THE GC WEALTH PROJECT
STONE CENTER
ON SOCIO-ECONOMIC INEQUALITY

The GC Wealth Project

Data Warehouse v.1 - Documentation

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Authorship Note. This documentation file is the result of a collaborative effort supervised by Salvatore Morelli, the director of the GC Wealth Project, who conceived and designed the overall research project. Different subgroups of people were responsible for specific sections within the documentation and the appendices. Ignacio Flores was responsible for the overall data warehouse architecture and description, including the section and appendix pertaining to Supplementary Variables. Franziska Disslbacher handled the Wealth Inequality Trends section, including the appendix tables documenting the treatment and classification of each data source. Giacomo Rella led the Wealth Topography section, including the appendix tables outlining the composition rules and methodological choices for each source in the database. Twisha Asher and Manuel Schechtl jointly oversaw the Estate, Inheritance, and Gift Taxes section, including the classification of concepts used in the database and the corresponding appendix section. Adam Rego Johnson took charge of the data source classification and citation reference organization.

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Contents

Section 1

The GC Wealth Project

The GC Wealth Project, a central project of the Graduate Center's Stone Center on Socio-Economic Inequality, is a multi-year effort aimed at expanding and consolidating access to the most up-to-date research and information on wealth, wealth inequalities, and wealth transfers and related tax policies across countries and over time.

The GC Wealth Project website — first launched in June 2023 — is organized around two main components: a data warehouse of gathered and novel data that can be visualized in a variety of ways through the interactive dashboard, and a Digital Library of Research on Wealth Inequality. Both are designed to provide researchers, policymakers, journalists, and others interested in wealth and wealth taxation with open, unlimited access to an array of high-quality information and resources.

All of the data, including the tailored visualizations that users can create using the interactive dashboard, can be exported.

1.1 The Data Warehouse

The data warehouse includes four databases, which correspond to the four sections of the dashboard:

1. Wealth Topography
2. Wealth Inequality Trends
3. Estate, Inheritance, and Gift Taxes
4. Inheritance Trends: coming soon.

To create and populate the sections of our data warehouse, we drew on a large array of data sources. The sections were filled by assembling secondary sources, extracting policy data, and/or querying and working directly with primary microdatasets.

The sources are all listed in our Data Sources Library.

The data warehouse is also complemented with full metadata descriptive information. The metadata provide detailed information on sources of data, longer descriptions of variables and the concepts used, procedures of aggregation and estimation, bibliography links, and complementary information.

All data files, metadata, supplementary variables, and documentation are available in our GitHub repository.

1.2 The Four Main Sections of the Warehouse

1) The Wealth Topography section includes cross-country data that capture, at the aggregate level, the evolution of household portfolios of assets and debt. Assets are metaphorically represented as "mountains and hills," while debts are visualized as "seas" of debt. The data come from national accounts, household surveys, and a range of research projects and reports.

   These data offer a unique view of aggregate household balance sheets. Country-specific portfolios are shaped by, and reflect, national characteristics, including demographic trends, inflation and interest rate dynamics, features of financial and credit markets, the relative importance of stock exchanges versus banking systems, the strength of asset management industries, and the preferential tax treatment of assets, as well as the preferences of households and the generosity of pensions systems.

2) The Wealth Inequality Trends section presents a large comprehensive compilation of cross-national time-series data on wealth inequality. This section contains wealth inequality indicators (such as top shares and Gini coefficients) for many countries, as estimated in the existing literature and as derived from existing micro data sources. These data are accompanied by Methodological Tables that provide systematic assessments of the underlying concepts, methods, and sources for the estimation of wealth inequality trends.

   This section provides access to, and detailed information about, wealth inequality across countries and over time. To date, there is no comprehensive database that offers "off the shelf" indicators

on wealth inequality levels and trends for a variety of different sources. Estimates of wealth distributions are much less settled than those of income distributions, and there is substantial controversy about how wealth inequality has evolved in recent years. A core value-added of this section is that users have access to detailed information about the values provided and methodological information that will help them to navigate the inevitable complexity. Users can also exploit our classification of data types, source types, and unit of analysis to guide the choice of the most suitable indicator for their purpose.

3) The Estate, Inheritance, and Gift Taxes section contains a comprehensive database on the evolution of estate, inheritance, and gift (EIG) taxation, both across countries and (forthcoming) across the U.S. states. This section focuses on the taxation of wealth transfers, that is, transfers from one household or individual to another, either when the donor is living (inter vivos gifts) or at the time of the donor's death (bequests). When assessing taxes, we distinguish among three types of taxes: those levied on estates (on the total amount bequeathed), on inheritances (on amounts received by individual recipients), and on gifts (given by living donors). The EIG sections contain information on statutory tax schedules, marginal tax rates, top marginal rates, exemption thresholds, and tax revenues. Information on effective taxation is also derived and presented.

   Understanding how governments tax these transfers is essential because bequests, inheritances, and inter vivos gifts are crucial economic resources for households and because their scale has increased substantially in recent decades relative to total national income. Very little work has been done to analyze how patterns of wealth transfer taxation affect the extent of these transfers across countries and across households within countries. This systematic compilation of tax data will provide researchers a crucial tool for scholarship and policy analysis focused on the behavioral effects of wealth taxes.

4) The Inheritance Trends section, forthcoming later in 2023, will present cross-country estimates of annual flows of wealth left at death as well as gifts from living donors. The included estimates will be taken from existing works in the literature or derived using a variety of approaches drawing on national accounts data and survey data, as well as estate, inheritance, and gifts tax records.

1.3 The Digital Library of Research on Wealth Inequality

The Digital Library of Research on Wealth Inequality is a large, comprehensive, searchable database that includes abstracts and (when possible) full texts of important, innovative, and high-quality articles, chapters, and books focused on wealth inequality. The library is updated regularly and categorizes the included literature into eight subsections. Complete reference information is available in the BibTeX format, as are abstracts and (when possible) full texts.

1.4 How to Cite Our Data Source

If you are using the GC Wealth Project data in a report, monograph, paper, book, book chapter, journal article, dissertation, etc., include the citation in your bibliography as follows:

Morelli, Salvatore, Twisha Asher, Frincasco Di Biase, Franziska Disslbacher, Ignacio Flores, Adam Rego Johnson, Giacomo Rella, Manuel Schechtl, Francesca Subioli, and Matteo Targa, GC Wealth Project Data v.1, [year], accessed via http://wealthproject.gc.cuny.edu, on [date].

1.5 The Stone Center on Socio-Economic Inequality

The GC Wealth Project is a component of the James M. and Cathleen D. Stone Center on Socio-Economic Inequality, a research center housed at the Graduate Center of the City University of New York (CUNY).

The Stone Center conducts and promotes quantitative research using inequality as a lens on society, the economy, and politics. The faculty, postdoctoral scholars, and students working within the Stone Center share a commitment to scholarship that is data-driven, interdisciplinary, oriented toward policy and institutional change, and that addresses questions about inequality throughout the world.

The Stone Center's core functions include:

- Researching the causes, nature, and consequences of socio-economic inequality, with a specific mandate to expand research and research capacity related to wealth inequality;
- Training and teaching emerging inequality scholars at The Graduate Center/CUNY across a number of academic disciplines;
- Participating in discussions and debates on inequality through public programs and collaboration with journalists;
- Engaging in special programs and projects, such as the Inequality by the Numbers workshop, the Lee Rainwater Lecture Series, the Stone Center Working Paper Series, and an ever-expanding compilation of research spotlights (briefs), scholar interviews, and blog postings;
- Housing the U.S. Office of LIS, the renowned cross-national data center based in Luxembourg.

The Stone Center was created in 2016 with a generous gift from the James M. and Cathleen D. Stone Foundation.

Section 2

General Warehouse Structure

This section provides a comprehensive overview of the general structure of the data warehouse of the GC Wealth Project.

The data warehouse is organized in long format with a total of nine columns.

First of all, important information codifying the nature of the variable listed in the warehouse is stored in the column named *varcode*, and this is detailed in its own subsection below. Two additional columns store values related to each *varcode*. On the one hand, the column *value* stores numerical values like amounts in nominal currency, indices, shares, or rates. On the other hand, the column *value_str* stores textual information, such as details on how taxes are applied in a given country.

There are five additional columns providing geographical and temporal information, population of reference, and sources (*GEO, GEO_long, year, percentile, source*). The *GEO* column refers to 2-character ISO codes for countries, while the *GEO_long* column refers to their full name. The *year* column is an integer variable, while the *percentile* column defines the population to which each observation corresponds. This is a string variable that takes values such as "p0p100" when observations refer to the whole population, as mostly happens with the Wealth Topography dashboard. Other percentiles, as appear in the Wealth Inequality Trends section, can be defined using values between 0 and 100. For instance, the top 0.1% share of the population would be referred to as "p99.9p100". The source column contains information about the identifier of the specific source of the data.

Table 2.1: Warehouse Columns

GEO	GEO_long	year	percentile	varcode	value	value_str	source	longname	last_update

Finally, the variable *longname* is a string variable providing a description in plain language of each observation. . This is defined automatically by an algorithm that draws all labels from our codebook/dictionary file (named dictionary.xlsx), available in our GitHub repository.

Importantly, the data warehouse is also available in a more detailed version, which contains a long list of descriptive metadata information. The complete warehouse is *warehouse_meta*. Metadata include information such as comments on the methodology used to compile the data, and any limitations or caveats associated with the data, as well as detailed information about the definition of our variables, units of analysis, and full spelling of the sources of data, including links to full curated bibliographic citation details. The metadata version is essential for researchers and analysts who require a deeper understanding of the underlying data and its quality. It is available for download alongside the warehouse and can also be accessed through our website and repository.

2.1 The varcode

The *varcode* column allows users to identify the variable and concept at hand. It is also designed to indicate information about the specific warehouse section and sector, as well as section-specific information. Each *varcode* variable has a pre-determined structure, and consists of five main components: Section, Sector, Variable Type, Concept, and Section-Specific info.

$$\underbrace{A}_{Section} - \underbrace{BB}_{Sector} - \underbrace{CCC}_{VariableType} - \underbrace{DDDDD}_{Concept} - \underbrace{ZZ}_{Section-Specific}$$

The first 1-digit component, Section, defines the broad section in which the variable belongs, such as the Wealth Inequality Trends or the Wealth Topography section.

The 2-digit Sector component provides additional granularity, such as the specific institutional sector being measured, e.g., the Household sector including the Non-Profit Institutions Serving Households.

The 3-digit Variable Type component denotes the type of variable being measured, e.g., the Gini coefficient, Top or Bottom shares, a tax threshold or aggregate wealth.

The 6-digit Concept component provides more detailed information about the variable being measured, such as the specific metric being used, while the 2-digit Section-Specific component can be used to further characterize the variable within a particular section of the warehouse (e.g., in the context of the Estate, Inheritance, and Gift Taxes section, each variable will be associated to a particular tax bracket if necessary).

Table 2.2: Section codes

code	label
x	Estate, Inheritance, and Gift Taxes
t	Wealth Inequality Trends
p	Wealth Topography

2.2 Supplementary Variables

To enhance users' capacity for insightful comparisons and analysis, our website offers various transformations of the data through data visualizations. These transformations encompass inflation adjustments, currency conversion rates, population estimates (such as per capita or per adult), and macroeconomic values. The data used for these transformations is sourced from the World Inequality Database, downloaded on November 4th, 2022.

We have made the code used to extract these variables available on our GitHub repository, stored in a downloadable file called "supplementary_var.xlsx". Users can easily access and review the code, enabling them to understand the data processing steps and reproduce the results displayed on our website if desired. This file contains all the relevant data in a structured format, allowing users to explore the variables at their own pace and integrate them into their own analyses.

Table A.1 in Appendix A below provides a summary of the supplementary variables employed in the project. For more comprehensive information on the construction of these variables, please consult their original documentation ([15], [16]).

Section 3

Wealth Topography Section

3.1 Introduction to the Wealth Topography Section

The Wealth Topography section includes cross-country data that capture, at the aggregate level, the evolution of household portfolios of assets and debt. Assets are metaphorically represented as "mountains and hills," while debts are visualized as "seas" of debt. The data come from national accounts, household surveys, and a range of research projects and reports.

These data offer a unique view of aggregate household balance sheets. Country-specific portfolios are shaped by, and reflect, national characteristics, including demographic trends, inflation and interest rate dynamics, features of financial and credit markets, the relative importance of stock exchanges versus banking systems, the strength of asset management industries, and the preferential tax treatment of assets, as well as the preferences of households and the generosity of pensions systems.

This chapter introduces the reader to the categories of the Wealth Topography database and the construction of each concept. We refer the interested reader to the Technical Documentation of the Wealth Topography for all information related the treatment of each source of data as well as the country-specific data coverage.

3.2 The `varcode` in the Wealth Topography Section

As described in the general warehouse structure section, for each country-source pair, the `varcode` is a string that identifies a unique time-series by means of five elements. The first element of the `varcode` is a 1-digit

code that identifies the Section of the GC Wealth Project, which for the case of Wealth Topography takes the value `p`. Hence, `varcode` takes the following form:

$$\underbrace{p}_{\text{Section}} - \underbrace{BB}_{\text{Sector}} - \underbrace{CCC}_{\text{Variable Type}} - \underbrace{DDDDDD}_{\text{Concept}} - \underbrace{ZZ}_{\text{Section Specific}}$$

3.2.1 `Sector`

The second element of the `varcode` identifies the sector to which the time-series refers. The Wealth Topography database reports aggregate wealth and the composition of assets and liabilities of three institutional sectors: Households, NPISH (non-profit institutions serving households), and Households & NPISH sectors.[1] The classification of institutional sectors used in the Wealth Topography database (and in the GC Wealth Project more in in general) mirrors the classification used by the System of National Accounts 2008 (SNA2008, hereafter) and its European counterpart, the European System of Accounts 2010 (ESA2010. hereafter). The institutional sectors are reported in Table 3.1, where the column "Code" reports the sector identifier used in the `varcode` while the column "Description" reports a detailed, non-technical, description of each sector.

Table 3.1: Wealth Topography: Sector

Code	Sector	Description
hs	Households	The household sector gathers together all individuals or group of individuals who live together, who pool their income and wealth, and make joint economic decisions (e.g., consumption). The household sector is one of the institutional sectors constituting the national economy.
hn	Households & NPISH	The households and NPISH sector (non-profit institutions serving households) gathers together households (all individuals or group of individuals who live together, who pool their income and wealth, and make joint economic decisions) and non-profit organizations that primarily provide services to households (such as charities, religious institutions, and social clubs). The household and NPISH sector is one of the institutional sectors constituting the national economy.

[1] Other institutional sectors (non-financial corporations sector, financial corporations sector, general government sector, and the rest of the world) are not currently included in the database.

np	NPISH	The NPISH (non-profit institutions serving households) sector gathers together non-profit organizations that primarily provide services to households. This includes organizations such as charities, religious institutions, and social clubs. The NPISH sector is one of the institutional sectors constituting the national economy.

3.2.2 `Variable Type`: Consolidation

The third element of the `varcode` identifies the `Variable Type` which, in the Wealth Topography database, coincides with the consolidation status. The Wealth Topography reports outstanding levels of assets and liabilities and net wealth for the institutional sectors considered. In the SNA2008, outstanding levels or stocks for a given sector are obtained by aggregating the accounts of the units of the sector, and the aggregation process can differ according to the treatment of transactions within the sector. Within-sector transactions can be consolidated or non-consolidated accounts. Consolidation refers to the practice of eliminating any transaction between units or sub-sectors within the same sector. In this case, any remaining transaction is a transaction with other institutional sectors of the economy. For example, in a consolidated financial account, a loan between two households within the household sector would be eliminated, and the remaining loans would reflect transactions with other sectors of the economy (e.g., the rest of the world, the government sector, the non-financial corporations sector, or the financial corporations sector). In contrast, in a non-consolidated account, such an elimination is not carried out and the aggregation across units within the same sector includes all types of transactions, regardless of the counterpart. In this case, a loan between two households within the households sector would be counted as both an asset and a liability. In practice, most statistical agencies publish only non-consolidated accounts because the construction of consolidated accounts requires knowing the sender and the recipient of all transactions.

Table 3.2 reports under the column "Code" the consolidation status identifier used in the `varcode` of the Wealth Topography database while the column "Description" reports a detailed, non-technical description. If a source in the Wealth Topography database does not provide any information about the consolidation status, we classify them simply as "Aggregate".

Table 3.2: Wealth Topography: Variable Type

Code	Consolidation status	Description
agc	Aggregate (Consolidated)	Aggregate value for a given institutional sector for which transactions that occur between units within the same sector are eliminated.

agn	Aggregate (Non-consolidated)	Aggregate value for a given institutional sector for which transactions that occur between units within the same sector are not eliminated. This may result in double-counting of assets and liabilities
agg	Aggregate	Aggregate value for a given institutional sector. The value is reported without knowing whether transactions that occur between units within the same sector are eliminated or kept during the aggregation.

3.2.3 `Concept`

The fourth element of the `varcode` identifies the `Concept`. In the Wealth Topography database, a concept is a macro-category of the balance sheet, computed by aggregating different asset and liability classes. The construction of such concepts and the aggregation procedure are explained in Section 3.3. The concepts and the corresponding identifiers used in the `varcode` of the Wealth Topography database, together with a detailed description, are reported in Table 3.3.

