



# World Inequality Report 2018

## Technical Notes for Figures and Tables

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### Abstract

This document provides a technical description of the figures and tables presented in the World Inequality Report 2018.

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## Part 1 – The WID.world project and the measurement of economic inequality

Figure 1.1. Top 10% income share in Brazil, 2001-2015: survey vs. national accounts (WID.world) series

This figure compares two series: one obtained from raw survey estimates (survey series) and the other combining national accounts, surveys and fiscal data (national accounts, WID.world series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Morgan (2017)

Figure number in article: Figure 5

URL: <http://wid.world/document/extreme-persistent-inequality-new-evidence-brazil-combining-national-accounts-surveys-fiscal-data-2001-2015-wid-world-working-paper-201712/>

## Figure 1.2. Top 0.01% wealth share and its composition in emerging and rich countries, 2000-2009

Net household wealth is the total value of non-financial and financial assets (housing, land, deposits, bonds, equities, etc.) held by households, minus their debts. The household sector - in the national accounts sense - includes all households and private individuals (including those living in institutions), as well as unincorporated enterprises whose accounts are not separated from those of the households who own them. Offshore wealth is defined as wealth owned by households in all the world's tax havens at the end of each year.

The population is comprised of individuals over age 20.

The base unit is the household.

Scandinavia is the arithmetic average of Denmark, Norway and Sweden.

More detailed information is available in : Alstadsæter, Johannesen and Zucman (2017)

Figure number in article: Figure 8

Article appendix: Main Appendix Tables 8b and 11b

URL: <http://gabriel-zucman.eu/files/AJZ2017b.pdf>

## Part 2 – Trends in global income inequality

### Figure 2.1.1a. Top 10% income shares across the world, 1980-2016: Rising inequality almost everywhere, but at different speeds

For all regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-

tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax system, but after taking into account the operation of pension, unemployment insurance as well as other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Europe corresponds to Western Europe. Western Europe is built by merging the income distributions of France, Germany and the UK, and an aggregate representing other Western European countries (28 countries in total). We know the average income of this aggregate, but do not have at this stage [Distributional National Accounts](#) for these countries. We thus use the combined distribution of France, UK and Germany to infer the distribution of national income in this aggregate. When Distributional National Accounts become available for other Western European countries, we will add to the analysis. These refinements are likely to have only marginal impacts on the distribution of Western Europe as a whole as well as its evolution over the period considered. See chapter 2.3 of the World Inequality Report 2018 for a comparison between inequality in Western Europe and inequality in Europe as a whole. See also "Building a global income distribution brick by brick", by L. Chancel and A. Gethin (WID.world Technical Note 2017/5) for a more detailed description of the method.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined. The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main

differences in national income levels and growth trajectories between the US and Canada.

For other countries or regions, estimates come from country specific research papers referred to at the beginning of each chapter of the report.

In this graph, all series are extended to 2016 values are obtained by keeping income shares constant and using known average national income growth rates to predict 2016 each groups' income levels and thresholds. The last year available is: 2016 for Africa and the Middle East; 2015 for Brazil, China and Russia; 2014 for France, the UK, India and the US; 2013 for Germany.

All inequality estimates in our benchmark series are constructed using Purchasing Power Parity estimates. For alternative measures using Market Exchange rates, see the data appendix folders.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

## Figure 2.1.1b. Top 10% income shares across the world, 1980-2016: Is world inequality moving towards the high-inequality frontier?

For all regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax system, but after taking into account the operation of pension, unemployment insurance as well as other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Europe corresponds to Western Europe. Western Europe is built by merging the income distributions of France, Germany and the UK, and an aggregate representing other Western European countries (28 countries in total). We know the average income of this aggregate, but do not have at this stage [Distributional National Accounts](#) for these countries. We thus use the combined distribution of France, UK and Germany to infer the distribution of national income in this aggregate. When Distributional National Accounts become available for other Western European countries, we will add to the analysis. These refinements are likely to have only marginal impacts on the distribution of Western Europe as a whole as well as its evolution over the period considered. See chapter 2.3 of the World Inequality Report 2018 for a comparison between inequality in Western Europe and inequality in Europe as a whole. See also "Building a global income distribution brick by brick", by L. Chancel and A. Gethin (WID.world Technical Note 2017/5) for a more detailed description of the method.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable

given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined. The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

Sub-Saharan Africa is the merged distribution of Sub-Saharan African countries for which survey data is available from Povcal. Survey data is corrected with available tax data estimates (which are available at this stage for the recent period only for Ivory Coast and South Africa; we use the gap between surveys and tax data in Ivory Coast and South Africa to correct survey estimates in other African countries). See the Technical Note on the production of African data for more details (L. Chancel and L. Czajka, "Estimating the regional distribution of income in Sub-Saharan Africa", WID.world Technical Note 2017/6).

For Brazil, estimates post-2001 are detailed in M. Morgan "Extreme and Persistent Inequality: New Evidence for Brazil Combining National Accounts, Surveys and Fiscal Data, 2001-2015" WID.world Working Paper 2017/12. Estimates from 1990 to 2000, not available in this Working Paper, were obtained the combination of household survey estimates and fiscal data (survey estimates were corrected assuming the same gap between survey income levels and national income levels observed post-2000).

For other countries or regions, estimates come from country specific research papers referred to at the beginning of each chapter of the report.

In this graph, all series are extended to 2016 values are obtained by keeping income shares constant and using known average national income growth rates to predict 2016 each groups' income levels and thresholds. The last year available is: 2016 for Africa and the Middle East; 2015 for Brazil, China and Russia; 2014 for France, the UK, India and the US; 2013 for Germany.

All inequality estimates in our benchmark series are constructed using Purchasing Power Parity estimates. For alternative measures using Market Exchange rates, see the data appendix folders.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20. The base unit is the individual but resources are split equally within couples.

### Figure 2.1.1c. Top 10% national income shares across the world, 2016

For all regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax system, but after taking into

account the operation of pension, unemployment insurance as well as other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Here, Europe corresponds to Western Europe. Western Europe is built by merging the income distributions of France, Germany and the UK, and an aggregate merging other Western European countries (28 countries in total). This aggregate has a different average national income than France, Germany and the UK but the combined distribution of these three countries. When more Distributional National Accounts data is available for other Western European countries, they will be added to the analysis. Preliminary results show that these do not impact the evolution of the trend observed in Europe and only marginally the levels of inequality observed there. See chapter 2.3 of the report for a comparison between inequality in Western Europe and in Europe as a whole.

