

## 2020 Wealth Aggregate series

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**WID.WORLD**  
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GLOBAL INEQUALITY DATA



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### Technical Note

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At the moment, the World Inequality Database (WID) counts with aggregate wealth series for 24 countries. In November 2020, we have updated the series of 20 countries. Four countries could not be updated due to the complexity to extend the series provided by WID fellows in the corresponding research papers. In this technical note we document the existing wealth aggregate series in the WID and provide information on the data sources used to update these series. The methodology used in the WID to estimate aggregate wealth is explained in chapter 3 of the Distributional National Accounts Guidelines (Alvaredo et al. 2020). Another two useful references on the data and methods followed by the WID to produce wealth aggregate series are Piketty and Zucman (2014) and Bauluz (2019).

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## Available data in WID

Table 1 summarizes the data available in the WID. For the 24 countries included in WID, we indicate (i) the period covered by the private wealth series and (ii) whether the country-series have been updated in November 2020. For most countries, data on corporate, public and foreign wealth, as well as on different asset classes (e.g. housing, equity, deposits, debt, etc.), are also available. In the country-specific sections (see below) we also document the time availability for the net worth of corporations, government and foreign sectors. For details on asset-specific series we refer the interested reader to the online database.

**Table 1. Summary of wealth aggregates in WID.**

Country	Private wealth	Updated in November 2020
Australia	1960-2019	Yes
Canada	1971-2019	Yes
China	1978-2015	No
Czech Republic	1993-2019	Yes
Denmark	1973-2018	Yes
Finland	1996-2018	Yes
France	1870-2019	Yes
Germany	1870-2018	Yes
Greece	1997-2010	No
India	(national wealth 1860-2012)	No
Italy	1966-2017	Yes
Japan	1970-2017	Yes
South Korea	1996-2019	Yes
Mexico	2004-2018	Yes
Netherlands	1995-2019	Yes
Norway	1980-2018	Yes
Russia	1990-2015	No
Singapore	1996-2019	Yes
South Africa	1976-2019	Yes
Spain	1900-2017	Yes
Sweden	1810-2019	Yes
Taiwan	2006-2018	Yes
United Kingdom	1855-2018	Yes
United States	1870-2019	Yes

## Country-specific data sources

In what follows, we indicate the coverage of the wealth aggregate series of the 20 countries that have been updated in November 2020 and summarize the data sources used to extend them. We remind the reader that WID's series are mid-year averages, while raw sources usually refer to the end of the year. Hence, most of our series initiate one year after the first year available in the raw sources.

### Australia

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1960-2019	1990-2019	1960-2019	1960-2019

Data sources: we extend the existing data from Piketty and Zucman (2014), later updated by Bauluz (2019). The most recent financial and non-financial balance sheets, by institutional sector, cover the period 1960-2019 but some series only start in the late 1980s / early 1990s. These data are produced by the Australian Bureau of Statistics (ABS) and the Reserve Bank of Australia (RBA). See Bauluz (2019) and Piketty and Zucman (2014) for a detailed explanation of the sources and methods used to splice historical data with the most recent official series.

### Canada

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1971-2019	1971-2019	1971-2019	1971-2019

Data sources: we extend the existing data from Piketty and Zucman (2014), later updated by Bauluz (2019). The most recent financial and non-financial balance sheets, by institutional sector, cover the period 1991-2019, and are taken from Statistics Canada (StatCan). Natural resources are extended from 1991 back to 1970 using StatCan's series of "Value of selected natural resource reserves" (Table: 38-10-0006-01). See Bauluz (2019) and Piketty and Zucman (2014) for a detailed explanation of the sources and methods used to splice historical data with the most recent official series.

## Czech Republic

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1993-2019	1993-2019	1993-2019	1993-2019

Data sources: we extend and update the existing data previously added and constructed by Novokmet (2017). The data consist of the financial and non-financial balance sheets, by institutional sector, which cover the period 1993-2019. These data are produced by the Czech Statistical Office. The only adjustment we do to the official series is not to include public natural capital as it results in an unrealistically high wealth-to-income ratio. This is the same adjustment made by Novokmet (2017).

## Denmark

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1973-2018	1996-2018	1996-2018	1973-2018

Data sources: we extend and update the data uploaded to WID.world in 2015, which were taken from the 2015 working paper version of the following publication: Jakobsen, K., Jakobsen, K., Kleven, H., and Zucman, G. (2020). "Wealth taxation and wealth accumulation: Theory and evidence from Denmark". Concerning financial assets and liabilities, we use data for the period 1995-2018 from Statistics Denmark and for 1973-1994 from Jakobsen et al (2020). Produced non-financial assets for the period 1995-2018 are also taken from Statistics Denmark, while non-produced assets are taken from Jakobsen et al (2020) and extended to 2018 using Eurostat.