Table 3.3: Wealth Topography: Concept

Code	Concept	Description
netwea	Net Wealth	Net wealth is the sum of all tangible assets (real estate properties and land, valuables, plants, machineries, equipment, etc.) and intangible assets (stocks, bonds, balances of current, saving, and investment accounts, private pension and life insurance funds, etc.) minus the sum of all debts and liabilities (mortgages, loans, and credit card debt).
nnhass	Financial Assets & Fixed Capital of Personal Businesses	Sum of all financial assets (such as stocks, shares or equities in corporations and quasi-corporations, corporate and government bonds, mutual funds, cash, current, savings and investment accounts, time deposits or certificates of deposit (CDs), accumulated balance in private pension funds, cash or reserve value of life insurance funds, etc.) and the fixed capital stock of small personal businesses of producer households (such as plants, machinery, equipment, inventories, software, and goodwill).
fliabi	Debt	Debts, or liabilities, are financial obligations that generally result from borrowing. For households, the most common form of debt is the mortgage, a loan taken out by an individual or a household to purchase a home or other real estate properties. Other forms of debt include credit card debts, auto loans, and student loans.

facdbl	Cash, Deposits, Bonds & Loans	Cash can be held in the form of banknotes, coins, or digital currency. Bonds represent a loan made by households to a corporation or government entity and provide a fixed return to the investor in the form of interest payments. Deposits include both current accounts (available on demand) and savings accounts (generally interest-bearing instruments with limited withdrawal). Loans are the money lent to individuals or households for which they owe the principal and interest to the creditors.
faeqfd	Stocks, Business Equities & Fund Shares	Stocks (or shares) and business equities are securities representing the ownership in a corporation or quasi-corporation and entitling the holder to a portion of the company's profits. Fund shares represent the participation in mutual or investment funds which are investment vehicles that pool together money from multiple investors to purchase a portfolio of securities such as stocks, bonds, or other assets.
falipe	Pensions & Life Insurance	Private pension assets refer to funds that are set aside by an individual (or an employer) to provide income during retirement (excluding public pension and social security schemes). Pension assets can take the form of defined benefit plans (retirement income benefits are fixed) or defined contribution plans (retirement income benefits are dependent on contributions). Life insurance assets refer to the cash value or reserve value of a life insurance policy (where the policyholder pays premiums in exchange for a death benefit that is paid out to their beneficiaries upon their death).
nfabus	Fixed Capital of Personal Businesses	Fixed capital of small personal businesses represents the non-financial assets that are used by a small personal business to produce goods or services and to support the ongoing operations of the business. This category includes both tangible assets (such as plants, machineries, equipment, inventories, valuables) and intangible assets (such as software and goodwill).
nfahou	Housing & Land	Housing identifies the value of residential buildings or structures that are owned by households (may include single-family homes, apartments, condominiums, and other types of housing). Land assets include agricultural land, residential land, commercial land, and industrial land. The value of land on which housing is constructed is instead typically included in the value of housing assets.

We use a stylized balance sheet to show the relationship between the concepts in Table 3.3. The balance sheet is organized into two panels: Assets and Liabilities and Net Wealth. We also report illustrative values for each concept. Among assets, "Housing & Land" and "Financial Assets & Fixed Capital of Personal Businesses" are the two main concepts. The concept "Financial Assets & Fixed Capital of Personal Businesses", in turn, equals the sum of the following concepts: "Fixed Capital of Personal Businesses", "Cash, Deposits, Bonds &

Loans", "Stocks, Business Equities & Fund Shares", and "Pensions & Life Insurance". The concept "Debt" constitutes the liability side of the balance sheet. Finally, the concept "Net Wealth" is the balancing item and it equals the difference between total assets ("Housing & Land" and "Financial Assets & Fixed Capital of Personal Businesses") and "Debt."

Assets		Liabilities and Net Wealth	
Housing & Land	1510	Debt	695
Financial Assets & Fixed Capital of Personal Businesses	3518		
Fixed Capital of Personal Businesses	26		
Cash, Deposits, Bonds & Loans	684		
Stocks, Business Equities & Fund Shares	1550		
Pensions & Life Insurance	1258		
		Net Wealth	4333

Figure 3.1: Wealth Topography: Balance Sheet Example

3.2.4 `Section-Specific`: Recording of Financial Position

The fifth element of the `varcode` is a `Section-Specific` string which, in the Wealth Topography databse, corresponds to the financial position of each concepts. Financial assets may be recorded gross or net of all liabilities, at a given point in time. Similarly, debt securities can appear both as assets or as liabilities. To distinguish between the financial position of each concept, the Wealth Topography distinguishes between three types of financial position: gross assets (`ga`), net assets (`na`), and liabilities (`lb`). When this classification is not possible, the financial position is not applicable (`_`). Table 3.4 provides a taxonomy of financial positions together with a non-technical description for each.

Table 3.4: Wealth Topography: Section-Specific

Code	Financial position	Description
ga	Gross Assets	Gross assets are the total value of all assets before subtracting the value of debts and liabilities.
na	Net Assets	Net assets are the total value of all assets after subtracting the value of debts and liabilities.
lb	Liabilities	Liabilities are financial obligations or debts that an individual, company, or organization owes to another party.
___	Not Applicable	Not Applicable

3.3 Construction of the Wealth Topography Database

We now give a brief and stylized description of the process underlying the construction of the Wealth Topography database. In its most stylized version, this process involves three steps (synthesized in the flow chart):

1. Identify and download raw data for each source.
2. Map every raw source into national accounting concepts using the Wealth Topography Conceptual Grid.
3. Create Wealth Topography macro-category ('concept') by aggregating the variables from each source (transformed following step 2) using the Wealth Topography Composition Rules.

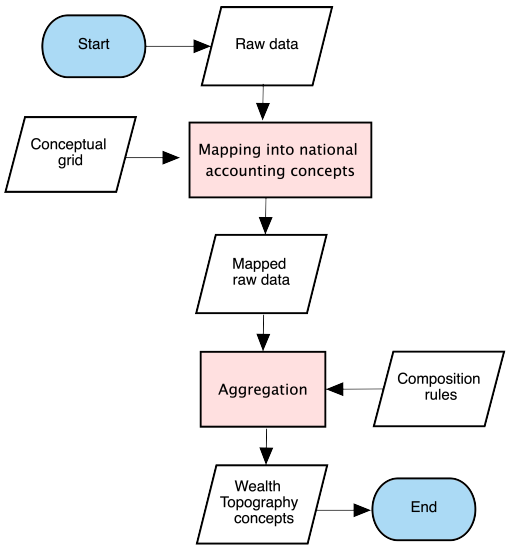

Figure 3.2: Wealth Topography: Flow Chart

We now provide a detailed explanation of all steps put in place to construct the Wealth Topography database.

3.3.1 Identify and Download Raw Data for Each Source

The starting point is the identification of raw data on balance sheets from various sources, such as national accounts, household surveys, and a range of research projects and reports. Once the sources have been identified and the raw data downloaded, we proceed to their classification. Raw data sources included in the Wealth Topography database can be classified in three macro groups:

1. Raw data sources published by central banks and national statistical institutes that use the SNA2008/ESA2010 framework to organize and disseminate the data. We refer to these raw data sources simply as cross-national official statistics.

2. Raw data sources published by central banks and national statistical institutes that use variants of the SNA2008/ESA2010 framework or other frameworks to organize and disseminate the data. We refer to these raw data sources as cross-national official statistics that use variants of SNA2008/ESA2010 framework.

3. Raw data sources contained in surveys and academic papers or published by central banks and research institutes that use frameworks different from the SNA2008/ESA2010 framework to organize and disseminate the data. We refer to these data sources as cross-national official survey data or cross-national academic research that do not use the SNA2008/ESA2010 framework.

3.3.2 Map Raw Data into National Accounting Concepts

Once raw data have been obtained and classified, we harmonize them using the Wealth Topography Conceptual Grid, or simply "the grid". The grid, inspired by National Accounts, is a table that assigns an alphanumeric identifier to each item or instrument of the balance sheet.[2] An extract of the grid can be seen in Table 3.5. Under the column "Code", we report the code that identifies each item of the balance sheet (e.g., AN111 stands for Dwellings). The code consists of two elements (letters and numbers) and a special character for the case of financial assets and liabilities. The alphabetic part of the code identifies whether a specific balance sheet component falls in the category of non-financial assets (AN), financial assets (A_AF), or liabilities (L_AF). Numbers, instead, identify the class of assets and liabilities to which the instrument belongs.

Equipped with the grid, we can map each raw source into national accounting concepts with the aim of obtaining harmonized data on net wealth, assets, and liabilities that can be compared across countries and sources. According to the type of raw data source, we distinguish between two types of mapping:

- Automatic mapping (for cross-national official statistics). For raw data sources published by central banks and national statistical institutes that use the SNA2008/ESA2010 framework to organize and disseminate the data, the mapping of raw data into national accounting concepts is straightforward.

[2]For the original table used in ESA2010 @ESA2010, see Section 'IV.3: Balance sheets: Closing balance sheet' in 'Table 24.6 — Full sequence of accounts for households' of the European System of National Accounts accessed via https://ec.europa.eu/eurostat/esa2010/.

- Conceptual or manual mapping (for cross-national official statistics that use variants of SNA2008/ESA2010 framework). For raw data sources published by central banks and national statistical institutes that use variants of the SNA2008/ESA2010 framework or other frameworks to organize and disseminate the data, the mapping of raw data into national accounting concepts is not straightforward. Therefore, we manually map each series from the raw data source to elements of the grid. The mapping is conceptual and based on our reading of source-specific documentation. All source-specific manual mapping tables are reported in Appendix B.4.

For cross-national official survey data or cross-national academic research that do not use the SNA2008/ESA2010 framework, we build source-specific grids to help cross-walking from raw data to the national accounting concepts in Table 3.5. For completeness, we report the source-specific grids together with source-specific documentation in Appendix B.4.

Table 3.5: Wealth Topography: Conceptual Grid

Code	Description	Financial position
AN	Produced and non-produced non-financial assets	ga
AN1	Produced non-financial assets	ga
AN11	Fixed assets by type of assets	ga
AN111	Dwellings	ga
…	…	…
…	…	…
A_AF	Financial assets	ga
A_AF1	Monetary gold and SDRs	ga
A_AF11	Monetary gold	ga
A_AF12	SDRs	ga
A_AF2	Currency and deposits	ga
A_AF21	Currency	ga
…	…	…
L_AF	Liabilities	lb
…	…	…
L_AF3	Debt securities	lb
L_AF31	Short-term debt securities	lb
L_AF32	Long-term debt securities	lb
L_AF4	Loans	lb
L_AF41	Short-term loans	lb

L_AF42	Long-term loans	lb
...	...	...
XDHHCE	Consumer durables	ga

3.3.3 Create Wealth Topography Concepts Using Our Composition Rules

For raw sources classified as cross-national official statistics (independently of whether the SNA2008/ESA2010 framework is used), the mapping yields harmonized series on net wealth, assets, and liabilities. The next step is to aggregate these harmonized raw data into the macro-categories (`concept`) of the Wealth Topography database. Aggregation is carried out through the general composition rules in Table 3.6.

It is worth nothing that, in practice, we use an extended set of composition rules relative to those displayed in Table 3.6. This happens because different data sources provide different levels of aggregation for the sub-components of the balance sheet. For example, the `concept` "Stocks, Business Equity & Fund Shares" can be computed by aggregating different variables. On the one hand, for some data sources, the `concept` "Stocks, Business Equity & Fund Shares" is set equal to "Equity and investment fund shares (A_AF5)". On the other hand, when the aggregate variable is missing, we obtain "Stocks, Business Equity & Fund Shares" by summing up "Equity (A_AF51)" and "Investment fund shares/units (A_AF52)". We always provide a detailed account of which composition rule has been used to construct a data point in the Wealth Topography database in the metadata section of the warehouse file or graphs available to users through the website of the GC Wealth Project. All source-specific composition rules used in the Wealth Topography database are reported in the source-specific documentation in Appendix B.4.

Finally, for raw data sources classified as cross-national official survey data or cross-national academic research that do not use the SNA2008/ESA2010 framework, we consider ad-hoc source-specific composition rules. In this case, raw data sources are not harmonized by mapping them into national accounting concepts using the grid. Rather, based on our reading of source-specific documentations, the aggregation of this raw data type uses macro-categories that are coherent and comparable to those obtained from cross-national official statistics. We provide a detailed treatment of these sources in Appendix B.4.

3.4 Additional Information on the Wealth Topography Section

For any additional information about the Wealth Topography databse the reader can refer to Appendix B which includes a list of all sources covered by the Wealth Topography database, an extensive treatment of

the composition rules, and detailed source-specific documentations.

Table 3.6: Wealth Topography: General Composition Rule

Code	Concept	Composition rule using codes	Composition rule
netwea	Net Wealth	(AN1) + (AN2) + (A_AF) - (L_AF)	(Produced non-financial assets) + (Non-produced non-financial assets) + (Financial assets) - (Liabilities)
nnhass	Financial Assets & Fixed Capital of Personal Businesses	(AN1) + (AN2) + (A_AF) - (AN111) - (AN112) - (AN21111) + (AN1123)	(Produced non-financial assets) + (Non-produced non-financial assets) + (Financial assets) - (Dwellings) - (Other buildings and structures) - (Land underlying dwellings) + (Land improvements)
fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF5) + (L_AF6)	(Debt securities, liab.) + (Loans, liab.) + (Equity and investment fund shares, liab.) + (Insurance, pension and standardized guarantee schemes, liab.)
facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3) + (A_AF4)	(Currency and deposits) + (Debt securities) + (Loans)
faeqfd	Stocks, Business Equities & Fund Shares	(A_AF5)	(Equity and investment fund shares)
falipe	Pensions & Life Insurance	(A_AF6)	(Insurance, pension and standardized guarantee schemes)
nfabus	Fixed Capital of Personal Businesses	(AN1) + (AN2) - (AN111) - (AN112) - (AN21111) + (AN1123)	(Produced non-financial assets) + (Non-produced non-financial assets) - (Dwellings) - (Other buildings and structures) - (Land underlying dwellings) + (Land improvements)
nfahou	Housing & Land	(AN111) + (AN112) - (AN1123) + (AN21111)	(Dwellings) + (Other buildings and structures) - (Land improvements) + (Land underlying dwellings)

Section 4

Wealth Inequality Trends

4.1 Introduction to the Wealth Inequality Trends Section

The Wealth Inequality Trends section presents a large comprehensive compilation of cross-national time-series data on wealth inequality. This section contains wealth inequality indicators (such as top shares and Gini coefficients) for many countries, as estimated in the existing literature and as derived from existing micro data sources. These data are accompanied by Methodological Tables that provide systematic assessments of the underlying concepts, methods, and sources for the estimation of wealth inequality trends.

This section provides access to, and detailed information about, wealth inequality across countries and over time. To date, there is no comprehensive database that offers `off the shelf` indicators on wealth inequality levels and trends for a variety of different sources. Estimates of wealth distributions are much less settled than those of income distributions, and there is substantial controversy about how wealth inequality has evolved in recent years. A core value-added of this section is that users have access to detailed information about the values provided and methodological information that will help them to navigate the inevitable complexity. Users can also exploit our classification of data types, source types, and units of analysis to guide the choice of the most suitable indicator for their purpose.

4.2 The Structure of the Wealth Inequality Trends Section

In the Wealth Inequality Trends database, each estimate of wealth inequality (`value`) is uniquely identified by the combination of the reference country indexed by a two-digit identifier (`GEO`) and the country name

Table 4.1: Introducing the GC Wealth Inequality Trends Database - Snippet

source	GEO	GEO_long	year	varcode	percentile	value
HFCS_ineq	AT	Austria	2010	t-hs-dsh-netwea-ho	p95p100	47.62
HFCS_ineq	AT	Austria	2010	t-hs-dsh-netwea-ho	p90p95	13.48
HFCS_ineq	AT	Austria	2010	t-hs-dsh-netwea-ho	p50p90	36.14
HFCS_ineq	AT	Austria	2010	t-hs-dsh-netwea-ho	p90p100	61.10
HFCS_ineq	AT	Austria	2010	t-hs-dsh-netwea-ho	p95p99	24.68
HFCS_ineq	AT	Austria	2010	t-hs-dsh-netwea-ho	p99p100	22.94
HFCS_ineq	AT	Austria	2010	t-hs-dsh-netwea-ho	p90p99	38.16
HFCS_ineq	AT	Austria	2010	t-hs-dsh-netwea-ho	p80p100	76.63

(`GEO_long`), the reference year (`year`), the data source (`source`), the `varcode`, and a `percentile`.

Table 4.1 provides a small extract from the data the Wealth Inequality Trends database, and it is important to note that only the combination of `varcode` and `percentile` uniquely identifies a `value` (an estimate of a specific wealth inequality measure obtained from a `source` and referring to a specific country and year). The `varcode` provides general information about the unit of analysis and the type of wealth inequality measure, while the `percentile` column specifies which part of the distribution the estimate refers to. The focus of this documentation is the specific nature of the `varcode` and the variable `percentile` in the Wealth Inequality Trends section.

4.3 The `varcode` in the Wealth Inequality Trends Section

`varcode` In the Wealth Inequality Trends section, three of the five elements of `varcode` are fixed across the entire database. The constant elements are the first, indexing the dashboard, the second, indexing the sector, and the fourth, describing the wealth concept. Only the `Variable Type` and the `Section-Specific` parts of the `varcode` vary within a source and across sources.

$$\underbrace{t}_{\text{Section}} - \underbrace{hs}_{\text{Sector}} - \underbrace{CCC}_{\text{Variable Type}} - \underbrace{netwea}_{\text{Concept}} - \underbrace{ZZ}_{\text{Section-Specific}}$$

4.3.1 `Section`: Wealth Inequality Trends

`Section` The first element of the varcode identifies the *section*, which always equals *t*, i.e. our code for the Wealth Inequality Trends database.

Table 4.2: Wealth Inequality Trends: Variable Type

Code	Label	Description
dsh	Share of Total Net Wealth	The share of total net wealth refers to the percentage of the overall net wealth that individuals, household, or group owns. Net wealth is the value of assets (such as property, investments, and savings) minus any liabilities (such as debts or loans). For example, if the total net wealth of a country is €10,000 billion and a group's net wealth is €2,000 billion, their share of total net wealth would be 20%.
gin	Gini Coefficient	The Gini coefficient is a statistic that summarizes the overall distribution of income or wealth that is commonly published by statistical agencies. The coefficient ranges from 0 (perfect equality) to 100 (maximum inequality). A Gini coefficient of G per cent means that, if we take any 2 households from the population at random, the expected difference is 2G per cent of the mean. So that a rise in the Gini coefficient from 30 to 40 per cent implies that the expected difference (in wealth for instance) has gone up from 60 to 80 per cent of the average wealth.
avg	Average Wealth	Average wealth refers to the total value of assets (such as property, savings, investments, and other financial assets) owned by a group of individuals or households divided by the total number of individuals or households in that group.
thr	Threshold	A threshold represents a minimum or maximum value that must be met or exceeded, for instance, the minimum value of net wealth that is needed for an individual to belong to the group of the richest 1% of adults, or the maximum value of net wealth that is needed for an individual to belong to the group of the poorest 50% of adults.

4.3.2 `Sector`: Household Sector

`Sector` The second element of the varcode identifies the *sector*, which is set to *hs*, i.e., our code for the household sector.

4.3.3 `Variable Type`: Category of Wealth Inequality Measure

`Variable Type` The third element of the `varcode` identifies the broad type of inequality measure, which is either a Gini coefficient, a distributional share, a threshold and thus a specific percentile, or an average. Note that averages and thresholds are currently included in the database only in case they have been denoted in national currency, nominal terms, in the original source. Table 4.2 provides the permitted strings of the `Variable Type` within the `varcode` in the Inequality Trends database, together with a label and a description.