Europe corresponds to Western Europe. Western Europe is built by merging the income distributions of France, Germany and the UK, and an aggregate representing other Western European countries (28 countries in total). We know the average income of this aggregate, but do not have at this stage [Distributional National Accounts](#) for these countries. We thus use the combined distribution of France, UK and Germany to infer the distribution of national income in this aggregate. When Distributional National Accounts become available for other Western European countries, we will add to the analysis. These refinements are likely to have only marginal impacts on the distribution of Western Europe as a whole as well as its evolution over the period considered. See chapter 2.3 of the World Inequality Report 2018 for a comparison between inequality in Western Europe and inequality in Europe as a whole. See also "Building a global income distribution brick by brick", by L. Chancel and A. Gethin (WID.world Technical Note 2017/5) for a more detailed description of the method.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet

been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined. The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

Sub-Saharan Africa is the merged distribution of Sub-Saharan African countries for which survey data is available from Povcal. Survey data is corrected with available tax data estimates (which are available at this stage for the recent period only for Ivory Coast and South Africa; we use the gap between surveys and tax data in Ivory Coast and South Africa to correct survey estimates in other African countries). See the Technical Note on the production of African data for more details (L. Chancel and L. Czajka, "Estimating the regional distribution of income in Sub-Saharan Africa", WID.world Technical Note 2017/6).

For other countries or regions, estimates come from country specific research papers referred to at the beginning of each chapter of the report.

In this graph, 2016 values are obtained by keeping income shares constant and using known average national income growth rates to predict 2016 each groups' income levels and thresholds. The last year available is: 2016 for Africa and the Middle East; 2015 for Brazil, China and Russia; 2014 for France, the UK, India and the US; 2013 for Germany.

All inequality estimates in our benchmark series are constructed using Purchasing

Power Parity estimates. For alternative measures using Market Exchange rates, see the data appendix folders.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20. The base unit is the individual but resources are split equally within couples.

#### Figure 2.1.1e. Bottom 50% income shares across the world, 1980-2016

For all regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax system, but after taking into account the operation of pension, unemployment insurance as well as other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Europe corresponds to Western Europe. Western Europe is built by merging the income distributions of France, Germany and the UK, and an aggregate representing other Western European countries (28 countries in total). We know the average income of this aggregate, but do not have at this stage [Distributional National Accounts](#) for these countries. We thus use the combined distribution of France, UK and Germany to infer the distribution of national income in this aggregate. When Distributional National Accounts become available for other Western European countries, we will add to the analysis. These refinements are likely to have only marginal impacts on the distribution

of Western Europe as a whole as well as its evolution over the period considered. See chapter 2.3 of the World Inequality Report 2018 for a comparison between inequality in Western Europe and inequality in Europe as a whole. See also "Building a global income distribution brick by brick", by L. Chancel and A. Gethin (WID.world Technical Note 2017/5) for a more detailed description of the method.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined. The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

Sub-Saharan Africa is the merged distribution of Sub-Saharan African countries for which survey data is available from PovcalNet. Survey data is corrected with available tax data estimates (which are available at this stage for the recent period only for Ivory Coast and South Africa; we use the gap between surveys and tax data in Ivory Coast and South Africa to correct survey estimates in other African countries). See the Technical Note on the production of African data for more details (L. Chancel and L. Czajka, "Estimating the regional distribution of income in Sub-Saharan Africa", WID.world Technical Note 2017/6).

For Brazil, estimates post-2001 are detailed in M. Morgan "Extreme and Persistent Inequality: New Evidence for Brazil Combining National Accounts, Surveys and Fiscal Data, 2001-2015" WID.world Working Paper 2017/12. Estimates from 1990 to 2000, not

available in this Working Paper, were obtained the combination of household survey estimates and fiscal data (survey estimates were corrected assuming the same gap between survey income levels and national income levels observed post-2000).

For other countries or regions, estimates come from country specific research papers referred to at the beginning of each chapter of the report.

In this graph, all series are extended to 2016 values are obtained by keeping income shares constant and using known average national income growth rates to predict 2016 each groups' income levels and thresholds. The last year available is: 2016 for Africa and the Middle East; 2015 for Brazil, China and Russia; 2014 for France, the UK, India and the US; 2013 for Germany.

All inequality estimates in our benchmark series are constructed using Purchasing Power Parity estimates. For alternative measures using Market Exchange rates, see the data appendix folders.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20. The base unit is the individual but resources are split equally within couples.

## Table 2.1.2. Share of global growth captured by income groups, 1980-2016

For all world regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax system, but after taking into account the operation of pension, unemployment insurance as well as other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The World income distribution is the merged distribution of Africa, Asia, Europe, the Middle East, Latin America, Russia, and US-Canada.

Europe corresponds to Europe as a whole, and is built as follows. First, the income distributions of France, Germany, and the UK are merged using Generalized Pareto Interpolation ([wid.world/gpinter](http://wid.world/gpinter)), and the resulting distribution is rescaled to the average national income per adult of “Western Europe” (25 countries; Western Europe excludes France, Germany and the UK). The merged distribution is also duplicated and rescaled to the average national income per adult of “Eastern Europe” (23 countries). We thus take into account relatively important between-country inequality between Western European countries and Eastern European countries. Finally, the five aggregates obtained (France, Germany, the UK, Western Europe and Eastern Europe) are merged into a single aggregate using [gpinter](http://wid.world/gpinter). This process allows us to get a simple estimate of inequality at the European level, while taking into consideration the main differences in national income levels and growth trajectories between European regions. When more DINA are available for other Western and Eastern European countries, they will be included in the analysis. Preliminary results suggest that these improvements will only have a moderate impact on overall pan-European inequality levels and only marginal impacts on the trends observed.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet

been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined. The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

Estimates for the world in the right hand side column also take into account regions not presented on this graphs, namely Latin America, Africa and the Rest of Asia. In that sense, the "World" column presents the distribution of global growth over the entire global adult population from 1980 to 2016. See "Building a global income distribution brick by brick", by L. Chancel and A. Gethin (WID.world Technical Note 2017/5) for a detailed description of the method.

All inequality estimates in our benchmark series are constructed using Purchasing Power Parity estimates. For alternative measures using Market Exchange rates, see the data appendix folders. Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20. The base unit is the individual but resources are split equally within couples.

### Figure 2.1.2. Total income growth by percentile in USA-Canada and Western Europe, 1980-2016

For all regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax system, but after taking into account the operation of pension, unemployment insurance as well as other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Europe corresponds to Western Europe. Western Europe is built by merging the income distributions of France, Germany and the UK, and an aggregate representing other Western European countries (28 countries in total). We know the average income of this aggregate, but do not have at this stage [Distributional National Accounts](#) for these countries. We thus use the combined distribution of France, UK and Germany to infer the distribution of national income in this aggregate. When Distributional National Accounts become available for other Western European countries, we will add to the analysis. These refinements are likely to have only marginal impacts on the distribution of Western Europe as a whole as well as its evolution over the period considered. See chapter 2.3 of the World Inequality Report 2018 for a comparison between inequality in Western Europe and inequality in Europe as a whole. See also "Building a global income distribution brick by brick", by L. Chancel and A. Gethin (WID.world Technical Note 2017/5) for a more detailed description of the method.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet been produced we distribute Canadian growth to the Canadian population assuming the

same distribution as the one observed in the USA. The simplification seems acceptable given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined. The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

The two regions (US-Canada and Western Europe) are merged using [gpinter](#).