## Finland

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1996-2018	1996-2018	1996-2018	1996-2018

Data sources: we extend and update the data from Leenders (2016). We use official financial and non-financial balance sheets, published by Statistics Finland, without any adjustment. These data are available for all institutional sectors and cover the period 1995-2019 – for financial balance sheets – and 1995-2018 – for non-financial balance sheets. It is worth stressing out that financial data covering the period 1970-1994 also exist, but were not included due to inconsistencies with the most recent data.

## France

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1870-2019	1970-2019	1870-2019	1970-2019

Data sources: we extend the existing data from Piketty and Zucman (2014), later updated by Bauluz (2019). Financial and non-financial sectoral balance sheets, covering the period 1995-2019, come from the INSEE. For the historical period, private and corporate wealth are taken from Garbinti, Goupille-Lebret and Piketty (2018), while public wealth comes from Piketty and Zucman (2014). See Bauluz (2019) for a detailed explanation of the sources and methods used to splice historical data with the most recent official series.

## Germany

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1870-2018	1970-2018	1870-2018	1950-2018

Data sources: we extend the existing data from Piketty and Zucman (2014), later updated by Bauluz (2019). Financial and non-financial balance sheets for institutional sectors covering the period 1999-2018 come from Destatis. See Bauluz (2019) and Piketty and Zucman (2014) for a detailed explanation of the sources and methods used to splice historical data with the most recent official series.

## Italy

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1966-2017	2006-2017	1951-2017	1951-2017

Data sources: we extend the existing data from Piketty and Zucman (2014), later updated by Bauluz (2019). The most recent non-financial sectoral balance sheets stem from the *Istituto Nazionale di Statistica* (Istat) and cover the period 2005-2017. On the financial side, the latest data originate from the Central Bank of Italy and cover the period 1995-2018. From the same source, we also make use of ESA 1995 financial data that covers the period 1950-1994 for all institutional sectors. See Bauluz (2019) and Piketty and Zucman (2014) for a detailed explanation of the sources and methods used to splice historical data with the most recent official series.

## Japan

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1970-2017	1970-2017	1970-2017	1970-2017

Data sources: we extend the existing data from Piketty and Zucman (2014), later updated by Bauluz (2019). This new update uses the 2017 edition of Japan's national accounts from the Cabinet Office that cover the period 1994-2017. Relative to the previous update from Bauluz (2019), only the estimate of housing for the period 2015-2017 follows a different methodology and data input. For this period, the only official information on the value of housing corresponds to one of its two components: the residential structures (i.e. Dwellings AN.111). This is because the series of land underlying buildings and structures of the private sector that had been produced by the Cabinet Office until 2014 ("Table: Value of Land by Prefectures owned by Private Sectors") has been discontinued and is no longer available. To overcome this issue, we proceed in two steps. First, we estimate the market value of the housing stock (i.e. residential structures plus land underlying) for 2015-2017 following the methodology of Davis and Heathcote (2007). This method requires information on net investment in residential structures and on housing prices. Data on the previous two items are taken from official National Accounts and from "OECD: Residential Property Price Indices", respectively. In a second step, we obtain land underlying dwellings as a residual (Eurostat-OECD, 2015) by deducting the estimates of residential structures from the market value of the housing stock. See Bauluz (2019) and Piketty and Zucman (2014) for a detailed explanation of the sources and methods used to splice historical data with the most recent official series.



## South Korea

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1996-2019	1996-2019	1996-2019	1976-2019

Data sources: we extend and update the data from Leenders (2016). Data originate from the Bank of Korea. Institutional sectors' non-financial balance sheets cover the period 1995-2019. Financial balance sheets are available as far as since 1962. However, we use various sets of financial balance sheets starting 1975, as we find data to be consistent over this time frame. Financial series since 2008 follow SNA-2008 standards. Data covering the period 2002-2007 follow SNA-1993, while series for 1975-2011 follow SNA-1968. To splice these three sets of financial accounts we use the "retropolation" method, consisting in extending the newest accounts (available since 2008) backwards to 1975 with the growth rates of the similar series in SNA95 and SNA68.

## Mexico

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
2004-2018	2004-2018	2004-2018	2004-2018

Data sources: Financial and non-financial balance sheets of institutional sectors starting in 2003 come from the National Institute of Statistics and Geography (INEGI). These data follow SNA-2008 standards. Prior to the present update of the WID series, WID had series of financial assets and liabilities for Mexico starting in 1998, that were taken from OECD. We no longer provide these series since they are inconsistent with the financial balance sheets from INEGI. We do not make any adjustment to the raw official series from INEGI.