Table 4.3: Wealth Inequality Trends: Section-Specific

Code	Label	Description
ia	Individuals - Adults	Estimates of wealth inequality refer to the distribution across individual holders (depending on the source, at least 15, 16, 18, or 20 years old). In rare cases, this label also refers to individuals assumed to be holding the equivalized wealth of the household. The equivalence scale used in most cases is the "modified OECD scale,", which gives a weight of 1 to the first adult, of 0.5 to each additional adult, and of 0.3 to each child. This means that total wealth of a family of 2 adults and 2 children is divided by 2.1. In other rare cases, it refers to the distribution across all individuals, irrespective of their age.
es	Individuals - Adults (equal split)	Total wealth of the household is divided equally between the two adult partners. Adults are generally defined as individuals at least 18 or 20 years old. This category could also include cases in which total wealth of the household is divided equally among all members of the household.
tu	Tax Units	Data on wealth holding refer to a group of individuals who are subject to the same tax laws (tax unit). In most cases, a tax unit is composed of one or more people who file a tax return together, such as a married couple filing jointly or a family filing as dependents on a parent's tax return.
ho	Households	Data on wealth holding refer to a household, defined as a group of people who live together in the same dwelling unit. The members of a household may be related by blood, marriage, or adoption, or they may be unrelated individuals who have chosen to live together for other reasons.

4.3.4 `Concept`: Net Wealth

`Concept` The fourth element of the `varcode`, `Concept`, is always set to *netwea*, i.e., our code for net wealth. The precise definition of net wealth, however, not identical across the sources covered by the Wealth Inequality Trends database. Hence, in the *`Methodological Table`* we provide for each source a detailed definition of net wealth, including an explanation of how different asset classes have been treated and valued.

4.3.5 `Section-Specific`: Unit of Analysis

`Section-Specific` In the Wealth Inequality Trends database, the section-specific part of the `varcode` refers to the unit of analysis of the wealth inequality indicator. A list of permitted strings for the *`section-specific`* part of the `varcode` is provided in Table 4.3.

4.4 Wealth Inequality among Whom? Percentiles in the Wealth Inequality Trends Section

In addition to the `varcode`, values are indexed by the `percentile` variable. This variable specifies the reference part of the overall wealth distribution of a wealth inequality indicator. We provide a selection of permitted percentiles in Table 4.4; the full list can be found in the `dictionary.xlsx`. The structure of the variable `percentile` is such that the number following the first *p* gives the starting point of the reference part of the distribution, while the number following the second *p* gives the end point of the reference part of the distribution. For the share of wealth held by the richest 1%, for instance, the `percentile` variable corresponds to *p99p100*. Most of estimates of average net wealth and the Gini index covered by our database refer to the overall population and thus are indexed by `percentile` set to *p0p100*, but the database also covers some averages and Gini coefficients referring to population sub-groups, such as the bottom 90%, and thus *p0p90*.

Table 4.4: Wealth Inequality Trends: Selected Percentiles

Code	Label	Description
p0p10	Poorest 10%	Group representing the bottom decile (10%) of the wealth distribution, meaning that 90% of the population would have higher wealth levels in comparison.
p0p100	Overall Population	Everyone in the reference population
p90p99	Next 9% (90th-99th Percentiles)	Group with wealth level higher than the top decile but not high enough to enter the group of the richest 1 % in the population
p99.999p100	Richest 0.001%	Group representing the richest 0.001% of the wealth distribution
p99p100	Richest 1%	Group representing the top percentile (1%) of the wealth distribution, meaning that 99% of the population would have lower wealth levels in comparison.

4.5 Construction of the Wealth Inequality Trends Section

The procedure used to construct the Wealth Inequality Trends database is sketched below.

First, we obtain the raw data for each source, which can come in different formats. Second, we transform and harmonize the raw data to fit our standards (in terms of format and structure). In many cases we increase the list of available inequality indicators. In some, we compute the full set of estimates based on existing micro data, such as cross-national survey data. Third, we run a set of tests and append the estimates to the database. In parallel to this process, we develop and write a detailed **Methodological Table**.

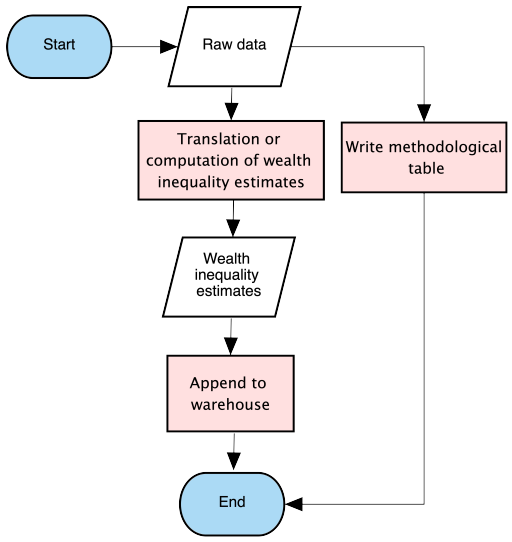

Figure 4.1: Wealth Inequality Trends Workflow

4.5.1 Step 1: Obtain and Classify Raw Data

First, we obtain the raw data, which may come in different shape or formats, including .pdf documents, and .xlsx or .csv files. Then we classify each data source using our taxonomy of data estimation types (e.g., whether the specific wealth inequality series has been estimated using wealth surveys or using administrative tax data). The full taxonomies of data and estimation types are shown in Table 4.5.

As the data type classification is source-specific, the exercise of assigning a type to each source turns out to be less precise for cross-national sources, as we do not differentiate across countries specificities within the same source. For instance, in the case of the Luxembourg Wealth Study Database [107] and the OECD Wealth Distribution Database [117], we classify the data type as *Wealth survey*. However, data for one country, Norway, does not come from a wealth survey but from various administrative sources. Similarly, we classify the World Inequality Database [172] as a *Mix of sources and methods* to reflect the variety of data sources

Table 4.5: Data Type

Label	Description
Wealth survey	The series has been estimated using only wealth survey data.
Wealth survey (with adjustments)	The series has been estimated from wealth survey data that has been adjusted, especially at the top. Adjustment methods comprise rich-list based adjustment als well as pure reweighting methods.
Wealth survey and national accounts	The series has been estimate using wealth survey data that has been brought into alignment with macroeconomic balance sheets.
Rich list	The series has been estimated using only rich list data points.
Capital income tax data, wealth survey, and national accounts	The series has been estimated via a capitalization approach that uses data on income due to the ownership of wealth (capital income), supported by survey data, and the series aligns with macroeconomic balance sheets.
Capital income tax data, other sources, and national accounts	The series has been estimated via a capitalization approach that uses data on income due to the ownership of wealth (capital income), additional data other than household survey data, and the series aligns with macroeconomic balance sheets.
Inheritance/estate tax-based	The series has been estiamted via a mortality-multiplier approach using inheritance and/or estate tax data.
Inheritance/estate tax data, wealth survey, and national accounts	The series has been estimated via a mortality-multiplier approach using inheritance and/or estate tax data, supported by survey data, and the corresponding aggregates align with macroeconomic balance sheets.
Wealth tax/register-based	The series has been estiamted from wealth tax data or register data on wealth.
Wealth tax/register data and estate tax data	The series has been estimated from wealth tax data or register data on wealth used in conjunction with estate/inheritance tax data.
Wealth tax/register data, other sources, and national accounts	The seies has been estiamted from wealth tax data or register data on wealth in conjucntion with additional sources outher than estate/inheritance tax data, and it has been braught into alignment with macroeconomic balance sheets.
Mix of sources and methods	Any combination of methods and sources not listed above along a single series or, in the case of cross-country sources, across countries.

and estimation methods underlying this source (these details feature in the **Methodological Table** but are not captured in the source-specific classification of data estimation types).

4.5.2 Step 2: Transformation and Harmonization of Raw Data

All indicators on wealth inequality that we acquire, derive, or estimate from an original data source are classified such that a `percentile` and a `varcode` are associated with each value. Also, the format is standardized so that all inequality indicators are reported on the 0 – 100 scale.

In most cases, we directly acquire estimates of wealth inequality from raw data sources and publications. When possible, we also complement the available set of indicators. To give an example, many sources provide an estimate of the wealth share held by the richest 1% (p99p100) as well as an estimate of the wealth share held by the richest 10% (p90p100). We then use the two indicators to add an estimate of the share of wealth held by the Next 9% (90th–99th Percentiles). When using original micro-data sources, such as cross-national wealth surveys, we provide our own estimates of a range of wealth inequality indicators.

It is also worth noting we take or estimate only one value for each wealth inequality indicator (as indexed by the combination of `percentile` and `varcode`) from each source. This is typically the benchmark estimate as defined in the underlying research paper or database. In future releases of the GC Wealth Project, we aim to explore the within-source variation of wealth inequality estimates by incorporating the full range of estimates reflecting the use of different methodological assumptions.

Finally, the current version of the Wealth Inequality Trends database of the GC Wealth Project does not publish fully imputed estimates of wealth inequality. We define an estimate as fully imputed if no wealth distribution data was used in the estimation of wealth inequality indicators for a specific country. The information on the distribution of wealth is allowed to derive directly from micro-level data and from databases that publish wealth inequality measures estimated based on micro data. This definition of fully imputed implies that we still publish time series even though wealth distribution data has been used only in one or selected years. It has implications for a handful of sources, such as the Credit Suisse [24] data as well as the World Inequality Database [172] that we discuss in the Appendix (Section C.3 to this documentation).

4.5.3 Step 3: Testing and Appending

After making sure the acquired, derived, and estimated wealth inequality indicators follow our formatting standards, we run a set of consistency checks and tests before we append them to the Wealth Inequality Trends database.

4.6 Methodological Tables

The **Methodological Tables** summarize for each source, among other things: the type of data used, where the work sources its data, the unit of analysis, the methods of estimation, how different assets are valued, how specific types of assets are treated, any adjustments made to the data, important underlying assumptions, and more. We provide a brief description of the content of the **Methodological Tables** in Table 4.6.

4.6.1 Content of Methodological Tables

Table 4.6: Methodological Tables - Content Description

Field name	Field description
Legend	The name of the source.
Period covered and data points	The range from the first to last year included in the series published in the warehouse; the precise years and/or quarters for which data points are available; the total number of years and/or quarters containing data points.
Data type	A categorization of the data type(s) used in the series published in the warehouse.
Inequality indicators	The precise inequality measures covered in the series. See the description of the varcode (vartype) for more information on these measures.
Data sources used in the research	A list of all data sources used in the estimation of wealth inequality and the year(s) they provide data for. Note that not all of these data sources are necessarily relevant to the specific series we publish in the database. Full citation information for these sources is not typically included in the references section, and should instead be located from the source itself.
Unit of analysis	The unit of analysis of the series published in the warehouse. See the description of the varcode (dashboard-specific) for details.
Definition of wealth	The precise definition of wealth underlying the wealth inequality estimates provided by the source.
Method of estimation	A brief summary of the estimation method of the series published in the warehouse.
Method of estimation (detailed)	A more detailed explanation (when applicable) of the estimation method of the series published in the warehouse.
Valuation of assets	How specific assets and liabilities have been valuated.
Treatment of private pensions	Whether any private pensions are included in the wealth definition, and if applicable, how they have been valuated.
Treatment of public pensions	Whether any public pensions are included in the wealth definition, and if applicable, how they have been valuated.

Treatment of life insurance	Whether any life insurance benefits are included in the wealth definition, and if applicable, how they have been valuated.
Treatment of household and personal goods (e.g., vehicles, boats, aircraft, jewelry, antiques, works of art, collections)	Whether any valuables and consumer goods are included in the definition of wealth, and if applicable, how they have been valuated.
Treatment of foreign wealth holdings	Whether any assets held abroad are included in the wealth definition, and if applicable, how they have been valuated.
Treatment of debt	Which types of liabilities are included in the wealth definition, and if applicable, how they have been valuated.
Adjustments to data	An explanation of any significant adjustments made to the raw data.
Distributional estimates aligned with national account aggregates	Whether the wealth estimate has been brought into alignment with the reference country's national accounts wealth aggregates.
Total population estimate and source	The manner and source of the reference population estimate underlying the series.
Total wealth estimate and source	The manner and source of the aggregate wealth estimate underlying the series.
References	A bibliography for the sources cited parenthetically in the table's analysis (i.e., not necessarily those listed in the data sources used in the research section). Any important references that are called out by title in the analysis (such as appendices, data files, or a working paper version of the source) are listed first, with their reference information and any downloadable files being available at their hyperlinked entry in the Data Sources Library.

4.7 Additional Information on the Wealth Inequality Trends Section

For additional information about the Wealth Inequality Trends section, we refer the reader the to the Appendix of this Documentation, where we provide a list of all sources included in the Wealth Inequality Trends database, country-specific information on the coverage of the Wealth Inequality Trends database, and additional information on the precise treatment of selected sources.

Section 5

Estate, Inheritances, and Gift Taxes (EIG)

5.1 Introduction to the Estate, Inheritances, and Gift Taxes Section

The Estate, Inheritance, and Gift Tax (EIG) section of the GC Wealth Project provides a comprehensive data collection on wealth transfer taxes across countries and over time. The EIG section compiles tax policy information as well as tax revenue data. The section contains information about these taxes for up to over 160 countries, in some instances dating back as far as the 18th century. The EIG section codifies and harmonizes information on features common among these taxes, such as top tax rates among closest relatives, personal tax exemptions, or full tax schedules. The section also provides revenue statistics for EIG taxes from cumulative sources from 1960 onward. Information is obtained from academic, government, and corporate research, government legislation and legislative information, as well as cross-national research and official statistics. This chapter introduces the reader to the data structure of the EIG section, as well as the general interpretation and construction of each concept.

5.2 The `varcode` in the Estate, Inheritance, and Gift Taxes Section

As described in the general warehouse structure section, the `varcode` uniquely identifies each value in the EIG section using five elements. The first element of the `varcode` is a 1-digit code that identifies the `section` of the GC Wealth Project, which for the case of the Estate, Inheritance, and Gift Taxes takes the value `x`. Hence, the `varcode` takes the following form:

$$\underbrace{x}_{\text{Section}} - \underbrace{hs}_{\text{Sector}} - \underbrace{CCC}_{\text{Variable Type}} - \underbrace{DDDDDD}_{\text{Concept}} - \underbrace{ZZ}_{\text{Section Specific}}$$

5.2.1 `Sector`: Households

The next two letters of the `varcode` indicate the `Sector`, which for this section will always be `hs` for households, since these taxes are levied on individuals and estates of private citizens.

5.2.2 `Variable Type`

The next three letters of the `varcode` represent the `Variable Type`, which will vary in this section. Specifically, five types of variables are used within the EIG section. These are described in Table 5.1.

Table 5.1: EIG: Variable Type

Code	Type	Description
agg	Aggregate	Aggregate values are sum totals and cover, for instance, tax revenue information in currency units.
cat	Categorical	These are binary variables that include, for instance, whether or not certain taxes are levied, when they were first levied, and so on.
rat	Rates	The percentage values are various kinds of tax rates.
rto	Ratios	In this section, ratios are similar to rates, but in the context of revenue proportions. These include, for instance, EIG tax revenue as a proportion of total revenue at all levels of government. The values should be interpreted as percentages, and do not need to be multiplied by 100.

thr	Thresholds	Typically minimum or maximum amounts, such as tax exemption thresholds.

5.2.3 `Concept`: Variables

The next six letters, indicating `Concept` encode the specific variables for this section, and details for each can be found in Table 5.2.

Table 5.2: Estate, Inheritance, and Gift Tax Variable Definitions

Code	Label	Definition
curren	Currency	Currency (unless otherwise specified in the variable)
eigsta	Transfer Tax Indicator	Whether or not the country levies estate, inheritance, or gift taxes for the given year.
eigfir	First Year for EIG Taxes	The first year any modern transfer tax (i.e., not including stamp or probate filing taxes) is introduced.
esttax	Estate Tax Indicator	Whether or not there is an estate tax (taxes that are levied on the entire estate of a decedent person upon whose death the ownership of the property is being transferred).
giftax	Gift Tax Indicator	Whether or not a separate gift tax (other than estate or inheritance tax) is applicable. That is, whether or not gifts are taxable at all points in a decedent's lifetime.
inhtax	Inheritance Tax Indicator	Whether or not there is an inheritance tax (tax levied on individuals who inherit property based on the value of their inheritance).
itaxre	Inheritance Tax by Relationship	Whether or not the inheritance tax varies by relationship between decedent and recipient.
ieexem	Alternate Type Exemption	In the case of inheritance taxes, whether or not the exemption threshold for an inheritance tax applies to the overall estate as opposed to any individual recipient's share. Alternatively, if an estate tax applies, whether or not there is variation in the exemption (based on the recipient's relationship with the decedent).
totrev	Total Revenue	Total EIG tax revenue collected at all levels of government in the most recent local currency (Local Currency Units or LCUs).

eitrev	Total Revenue from Estate and Inheritance Taxes	Total revenue from estate and inheritance taxes at all levels of government in the most recent local currency (Local Currency Units or LCUs).
gifrev	Total Revenue from Gift Taxes	Total revenue from gift taxes at all levels of government in the most recent local currency (Local Currency Units or LCUs).
fedrev	Federal Revenue	Federal or central government revenue from EIG taxes in the most recent local currency (Local Currency Units or LCUs).
tprrev	Total Revenue from EIG taxes as % of Tax Revenue	Total revenue from estate, inheritance, and gift taxes as a proportion of the total tax revenue for all levels of government.
fprrev	Federal Revenue from EIG taxes as % of Tax Revenue	Federal or central government revenue from estate, inheritance, and gift taxes as a percentage of total revenue from federal taxes.
trvgdp	Total Revenue from EIG Taxes as a Percentage of GDP	Total revenue from estate, inheritance, and gift taxes as a percentage of GDP.
frvgdp	Federal Revenue from EIG Taxes as a Percentage of GDP	Federal or central government revenue from estate, inheritance, and gift taxes as a percentage of GDP.
chiexe	Child Exemption	The exemption amount normally applicable for children (assuming no additional exemptions, credits or relief).

ad1lbo	Lower Bound for Exemption Adjusted Tax Bracket	The value of estates or inheritances over which the tax rate applies, adjusted to include the exemption amount in the rate schedule as a zero bracket, if needed. The adjusted schedule transforms the tax brackets so that exemption thresholds in the form of credits and true exemptions (tax credit applied to final tax bill and estate net the exemption threshold) are all listed as 'zero brackets' (i.e., embedded in the first bracket at a 0% tax rate). Includes an exemption of zero if exemption is not applicable (i.e., no tax applicable). Information applies to closest relatives (i.e., children).
ad1ubo	Upper Bound for Exemption Adjusted Tax Bracket	The highest estate or inheritance value for which the tax rate applies, adjusted to include the exemption amount in the rate schedule as a zero bracket, if needed. The adjusted schedule transforms the tax brackets so that exemption thresholds in the form of credits and true exemptions (tax credit applied to final tax bill and estate net the exemption threshold) are all listed as 'zero brackets' (i.e., embedded in the first bracket at a 0% tax rate). Includes an exemption of zero if exemption is not applicable (i.e., no tax applicable). Information applies to closest relatives (i.e., children).
ad1smr	Tax Rate for Exemption Adjusted Tax Bracket	The rate of taxation on estate or inheritance values between the bracket lower bound and the bracket upper bound, adjusted to include the exemption amount in the rate schedule as a zero bracket, if needed. The adjusted schedule transforms the tax brackets so that exemption thresholds in the form of credits and true exemptions (tax credit applied to final tax bill and estate net the exemption threshold) are all listed as 'zero brackets' (i.e. embedded in the first bracket at a 0% tax rate). Includes an exemption of zero if exemption is not applicable (i.e. no tax applicable). Information applies to closest relatives (i.e., children).
gtopra	Top Rate for Gift Tax	The highest statutory rate for gift taxes across all recipients. This figure equals 0 for any country-year for which there are no gift taxes.
toprat	Top Rate for Estate/Inheritance Tax	The highest statutory rate for estate or inheritance taxes for closest relatives (i.e., children) when applicable, unless specified otherwise. This figure equals 0 for any country-year for which there are no taxes.

etopra	Top Rate for Estate Tax	The highest statutory rate for estate taxes. This figure equals 0 for any country-year for which there are no taxes.
itopra	Top Rate for Inheritance Tax	The highest statutory rate for inheritance taxes for closest relatives (i.e., children) when applicable, unless specified otherwise. This figure equals 0 for any country-year for which there are no taxes.
torac1	Top Rate Applicable From	The minimum amount including and above which the top rate for estate or inheritances taxes applies. This figure equals 0 for any country-year for which there are no taxes. Note: For visualizations, zeros are suppressed for countries with no records of EIG taxes, and for all years before any recorded taxes for a given country.