In this graph, all series are extended to 2016 values are obtained by keeping income shares constant and using known average national income growth rates to predict 2016 each groups' income levels and thresholds. The last year available is: 2014 for France, the UK, India and the US; 2013 for Germany.

All inequality estimates in our benchmark series are constructed using Purchasing Power Parity estimates. For alternative measures using Market Exchange rates, see the data appendix folders.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20. The base unit is the individual but resources are split equally within couples.

### Figure 2.1.3. Total income growth by percentile in China, India, USA-Canada, and Western Europe, 1980-2016

For all regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax system, but after taking into account the operation of pension, unemployment insurance as well as other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Europe corresponds to Western Europe. Western Europe is built by merging the income distributions of France, Germany and the UK, and an aggregate representing other Western European countries (28 countries in total). We know the average income of this aggregate, but do not have at this stage [Distributional National Accounts](#) for these countries. We thus use the combined distribution of France, UK and Germany to infer the distribution of national income in this aggregate. When Distributional National Accounts become available for other Western European countries, we will add to the analysis. These refinements are likely to have only marginal impacts on the distribution of Western Europe as a whole as well as its evolution over the period considered. See chapter 2.3 of the World Inequality Report 2018 for a comparison between inequality in Western Europe and inequality in Europe as a whole. See also "Building a global income distribution brick by brick", by L. Chancel and A. Gethin (WID.world Technical Note 2017/5) for a more detailed description of the method.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable given the similar trajectories of top income shares observed in the two countries, and is

also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined. The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

For other countries or regions, estimates come from country specific research papers referred to at the beginning of each chapter of the report.

The different regions are merged using [gpinter](#).

In this graph, all series are extended to 2016 values are obtained by keeping income shares constant and using known average national income growth rates to predict 2016 each groups' income levels and thresholds. The last year available is: 2014 for France, the UK, India and the US; 2013 for Germany.

All inequality estimates in our benchmark series are constructed using Purchasing Power Parity estimates. For alternative measures using Market Exchange rates, see the data appendix folders.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

## Figure 2.1.4. Total income growth by percentile across all world regions, 1980-2016

For all regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax system, but after taking into account the operation of pension, unemployment insurance as well as other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Europe corresponds to Europe as a whole, and is built as follows. First, the income distributions of France, Germany, and the UK are merged using Generalized Pareto Interpolation ([wid.world/gpinter](http://wid.world/gpinter)), and the resulting distribution is rescaled to the average national income per adult of “Western Europe” (25 countries; Western Europe excludes France, Germany and the UK). The merged distribution is also duplicated and rescaled to the average national income per adult of “Eastern Europe” (23 countries). We thus take into account relatively important between-country inequality between Western European countries and Eastern European countries. Finally, the five aggregates obtained (France, Germany, the UK, Western Europe and Eastern Europe) are merged into a single aggregate using [gpinter](http://wid.world/gpinter). This process allows us to get a simple estimate of inequality at the European level, while taking into consideration the main differences in national income levels and growth trajectories between European regions. When more DINA are available for other Western and Eastern European countries, they will be included in the analysis. Preliminary results suggest that these improvements will only have a moderate impact on overall pan-European inequality levels and only marginal impacts on the trends observed.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable

given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined. The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

Sub-Saharan Africa is the merged distribution of Sub-Saharan African countries for which survey data is available from PovcalNet. Survey data is corrected with available tax data estimates (which are available at this stage for the recent period only for Ivory Coast and South Africa; we use the gap between surveys and tax data in Ivory Coast and South Africa to correct survey estimates in other African countries). See the Technical Note on the production of African data for more details (L. Chancel and L. Czajka, "Estimating the regional distribution of income in Sub-Saharan Africa", WID.world Technical Note 2017/6).

For Brazil, estimates post-2001 are detailed in M. Morgan "Extreme and Persistent Inequality: New Evidence for Brazil Combining National Accounts, Surveys and Fiscal Data, 2001-2015" WID.world Working Paper 2017/12. Before 2000, we factor in the evolution of Brazilian national income and assume constant inequality levels. Assuming different inequality trajectories between 1980 and 2000 in Brazil does not modify global inequality trends. For the rest of Latin America, we use observed national income and assume that national income growth is distributed in the same way as in Brazil over the period. See L. Chancel and A. Gethin "Building a global income distribution brick by brick", WID.world Technical Note 2017/5 for a detailed description of the method.

The methodology followed to produce income inequality estimates in India and China is described in Piketty, T., Yang, L., Zucman, G., "Capital Accumulation, Private Property and Rising Inequality in China, 1978-2015", WID.world Working Paper, 2017/6 and in Chancel, L., Piketty T., "Indian Income Inequality, 1922-2014: from British Raj to Billionaire Raj?", WID.world Working Paper, 2017/11. For Other Asia (31 countries), we use observed national income and assume national income growth is distributed in the same way as in India and China combined.

In this graph, all series are extended to 2016 values are obtained by keeping income shares constant and using known average national income growth rates to predict 2016 each groups' income levels and thresholds. The last year available is: 2016 for Africa and the Middle East; 2015 for Brazil, China and Russia; 2014 for France, the UK, India and the US; 2013 for Germany.

All inequality estimates in our benchmark series are constructed using Purchasing Power Parity estimates. For alternative measures using Market Exchange rates, see the data appendix folders.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20. The base unit is the individual but resources are split equally within couples.

## Figure 2.1.5. Geographic breakdown of global income groups in 1990

For all regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax system, but after taking into account the operation of pension, unemployment insurance as well as other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Here, Europe corresponds to Europe as a whole, and is built as follows. First, the income distributions of France, Germany, and the UK are merged using Generalized Pareto Interpolation ([gpinter](#)), and the resulting distribution is rescaled to the average national income per adult of “Western Europe” (25 countries; Western Europe excludes France, Germany and the UK). The merged distribution is also duplicated and rescaled to the average national income per adult of “Eastern Europe” (23 countries). We thus take into account relatively important between-country inequality between Western European countries and Eastern European countries. Finally, the five aggregates obtained (France, Germany, the UK, Western Europe and Eastern Europe) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality at the European level, while taking into consideration the main differences in national income levels and growth trajectories between European regions.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined. The two

countries obtained (US and Canada) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

Sub-Saharan Africa is the merged distribution of Sub-Saharan African countries for which survey data is available from PovcalNet. Survey data is corrected with available tax data estimates (which are available at this stage for the recent period only for Ivory Coast and South Africa; we use the gap between surveys and tax data in Ivory Coast and South Africa to correct survey estimates in other African countries). See the Technical Note on the production of African data for more details (L. Chancel and L. Czajka, "Estimating the regional distribution of income in Sub-Saharan Africa", WID.world Technical Note 2017/6).

