1850–1879, 1880–1899 and each decade from 1900–onwards for all countries for which we observe top income and wealth shares at least once during a given subperiod.



N.B.: The figure plots average top 10% income and wealth shares over subperiods 1800–1819, 1820–1849, 1850–1879, 1880–1899 and 1900–1909 for all countries for which we observe top income and wealth shares at least once during a given subperiod.



N.B.: The figure plots average top 10% income and wealth shares over subperiods 1900–1909, 1910-1919, 1920-1929, 1930-1939, 1940-1949, 1950-1959, 1960-1969 and 1970–1979 for all countries for which we observe top income and wealth shares at least once during a given subperiod.



N.B.: The figure plots average top 10% income and wealth shares over subperiods 1980–1989, 1990-1999, 2000-2009, 2010-2019 and 2020-2023 for all countries for which we observe top income and wealth shares at least once during a given subperiod.