5.2.4 `Section Specific`: Bracket Numbers

Finally, the last two letters in the `varcode` denote the section-specific variables, which for the EIG section refer to the tax bracket number when needed. Full tax schedule information will vary by tax bracket. For instance, in the event of a flat rate of 10% on individual shares of an inheritance valued at 100,000 currency units, the first bracket (`01`) will cover inheritances worth between 0 and 100,000 currency units and a corresponding tax rate of 0%, while the second bracket (`02`) will cover all inheritances valued over 100,000 with a corresponding tax rate of 10% (see section 5.3.2). Information not contained within a tax schedule does not vary by bracket and is contained in the row with bracket number `00`. An example of tax bracket numbers— and the tax schedule more generally—is laid out in Table 5.4.

5.3 Data Structure and Interpretation

Downloaded data is provided in long format. All information in the data is sorted by a country's two-letter ISO code (`GEO`), or its full name (`GEO_long`) and `year`. Information unrelated to the tax schedule is listed with `bracket` "00" in the `varcode`, while the schedule variables, which vary within a country-year, have positive bracket values. The final number of observations per country-year varies depending on the number of tax brackets in that country-year (and hence the number of `varcodes`).

An example illustrated in Table 5.3 is the UK's tax schedule in 2019. Users can access the tax revenue of `GEO` "UK" by selecting the `value` of the `varcode` corresponding to that `concept` (*x-hs-agg-totrev-00*). Similarly, to display the `value` of the upper bound of the first tax schedule bracket for the UK, the user can select the `varcode` corresponding to that `concept` (*x-hs-thr-ad1ubo-01*). All `varcode` conventions follow the logic detailed in section 5.1.

If transformed into wide format, any observation is uniquely identified by country, year, and tax bracket to accommodate full tax schedules. That is, variables containing tax schedule information vary within each country-year. Hence, information will look considerably different from the example detailed in Table 5.3 above.

To illustrate a wide structure, consider the UK tax schedule in 2019. There is a flat tax of 40 percent on estates over GBP 325,000. The revenue for the UK under the estate tax in 2019 was GBP 5.165 billion. A simplified subset of the variables (non-identifying variable names changed for ease of explanation) is shown in Table 5.4. As this example illustrates, selecting `GEO` "UK" and `year` "2019" will not be sufficient to uniquely identify one observation per country. For instance, any user interested in total revenue information would

Table 5.3: Simplified Illustration of EIG Data in Long Format

GEO	varcode	value	value_str	longname
UK	x-hs-agg-totrev-00	5165000000		Aggregate Total Revenue, of the Households sector (Non-Bracket Specific)
UK	x-hs-thr-ad1ubo-01	325000		Threshold Upper Bound for Exemption Adjusted Tax Bracket, of the Households sector (Bracket n 01)
UK	x-hs-agg-ad1tlb-01	0		Aggregate Tax Paid on Lower Bound for Exemption Adjusted Tax Bracket, of the Households sector (Bracket n 01)
UK	x-hs-rat-ad1smr-01	0		Rate Tax Rate for Exemption Adjusted Tax Bracket, of the Households sector (Bracket n 01)
UK	x-hs-thr-ad1lbo-02	325000		Threshold Lower Bound for Exemption Adjusted Tax Bracket, of the Households sector (Bracket n 02)
UK	x-hs-thr-ad1ubo-02		_and_over	Threshold Upper Bound for Exemption Adjusted Tax Bracket, of the Households sector (Bracket n 02)
UK	x-hs-rat-ad1smr-02	40		Rate Tax Rate for Exemption Adjusted Tax Bracket, of the Households sector (Bracket n 02)

Table 5.4: Simplified Illustration of a Tax Schedule

GEO	year	Currency	Value Over…	But Not Over…	Tax Rate	Total Revenue	bracket
UK	2019	GBP				5,165,000,000	0
UK	2019	GBP	0	325000	0		1
UK	2019	GBP	325000	_and_over	40		2

need to additionally select `bracket` "0". Importantly, variables that are not related to the tax schedule will not be filled for country-year observations other than in the zero bracket.

5.3.1 Non-Schedule Tax Parameters

5.3.1.1 Binary Indicators for Tax Status

A set of binary variables is used to indicate whether a country or region has any wealth transfer taxes (*eigsta*), as well as the specific types of taxes that are levied (*esttax*, *inhtax*, *giftax*), when applicable. Taxes that are not deemed estate- or inheritance-specific taxes may be indicated as either "Y" (yes) or "N" (no) for the binary variables, but have their schedules, rates or exemption information filled. There may therefore be inconsistencies between these variables; for instance, Colombia does not tax inheritances or estates specifically, but includes them as capital gains—data for Colombia indicates that an inheritance tax and a gift tax are present; however, the revenue information shows no government revenues for these taxes. Countries for which no data is available other than the tax revenue from the OECD are marked as having an estate, inheritance, or gift tax if the revenue information is non-zero and not decreasing as a pattern, which would indicate a possible repeal. When possible, the data further include a variable indicating the first year for which any wealth transfer tax has been levied in a country or region (*eigfir*) [66].

5.3.1.2 Tax Reductions and Relationship-Based Parameters

Estate and inheritance tax exemptions can vary in complexity and detail, and countries differ in how they offer reductions to the final tax bill (exemptions, deductions, rebates, credits, *etc.*). The data in this section encode these as "exemptions", for instance, by calculating how much of an estate or inheritance would be exempt under a credit.

Inheritance taxes frequently vary in generosity of exemptions or rates by the closeness of relationship between decedents and recipients, which are divided into "classes." If this is the case, *itaxre* will be "Y." The data pick up the exemptions (*chiexe*) and rates for direct descendants without any additional mitigating factors (for instance, higher exemptions or lower rates for minors). Because classes of inheritors are not generally applicable for estate taxes, information in country-years with estate taxes tends to apply to everybody, and the exemptions and rates apply to the aggregate of all property bequeathed by a decedent. The exception to this is if a country with estate taxes has an estate tax, but individual share-based exemptions vary beyond those for spouses and minor children. In this case, the indicator *ieexem* will contain the value "Y," and the

corresponding exemptions indicate the exemption applicable to the proportion of the estate that corresponds to direct descendant's shares, even though the tax is paid on the overall estate.

In cases where *eigsta* indicates the existence of an EIG tax, a missing value for *chiexe* means that inheritances (or the respective portions of estates) are fully exempt for direct descendants if *toprat* is equal to zero. When tax rates cannot be determined without determining additional information about the recipient or decedent, assumptions are made in order to select the lowest applicable rates for direct descendants. In Spain, for instance, the tax rates vary by relationship and increase with the pre-existing wealth owned by the recipient. The data is entered under the assumption that the recipient possesses no pre-existing wealth. For such cases, however, more information will be made available in the metadata.

5.3.2 Tax Schedules

5.3.2.1 General Structure and Interpretation

Progressive tax schedules are split into brackets by the value of the estate or inheritance, each with identical variable values for non-schedule variables. Bracket number, the dashboard-specific variable encoded in the last two letters of the `varcode`, specifies the order of the brackets that constitute a full tax schedule.

The structure of the tax schedule data is the same as the statutory schedules provided by many governments for estate taxes and other progressive taxes. The basic structure of all tax schedules in the data consists of tax brackets arranged in ascending order, which indicate the range of amounts to which a tax rate applies, as well as the tax liability on amounts below that bracket. Each bracket corresponds to a single row, and all brackets that form a schedule have the same logistical variable values; all non-schedule tax variables are constant for a schedule, and therefore identical for all brackets (or rows).

The schedules are typically cumulative in structure, such that the rate in a bracket that corresponds to an aggregate inherited (or estate) value only applies to the proportion of the inheritance that is greater than the highest amount in the previous bracket. That is, if the inherited amount misses a lower tax bracket by one currency unit, the higher tax rate only applies to one currency unit.

5.3.2.2 Schedule Transformation for Adjusted Schedules

We adjust the schedules to make them more comparable across countries, as detailed below.

Estate, inheritance, and gift taxes typically only apply above a certain threshold. We modify all schedules that do not already include a bracket with a zero tax rate that corresponds to the exempted amount (that is,

a zero tax rate on amounts ranging from zero to the exemption threshold), to include such a bracket. This can be complicated because tax schedules are not standardized with respect to exemptions. Some exemptions might be included in a tax schedule and do not require any additional calculation. Others are calculated as deductions or credits, which means that a tax is calculated on the entirety of the estate, and the tax that would be owed on the exemption amount is subsequently subtracted from the total tax liability. For instance, consider the U.S. federal estate tax: The statutory schedule contains a progressive schedule, but because the exemption deduction is so high (nearly 13 million USD as of 2023), every bracket but the last is effectively within the deduction range. Therefore (assuming no other deductions or credits apply), all amounts below (and many above) the last bracket would yield a final tax bill of zero. The result is a flat tax rate that applies to relatively large estates of several million dollars.

In order to transform tax schedules to adjusted and effective, we assume that taxes will be paid on a monetary transfer to one adult child upon the death of a decedent, assuming no additional circumstantial deductions, reliefs, or credits apply unless otherwise specified. In the case of a country like Spain, it is additionally assumed that the recipient owns no prior wealth. Historical information is adjusted to reflect the most recent local currency.

Appendix A

Supplementary Variables

Table A.1: Variables from wid.world

Variable	Short Name	Simple descrpition (original)
inyixx	National income price index	Price index that reflects the evolution of the price level for all new, domestically produced, final goods and services in the economy.
mgdpro	Gross domestic product	Gross domestic product is the total value of goods and services produced by the national economy.The national economy - in the national accounts sense - includes all domestic sectors, i.e. all entities that are resident of a given country (in the sense of their economic activity), whether they belong to the private sector, the corporate sector, the governement sector.
mnninc	National income	National income aims to measure the total income available to the residents of a given country. It is equal to the gross domestic product (the total value of goods and services produced on the territory of a given country during a given year), minus fixed capital used in production processes (e.g. replacement of obsolete machines or maintenance of roads) plus the net foreign income earned by residents in the rest of the world.
mpweal	Net private wealth	Net private wealth is the total value of non-financial and financial assets (housing, land, deposits, bonds, equities of corporations, etc.) held by private owners (households and foundations), minus their debts. The private sector - in the national accounts sense - includes the personal sector (households) and the non-profit sector (foundations, religious organizations, etc.). In certain countries, availables sources do not allow to decompose the wealth owned by each of these two sub-sectors, and we only provide total net private wealth.
ntaxma	Number of tax units - married couples & single adults	Number of married couples and single adults as tax units.
xlceup	PPP conversion factor, LCU per EUR	PPP conversion factor of current local currency to current PPP EUR.
xlceux	Market exchange rate, LCU per EUR	Official exchange rate of the local currency to EUR.
xlcusp	PPP conversion factor, LCU per USD	PPP conversion factor of current local currency to current PPP USD.
xlcusx	Market exchange rate, LCU per USD	Official exchange rate of the local currency to USD.
xlcyup	PPP conversion factor, LCU per CNY	PPP conversion factor of current local currency to current PPP CNY.
xlcyux	Market exchange rate, LCU per CNY	Official exchange rate of the local currency to CNY.
npopem	Employed population	Number of employed individuals.
npopul	Population	Number of individuals.
nomgdp	Nominal GDP	Nominal GDP adjusted using the national income price index.
nomnni	Nominal national income	Nominal national income adjusted using the national income price index.

Appendix B

Appendix to the Wealth Topography Section

B.1 Introduction

The Appendix of the Wealth Topography section of the GC Wealth Project provides additional information on the concepts included in the Wealth Topography and detailed source-specific documentation. In particular, this appendix provides:

- the full list of sources included in the Wealth Topography (Section B.2),
- the full conceptual grid used in the GC Wealth Project (Section B.3),
- source-specific detailed information on raw data source, all source-specific composition tables reporting all composition rules used to obtain the wealth concepts, and additional tables on conceptual and manual mapping (Section B.4).

B.2 Sources Included in the Wealth Topography Section

All data sources included in the current version of the Wealth Topography database are reported in Table B.1. In addition to the source name and bibliographic reference, the table reports the source type and the consultation date ("Download date"). All sources included in the Wealth Topography database can be distinguished according to types of national accounts:

- Balance Sheets contain holdings of non-financial assets (e.g., real estate assets or machinery), financial assets (e.g., deposits or equities), and liabilities (e.g., home mortgages) at a point in time.
- Financial Accounts contain holdings of financial assets (e.g., deposits or equities), and liabilities (e.g., home mortgages) at a point in time.

In other words, in the Wealth Topography databse, Financial Accounts are financial balance sheets in which only holdings of financial assets and liabilities are reported. In both cases, we report stocks or outstanding levels, that is holdings of assets and liabilities at the end of each accounting period (year). Outstanding levels reflect changes in transactions, nominal holding gains/losses, and other changes occurred throughout the year.

Table B.1: Sources in the Wealth Topography

Source	Source Type	Download Date
Bank of Italy - Financial Accounts [10]	Cross-national official statistics	August 8, 2023
Bank of Italy & Istat - Balance Sheet [11]	Cross-national official statistics	September 29, 2022
European Central Bank Non-EU - Financial Accounts [60]	Cross-national official statistics	August 29, 2023
European Central Bank EU - Financial Accounts [61]	Cross-national official statistics	August 8, 2023
Eurostat - Financial Accounts [62]	Cross-national official statistics	August 29, 2023
Federal Reserve Board B.101 - Balance Sheet [17]	Cross-national official statistics	August 29, 2023
Federal Reserve Board B.101.H - Balance Sheet [17]	Cross-national official statistics	August 29, 2023
Federal Reserve Board B.101.N - Balance Sheet [17]	Cross-national official statistics	August 29, 2023
Federal Reserve Board S.3.a (IMA) - Balance Sheet [17]	Cross-national official statistics	August 28, 2023
Household Finance and Consumption Survey - Balance Sheet [77]	Cross-national official survey data	September 27, 2022
Luxembourg Wealth Study Database - Balance Sheet [107]	Cross-national academic research	March 30, 2023
OECD - Financial Accounts [115]	Cross-national official statistics	August 29, 2023
World Inequality Database - Balance Sheet [172]	Cross-national academic research	August 29, 2023

B.3 Full Conceptual Grid

Once raw data have been obtained and classified, we harmonize them using the Wealth Topography Conceptual Grid, a table that assigns an alphanumeric identifier to each item or instrument of the balance sheet. The full grid is reported in Table B.2. Under the column `Code`, we report the code that identifies each item of the balance sheet (e.g., `AN111` stands for `Dwellings`). The code consists of two elements (letters and numbers), and, in the case of financial assets and liabilities, it also contains a special character. The alphabetic part of the code identifies whether a specific balance sheet component falls in the category of non-financial assets (`AN`), financial assets (`A_AF`) or liabilities (`L_AF`). The numeric part of the code identifies the class of assets and liabilities to which the instrument belongs.