For Brazil, 1990 estimates are computed using known national income growth evolution between 1990 and 2001 and the income distribution of 2001. For the rest of Latin America, we use observed national income and assume that national income growth is distributed in the same way as in Brazil over the period. See L. Chancel and A. Gethin "Building a global income distribution brick by brick", WID.world Technical Note 2017/5 for a detailed description of the method.

The methodology followed to produce income inequality estimates in India and China is described in Piketty, T., Yang, L., Zucman, G., "Capital Accumulation, Private Property and Rising Inequality in China, 1978-2015", WID.world Working Paper, 2017/6 and in Chancel, L., Piketty T., "Indian Income Inequality, 1922-2014: from British Raj to Billionaire Raj?", WID.world Working Paper, 2017/11. For Other Asia (31 countries), we use observed national income and assume national income growth is distributed in the same way as in India and China.

All inequality estimates in our benchmark series are constructed using Purchasing Power Parity estimates. For alternative measures using Market Exchange rates, see the data appendix folders.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20. The base unit is the individual but resources are split equally within couples.

#### Figure 2.1.6. Geographic breakdown of global income groups in 2016

For all regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax system, but after taking into account the operation of pension, unemployment insurance as well as other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Europe corresponds to Europe as a whole, and is built as follows. First, the income distributions of France, Germany, and the UK are merged using Generalized Pareto Interpolation ([gpinter](#)), and the resulting distribution is rescaled to the average national income per adult of “Western Europe” (25 countries; Western Europe excludes France, Germany and the UK). The merged distribution is also duplicated and rescaled to the average national income per adult of “Eastern Europe” (23 countries). We thus take into

account relatively important between-country inequality between Western European countries and Eastern European countries. Finally, the five aggregates obtained (France, Germany, the UK, Western Europe and Eastern Europe) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality at the European level, while taking into consideration the main differences in national income levels and growth trajectories between European regions.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined). The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

Sub-Saharan Africa is the merged distribution of Sub-Saharan African countries for which survey data is available from PovcalNet. Survey data is corrected with available tax data estimates (which are available at this stage for the recent period only for Ivory Coast and South Africa; we use the gap between surveys and tax data in Ivory Coast and South Africa to correct survey estimates in other African countries). See the Technical Note on the production of African data for more details (L. Chancel and L. Czajka, "Estimating the regional distribution of income in Sub-Saharan Africa", WID.world Technical Note 2017/6).

For Brazil, estimates post-2001 are detailed in M. Morgan "Extreme and Persistent Inequality: New Evidence for Brazil Combining National Accounts, Surveys and Fiscal Data, 2001-2015" WID.world Working Paper 2017/12. For the rest of Latin America, we use observed national income and assume that national income growth is distributed in the same way as in Brazil over the period. See L. Chancel and A. Gethin "Building a global income distribution brick by brick", WID.world Technical Note 2017/5 for a detailed description of the method.

The methodology followed to produce income inequality estimates in India and China is described in Piketty, T., Yang, L., Zucman, G., "Capital Accumulation, Private Property and Rising Inequality in China, 1978-2015", WID.world Working Paper, 2017/6 and in Chancel, L., Piketty T., "Indian Income Inequality, 1922-2014: from British Raj to Billionaire Raj?", WID.world Working Paper, 2017/11. For Other Asia (31 countries), we use observed national income and assume national income growth is distributed in the same way as in India and China.

In this graph, all series are extended to 2016 values are obtained by keeping income shares constant and using known average national income growth rates to predict 2016 each groups' income levels and thresholds. The last year available is: 2016 for Africa and the Middle East; 2015 for Brazil, China and Russia; 2014 for France, the UK, India and the US; 2013 for Germany.

All inequality estimates in our benchmark series are constructed using Purchasing Power Parity estimates. For alternative measures using Market Exchange rates, see the data appendix folders.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling

comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016). The population is comprised of individuals over age 20. The base unit is the individual but resources are split equally within couples.

### Figure 2.1.7. Global Bottom 50% and Top 1% income shares, 1980-2016

For all world regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of pension, unemployment and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report)..

The World income distribution is the merged distribution of Africa, Asia, Europe, the Middle East, Latin America, Russia, and US-Canada.

Europe is built as follows. First, the income distributions of France, Germany, and the UK are merged using Generalized Pareto Interpolation ([gpinter](#)), and the resulting distribution is rescaled to the average national income per adult of “Western Europe” (25 countries; Western Europe excludes France, Germany and the UK). The merged distribution is also duplicated and rescaled to the average national income per adult of “Eastern Europe” (23 countries). We thus take into account relatively important between-country inequality between Western European countries and Eastern European countries. Finally, the five aggregates obtained (France, Germany, the UK, Western Europe and Eastern Europe) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality at the European level, while

taking into consideration the main differences in national income levels and growth trajectories between European regions.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined). The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

For Brazil, estimates post-2001 are detailed in M. Morgan "Extreme and Persistent Inequality: New Evidence for Brazil Combining National Accounts, Surveys and Fiscal Data, 2001-2015" WID.world Working Paper 2017/12. Before 2000, we factor in the evolution of Brazilian national income and assume constant inequality levels. Assuming different inequality trajectories between 1980 and 2000 in Brazil does not modify global inequality trends. For the rest of Latin America, we use observed national income and assume that national income growth is distributed in the same way as in Brazil over the period. See L. Chancel and A. Gethin "Building a global income distribution brick by brick", WID.world Technical Note 2017/5 for a detailed description of the method.

Sub-Saharan Africa is the merged distribution of Sub-Saharan African countries for which survey data is available from PovcalNet. Survey data is corrected with available tax data estimates (which are available at this stage for the recent period only for Ivory Coast and South Africa; we use the gap between surveys and tax data in Ivory Coast and South Africa to correct survey estimates in other African countries). See the

Technical Note on the production of African data for more details (L. Chancel and L. Czajka, "Estimating the regional distribution of income in Sub-Saharan Africa", WID.world Technical Note 2017/6).

The methodology followed to produce income inequality estimates in India and China is described in Piketty, T., Yang, L., Zucman, G., "Capital Accumulation, Private Property and Rising Inequality in China, 1978-2015", WID.world Working Paper, 2017/6 and in Chancel, L., Piketty T., "Indian Income Inequality, 1922-2014: from British Raj to Billionaire Raj?", WID.world Working Paper, 2017/11. For Other Asia (31 countries), we use observed national income and assume national income growth is distributed in the same way as in India and China combined.

All series are extended to 2016 by keeping income shares constant and using past growth rates to predict 2016 national income and adult population levels. The last year available is: 2016 for Africa and the Middle East; 2015 for Brazil, China and Russia; 2014 for France, the UK, India and the US; 2013 for Germany. All regions are constructed using Purchasing Power Parity estimates.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

## Figure 2.1.8. Global top 10% income share, 1980-2016: between versus within country inequality

In the “perfect equality between countries” scenario, all world regions are assumed to have the same national income level (the average national income per adult of the world), but income inequality differs within regions and is the same as in the baseline scenario. In the “perfect equality within countries” scenarios, world regions are assumed to differ in their national income levels, but there is no inequality within regions (all citizens earn the average national income per adult of the region in which they live).