## Netherlands

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1995-2019	1995-2019	1995-2019	1995-2019

Data sources: we extend and update the data from Leenders (2016). Sectoral financial and non-financial balance sheets cover the period 1995-2019 and stem from Statistics Netherlands (CBS). We do not make any adjustment to the raw official series.

## Norway

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1980-2018	1997-2019	1980-2019	1971-2019

Data sources: Financial balance sheets by institutional sector covering the period 1995-2019 come from Statistics Norway. For the period before 1995, we use the data from Alstadsæter, A., Johannesen, N., & Zucman, G. (2019). "Tax evasion and inequality". For the 'households and NPISH' sector, we use data from Eurostat on produced assets, dwellings and land for the period 1979-2016. For 2017 and 2018, we extend non-financial assets using the evolution of housing wealth from Statistics Norway. For corporations and the government, we use non-financial accounts by institutional sector from Statistics Norway. These data do not report values for non-produced assets. For the case of the public sector, this should not be problematic as most of the non-produced assets are in the form of natural resources which are already accounted for through the financial ownership of Norway's sovereign fund.

## Singapore

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1996-2019			

Data sources: Statistics Singapore provides a comprehensive financial and non-financial balance sheet for the household sector. We assume that the household sector is equivalent to the private sector (i.e. households plus non-profit institutions serving households). These data start in 1995 and we use it without any further adjustment. Although not included in this update, some partial information on the balance sheet of the corporate sector also exists.

## South Africa

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1976-2018			1957-2018

Data sources: we extend and update the data from Orthofer et al (2018)<sup>2</sup>, which covered the period 1976-2014. Data on households and foreign wealth originate from the South African Reserve Bank (SARB). We extend non-financial assets by asset class (e.g. housing, business assets, etc.) up to 2019, and also total financial assets and liabilities. However, SARB does not provide a decomposition of financial assets by category, except for insurance assets, and currency and deposits. Orthofer et al (2018) provided a decomposition between equity and debt securities using the portfolio of counterparty sectors (Orthofer et al 2018, pg. 4), but we do not perform this decomposition given its complexity.

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<sup>2</sup> These data were shared by Anna Orthofer in 2015, and corresponded with the working paper version at that time.

## Spain

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1900-2017	1996-2017	1900-2017	1900-2017

Data sources: data are taken directly from Artola Blanco, Bauluz and Martínez-Toledano (2020).

## Sweden

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1810-2019	1980-2019	1870-2019	1810-2019

Data sources: data are taken directly from the “Swedish National Wealth Database” (version 2.4).

<sup>3</sup> These data were published in Waldenström (2017).

## Taiwan

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
2006-2018	2006-2018	2006-2018	2001-2018

Data sources: we extend and update the data from Leenders (2016). The most recent non-financial balance sheets are drawn from National Statistics, Republic of China (Taiwan) and cover the period 2014-2018. From the same source, we make use of the previous vintage of non-financial accounts, which covered the period 2005-2012. Unfortunately, information on year 2013 is missing, so we decide to linearly interpolate in between the years 2012 and 2014. In the case of financial balance sheets, data are drawn from the Central Bank of the Republic of China (Taiwan) and start in year 2000. Overall, no adjustments to the raw official series are made, with the exception of interpolating non-financial assets between 2012 and 2014.

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<sup>3</sup> Data are accessible online on: <https://sites.google.com/view/danielwaldenstrom/data-programs>

## United Kingdom

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1855-2018	1988-2018	1855-2018	1855-2018

Data sources: we extend the existing data from Piketty and Zucman (2014), later updated by Bauluz (2019). The most recent financial and non-financial balance sheets, by institutional sector, cover the period 1988-2018 or 1995-2018, depending on the specific asset series. These data come from the official UK national accounts “Blue Book 2019”, provided by the Office for National Statistics. See Bauluz (2019) and Piketty and Zucman (2014) for a detailed explanation of the sources and methods used to splice historical data with the most recent official series.

## United States of America

Summary of available data:

Private wealth	Corporate wealth	Public wealth	Foreign wealth
1870-2019	1946-2019	1870-2019	1913-2019

Data sources: data for the period 1913-2019 are taken from the September 2020 updated version of Piketty, Saez and Zucman (2018)<sup>4</sup>. Before 1913, data are taken from Piketty and Zucman (2014). See Bauluz (2019), Piketty, Saez and Zucman (2018) and Piketty and Zucman (2014) for a detailed explanation of the sources and methods used to splice historical data with the most recent official series.

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<sup>4</sup> <http://gabriel-zucman.eu/usdina/>

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