Table B.2: Full GC Wealth Topography Conceptual Grid

na_code	Description	Financial position
AN	Produced and non-produced non-financial assets	ga
AN1	Produced non-financial assets	ga
AN11	Fixed assets by type of assets	ga
AN111	Dwellings	ga
AN112	Other buildings and structures	ga
AN1121	Buildings other than dwellings	ga
AN1122	Other structures	ga
AN1123	Land improvements	ga
AN113	Machinery and equipment	ga
AN1131	Transport equipment	ga
AN1132	ICT equipment	ga
AN1133	Other machinery and equipment	ga
AN114	Weapons systems	ga
AN115	Cultivated biological resources	ga
AN1151	Animal resources yielding repeat products	ga
AN1152	Tree, crop and plant resources yielding repeat products	ga
AN117	Intellectual property products	ga
AN1171	Research and development	ga

AN1172	Mineral exploration and evaluation	ga
AN1173	Computer software and databases	ga
AN11731	Computer software	ga
AN11732	Databases	ga
AN1174	Entertainment, literary or artistic originals	ga
AN1179	Other intellectual property products	ga
AN12	Inventories by type of inventory	ga
AN121	Materials and supplies	ga
AN122	Work-in-progress	ga
AN1221	Work-in-progress on cultivated biological assets	ga
AN1222	Other work-in-progress	ga
AN123	Finished goods	ga
AN124	Military inventories	ga
AN125	Goods for resale	ga
AN13	Valuables	ga
AN131	Precious metals and stones	ga
AN132	Antiques and other art objects	ga
AN133	Other valuables	ga
AN2	Non-produced non-financial assets	ga
AN21	Natural resources	ga
AN211	Land	ga
AN21111	Land underlying dwellings	ga
AN212	Mineral and energy reserves	ga
AN213	Non-cultivated biological resources	ga
AN214	Water resources	ga
AN215	Other natural resources	ga
AN2151	Radio spectra	ga
AN2159	Other	ga
AN22	Contracts, leases and licences	ga
AN221	Marketable operating leases	ga
AN222	Permissions to use natural resources	ga

AN223	Permissions to undertake specific activities	ga
AN224	Entitlement to future goods and services on an exclusive basis	ga
AN23	Purchases less sales of goodwill and marketing assets	ga
A_AF	Financial assets	ga
A_AF1	Monetary gold and SDRs	ga
A_AF11	Monetary gold	ga
A_AF12	SDRs	ga
A_AF2	Currency and deposits	ga
A_AF21	Currency	ga
A_AF22	Transferable deposits	ga
A_AF221	Inter-bank positions	ga
A_AF229	Other transferable deposits	ga
A_AF29	Other deposits	ga
A_AF3	Debt securities	ga
A_AF31	Short-term debt securities	ga
A_AF32	Long-term debt securities	ga
A_AF4	Loans	ga
A_AF41	Short-term loans	ga
A_AF42	Long-term loans	ga
A_AF5	Equity and investment fund shares	ga
A_AF51	Equity	ga
A_AF511	Listed shares	ga
A_AF512	Unlisted shares	ga
A_AF519	Other equity	ga
A_AF52	Investment fund shares/units	ga
A_AF521	Money market fund shares/units	ga
A_AF522	Non-MMF investment fund shares/units	ga
A_AF6	Insurance, pension and standardized guarantee schemes	ga
A_AF61	Non-life insurance technical provisions	ga
A_AF62	Life insurance and annuity entitlements	ga
A_AF63	Pension entitlements	ga

A_AF64	Claims of pension funds on pension managers	ga
A_AF65	Entitlements to non-pension benefits	ga
A_AF66	Provisions for calls under standardized guarantees	ga
A_AF7	Financial derivatives and employee stock options	ga
A_AF71	Financial derivatives	ga
A_AF711	Options	ga
A_AF712	Forwards	ga
A_AF72	Employee stock options	ga
A_AF8	Other accounts receivable/payable	ga
A_AF81	Trade credits and advances	ga
A_AF89	Other accounts receivable/payable	ga
L_AF	Liabilities	lb
L_AF1	Monetary gold and SDRs	lb
L_AF11	Monetary gold	lb
L_AF12	SDRs	lb
L_AF2	Currency and deposits	lb
L_AF21	Currency	lb
L_AF22	Transferable deposits	lb
L_AF221	Inter-bank positions	lb
L_AF229	Other transferable deposits	lb
L_AF29	Other deposits	lb
L_AF3	Debt securities	lb
L_AF31	Short-term debt securities	lb
L_AF32	Long-term debt securities	lb
L_AF4	Loans	lb
L_AF41	Short-term loans	lb
L_AF42	Long-term loans	lb
L_AF5	Equity and investment fund shares	lb
L_AF51	Equity	lb
L_AF511	Listed shares	lb
L_AF512	Unlisted shares	lb

L_AF519	Other equity	lb
L_AF52	Investment fund shares/units	lb
L_AF521	Money market fund shares/units	lb
L_AF522	Non-MMF investment fund shares/units	lb
L_AF6	Insurance, pension and standardized guarantee schemes	lb
L_AF61	Non-life insurance technical provisions	lb
L_AF62	Life insurance and annuity entitlements	lb
L_AF63	Pension entitlements	lb
L_AF64	Claims of pension funds on pension managers	lb
L_AF65	Entitlements to non-pension benefits	lb
L_AF66	Provisions for calls under standardized guarantees	lb
L_AF7	Financial derivatives and employee stock options	lb
L_AF71	Financial derivatives	lb
L_AF711	Options	lb
L_AF712	Forwards	lb
L_AF72	Employee stock options	lb
L_AF8	Other accounts receivable/payable	lb
L_AF81	Trade credits and advances	lb
L_AF89	Other accounts receivable/payable	lb
XDHHCE	Consumer durables	ga

B.4 Source-Specific Documentation

This section provides source-specific detailed information on raw data source, all source-specific composition rules used to obtain the macro-categories of the Wealth Topography (`concept`), and additional tables on mapping. We recall that raw data sources included in the Wealth Topography database can be classified in three macro groups:

1. Raw data sources published by central banks and national statistical institutes that use the SNA2008/ESA2010 framework to organize and disseminate the data. We refer to this raw data sources simply as cross-national official statistics.

2. Raw data sources published by central banks and national statistical institutes that use variants of the SNA2008/ESA2010 framework or other frameworks to organize and disseminate the data. We refer to these raw data sources as cross-national official statistics that use variants of SNA2008/ESA2010 framework.

3. Raw data sources contained in surveys and academic papers or published by central banks and research institutes that use frameworks different from the SNA2008/ESA2010 framework to organize and disseminate the data. We refer to these data sources as cross-national official survey data or cross-national academic research that do not use the SNA2008/ESA2010 framework.

When formulating the composition rules, we construct rules that can be applied to all years during which all sub-components of each concept can be observed. This formulation of composition rules allows us to preserve time consistency in the construction of concepts.

B.4.1 Bank of Italy - Financial Accounts (`BoI_FA`)

The Bank of Italy provides financial balance sheets of the Households and NPISH sector as parts of its quarterly financial accounts publication, so-called *Conti Finanziari* Bank of Italy [10]. While raw data are published at quarterly frequency, we use the end-year observation. Relative to the mapping procedure, this raw data source is classified as cross-national official statistics, that is mapping is automatic since the Bank of Italy organizes and disseminates raw data according to the SNA2008/ESA2010 guidelines. Table B.3 provides an overview of the general and source-specific composition rules used to compute the concepts. In the table, the column "Frequency" reports the number of source-sector-concept triples for which the corresponding composition rule is used.

B.4.2 Bank of Italy & ISTAT - Balance Sheet (`BoI_NA`)

The source Bank of Italy & ISTAT - Balance Sheet (`BoI_NA`) is based on the joint Bank of Italy and ISTAT estimates of wealth published as "The Wealth of Italy's Institutional Sectors" Bank of Italy and Istat [11]. This publication provides annual estimates of net wealth, assets, and liabilities of households and other institutional sectors, together with a cross-country comparison on the evolution of balance sheets. Relative to the mapping procedure, this raw data source is classified as cross-national official statistics, that is, mapping is automatic since the Bank of Italy organizes and disseminates raw data according to the SNA2008/ESA2010 guidelines. Table B.4 provides an overview of the general and source-specific composition rules used to compute the

concepts. In the table, the column "Frequency" reports the number of source-sector-concept triples for which the corresponding composition rule is used. For this source, we obtain "Net Wealth" (`netwea`) as the sum of "Financial Assets & Fixed Capital of Personal Businesses" (`nnhass`) and "Housing & Land" (`nfahou`), net of "Debt" (`fliabi`).

B.4.3 European Central Bank Non-EU - Financial Accounts (`ECB_IDCSA`)

The European Central Bank provides estimates of financial balance sheet for non-EU countries on its Statistical Data Warehouse. These data are included in the source European Central Bank Non-EU (`ECB_IDCSA`), which corresponds to the IDCS - Sector accounts in the International Data Cooperation Task Force Context European Central Bank [60]. The underlying database collects financial accounts (both flows and levels) for each institutional sector as publishes by Eurostat, OECD, and the United Nations. Data are originally published at both quarterly and annual frequency. This raw data source is classified as cross-national official statistics for which mapping is automatic since the European Central Bank organizes and disseminates raw data according to the SNA2008/ESA2010 guidelines. Table B.5 provides an overview of the general and source-specific composition rules used to compute the concepts. In the table, the column "Frequency" reports the number of source-sector-concept triples for which the corresponding composition rule is used.

B.4.4 European Central Bank EU - Financial Accounts (`ECB_QSA`)

The source European Central Bank EU (`ECB_QSA`) corresponds to the Quarterly Sector Accounts published by the European Central Bank on the Statistical Data Warehouse European Central Bank [61]. The Quarterly Sector Accounts provide quarterly estimates of outstanding levels of financial assets and liabilities for the European Union (EU) countries, together with a detailed breakdown of institutional sectors and financial instruments. The original frequency of data is quarterly but we retain the end-year observation. Relative to the mapping procedure, this raw data source is classified as cross-national official statistics for which mapping is automatic since the European Central Bank organizes and disseminates raw data according to the SNA2008/ESA2010 guidelines. Table B.6 provides an overview of the general and source-specific composition rules used to compute the concepts. In the table, the column "Frequency" reports the number of source-sector-concept triples for which the corresponding composition rule is used.

B.4.5 Eurostat - Financial Accounts (`Est`)

The data source Eurostat - Financial Accounts (`Est`) corresponds to the Financial Flows and Stocks publication of Eurostat, the statistical office of the European Union Eurostat [62]. This data source reports financial assets held and the liabilities outstanding at the end of each year, for each institutional sector of the economy, according to the SNA2008/ESA2010 framework. Therefore, this is a cross-national official statistics source type for which mapping of raw data to national accounting concepts is automatic. Table B.7 provides an overview of the source-specific composition rules used to compute the concepts. In the table, the column "Frequency" reports the number of source-sector-concept triples for which the correspondent composition rule is used.

B.4.6 Federal Reserve Board B.101 - Balance Sheet (`FED_B101`)

The source Federal Reserve Board B.101 - Balance Sheet (`FED_B101`) corresponds to the table B.101: Balance Sheet of Households and Nonprofit Organizations published by the Federal Reserve Board in the Z.1 Financial Accounts of the United States Board of Governors of the Federal Reserve System [17]. The table covers the entire balance sheet of the households and nonprofit organizations sector. Relative to the mapping procedure, this raw data source is classified as cross-national official statistics that use variants of SNA2008/ESA2010 framework. Hence, we manually map each item from the raw data source into an item of the grid (see Table B.9 for the manual mapping). Table B.8 provides an overview of the general and source-specific composition rules used to compute the concepts. In the table, the column "Frequency" reports the number of source-sector-concept triples for which the corresponding composition rule is used. For this source, we obtain "Net Wealth" (`netwea`) as the sum of "Financial Assets & Fixed Capital of Personal Businesses" (`nnhass`) and "Housing & Land" (`nfahou`), net of "Debt" (`fliabi`).

B.4.7 Federal Reserve Board B.101.H - Balance Sheet (`FED_B101h`)

The source Federal Reserve Board B.101.H - Balance Sheet (`FED_B101h`) corresponds to the table B.101.h: Balance Sheet of Households published by the Federal Reserve Board as supplementary table in the Z.1 Financial Accounts of the United States Board of Governors of the Federal Reserve System [17]. The table covers the entire balance sheet of the households and is obtained as a residual - that is by subtracting assets and liabilities of the nonprofit sector from the combined balance sheet of households and nonprofit organizations sector (table B.101). Relative to the mapping procedure, this raw data source is classified as cross-national official statistics that use variants of SNA2008/ESA2010 framework. Hence, we manually

map each item from the raw data source into an item of the grid (see Table B.11 for the manual mapping). Table B.10 provides an overview of the general and source-specific composition rules used to compute the concepts. In the table, the column "Frequency" reports the number of source-sector-concept triples for which the corresponding composition rule is used. For this source, we obtain "Net Wealth" (`netwea`) as the sum of "Financial Assets & Fixed Capital of Personal Businesses" (`nnhass`) and "Housing & Land" (`nfahou`), net of "Debt" (`fliabi`).

B.4.8 Federal Reserve Board B.101.N - Balance Sheet (`FED_B101n`)

The source Federal Reserve Board B.101.N - Balance Sheet (`FED_B101n`) corresponds to the table B.101.n: Balance Sheet of Nonprofit Organizations published by the Federal Reserve Board as supplementary table in the Z.1 Financial Accounts of the United States Board of Governors of the Federal Reserve System [17]. The table covers the entire balance sheet of the nonprofit organizations sectors. Relative to the mapping procedure, this raw data source is classified as cross-national official statistics that use variants of SNA2008/ESA2010 framework. Hence, we manually map each item from the raw data source into an item of the grid (see Table B.13 for the manual mapping). Table B.12 provides an overview of the general and source-specific composition rules used to compute the concepts. In the table, the column "Frequency" reports the number of source-sector-concept triples for which the corresponding composition rule is used. For this source, we obtain "Net Wealth" (`netwea`) as the sum of "Financial Assets & Fixed Capital of Personal Businesses" (`nnhass`) and "Housing & Land" (`nfahou`), net of "Debt" (`fliabi`).

B.4.9 Federal Reserve Board S.3.a (IMA) - Balance Sheet (`FED_S3a_IMA`)

The source Federal Reserve Board S.3.a (IMA) - Balance Sheet (`FED_S3a_IMA`) corresponds to the table S.3.a: Households and Nonprofit Institutions Serving Households published by the Federal Reserve Board in the Integrated Macroeconomic Accounts section of the Z.1 Financial Accounts of the United States Board of Governors of the Federal Reserve System [17]. The table covers the entire balance sheet of the households and nonprofit organizations sector but the underlying data source is different from that used to obtain table B.101. In fact, the Integrated Macroeconomic Accounts combine production, income and saving, and capital formation from the National Income and Product Accounts (NIPA) and financial transactions and asset revaluations from the Financial Accounts with changes in net wealth from the balance sheet (table B.101). Relative to the mapping procedure, this raw data source is classified as cross-national official statistics that use variants of SNA2008/ESA2010 framework. Hence, we manually map each item from the raw data source

into an item of the grid (see Table B.14 for the manual mapping). Table B.14 provides an overview of the general and source-specific composition rules used to compute the concepts. In the table, the column "Frequency" reports the number of source-sector-concept triples for which the corresponding composition rule is used. For this source, we obtain "Net Wealth" (`netwea`) as the sum of "Financial Assets & Fixed Capital of Personal Businesses" (`nnhass`) and "Housing & Land" (`nfahou`), net of "Debt" (`fliabi`).

B.4.10 OECD - Financial Accounts (`OECD_FA`)

The source OECD - Financial Accounts (`OECD_FA`) corresponds to the OECD's table Households' Financial Assets and Liabilities (QASA_7HH table) which provides a detailed breakdown of households' loans, investment funds shares, life insurance and annuity entitlements, and pension entitlements OECD [115]. This raw data source assembles various sources from central banks and national statistical institutes. This raw data source is classified as cross-national official statistics because the OECD organizes and disseminate data according to the SNA2008/ESA2010 framework. Therefore, mapping of raw data into national accounts concepts is automatic. Table B.16 provides an overview of the general and source-specific composition rules used to compute the concepts. In the table, the column "Frequency" reports the number of source-sector-concept triples for which the corresponding composition rule is used.

B.4.11 Luxembourg Wealth Study Database - Balance Sheet (`LWS_topo`)

The source Luxembourg Wealth Study Database - Balance Sheet (`LWS_topo`) is the Luxembourg Wealth Study Database which provides cross-national harmonized micro-data (household- and individual-level data) on assets, liabilities, and net wealth LIS [107]. Aggregate concepts are obtained multiplying household-level micro-data by the population weight and they are the average across five implicates (Rubin's Rule). The organization of assets and liabilities in the Luxembourg Wealth Study Database is not directly comparable to the GC Wealth Project conceptual grid. Therefore, this raw data source is classified as cross-national academic research that do not use the SNA2008/ESA2010 framework for which we introduce a source-specific conceptual grid (see Table B.18) and composition table (see Table B.17). In the composition table, the column "Frequency" reports the number of source-sector-concept triples for which the corresponding composition rule is used. For this specific source, "Net Wealth" (`netwea`) is obtained ex-post, that is by combining the available concepts of the Wealth Topography. More specifically, "Net Wealth" is computed as "Financial Assets & Fixed Capital of Personal Businesses" (`nnhass`) plus "Housing & Land" (`nfahou`) minus "Debt" (`fliabi`).

B.4.12 Household Finance and Consumption Survey - Balance Sheet (`HFCS_topo`)

The source Household Finance and Consumption Survey - Balance Sheet (`HFCS_topo`) corresponds to the Household Finance and Consumption Survey (HFCS), a collection of harmonized micro-data on households' balance sheets and consumption Household Finance and Consumption Network [77]. The HFCS is housed at the European Central Bank but the survey is conducted nationally, mostly by central banks. To obtain aggregate concepts from household-level data, we used household-level weights. Moreover, aggregate data reported in the Wealth Topography are an average across all five implicates (Rubin's Rule). The organization of assets and liabilities in the Household Finance and Consumption Survey is not directly comparable to the GC Wealth Project conceptual grid. Therefore, this raw data source is classified as cross-national official survey data that do not use the SNA2008/ESA2010 framework source for which we introduce a source-specific conceptual grid (see Table B.20) and composition table (see Table B.19). In the composition table, the column "Frequency" reports the number of source-sector-concept triples for which the corresponding composition rule is used.

B.4.13 World Inequality Database - Balance Sheet (`WID_topo`)

The source World Inequality Database - Balance Sheet (`WID_topo`) corresponds to the World Inequality Database (WID) World Inequality Database [172]. The concepts included in the Wealth Topography database are the WID aggregate wealth variables, converted in nominal values using the country-specific price deflator provided by WID. Among the WID estimates, we have included in the Wealth Topography database only countries with wealth data available for at least two asset group. Thus, our databse excludes those estimates of wealth aggregates that are heavily imputed with data available only for one asset group or for few asset sub-components. The organization of assets and liabilities in the World Inequality Database - Balance Sheet is not directly comparable to the GC Wealth Project conceptual grid. Therefore, this raw data source is classified as cross-national academic research that does not use the SNA2008/ESA2010 framework for which we introduce a source-specific conceptual grid (see Table B.22) and composition table (see Table B.22). In the composition table, the column "Frequency" reports the number of source-sector-concept triples for which the corresponding composition rule is used. For this source, "Net Wealth" (`netwea`) may be different from the sum of "Financial Assets & Fixed Capital of Personal Businesses" (`nnhass`) and "Housing & Land" (`nfahou`), net of "Debt" (`fliabi`) because of discrepancies present in the raw data source.