For all world regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of pension, unemployment and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report)..

The World income distribution is the merged distribution of Africa, Asia, Europe, the Middle East, Latin America, Russia, and US-Canada.

Europe is built as follows. First, the income distributions of France, Germany, and the UK are merged using Generalized Pareto Interpolation ([gpinter](#)), and the resulting distribution is rescaled to the average national income per adult of “Western Europe” (25 countries; Western Europe excludes France, Germany and the UK). The merged distribution is also duplicated and rescaled to the average national income per adult of “Eastern Europe” (23 countries). We thus take into account relatively important between-country inequality between Western European countries and Eastern European countries. Finally, the five aggregates obtained (France, Germany, the UK, Western Europe and Eastern Europe) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality at the European level, while

taking into consideration the main differences in national income levels and growth trajectories between European regions.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined). The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

For Brazil, estimates post-2001 are detailed in M. Morgan "Extreme and Persistent Inequality: New Evidence for Brazil Combining National Accounts, Surveys and Fiscal Data, 2001-2015" WID.world Working Paper 2017/12. Before 2000, we factor in the evolution of Brazilian national income and assume constant inequality levels. Assuming different inequality trajectories between 1980 and 2000 in Brazil does not modify global inequality trends. For the rest of Latin America, we use observed national income and assume that national income growth is distributed in the same way as in Brazil over the period. See L. Chancel and A. Gethin "Building a global income distribution brick by brick", WID.world Technical Note 2017/5 for a detailed description of the method.

Sub-Saharan Africa is the merged distribution of Sub-Saharan African countries for which survey data is available from PovcalNet. Survey data is corrected with available tax data estimates (which are available at this stage for the recent period only for Ivory

Coast and South Africa; we use the gap between surveys and tax data in Ivory Coast and South Africa to correct survey estimates in other African countries). See the Technical Note on the production of African data for more details (L. Chancel and L. Czajka, "Estimating the regional distribution of income in Sub-Saharan Africa", WID.world Technical Note 2017/6).

The methodology followed to produce income inequality estimates in India and China is described in Piketty, T., Yang, L., Zucman, G., "Capital Accumulation, Private Property and Rising Inequality in China, 1978-2015", WID.world Working Paper, 2017/6 and in Chancel, L., Piketty T., "Indian Income Inequality, 1922-2014: from British Raj to Billionaire Raj?", WID.world Working Paper, 2017/11. For Other Asia (31 countries), we use observed national income and assume national income growth is distributed in the same way as in India and China combined.

All series are extended to 2016 by keeping income shares constant and using past growth rates to predict 2016 national income and adult population levels. The last year available is: 2016 for Africa and the Middle East; 2015 for Brazil, China and Russia; 2014 for France, the UK, India and the US; 2013 for Germany. All regions are constructed using Purchasing Power Parity estimates.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

### Table 2.2.1. The distribution of world national income and gross domestic product, 2016: Purchasing Power Parity

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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector. Gross Domestic Product (GDP) is the total value of goods and services produced by the national economy. Consumption of Fixed Capital is the decline in the total value of fixed assets (e.g. roads, machines) which are owned and used by a producer. In other words, the amount required to maintain the quality of fixed assets from one year to another. The decline in value is the result of physical deterioration, normal obsolescence or normal accidental damage. Net Foreign Income is the difference between the total value of a country's citizens and companies earned abroad, and the total value of foreign citizens and overseas companies earned in that country. The national economy - in the national accounts sense - includes all domestic sectors, i.e. all entities that are resident in a given country (in the sense of their economic activity), whether they belong to the private sector, the corporate sector or the government sector.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP

therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

See T. Blanchet, and L. Chancel, "[National Accounts Series Methodology](#)", WID.world Working Paper, 2016/1. for more details on the methodology followed to construct these estimates.

### Table 2.2.2. The distribution of world national income and gross domestic product, 2016: Market Exchange Rates

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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector. Gross Domestic Product (GDP) is the total value of goods and services produced by the national economy. Consumption of Fixed Capital is the decline in the total value of fixed assets (e.g. roads, machines) which are owned and used by a producer. In other words, the amount required to maintain the quality of fixed assets from one year to another. The decline in value is the result of physical deterioration, normal obsolescence or normal accidental damage. Net Foreign Income is the difference between the total value of a country's citizens and companies earned abroad,

and the total value of foreign citizens and overseas companies earned in that country. The national economy - in the national accounts sense - includes all domestic sectors, i.e. all entities that are resident in a given country (in the sense of their economic activity), whether they belong to the private sector, the corporate sector or the government sector.

The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

See T. Blanchet, and L. Chancel, "[National Accounts Series Methodology](#)", WID.world Working Paper, 2016/1. for more details on the methodology followed to construct these estimates.

### Table 2.2.3. The distribution of world national income and gross domestic product, 1980: Purchasing Power Parity

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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector. Gross Domestic Product (GDP) is the total value of goods and services produced by the national economy. Consumption of Fixed Capital is the decline in the total value of fixed assets (e.g. roads, machines) which are owned and used by a producer. In other words, the amount required to maintain the quality of fixed assets

from one year to another. The decline in value is the result of physical deterioration, normal obsolescence or normal accidental damage. Net Foreign Income is the difference between the total value of a country's citizens and companies earned abroad, and the total value of foreign citizens and overseas companies earned in that country. The national economy - in the national accounts sense - includes all domestic sectors, i.e. all entities that are resident in a given country (in the sense of their economic activity), whether they belong to the private sector, the corporate sector or the government sector.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

See T. Blanchet, and L. Chancel, "[National Accounts Series Methodology](#)", WID.world Working Paper, 2016/1. for more details on the methodology followed to construct these estimates.

#### Table 2.2.4. Total national income growth rates by world region, 1950-2016

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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

See T. Blanchet, and L. Chancel, "[National Accounts Series Methodology](#)" (WID.world Working Paper, 2016/1) for more details on the methodology followed to construct national income estimates in WID.world.

### Figure 2.2.1. Average income in Africa and Asia relative to the global average, 1950-2016

Estimates use 2016 Purchasing Power Parity values. Average income corresponds to national income per adult.

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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

See T. Blanchet, and L. Chancel, "[National Accounts Series Methodology](#)", WID.world Working Paper, 2016/1. for more details on the methodology followed to construct national income estimates in WID.world. Available at this address: <http://wid.world/document/1676/>.

Figure 2.2.2. Average income in China and Latin America relative to the global average, 1950-2016

Estimates use 2016 Purchasing Power Parity values. Average income corresponds to national income per adult.