Table B.3: Composition rules: Bank of Italy - Financial Accounts

Sector	Code	Concept	Composition rule using codes	Frequency
Households & NPISH	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(A_AF)	1
Households & NPISH	fliabi	Debt	(L_AF41) + (L_AF42) + (L_AF6)	1
Households & NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2BI2) + (A_AF29) + (A_AF31) + (A_AF32) + (A_AF41)	1
Households & NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF51) + (A_AF52)	1
Households & NPISH	falipe	Pensions & Life Insurance	(A_AF6)	1

Table B.4: Composition rules: Bank of Italy and ISTAT - Balance Sheet

Sector	Code	Concept	Composition rule using codes	Frequency
Households & NPISH	netwea	Net Wealth	(Financial Assets & Fixed Capital of Personal Businesses) + (Housing & Land) - (Debt)	1
Households & NPISH	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(AN1123) + (AN113) + (AN115) + (AN117) + (AN12) + (AN211) + (A_AF)	1
Households & NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF51) + (L_AF52) + (L_AF6) + (L_AF8)	1
Households & NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3) + (A_AF4)	1
Households & NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF51) + (A_AF52)	1
Households & NPISH	falipe	Pensions & Life Insurance	(A_AF6)	1
Households & NPISH	nfabus	Fixed Capital of Personal Businesses	(AN1123) + (AN113) + (AN115) + (AN117) + (AN12) + (AN211)	1
Households & NPISH	nfahou	Housing & Land	(AN111) + (AN1121) + (AN1122) - (AN1123)	1

Table B.5: Composition rules: European Central Bank Non-EU - Financial Accounts

Sector	Code	Concept	Composition rule using codes	Frequency
Households & NPISH	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(A_AF)	18
Households & NPISH	fliabi	Debt	(L_AF4)	2
Households & NPISH	fliabi	Debt	(L_AF4) + (L_AF5)	1
Households & NPISH	fliabi	Debt	(L_AF3) + (L_AF4)	1
Households & NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF5) + (L_AF6)	11
Households & NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF5)	3
Households & NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3) + (A_AF4)	18
Households & NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF5)	18
Households & NPISH	falipe	Pensions & Life Insurance	(A_AF6)	18

Households	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(A_AF)	12
Households	fliabi	Debt	(L_AF3) + (L_AF4)	2
Households	fliabi	Debt	(L_AF4)	2
Households	fliabi	Debt	(L_AF4) + (L_AF5)	1
Households	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF5) + (L_AF6)	7
Households	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3) + (A_AF4)	12
Households	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF5)	12
Households	falipe	Pensions & Life Insurance	(A_AF6)	12
NPISH	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(A_AF)	12
NPISH	fliabi	Debt	(L_AF4) + (L_AF5)	1
NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF5)	2
NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF5) + (L_AF6)	7
NPISH	fliabi	Debt	(L_AF4)	1
NPISH	fliabi	Debt	(L_AF3) + (L_AF4)	1
NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3) + (A_AF4)	12
NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF5)	12
NPISH	falipe	Pensions & Life Insurance	(A_AF6)	10

Table B.6: Composition rules: European Central Bank EU - Financial Accounts

Sector	Code	Concept	Composition rule using codes	Frequency
Households & NPISH	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(A_AF)	28
Households & NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF5) + (L_AF6)	28
Households & NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3) + (A_AF4)	28
Households & NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF5)	28
Households & NPISH	falipe	Pensions & Life Insurance	(A_AF6)	28
Households	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(A_AF)	28
Households	fliabi	Debt	(L_AF4)	1
Households	fliabi	Debt	(L_AF4) + (L_AF6)	27
Households	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3) + (A_AF4)	27
Households	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3)	1
Households	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF5)	28
Households	falipe	Pensions & Life Insurance	(A_AF6)	28

NPISH	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(A_AF)	28
NPISH	fliabi	Debt	(L_AF4) + (L_AF6)	1
NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF5) + (L_AF6)	26
NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF5)	1
NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3)	1
NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3) + (A_AF4)	27
NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF5)	28
NPISH	falipe	Pensions & Life Insurance	(A_AF6)	28

Table B.7: Composition rules: Eurostat - Financial Accounts

Sector	Code	Concept	Composition rule using codes	Frequency
Households & NPISH	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(A_AF)	37
Households & NPISH	fliabi	Debt	(L_AF4) + (L_AF5)	8
Households & NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF6)	1
Households & NPISH	fliabi	Debt	(L_AF4)	20
Households & NPISH	fliabi	Debt	(L_AF3) + (L_AF4)	4
Households & NPISH	fliabi	Debt	(L_AF4) + (L_AF6)	1
Households & NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF5) + (L_AF6)	3
Households & NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3) + (A_AF4)	34
Households & NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3)	3
Households & NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF5)	37

Households & NPISH	falipe	Pensions & Life Insurance	(A_AF6)	37
Households	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(A_AF)	36
Households	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF6)	2
Households	fliabi	Debt	(L_AF4)	30
Households	fliabi	Debt	(L_AF4) + (L_AF6)	2
Households	fliabi	Debt	(L_AF3) + (L_AF4)	2
Households	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3) + (A_AF4)	32
Households	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3)	4
Households	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF5)	36
Households	falipe	Pensions & Life Insurance	(A_AF6)	36
NPISH	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(A_AF)	36
NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF6)	1
NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF5) + (L_AF6)	1
NPISH	fliabi	Debt	(L_AF4)	22
NPISH	fliabi	Debt	(L_AF4) + (L_AF5)	8
NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF5)	2
NPISH	fliabi	Debt	(L_AF3) + (L_AF4)	2
NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3)	13
NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2)	2

NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3) + (A_AF4)	21
NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF5)	36
NPISH	falipe	Pensions & Life Insurance	(A_AF6)	13

Table B.8: Composition rules: Federal Reserve Board B.101 - Balance Sheet

Sector	Code	Concept	Composition rule using codes	Frequency
Households & NPISH	netwea	Net Wealth	(Financial Assets & Fixed Capital of Personal Businesses) + (Housing & Land) - (Debt)	1
Households & NPISH	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(AN) - (AN111) - (XDHHCE) + (A_AF)	1
Households & NPISH	fliabi	Debt	(L_AF3) + (L_AF4)	1
Households & NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF21) + (A_AF22) + (A_AF29) + (A_AF3) + (A_AF4)	1
Households & NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF511) + (A_AF519) + (A_AF521) + (A_AF522)	1
Households & NPISH	falipe	Pensions & Life Insurance	(A_AF62) + (A_AF63)	1
Households & NPISH	nfabus	Fixed Capital of Personal Businesses	(AN) - (AN111) - (XDHHCE)	1
Households & NPISH	nfahou	Housing & Land	(AN111)	1

Table B.9: Matching: Federal Reserve Board B.101 - Balance Sheet

Original label	Original identifier	Code
Nonfinancial Assets	LM152010005.A	AN
Real Estate At Market Value	LM155035005.A	AN111
Equipment, Current Cost Basis	LM165015205.A	AN113
Nonresidential Intellectual Property Products, Current Cost Basis	LM165013765.A	AN117
Total Financial Assets	FL154090005.A	A_AF
Checkable Deposits And Currency	FL153020005.A	A_AF21
Total Time And Savings Deposits	FL153030005.A	A_AF22
Private Foreign Deposits	LM153091003.A	A_AF29
Debt Securities	LM154022005.A	A_AF3
Loans	FL154023005.A	A_AF4
Corporate Equities	LM153064105.A	A_AF511
Proprietors' Equity In Noncorporate Business	LM152090205.A	A_AF519
Money Market Fund Shares	FL153034005.A	A_AF521
Mutual Fund Shares	LM153064205.A	A_AF522
Life Insurance Reserves	FL153040005.A	A_AF62
Pension Entitlements	FL153050005.A	A_AF63
Total Liabilities	FL154190005.A	L_AF
Municipal Securities	FL163162003.A	L_AF3
Loans	FL154123005.A	L_AF4
Deferred And Unpaid Life Insurance Premiums	FL543077073.A	L_AF62
Consumer Durable Goods, Current Cost Basis	LM155111005.A	XDHHCE

Table B.10: Composition rules: Federal Reserve Board B.101.H - Balance Sheet

Sector	Code	Concept	Composition rule using codes	Frequency
Households	netwea	Net Wealth	(Financial Assets & Fixed Capital of Personal Businesses) + (Housing & Land) - (Debt)	1
Households	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(AN) - (AN111) - (XDHHCE) + (A_AF)	1
Households	fliabi	Debt	(L_AF4)	1
Households	facdbl	Cash, Deposits, Bonds & Loans	(A_AF21) + (A_AF22) + (A_AF3) + (A_AF4)	1
Households	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF51) + (A_AF519) + (A_AF521)	1
Households	falipe	Pensions & Life Insurance	(A_AF62) + (A_AF63)	1
Households	nfabus	Fixed Capital of Personal Businesses	(AN) - (AN111) - (XDHHCE)	1
Households	nfahou	Housing & Land	(AN111)	1

Table B.11: Matching: Federal Reserve Board B.101.H - Balance Sheet

Original label	Original identifier	Code
Nonfinancial Assets	LM192010005.A	AN
Owner-Occupied Real Estate Including Vacant Land And Mobile Homes At Market Value	LM155035015.A	AN111
Total Financial Assets	FL194090005.A	A_AF
Checkable Deposits And Currency	FL193020005.A	A_AF21
Other Deposits Including Time And Savings Deposits	FL193030205.A	A_AF22
Debt Securities	LM194022005.A	A_AF3
Loans	FL194023005.A	A_AF4
Corporate Equities And Mutual Fund Shares	LM193064005.A	A_AF51
Proprietors' Equity In Noncorporate Business	LM152090205.A	A_AF519
Money Market Fund Shares	FL193034005.A	A_AF521
Life Insurance Reserves	FL153040005.A	A_AF62
Pension Entitlements	FL153050005.A	A_AF63
Total Liabilities	FL194190005.A	L_AF
Loans	FL194123005.A	L_AF4
Deferred And Unpaid Life Insurance Premiums	FL543077073.A	L_AF62
Consumer Durable Goods, Current Cost Basis	LM155111005.A	XDHHCE

Table B.12: Composition rules: Federal Reserve Board B.101.N - Balance Sheet

Sector	Code	Concept	Composition rule using codes	Frequency
NPISH	netwea	Net Wealth	(AN) + (A_AF) - (L_AF)	1
NPISH	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(AN) - (AN111) + (A_AF)	1
NPISH	fliabi	Debt	(L_AF3) + (L_AF4)	1
NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF21) + (A_AF22) + (A_AF3) + (A_AF4)	1
NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF5)	1
NPISH	nfabus	Fixed Capital of Personal Businesses	(AN) - (AN111)	1
NPISH	nfahou	Housing & Land	(AN111)	1

Table B.13: Matching: Federal Reserve Board B.101.N - Balance Sheet

Original label	Original identifier	Code
Nonfinancial Assets	FL162010005.A	AN
Real Estate At Market Value	FL165035005.A	AN111
Equipment, Current Cost Basis	FL165015205.A	AN113
Nonresidential Intellectual Property Products, Current Cost Basis	FL165013765.A	AN117
Total Financial Assets	FL164090005.A	A_AF
Cash And Non-Interest-Bearing Deposits	FL163020005.A	A_AF21
Other Deposits And Short-Term Investments	FL163030205.A	A_AF22
Debt Securities	LM164022005.A	A_AF3
Loans	FL164023005.A	A_AF4
Corporate Equities And Mutual Fund Shares	LM163064005.A	A_AF5
Money Market Fund Shares	FL163034003.A	A_AF521
Total Liabilities	FL164190005.A	L_AF
Municipal Securities	FL163162003.A	L_AF3
Loans	FL164123005.A	L_AF4

Table B.14: Composition rules: Federal Reserve Board S.3.a (IMA) - Balance Sheet

Sector	Code	Concept	Composition rule using codes	Frequency
Households & NPISH	netwea	Net Wealth	(Financial Assets & Fixed Capital of Personal Businesses) + (Housing & Land) - (Debt)	1
Households & NPISH	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(AN) - (AN111) - (XDHHCE) + (A_AF)	1
Households & NPISH	fliabi	Debt	(L_AF3) + (L_AF4) + (L_AF6)	1
Households & NPISH	facdbl	Cash, Deposits, Bonds & Loans	(A_AF2) + (A_AF3) + (A_AF4)	1
Households & NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF5)	1
Households & NPISH	falipe	Pensions & Life Insurance	(A_AF6)	1
Households & NPISH	nfabus	Fixed Capital of Personal Businesses	(AN) - (AN111) - (XDHHCE)	1
Households & NPISH	nfahou	Housing & Land	(AN111)	1

Table B.15: Matching: Federal Reserve Board S.3.a (IMA) - Balance Sheet

Original label	Original identifier	Code
Nonfinancial Assets	LM152010005.A	AN
Real Estate At Market Value	LM155035005.A	AN111
Equipment, Current Cost Basis	LM165015205.A	AN113
Nonresidential Intellectual Property Products, Current Cost Basis	LM165013765.A	AN117
Total Financial Assets	FL154090005.A	A_AF
Total Currency And Deposits	FL154000005.A	A_AF2
Debt Securities	LM154022005.A	A_AF3
Loans	FL154023005.A	A_AF4
Loans, Excluding Mortgages	FL154041005.A	A_AF41
Total Mortgages	FL153065005.A	A_AF42
Equity And Investment Fund Shares	FL153081005.A	A_AF5
Corporate Equities	LM153064105.A	A_AF51
Proprietors' Equity In Noncorporate Business	LM152090205.A	A_AF519
Money Market Fund Shares	FL153034005.A	A_AF521
Mutual Fund Shares	LM153064205.A	A_AF522
Insurance, Pension And Standardized Guarantee Schemes	FL153052005.A	A_AF6
Life Insurance Reserves	FL153040005.A	A_AF62
Pension Entitlements	FL153050005.A	A_AF63
Other Accounts Receivable	FL163096005.A	A_AF8
Net Worth	FL152090005.A	B90
Total Liabilities	FL154190005.A	L_AF
Municipal Securities	FL163162003.A	L_AF3
Loans	FL154123005.A	L_AF4
Short-Term Loans	FL154141005.A	L_AF41
Total Mortgages	FL153165005.A	L_AF42
Deferred And Unpaid Life Insurance Premiums	FL543077073.A	L_AF6

Trade Payables	FL163170005.A	L_AF8
Consumer Durable Goods, Current Cost Basis	LM155111005.A	XDHHCE

Table B.16: Composition rules: OECD - Financial Accounts

Sector	Code	Concept	Composition rule using codes	Frequency
Households & NPISH	fliabi	Debt	(L_AF4)	34
Households & NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF52)	34
Households & NPISH	falipe	Pensions & Life Insurance	(A_AF62) + (A_AF63)	28
Households	fliabi	Debt	(L_AF4)	27
Households	faeqfd	Stocks, Business Equities & Fund Shares	(A_AF52)	27
Households	falipe	Pensions & Life Insurance	(A_AF62) + (A_AF63)	27

Table B.17: Composition rules: Luxembourg Wealth Study Database - Balance Sheet

Sector	Code	Concept	Composition rule using codes	Frequency
Households	netwea	Net Wealth	(Financial Assets & Fixed Capital of Personal Businesses) + (Housing & Land) - (Debt)	16
Households	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(haf)	15
Households	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(haf) + (has) + (hannb)	4
Households	fliabi	Debt	(hl)	19
Households	facdbl	Cash, Deposits, Bonds & Loans	(hafc) + (hafib)	16
Households	faeqfd	Stocks, Business Equities & Fund Shares	(hafis) + (hafii) + (hannb)	15
Households	faeqfd	Stocks, Business Equities & Fund Shares	(hafis)	1
Households	falipe	Pensions & Life Insurance	(has)	4
Households	falipe	Pensions & Life Insurance	(hasi)	11
Households	nfabus	Fixed Capital of Personal Businesses	(hannb)	17
Households	nfahou	Housing & Land	(hanr)	19

Table B.18: Matching: Luxembourg Wealth Study Database - Balance Sheet

Original label	Original identifier
Total Assets	ha
Financial Assets (Excluding Pensions)	haf
Deposit Accounts And Cash	hafc
Bonds And Other Debt Securities	hafib
Investment Funds And Alternative Investments	hafii
Stocks And Other Equity	hafis
Non-Financial Assets	han
Business Equity	hannb
Vehicles	hanncv
Real Estate	hanr
Pension Assets And Other Long-Term Savings	has
Life Insurance And Voluntary Individual Pensions	hasi
Total Liabilities	hl

Table B.19: Composition rules: Household Finance and Consumption Survey - Balance Sheet

Sector	Code	Concept	Composition rule using codes	Frequency
Households	netwea	Net Wealth	(DA2100) + (DA1140) + (DA1131) + (DA1122) + (DA1110) + (DA1121) - (DL1000)	22
Households	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(DA1131) + (DA1140) + (DA1121) + (DA2100)	22
Households	fliabi	Debt	(DL1000)	22
Households	facdbl	Cash, Deposits, Bonds & Loans	(DA2101) + (DA2103) + (DA2107)	22
Households	faeqfd	Stocks, Business Equities & Fund Shares	(DA2104) + (DA2105) + (DA2102) + (DA2106)	22
Households	falipe	Pensions & Life Insurance	(DA2109)	22
Households	nfabus	Fixed Capital of Personal Businesses	(DA1140) + (DA1131) + (DA1121)	22
Households	nfahou	Housing & Land	(DA1110) + (DA1122)	22

Table B.20: Matching: Household Finance and Consumption Survey - Balance Sheet

Original label	Original identifier
Value of household's main residence	DA1110
Value of other real estate property used for business activities	DA1121
Value of other real estate property not for business activities	DA1122
Value of household's vehicles	DA1130
Valuables	DA1131
Value of self-employment businesses	DA1140
Total financial assets (excl. public and occupational pension plans)	DA2100
Deposits	DA2101
Mutual funds, total	DA2102
Bonds	DA2103
Value of non self-employment private business	DA2104
Shares, publicly traded	DA2105
Managed accounts	DA2106
Money owed to households	DA2107
Voluntary pension/whole life insurance	DA2109
Total outstanding balance of household's liabilities	DL1000

Table B.21: Composition rules: World Inequality Database - Balance Sheet

Sector	Code	Concept	Composition rule using codes	Frequency
Households & NPISH	netwea	Net Wealth	(pweal)	71
Households & NPISH	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(pwbus) + (pwfin)	18
Households & NPISH	fliabi	Debt	(pwdeb)	23
Households & NPISH	facdbl	Cash, Deposits, Bonds & Loans	(pwbol) + (pwcud)	16
Households & NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(pweqi)	20
Households & NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(pwequ)	2
Households & NPISH	falipe	Pensions & Life Insurance	(pwpen)	22
Households & NPISH	nfabus	Fixed Capital of Personal Businesses	(pwbus)	18
Households & NPISH	nfahou	Housing & Land	(pwhou)	20
Households	netwea	Net Wealth	(hweal)	71
Households	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(hwbus) + (hwfin)	13
Households	fliabi	Debt	(hwdeb)	15
Households	facdbl	Cash, Deposits, Bonds & Loans	(hwbol) + (hwcud)	9

Households	faeqfd	Stocks, Business Equities & Fund Shares	(hweqi)	11
Households	faeqfd	Stocks, Business Equities & Fund Shares	(hwequ)	5
Households	falipe	Pensions & Life Insurance	(hwpen)	16
Households	nfabus	Fixed Capital of Personal Businesses	(hwbus)	13
Households	nfahou	Housing & Land	(hwhou)	14
NPISH	netwea	Net Wealth	(iweal)	12
NPISH	nnhass	Financial Assets & Fixed Capital of Personal Businesses	(iwbus) + (iwfin)	11
NPISH	fliabi	Debt	(iwdeb)	13
NPISH	facdbl	Cash, Deposits, Bonds & Loans	(iwbol) + (iwcud)	9
NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(iweqi)	10
NPISH	faeqfd	Stocks, Business Equities & Fund Shares	(iwequ)	3
NPISH	falipe	Pensions & Life Insurance	(iwpen)	9
NPISH	nfabus	Fixed Capital of Personal Businesses	(iwbus)	11
NPISH	nfahou	Housing & Land	(iwhou)	10

Table B.22: Matching: World Inequality Database - Balance Sheet

Sector	Original label	Original identifier
Households & NPISH	Private agricultural land	pwagr
Households & NPISH	Private bonds & loans	pwbol
Households & NPISH	Private business assets	pwbus
Households & NPISH	Private currency & deposits	pwcud
Households & NPISH	Private debt	pwdeb
Households & NPISH	Private dwellings	pwdwe
Households & NPISH	Net private wealth	pweal
Households & NPISH	Private equities	pweqi
Households & NPISH	Private equity, fund shares & offshore wealth	pwequ
Households & NPISH	Private financial assets excluding currency & deposits	pwfie
Households & NPISH	Private financial assets	pwfin
Households & NPISH	Private housing assets	pwhou
Households & NPISH	Private land underlying dwellings	pwlan
Households & NPISH	Private natural capital	pwnat
Households & NPISH	Private non-financial assets	pwnfa
Households & NPISH	Other domestic private capital	pwodk
Households & NPISH	Private offshore wealth	pwoff
Households & NPISH	Private pension funds & life insurance	pwpen
Households	Personal agricultural land	hwagr
Households	Personal bonds & loans	hwbol
Households	Personal business and other non-financial assets	hwbus
Households	Personal currency & deposits	hwcud
Households	Personal debt	hwdeb
Households	Personal dwellings	hwdwe
Households	Net personal wealth	hweal
Households	Personal equities	hweqi
Households	Personal equity, fund shares & offshore wealth	hwequ
Households	Personal financial assets excluding currency & deposits	hwfie

Households	Personal financial assets	hwfin
Households	Personal housing assets	hwhou
Households	Personal land underlying dwellings	hwlan
Households	Personal natural capital	hwnat
Households	Personal non-financial assets	hwnfa
Households	Personal other domestic capital	hwodk
Households	Personal offshore wealth	hwoff
Households	Personal pension funds & life insurance	hwpen
NPISH	Non-profit agricultural land	iwagr
NPISH	Non-profit bonds & loans	iwbol
NPISH	Non-profit business and other non-financial assets	iwbus
NPISH	Non-profit currency & deposits	iwcud
NPISH	Non-profit debt	iwdeb
NPISH	Non-profit dwellings	iwdwe
NPISH	Net non-profit wealth	iweal
NPISH	Non-profit equities	iweqi
NPISH	Non-profit equity, fund shares & offshore wealth	iwequ
NPISH	Non-profit financial assets excluding cash	iwfie
NPISH	Non-profit financial assets	iwfin
NPISH	Non-profit housing assets	iwhou
NPISH	Non-profit land underlying dwellings	iwlan
NPISH	Non-profit natural capital	iwnat
NPISH	Non-profit non-financial assets	iwnfa
NPISH	Non-profit other domestic capital	iwodk
NPISH	Non-profit pension funds & life insurance	iwpen

Appendix C

Appendix to the Wealth Inequality Trends Section

C.1 Introduction

The Appendix to the Wealth Inequality Trends section of the GC Wealth Project provides additional information on

- the full list of sources covered by the GC Wealth Project Wealth Inequality Trends database in Section C.2
- source-specific documentation and information on the precise estimation method for own estimates (Household Finance and Consumption Survey and Luxembourg Wealth Study Database), and an explanation of the inclusion and exclusion of data points in the case of sources that (also) provide fully imputed wealth inequality estimates (Credit Suisse and the World Inequality Database) in Section C.3

C.2 Sources Included in the Wealth Inequality Trends Section

All data sources included in the current version of the Wealth Inequality section are reported in TableC.1. The table reports the code associated with each source (`Source`), including the proper citation, the source type (`Source Type`), and the final consultation date (`Date`). In the case of databases [117, 172], this is the date on which we have downloaded the data. In the case of microdata [77, 107], this column specifies the

publication vintages as well as the date on which we have computed the estimates. As for Credit Suisse [24], several reports with wealth inequality estimates referring to the same calendar year are available, so the date column specifies the precise publication years of the reports included in the Wealth Inequality Trends database. For details, we refer to the Methodological Table.

Table C.1: Sources in the Wealth Inequality Trends Section

Source	Source Type	Date
Acciari et al. (2022) [1]	Academic research	-
Advani et al. (2021) [2]	Academic research	-
Albers et al. (2022) [3]	Academic research	-
Alvaredo & Saez (2010) [6]	Academic research	-
Alvaredo et al. (2018) [5]	Academic research	-
Assouad (2021) [7]	Academic research	-
Australian Bureau of Statistics (2022) [8]	Official survey data	-
Batty et al. (2019) [12]	Government research	-
Batty et al. (2022) [13]	Government research	-
Bharti (2018) [14]	Academic research	-
Brandolini et al. (2006) [18]	Government research	-
Bricker et al. (2021) [19]	Academic research	-
Cannari & D'Alessio (2018) [20]	Academic research	-
Catherine et al. (2021) [21]	Academic research	-
Chatterjee et al. (2022) [22]	Academic research	-
Credit Suisse Global Wealth Report [24]	Cross-national corporate research	Global Wealth Databooks 2014, 2016, 2017, 2018, 2019
Davies & Di Matteo (2021) [26]	Academic research	-
Dell et al. (2007) [27]	Academic research	-
Easton (1983) [30]	Corporate research	-
Frick et al. (2010) [64]	Academic research	-
Garbinti et al. (2021) [65]	Academic research	-
Household Finance and Consumption Survey (own estimates) [77]	Cross-national official survey data	Waves I - III, as of December 14, 2022
Iacono & Palagi (2023) [79]	Academic research	-
Jakobsen et al. (2020) [97]	Academic research	-

Katic & Leigh (2016) [99]	Academic research	-
Kim (2018) [101]	Academic research	-
Kitao & Yamada (2019) [102]	Academic research	-
Kopczuk & Saez (2004) [104]	Academic research	-
Kuhn et al. (2020) [105]	Academic research	-
Lundberg & Waldenström (2018) [108]	Academic research	-
Luxembourg Wealth Study Database (own estimates) [107]	Cross-national academic research	Waves IV - XI, as of March 29, 2023
Martínez-Toledano (2022) [112]	Academic research	-
Novokmet et al. (2018) [114]	Academic research	-
OECD Wealth Distribution Database [117]	Cross-national official statistics	September 9, 2022
Piketty et al. (2006) [128]	Academic research	-
Piketty et al. (2019) [129]	Academic research	-
Roine & Waldenström (2009) [136]	Academic research	-
Roine & Waldenström (2015) [135]	Cross-national academic research	-
Saez & Zucman (2016) [140]	Academic research	-
Saez & Zucman (2019) [137]	Academic research	-
Saez & Zucman (2020a) [138]	Academic research	-
Saez & Zucman (2020b) [139]	Academic research	-
Salverda (2019) [141]	Academic research	-
Smith et al. (2020) [145]	Academic research	-
Smith et al. (2023) [146]	Academic research	-
Statistics Finland (2021) [149]	Official survey data	-
Statistics Norway (2022) [150]	Official statistics	-
Statistics New Zealand (2022) [151]	Official survey data	-
van Bavel & Frankema (2017) [167]	Academic research	-
Wolff (2017) [170]	Academic research	-

Wolff (2021) [171]	Academic research	-
World Inequality Database [172]	Cross-national academic research	November 22, 2022
Zucman (2019) [173]	Academic research	-

C.3 Source-Specific Documentation

For the Wealth Inequality Trends database of the GC Wealth Project, the **Methodological Tables** provide a detailed documentation of each `source`, thus the primary source-specific documentation is provided in these tables. In this appendix, we summarize the most important aspects for two types of sources: *i)* sources for which we estimated measures of wealth inequality based on microdata [77, 107], and *ii)* sources where we could not cover the full range of estimates available in the raw data of source, especially because data points provided by the source are fully imputed [24, 172].

C.3.1 Household Finance and Consumption Survey (HFCS_ineq)

We have estimated wealth inequality using data waves one to three of the Household Finance and Consumption Survey [77]. As the HFCS is a mulitply imputed data set, we obtained all estimates by applying Rubin's Rule; that is, they are the mean of the estimates across the five implicates. Second, we have used the household level weights provided in the dataset for the estimations. Third, our estimates are based on the variable `dn3001`, which is net wealth at the household level. This definition does not encompass private or occupational pension wealth, while private pension wealth is included even if it is not (directly) marketable (at the same value). Fourth, the HFCS is an ex ante harmonized survey; it is coordinated by the European Central Bank but conducted by the national central banks of the Eurosystem, and all countries survey, in principle, the same concept of net wealth. There are, however, important differences in the precise survey methodologies across countries and the resulting quality of the data, especially in terms of the coverage of the upper tail and the valuation of assets. Thus, while the survey is conceptually harmonized, the country-specific survey designs differ substantially. Some countries use (external) administrative data of different types to attach values to single components of net wealth, especially Finland, Estonia, Ireland, Latvia, and Lithuania. While sampling in most countries includes some type of oversampling of the upper tail, others do not even attempt to counterbalance the higher non-response rate at the top (Austria, Italy, Netherlands, Malta, and Slovenia). For the countries with over-sampling strategies, the precise procedure varies and is based on either individual, household, or region-specific estimates of wealth or wealth correlates. In summary, the effective oversampling rates of the top 5 percent ranges from -15% (Austria) to 413% (Spain) in the last wave of the survey, according to Household Finance and Consumption Network [77]. Finally, we work with an identical definition of net wealth across countries that excludes all private and occupational pension wealth. This cross-country harmonized definition might hide important aspects in country comparisons in light of (statutory) differences in the (relative) importance of the first, second, and third tier of pensions systems.

The HFCS reports wealth only at the household level, and, at the moment, our database only covers estimates of wealth inequality referring to the distribution among households.

C.3.2 Luxembourg Wealth Study (LWS_ineq)

The Luxembourg Wealth Study [107] provides cross-country harmonized microdata on household wealth and we employ waves Waves IV - XI of the data. Except for one country, Norway, the underlying original data has been obtained via surveys and is published by the Luxembourg Wealth Study via five implicates. We have obtained each as included in the Wealth Inequality Trends database thus as the average estimate across the five implicates. For Norway, a single data set is available, as, in contrast to all other countries, the original data is a sample of administrative data. Furthermore, we have used household-level weights in the computation of the wealth inequality measures.

Our preferred wealth definition is net wealth including private pension and life insurance plans (total real assets inclusive of consumer goods such as vehicles and other valuables, plus total financial assets, inclusive of long-term savings via life insurance and voluntary individual pensions plans, minus total liabilities; variable `anw`). We were able to implement this concept for the following countries: Austria, Canada, Chile, Germany, Spain, Estonia, Finland, Greece, Italy after 2000, Luxembourg, Norway, Sweden, South Africa, Slovakia, Slovenia, the United Kingdom, and the United States. For other countries, certain types of assets and liabilities are not available via the Luxembourg Wealth Study. For instance, valuables are not available for Finland, and we thus had to exclude them from the net wealth definition for Finland, while valuables are part of the net wealth definition in all other countries. Given the absence of data, the net wealth concept for the following countries does not include private pension plans: Australia, Italy up to 2000, Japan, Sweden, and South Africa (variable `dnw`). We accessed the Luxembourg Wealth Study to estimate the wealth inequality measures on March 29, 2023.

C.3.3 Word Inequality Database (WID_ineq)

The World Inequality Database [172] provides estimates of wealth inequality for most countries of the world. From among these estimates, we have selected those that are consistent with our principle of not being fully imputed wealth inequality data. Our database thus includes estimates that are based on either survey or administrative data on the distribution of wealth for at least one single year. In the case of the World Inequality Database [172], this still implies a very generous coverage, as, for many European countries with time-series data published on the World Inequality Database [172], the number years for which micro data

on the wealth distribution has been used is much smaller than the number of years for which the estimates derive from (backwards) extrapolation.

Furthermore, wealth inequality estimates are available for multiple units of analysis, including equal-split adults (or households). As the set of estimates referring to equal-split adults is the most complete among the sources that qualify for our database, we have chosen these estimates, while not reporting statistics referring to other units of analysis.

Table C.2 lists the countries covered by the GC Wealth Project Wealth Inequality Trends database and, for each country (`Country`), the primary origin of the estimates as published by WID (`Original Source`) and the data type according to our classification (`Data Type`) which suggests substantial methodological heterogeneity underlying World Inequality Database [172] estimates. We downloaded the data on November 22, 2022.

Table C.2: The selection of WID series available in the GC Wealth Project: notes on the primary source of data and their nature

Country	Original Source	Data Type
Austria	HFCS	Wealth survey and national accounts
Belgium	HFCS	Wealth survey and national accounts
China	Piketty et al. (2019)	Wealth survey (with adjustments)
Cyprus	HFCS	Wealth survey and national accounts
Croatia	HFCS	Wealth survey and national accounts
Denmark	Jakobsen et al. (2020); Survey-based estimates for Finland of Blanchet & Martínez-Toledano (2022) are adjusted to align with Jakobsen et al. (2020)	Wealth tax/register data, other sources, and national accounts
Estonia	HFCS	Wealth survey and national accounts
Finland	Blanchet & Martínez-Toledano (2022)	Wealth survey and national accounts
France	Garbinti et al. (2021)	Capital income tax data, wealth survey, and national accounts
Germany	Albers et al. (2022)	Wealth tax/register data, other sources, and national accounts
Greece	HFCS	Wealth survey and national accounts
Hungary	HFCS	Wealth survey and national accounts
India	Bharti (2018)	Wealth survey (with adjustments)
Ireland	HFCS	Wealth survey and national accounts
Italy	Acciari et al. (2022)	Inheritance/estate tax data, wealth survey and national accounts
Korea	Kim (2018)	Inheritance/estate tax-based.
Latvia	HFCS	Wealth survey and national accounts
Lithuania	HFCS	Wealth survey and national accounts
Luxembourg	HFCS	Wealth survey and national accounts

Malta	HFCS	Wealth survey and national accounts
Netherlands	Toussaint et al. (2022)	Wealth tax/register data, other sources, and national accounts
Norway	Iacono & Palagi (2021)	Wealth tax/register data, other sources, and national accounts
Poland	HFCS	Wealth survey and national accounts
Portugal	HFCS	Wealth survey and national accounts
Russia	Novokmet et al. (2018)	Wealth tax/register data, other sources, and national accounts
Slovakia	HFCS	Wealth survey and national accounts
Slovenia	HFCS	Wealth survey and national accounts
South Africa	Chatterjee et al. (2022)	Wealth tax/register data, other sources, and national accounts
Spain	Martínez-Toledano (2022)	Capital income tax data, other sources and national accounts
Switzerland	Foellmi & Martínez (2017), Blanchet & Martínez-Toledano (2022)	Wealth tax/register data, other sources, and national accounts
United Kingdom	Alvaredo et al. (2018); Wealth and Assets Survey 2006 - 2018 as utilized in Blanchet & Martínez-Toledano (2022)	Inheritance/estate tax data, wealth survey and national accounts
United States	Saez & Zucman (2016, 2020b)	Capital income tax data, wealth survey, and national accounts

C.3.4 Credit Suisse Global Wealth Report (CS_ineq)

Credit Suisse [24] aims to provide estimates of wealth inequality around the globe and by country. Generally, the approach of Credit Suisse [24] is based on a combination of estimates of per capita aggregate, obtained from macroeconomic balance sheets (household sector balance sheets, HBS, and/or financial balance sheets, FBS) and regression-based imputations, with estimates of the interpersonal distribution of wealth. As, for most countries, no wealth distribution data is available, Credit Suisse [24], in practice, relies on distributional estimates of income inequality instead of wealth inequality for the majority of countries. Along this general framework the the approach of Credit Suisse [24] still rests on a large variety of data sources to estimate per capita wealth and wealth distribution, including survey data on wealth, administrative data on wealth, rich list observations, and survey data on income or estimates of income inequality. Following our principle of not covering fully imputed wealth inequality estimates, we can only keep a subset of the countries for which Credit Suisse publishes data. The countries covered by our database are listed in Table C.3. Importantly, we also, as in the case of World Inequality Database [172], classify an estimate as not fully imputed even though the distributional information has not been directly obtained from microdata (such as the HFCS micro data) but indirectly via available databases or research papers.

In general, we have obtained data points referring to years prior to 2000 from the 2016 Databook and the 2017 Databook, data points referring to the period 2000–2014 derive from the 2014 Databook, and data points referring to more recent years primarily from the 2019 Databook. Furthermore, we do not cover the full available time-series for countries where the unit of analysis (such as households, or tax units) changes along the series. Such a change tends to result in substantial jumps in estimates of wealth inequality in Credit Suisse [24]. This decisions affects Italy and Canada, for which the original series provided by Credit Suisse [24] is longer than the series covered by our warehouse. In addition, we excluded some estimates of the Gini index with values well above 100 (affecting Denmark). While the Gini index for net worth can be above 100 (due to negative net wealth), some values published by Credit Suisse [24] are well above 100 and not covered by our warehouse.

Table C.3 shows for each country (`Country`) covered by the GC Wealth Project Wealth Inequality Trends Database the data source for the estimate of per capita wealth in the `Original Source: Aggregate` column (HBS and or FBS), the data source for the estimate of wealth inequality which can be a published research paper or report, a database, official statistics, or microdata in the `Original Source: Distribution`; the the reference years of the source providing distributional data in the column `Reference Years: Distribution Data`; and the reference years for which Credit Suisse [24] has used micro-level wealth data rather than wealth inequality estimates published by another source in the column `Reference Years: Microdata`.