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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

See T. Blanchet, and L. Chancel, "[National Accounts Series Methodology](http://wid.world/document/1676/)", WID.world Working Paper, 2016/1. for more details on the methodology followed to construct national income estimates in WID.world. Available at this address: <http://wid.world/document/1676/>.

### Figure 2.3.1. Top 1% national income share in Anglophone countries, 1920-2015

For the USA (1913-2014), income inequality is measured using pre-tax national income, and the population is comprised of individuals over age 20. For Australia (1921-2014), Canada (1920-2010) and the UK (1990-2014), income inequality is measured using fiscal income (individuals as base units) and population comprised of individuals over age 20. For the UK (1918-1989) and Ireland (1938-2009), income inequality is measured using fiscal income (tax units as base units) and population comprised of individuals over age 20.

USA: tax units are families (see source for details), and estimates include capital gains.

Australia: adults are individuals over age 15; estimates include transfers and capital gains.

Canada: tax units are individuals over age 20; estimates exclude capital gains between 1920 and 1971, and include capital gains between 1972 and 2010.

UK: excludes capital gains. The series are presented in two distinct columns, following

the change in the definition of the tax unit between 1989 and 1990. Tax units are: individuals aged 15+ minus married females until 1989; individuals aged 15+ from 1990.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report). Fiscal income is defined as the sum of all income items reported on income tax returns, before any deduction. It includes labour income, capital income and mixed income. The concept of fiscal income varies with national tax legislations, so in order to make international comparisons it is preferable to use the concept of national income.

For a description of the methodology followed to produce estimates in each individual countries, refer to the methodological documents listed below. They are all available on wid.world at this address: <http://wid.world/methodology/>.

USA: Piketty, Thomas; Saez, Emmanuel and Zucman, Gabriel (2016). Distributional National Accounts: Methods and Estimates for the United States.

Australia: Atkinson, Anthony B. and Leigh, Andrew (2007). The Distribution of Top Incomes in Australia; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries, Oxford University Press, chapter 7.

Burkhauser, Richard V. , Hahn, Markus H. and Wilkins, Roger (2013). Measuring Top Incomes Using Tax Record Data: A Cautionary Tale from Australia. NBER Working Paper No. 19121.

Burkhauser, Richard V. , Hahn, Markus H. and Wilkins, Roger (2015). Measuring top incomes using tax record data: a cautionary tale from Australia. Journal of Economic Inequality, 13(2): 181-205. Series updated by Roger Wilkinson.

Canada: Saez, Emmanuel and Veall, Michael (2007). The Evolution of High Incomes in Canada 1920-2000; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries, Oxford University Press, chapter 6.

Veall, Michael (2010). Top Income

Shares in Canada: Updates and Extensions; McMaster University, Department of Economics, mimeo. Veall, Michael (2012). Top income shares in Canada: recent trends and policy implications; Canadian Journal of Economics, 45(4): 1247-1272. Series updated by M. Veall.

UK: Atkinson, Anthony B. (2007). The Distribution of Top Incomes in the United Kingdom 1908-2000; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries, Oxford University Press, chapter 4. Atkinson, Anthony B. (2012). UK Estimates of Top Income Shares 2009-2010; WID.world Technical Note 2012/3. Atkinson, Anthony B. (2012). UK Estimates of Top Income Shares 2009-2010: Revised Note on Methods; WID.world Technical Note 2012/5. Atkinson, Anthony B. (2013). UK Estimates of Top Income Shares 2010-2011: Note on Methods; WID.world Technical Note 2013/7. Atkinson, Anthony B. (2014). UK Estimates of Top Income Shares 2011-2012: Note on Methods; WID.world Technical Note 2014/1. Atkinson, Anthony B. and Ooms, Tahnee (2015). UK Estimates of Top Income Shares 2012-2013: Note on Methods; WID.world Technical Note 2015/4. Alvaredo, Facundo (2017). UK Estimates of Top Income Shares 2013-2014 and 2014-2015: Note on Methods; WID.world Technical Note 2017/2.

Ireland: Nolan, Brian (2007). Long Term Trends in Top Income Shares in Ireland; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries, Oxford University Press, chapter 12. Series updated by the same author.

### Figure 2.3.2a. Top 1% vs. Bottom 50% national income shares in the USA and Western Europe, 1980-2016

Income inequality is measured by pre-tax national income.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the

operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

Western Europe is the combined distribution of Germany, France, the UK and the rest of Europe. The rest of Europe is a normalized distribution of Germany, France, and the UK.

For a description of the methodology followed to produce estimates in each individual countries, refer to the methodological documents listed below. They are all available on wid.world at this address: <http://wid.world/methodology/>.

France: Garbinti, Goupille and Piketty (2016).  
Germany: Dell, Fabien (2007). Top Incomes in Germany Throughout the Twentieth Century 1891-1998; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries, Oxford University Press, chapter 9. Bartels, Charlotte and Jenderny, Katharina (2015). The Role of Capital Income for Top Income Shares in Germany. WTID Working Paper 2015/1.  
UK: Atkinson, Anthony B. (2007). The Distribution of Top Incomes in the United Kingdom 1908-2000; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries, Oxford University Press, chapter 4. Atkinson, Anthony B. (2012). UK Estimates of Top Income Shares 2009-2010; WID.world Technical Note 2012/3. Atkinson, Anthony B. (2012). UK Estimates of Top Income Shares 2009-2010: Revised Note on Methods; WID.world Technical Note 2012/5. Atkinson, Anthony B. (2013). UK Estimates of Top Income Shares 2010-2011: Note on Methods; WID.world Technical Note 2013/7. Atkinson, Anthony B. (2014). UK Estimates of Top Income Shares 2011-2012: Note on Methods; WID.world Technical Note 2014/1. Atkinson, Anthony B. and

Ooms, Tahnee (2015). UK Estimates of Top Income Shares 2012-2013: Note on Methods; WID.world Technical Note 2015/4. Alvaredo, Facundo (2017). UK Estimates of Top Income Shares 2013-2014 and 2014-2015: Note on Methods; WID.world Technical Note 2017/2. USA: Piketty, Thomas; Saez, Emmanuel and Zucman, Gabriel (2016). Distributional National Accounts: Methods and Estimates for the United States.

### Figure 2.3.2b. Top 10% national income share in Europe and the USA, 1980-2016

Income inequality is measured by pre-tax national income.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

Western Europe is built by merging the income distributions of France, Germany and the UK, and an aggregate representing other Western European countries (28 countries in total). We know the average income of this aggregate, but do not have at this stage [Distributional National Accounts](#) for these countries. We thus use the combined distribution of France, UK and Germany to infer the distribution of national income in this aggregate. When Distributional National Accounts become available for other Western European countries, we will add to the analysis. These refinements are likely to have only marginal impacts on the distribution of Western Europe as a whole as well as its evolution over the period considered. See chapter 2.3 of the World Inequality

Report 2018 for a comparison between inequality in Western Europe and inequality in Europe as a whole. See also "Building a global income distribution brick by brick", by L. Chancel and A. Gethin (WID.world Technical Note 2017/5) for a more detailed description of the method.