Table C.3: The selection of Credit Suisse series available in the GC Wealth Project: notes on the primary source of data and their nature

Country	Original Source: Aggregate	Original Source: Distribution	Reference Years: Distribution Data	Reference Years: Microdata
Australia	HBS and FBS	Survey of Income and Housing of the Australian Bureau of Statistics	2003, 2005, 2009, 2011, 2013, 2014, 2015, 2016, 2017,2018	2003, 2005, 2009, 2011, 2013
Austria	FBS	Eurosystems Household Finance and Consumption Survey microdata and as published by OECD Statistics	2010 (HFCS microdata); 2014 (OECD Statistics)	2010
Belgium	FBS	Eurosystems Household Finance and Consumption Survey microdata and as published by OECD Statistics	2010 (HFCS microdata); 2014 (OECD Statistics)	2010
Canada	HBS and FBS	Survey of Financial Security of Statistics Canada	1999, 2005, 2012, 2016, 2019	1999, 2005, 2012, 2016, 2019
Chile	FBS	Encuesta Financiera de Hogares of the Central Bank of Chile (microdata) and as published by Sanroman and Santos (2017)	2007, 2011, 2014	2007, 2011
China	HBS and FBS	China Household Income Project as published by Knight, Li and Wan (2019)	2002, 2013	2002, 2013
France	HBS and FBS	Eurosystems Household Finance and Consumption Survey microdata and as published by OECD Statistics	2010 (HFCS microdata); 2014 (OECD Statistics)	2009
Cyprus	FBS	Eurosystem Household Finance and Consumption Survey (HFCS)	2010	2010

Denmark	HBS and FBS	National Survey of Family Income and Expenditure, Statistics Denmark as published by OECD Statistics	2002 - 2012	2015
Estonia	FBS	Eurosystem Household Finance and Consumption Survey as published by see OECD Statistics	2013	2013
Finland	HBS and FBS	Household Wealth Survey (HWS) by Statistics Finland, Eurosystem Household Finance and Consumption Survey microdata and as published by OECD Statistics	1999 (HWS); 2010 (HFCS microdata); 2013 (OECD Statistics)	2010
Germany	HBS and FBS	Socio-Economic Panel (SOEP) as published by Grabka and Westermeir (2014), Eurosystem Household Finance and Consumption Survey microdata	2007, 2007, 2012 (SOEP); 2010 (HFCS microdata)	2010
Greece	HBS and FBS	Eurosystems Household Finance and Consumption Survey microdata and as published by OECD Statistics	2010 (HFCS microdata); 2014 (OECD Statistics)	2009
Hungary	HBS and FBS	Eurosystems Household Finance and Consumption Survey published by OECD Statistics	2014	2014
Indonesia	Indonesia Family Life Survey	Indonesia Family Life Survey	1997, 2014	1997, 2014
Ireland	FBS	Eurosystem Household Finance and Consumption Survey as published by Staunton (2015)	2013	2013

Italy	HBS and FBS	Survey of Household Income and Wealth (SHIW) as published by Mazzaferro, SHIW microdata and Eurosystem Household Finance and Consumption Survey as published by OECD Statistics	1991, 1993, 1995, 1998, 2000, 2002 (SHIW); 2008, 2010 (SHIW microdata); 2014 (OECD Statistics)	2008
Japan	HBS and FBS	National Survey of Family Income and Expenditure as published by Statistics Japan and OECD Statistics	1999, 2009, 2014	1999, 2009, 2014
Luxembourg	FBS	Eurosystem Household Finance and Consumption Survey microdata	2010	2010
Malta	FBS	Eurosystem Household Finance and Consumption Survey microdata	2010	2010
Netherlands	HBS and FBS	Eurosystems Household Finance and Consumption Survey microdata and as published by OECD Statistics	2010 (HFCS microdata); 2014 (OECD Statistics)	2009
New Zealand	HBS and FBS	Household Saving Survey by Statistics New Zealand (2002), and Income Statistics for Households as published by OECD Statistics	2001, 2014	2001, 2014
Norway	FBS	Norwegian Income and Wealth Statistics for Households by Statistics Norawy and as published by OECD Statistics	2004, 2013, 2014	2004, 2013, 2014
Poland	FBS	Eurosystem Household Finance and Consumption Survey as published by OECD Statistics	2014	2014
Portugal	FBS	Eurosystems Household Finance and Consumption Survey microdata and as published by OECD Statistics	2010 (HFCS microdata); 2013 (OECD Statistics)	2010

Slovakia	FBS	Eurosystem Household Finance and Consumption Survey microdata and as published by OECD Statistiks	2010 (HFCS microdata); 2014 (OECD Statistics)	2010
Slovenia	FBS	Eurosystem Household Finance and Consumption Survey as published by OECD Statistics	2014	2014
Spain	HBS and FBS	Survey of Household Finances microdata	2008, 2011, 2014	2008, 2011, 2014
Sweden	HBS and FBS	Wealth Survey (HINK) of Statistics Sweden as published by Davies et al. (2011) and Wealth statistics based on registers of total population as published by Statistics Sweden (2007)	2002, 2007	2002, 2007
Switzerland	HBS and FBS	Data as published by Fluder and Jann (2014)	2003 - 2014	Not Clear
Thailand	FBS	2006 Socioeconomic Survey as published by Ariyapruchya et al (2008).	2006	2006
United Kingdom	HBS and FBS	British Household Panel Survey as published by Sierminska et al (2006), Wealth and Asset Survey of the UK Office for National Statistics (microdata)	2000, 2008 (BHPS); 2014 (WAS)	2014
Uruguay	Encuesta Financiera de Hogares Uruguayos (EFHU)	Encuesta Financiera de Hogares Uruguayos (EFHU)	2013	2013
United States	HBS and FBS	Survey of Consumer Finances microdata and Distributional Financial Accounts of the Federal Reserve Board (2021)	2001, 2007, 2010, 2013, 2016, 2019 (SCF); 2000-2020 (DFA)	2001, 2007, 2010, 2013, 2016, 2019

India	FBS	All-India Debt and Investment Survey (NSS 59th round and 70 thround); see National Sample Survey Organization (2005) and Subramanian and Jazaraj (2008).	2002, 2012	2002, 2012
Korea	HBS and FBS	Survey of Household Finances by the Korean Statistical Information Service and as published by OECD Statistics	2011 (Korean Statistical Information Service); 2013 (OECD Statistics); 2015 (OECD Statistics)	2011, 2013, 2015

Appendix D

Appendix to the Estate, Inheritances, and Gift Taxes (EIG) Section

D.1 Introduction

The Appendix of the Estate, Inheritances, and Gift Taxes (EIG) section of the GC Wealth Project provides additional information on the data creation and data validation processes and a detailed documentation of sources. In particular, this appendix provides:

- an explanation of data creation processes,
- the full list of sources included in the Estate, Inheritances, and Gift Tax section.

D.2 Data Creation Processes

Information on Estate, Inheritance, and Gift taxes is collected from three broadly different source categories: 1) Legal tax documents from public entities, 2) information on tax codes and schedules from third-party sources, and 3) tax revenue data typically from the OECD [118]. Depending on the source category, the information can be directly inserted into the Estate, Inheritance, and Gift Taxes database (as is the case with tax revenue information) or be subject to interpretation and harmonization procedures (as is the case with detailed information on tax schedules and rates).

We retrieve tax schedule information only where interpretation of tax rates and schedules is unambiguous For instance, information from documents that provide a full tax schedule—from personal exemptions to specific tax rates for each bracket as well as lower and upper bounds of every bracket—can be easily added to the database. Sometimes, however, sources provide only a broad range of the tax schedule (e.g., 10-30% inheritance tax). In such cases we make use of the information that is evident (e.g., lowest inheritance tax rate being 10%, top inheritance tax rate being 30%) but refrain from filling tax schedule variables because the information is insufficient to determine exemptions or brackets.

To ensure comparability of Estate, Inheritance, and Gift tax schedules and rates across countries and over time, the information is stratified by transfer category (e.g., gift or inheritance) and donor relationship (i.e., only direct children). Estate, Inheritance, and Gift tax information that does not fit into the harmonized set of variables is documented in country-year-specific notes that will be made available soon.

Information on EIG taxes is validated along two dimensions: 1) external consistency of collected data using additional sources (wherever possible), and 2) internal consistency of harmonized information. The former crucially depends on the availability of external sources, either from legal tax documents or third-party tax information. The latter is validated within the EIG data based on a set of conditions. For instance, some countries report a positive value of EIG tax revenue despite not levying any EIG tax. In these cases, country-years are checked individually, as revenue is sometimes collected from estates and bequests dating back several years.

For 15 countries (Austria, Belgium, Chile, Croatia, El Salvador, Finland, France, Germany, Ireland, Italy, Netherlands, New Zealand, Peru, Portugal, Venezuela), the sources report tax schedules in a historical national currency in place in a given year (for instance, German Mark in Germany prior to the introduction of the Euro). We convert those historical currency values to the current national currency by using the fixed conversion rate established at the time of currency exchange in each country. For Chile, Uzbekistan, and Zimbabwe, for which the sources report the tax schedule in a different currency (not a historical one), we use the market exchange rate to get the national currency. The table below reports the fixed conversion rates we applied. For the specific case of Zimbabwe, which adopted USD in 2009 without fixing a conversion rate, we convert the schedule using the market exchange rate between ZWE and USD.

Table D.1: Currency Fixed Conversion Rates for EIG Adjusted Tax Schedules

GEO	Historical Currency	Current Currency	Conversion Rate
AT	ATS	EUR	13.7603
AT	RM	EUR	19.5583
BE	BEF	EUR	40.3399
CL	CLE	CLP	1000
HR	HRK	EUR	7.5345
SV	SVC	USD	8.75
FI	FIM	EUR	5.94573
FR	FRF	EUR	6.55957
DE	DEM	EUR	1.95583
DE	PM	EUR	19792.9996
DE	RM	EUR	19.5583
IE	IEP	EUR	0.787564
IT	ITL	EUR	1936.27
NL	NLG	EUR	2.20371
NZ	NZP	NZD	0.5
PE	PES	PEN	1e+09
PE	PEI	PEN	1e+06
PT	PTE	EUR	200.482
VE	VEB	VES	1e+08
VE	VEF	VES	1e+05

D.3 Sources Included in the Estate, Inheritance, and Gift Taxes Section

All data sources included in the current version of the Estate, Inheritance, and Gift Tax section are reported in Table D.2.

Table D.2: Sources in the Estate, Inheritance, and Gift Tax Section

Source	Source Type
Australian Tax Office: Deceased Estates [9]	Government legislative info
CCH International Master Tax Guide (2009) [25]	Cross-national corporate research
Capital Acquisitions Tax Act, 1976 (Ireland) [89]	Government legislation
Capital Acquisitions Tax Historical Rates (Ireland) [120]	Government legislative info
Capital Acquisitions Tax Info (Ireland) [95]	Government legislative info
Capital Acquisitions Tax Rates (Ireland) [119]	Government legislative info
Capital Acquisitions Tax manuals (Ireland) [153]	Corporate research
Changes in the Revenue Act of 1940 [131]	Corporate research
Comparison of the Revenue Acts of 1932 and 1934 [78]	Government documents
Coordination of State and Federal Inheritance, Estate, and Gift Taxes (1961) [165]	Government research
Copenhagen Economics (2010) [23]	Cross-national government research
Davies & Di Matteo (2021) [26]	Academic research
Deficit Reduction Act of 1984 (United States) [156]	Government legislation
Deloitte (2018) [28]	Corporate research
Drometer et al.(2018) [29]	Cross-national academic research
Easton (1983) [30]	Corporate research
Economic Recovery Tax Act of 1981 [157]	Government legislation
Ernst & Young 2006 Personal Tax Guide [37]	Cross-national corporate research
Ernst & Young 2007 Personal Tax Guide [38]	Cross-national corporate research

Ernst & Young 2008 Personal Tax Guide [33]	Cross-national corporate research
Ernst & Young 2009 Personal Tax Guide [34]	Cross-national corporate research
Ernst & Young 2010 Personal Tax Guide [35]	Cross-national corporate research
Ernst & Young 2011 Estate & Inheritance Tax Guide [31]	Cross-national corporate research
Ernst & Young 2011 Personal Tax Guide [36]	Cross-national corporate research
Ernst & Young 2012–13 Personal Tax Guide [56]	Cross-national corporate research
Ernst & Young 2013 Estate & Inheritance Tax Guide [32]	Cross-national corporate research
Ernst & Young 2013–14 Personal Tax Guide [57]	Cross-national corporate research
Ernst & Young 2014 Estate & Inheritance Tax Guide [39]	Cross-national corporate research
Ernst & Young 2014–15 Personal Tax Guide [58]	Cross-national corporate research
Ernst & Young 2015 Estate & Inheritance Tax Guide [40]	Cross-national corporate research
Ernst & Young 2015–16 Personal Tax Guide [59]	Cross-national corporate research
Ernst & Young 2016 Estate & Inheritance Tax Guide [41]	Cross-national corporate research
Ernst & Young 2016–17 Personal Tax Guide [49]	Cross-national corporate research
Ernst & Young 2017 Estate & Inheritance Tax Guide [42]	Cross-national corporate research
Ernst & Young 2017–18 Personal Tax Guide [50]	Cross-national corporate research
Ernst & Young 2018 Estate & Inheritance Tax Guide [43]	Cross-national corporate research
Ernst & Young 2018–19 Personal Tax Guide [51]	Cross-national corporate research
Ernst & Young 2019 Estate & Inheritance Tax Guide [44]	Cross-national corporate research
Ernst & Young 2019–20 Personal Tax Guide [52]	Cross-national corporate research
Ernst & Young 2020 Estate & Inheritance Tax Guide [45]	Cross-national corporate research
Ernst & Young 2020–21 Personal Tax Guide [53]	Cross-national corporate research

Ernst & Young 2021 Estate & Inheritance Tax Guide [46]	Cross-national corporate research
Ernst & Young 2021–22 Personal Tax Guide [54]	Cross-national corporate research
Ernst & Young 2022 Estate & Inheritance Tax Guide [47]	Cross-national corporate research
Ernst & Young 2022–23 Personal Tax Guide [55]	Cross-national corporate research
Ernst & Young 2023 Estate & Inheritance Tax Guide [48]	Cross-national corporate research
Estate Tax Exemption Level [152]	Corporate research
Finance Act, 1971, Second Schedule (Ireland) [90]	Government legislation
Finance Act, 1975, Sec. 47 (Ireland) [91]	Government legislation
Finance Act, 1984, Sec. 111 (Ireland) [92]	Government legislation
Finance Act, 1990, Sec. 128 (Ireland) [93]	Government legislation
Finance Act, 1991, Sec. 115 (Ireland) [94]	Government legislation
Frank (2021) [63]	Corporate research
French Inheritance Law Brochure [4]	Corporate research
French Public Finances Directorate General (2015) [134]	Government research
Frequently Asked Questions on Gift Taxes [80]	Government legislative info
German Tax Law (1977) [67]	Government legislation
German Tax Law (1980) [68]	Government legislation
German Tax Law (1996) [69]	Government legislation
German Tax Law (2002) [70]	Government legislation
German Tax Law (2009) [71]	Government legislation
German Tax Law (2010) [72]	Government legislation
Gift, Estate, and Generation-Skipping Transfer Tax Calculations [148]	Corporate research

Guerrero (2021) [75]	Corporate research
HM Revenue and Customs (2016) [76]	Government legislative info
Historical Look at Estate and Gift Tax Rates [109]	Corporate research
Inheritance Tax and Inheritance Law in Chile [73]	Corporate research
Inheritance Tax and Inheritance Law in Sri Lanka [74]	Corporate research
Jacobson et al. (2007) [96]	Government research
Jappelli et al. (2011) [98]	Cross-national academic research
Kessler & Pestieau (1991) [100]	Cross-national academic research
Kley (2012) [103]	Academic research
Law and regulations relating to the estate tax (1917) [166]	Government legislation
Lin et al. (2018) [106]	Academic research
Luzkow (2018) [110]	Academic research
Manestra (2023) [111]	Academic research
OECD (2021) [116]	Cross-national government research
OECD Revenue Statistics Database [118]	Cross-national official statistics
Omnibus Budget Reconciliation Act of 1987 (United States) [158]	Government legislation
Omnibus Budget Reconciliation Act of 1993 (United States) [159]	Government legislation
Peru Tax Law No. 10575 (1946) [125]	Government legislation
Peru Tax Law No. 2227 (1916) [124]	Government legislation
Peru Tax Law No. 7392 (1931) [122]	Government legislation
Peru Tax Law No. 7873 (1933) [123]	Government legislation
Piketty (2010) [127]	Academic research

Piketty (2020) [126]	Cross-national academic research
Plagge et al. (2010) [130]	Cross-national academic research
Profeta et al. (2014) [133]	Cross-national academic research
Schinke (2012) [142]	Academic research
Schoenblum (2008) [143]	Cross-national corporate research
Shaughnessy (1996) [144]	Cross-national academic research
Spanish Inheritance and Gift Tax [147]	Government legislation
Sri Lanka, Individual - Other taxes [132]	Corporate research
Tax Introduction Database [66]	Cross-national academic research
Tax Manual of the Federal Revenue Act of 1942 [155]	Corporate research
Tax Reform Act of 1976 (United States) [161]	Government legislation
The Revenue Act of 1916 [164]	Government legislation
The Revenue Act of 1918 [113]	Government legislation
The Revenue Act of 1921 [160]	Government legislation
The Revenue Act of 1924 [162]	Government legislation
The Revenue Act of 1926 [121]	Government legislation
The Revenue Act of 1932 [163]	Government legislation
The Revenue Act of 1935 (Chase Bank) [154]	Corporate research
U.S. IRS Form 706 Instructions (2008) [81]	Government documents
U.S. IRS Form 706 Instructions (2009) [82]	Government documents
U.S. IRS Form 706 Instructions (2010) [83]	Government documents
U.S. IRS Form 706 Instructions (2016) [84]	Government documents

U.S. IRS Form 706 Instructions (2017) [85]	Government documents
U.S. IRS Form 706 Instructions (2018) [86]	Government documents
U.S. IRS Form 706 Instructions (2019) [87]	Government documents
U.S. IRS Form 706 Instructions (2021) [88]	Government documents
Walczak (2017) [168]	Corporate research
White (1928) [169]	Academic research

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