Europe as a whole corresponds to Western Europe and 23 the Eastern European countries. It is constructed as follows. First, the income distributions of France, Germany, and the UK are merged using Generalized Pareto Interpolation ([gpinter](#)), and the resulting distribution is rescaled to the average national income per adult of "Western Europe" (25 countries; Western Europe excludes France, Germany and the UK). The merged distribution is also duplicated and rescaled to the average national income per adult of "Eastern Europe" (23 countries). We thus take into account relatively important between-country inequality between Western European countries and Eastern European countries. Finally, the five aggregates obtained (France, Germany, the UK, Western Europe and Eastern Europe) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality at the European level, while taking into consideration the main differences in national income levels and growth trajectories between European regions.

For a description of the methodology followed to produce estimates in each individual countries, refer to the methodological documents listed below. They are all available on wid.world at this address: <http://wid.world/methodology/>.

France: Garbinti, Goupille and Piketty (2016).  
Germany: Dell, Fabien (2007). Top Incomes in Germany Throughout the Twentieth Century 1891-1998; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries, Oxford University Press, chapter 9. Bartels, Charlotte and Jenderny, Katharina (2015). The Role of Capital Income for Top Income Shares in Germany. WTID Working Paper 2015/1.  
UK: Atkinson, Anthony B. (2007). The Distribution of Top Incomes in the United

Kingdom 1908-2000; in Atkinson, A. B. and Piketty, T. (editors) *Top Incomes over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries*, Oxford University Press, chapter 4. Atkinson, Anthony B. (2012). *UK Estimates of Top Income Shares 2009-2010*; WID.world Technical Note 2012/3. Atkinson, Anthony B. (2012). *UK Estimates of Top Income Shares 2009-2010: Revised Note on Methods*; WID.world Technical Note 2012/5. Atkinson, Anthony B. (2013). *UK Estimates of Top Income Shares 2010-2011: Note on Methods*; WID.world Technical Note 2013/7. Atkinson, Anthony B. (2014). *UK Estimates of Top Income Shares 2011-2012: Note on Methods*; WID.world Technical Note 2014/1. Atkinson, Anthony B. and Ooms, Tahnee (2015). *UK Estimates of Top Income Shares 2012-2013: Note on Methods*; WID.world Technical Note 2015/4. Alvaredo, Facundo (2017). *UK Estimates of Top Income Shares 2013-2014 and 2014-2015: Note on Methods*; WID.world Technical Note 2017/2. USA: Piketty, Thomas; Saez, Emmanuel and Zucman, Gabriel (2016). *Distributional National Accounts: Methods and Estimates for the United States*.

### Figure 2.3.2c. Bottom 50% national income share in Europe and the USA, 1980-2016

Income inequality is measured by pre-tax national income.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

Western Europe is built by merging the income distributions of France, Germany and the UK, and an aggregate representing other Western European countries (28 countries in total). We know the average income of this aggregate, but do not have at this stage [Distributional National Accounts](#) for these countries. We thus use the combined distribution of France, UK and Germany to infer the distribution of national income in this aggregate. When Distributional National Accounts become available for other Western European countries, we will add to the analysis. These refinements are likely to have only marginal impacts on the distribution of Western Europe as a whole as well as its evolution over the period considered. See chapter 2.3 of the World Inequality Report 2018 for a comparison between inequality in Western Europe and inequality in Europe as a whole. See also "Building a global income distribution brick by brick", by L. Chancel and A. Gethin (WID.world Technical Note 2017/5) for a more detailed description of the method.

Europe as a whole corresponds to Western Europe and 23 the Eastern European countries. It is constructed as follows. First, the income distributions of France, Germany, and the UK are merged using Generalized Pareto Interpolation ([gpinter](#)), and the resulting distribution is rescaled to the average national income per adult of "Western Europe" (25 countries; Western Europe excludes France, Germany and the UK). The merged distribution is also duplicated and rescaled to the average national income per adult of "Eastern Europe" (23 countries). We thus take into account relatively important between-country inequality between Western European countries and Eastern European countries. Finally, the five aggregates obtained (France, Germany, the UK, Western Europe and Eastern Europe) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality at the European level, while taking into consideration the main differences in national income levels and growth trajectories between European regions.

For a description of the methodology followed to produce estimates in each individual countries, refer to the methodological documents listed below. They are all available on wid.world at this address: <http://wid.world/methodology/>.

France: Garbinti, Goupille and Piketty (2016).  
Germany: Dell, Fabien (2007). Top Incomes in Germany Throughout the Twentieth Century 1891-1998; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries, Oxford University Press, chapter 9. Bartels, Charlotte and Jenderny, Katharina (2015). The Role of Capital Income for Top Income Shares in Germany. WTID Working Paper 2015/1.  
UK: Atkinson, Anthony B. (2007). The Distribution of Top Incomes in the United Kingdom 1908-2000; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries, Oxford University Press, chapter 4. Atkinson, Anthony B. (2012). UK Estimates of Top Income Shares 2009-2010; WID.world Technical Note 2012/3. Atkinson, Anthony B. (2012). UK Estimates of Top Income Shares 2009-2010: Revised Note on Methods; WID.world Technical Note 2012/5. Atkinson, Anthony B. (2013). UK Estimates of Top Income Shares 2010-2011: Note on Methods; WID.world Technical Note 2013/7. Atkinson, Anthony B. (2014). UK Estimates of Top Income Shares 2011-2012: Note on Methods; WID.world Technical Note 2014/1. Atkinson, Anthony B. and Ooms, Tahnee (2015). UK Estimates of Top Income Shares 2012-2013: Note on Methods; WID.world Technical Note 2015/4. Alvaredo, Facundo (2017). UK Estimates of Top Income Shares 2013-2014 and 2014-2015: Note on Methods; WID.world Technical Note 2017/2.  
USA: Piketty, Thomas; Saez, Emmanuel and Zucman, Gabriel (2016). Distributional National Accounts: Methods and Estimates for the United States.

### Figure 2.3.3. Top 1% national income share in European countries, 1890-2014

For France (1900-2014), income inequality is measured using pre-tax national income (equal-split adults as base units) and the population is comprised of individuals over age 20.

For Spain (1981-2012) and Italy (1974-2009), income inequality is measured using fiscal income (individuals as base units) and population comprised of individuals over age 20.

For Germany, income inequality is measured using fiscal income (tax units as base units) and population comprised of individuals over age 20.

Spain: Adults are individuals aged 20+. Excludes capital gains.

Italy: Tax units are individuals aged 20+. Excludes capital gains.

Germany: Tax units are single individuals aged 20+ plus one half of married individuals.

Series have the following breaks in coverage: from 1891, Prussia; from 1925, the Republic of Weimar; from 1935, Saarland is included; from 1950, the Federal Republic of Germany; from 1960, West Berlin and Saarland are included; from 1991, reunification. Excludes capital gains.

Fiscal income is defined as the sum of all income items reported on income tax returns, before any deduction. It includes labour income, capital income and mixed income. The concept of fiscal income varies with national tax legislations, so in order to make international comparisons it is preferable to use the concept of national income.

For a description of the methodology followed to produce estimates in each individual countries, refer to the methodological documents listed below. They are all available on wid.world at this address: <http://wid.world/methodology/>.

France: Garbinti, Goupille and Piketty (2016)

Spain: Alvaredo, Facundo and Saez, Emmanuel (2009). Income and Wealth

Concentration in Spain from a Historical and Fiscal Perspective; Journal of the European Economic Association, 7(5): 1140-1167. Longer version in Atkinson, B. and Piketty, T. (editors) Top Incomes: A Global Perspective, Oxford University Press, 2010, chapter 10. Series updated by the same authors.

Italy: Alvaredo, Facundo and Pisano, Elena (2010). Top Incomes in Italy 1974-2004; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes: A Global Perspective, Oxford University Press, chapter 12. Series updated by the same authors.

Germany: Dell, Fabien (2007). Top Incomes in Germany Throughout the Twentieth Century 1891-1998; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries, Oxford University Press, chapter 9.

Bartels, Charlotte and Jenderny, Katharina (2015). The Role of Capital Income for Top Income Shares in Germany. WTID Working Paper 2015/1.

#### Figure 2.3.4. Top 1% national income share in Northern European countries, 1900-2013

For Denmark (1970-2010), Finland (1970-2009) and Norway (1875-2011), income inequality is measured using fiscal income (individuals as base units) and population comprised of individuals over age 20.

For Denmark (1870-1968), Finland (1920-1969), the Netherlands (1914-2012) and Sweden (1903-2013), income inequality is measured using fiscal income (tax units as base units) and population comprised of individuals over age 20.

Denmark: Tax units are: individuals aged 15+ minus married females until 1968; from 1970, tax returns (individuals aged 15+ plus those individuals below 15 years old who also file a tax return). Excludes capital gains. Adults are: until 1969, individuals aged 15+; from 1970, tax returns (individuals aged 15+ plus those individuals below 15 years old who also file a tax return). Excludes capital gains.

Finland: Tax units are: individuals aged 15+ minus married females until 1969;

individuals aged 15+ from 1970. Data before 1990 are based on tabulated tax data, and the unit of analysis is the tax unit. In 1990 and after, data are based on the Income Distribution Survey, the unit of analysis is the individual aged 15 and over with non-zero incomes. Excludes capital gains.

Norway: Tax units (used as control total for the population) are individuals aged 16+. In practice, although taxation is joint, separate filing has become increasingly prevalent; from 1998 Statistics Norway ceased to treat married couples with joint taxation as one personal taxpayer. Excludes capital gains. Adults are individuals aged 16+. Excludes capital gains.

Netherlands: Excludes capital gains.

Sweden: The series includes social benefits and capital gains. Tax units are: up to 1950, individuals aged 16+ minus married women; between 1951 and 1970, individuals aged 16+ minus married women with low or no income; from 1971, individuals aged 16.

Fiscal income is defined as the sum of all income items reported on income tax returns, before any deduction. It includes labour income, capital income and mixed income. The concept of fiscal income varies with national tax legislations, so in order to make international comparisons it is preferable to use the concept of national income.

For a description of the methodology followed to produce estimates in each individual countries, refer to the methodological documents listed below. They are all available on wid.world at this address: <http://wid.world/methodology/>.

Denmark: Atkinson, Anthony B. and Søgaard, Jakob E. (2012). The long-run history of income inequality in Denmark. Top Incomes from 1870 to 2010. Mimeo.

Finland: Jäntti, Markus; Riihelä, Marja; Sullström, Risto and Tuomala, Matti (2010). Trends in Top Income Shares in Finland; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes: A Global Perspective, Oxford University Press, chapter 8. Series updated by the same authors. See also Riihelä, Marja; Sullström, Risto and Tuomala, Matti (2010). Trends in Top Income Shares in Finland 1966-2007. VATT Research Report 157.

Norway: Aaberge, Rolf and Atkinson, Anthony B. (2010). Top Incomes in Norway; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes: A Global Perspective, Oxford

University Press, chapter 9. Aaberge, Rolf and Atkinson, Anthony B. and Modalsli, Jørgen (2013). The ins and outs of top income mobility; Statistics Norway Research Department Discussion Papers n. 762, October. Series updated by the same authors. Netherlands: Salverda, Wiemer and Atkinson, Anthony B. (2007). Top Incomes in the Netherlands over the Twentieth Century; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries, Oxford University Press, chapter 10. Salverda, Wiemer (2013). Extending the top-income shares for the Netherlands from 1999 to 2012: An explanatory note. Mimeo.

### Figure 2.3.5. Top 1% national income share in emerging countries 1900-2015

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

For a description of the methodology followed to produce estimates in each individual countries, refer to the methodological documents listed below. They are all available on wid.world at this address: <http://wid.world/methodology/>.

China: Piketty, Yang and Zucman (2016)  
India: Chancel & Piketty (2017)  
Russia: Novokmet, Piketty and Zucman (2017)

### Figure 2.3.6. Top 10% national income share in Brazil, the Middle East, South Africa and other countries, 2012-2016

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

Western Europe is the combined distribution of Germany, France, the UK and the rest of Europe. The rest of Europe is a normalized distribution of Germany, France, and the UK.

More detailed information is available in : Alvaredo, Assouad and Piketty (2017)

URL: <http://wid.world/document/alvaredoassouadpiketty-middleeast-widworldwp201715/>

### Table 2.4.1. The distribution of national income in the USA, 2014

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the

operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report). Post-tax national income is measured after all taxes, transfers and government spending. Pre-tax national income fractiles are ranked by pre-tax national income, and post-tax national income fractiles are ranked by post-tax national income. Hence, the two sets of fractiles do not represent the same groups of individuals due to re-ranking when switching from one income definition to another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Saez and Zucman (2018)

Figure number in article: Table I

URL: <http://gabriel-zucman.eu/files/PSZ2018QJE.pdf>

#### Table 2.4.2. The growth of national income since World War II in the USA, 1946-2014

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report). Post-tax national income is measured after all taxes, transfers and government spending. Pre-tax national income fractiles are ranked by pre-tax national income, and post-tax national income fractiles are ranked by post-tax national income. Hence, the two sets of fractiles do not represent the same groups of individuals due to re-ranking when switching from one income definition to another. We assume that bottom 50% and middle 40% incomes grew at the same rate as average bottom 90% income over 1946-1962.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Saez and Zucman (2018)

Figure number in article: Table II

URL: <http://gabriel-zucman.eu/files/PSZ2018QJE.pdf>

### Figure 2.4.1a. Pre-tax income shares of the Top 1% and Bottom 50% in the USA, 1962-2014

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Saez and Zucman (2016)

Figure number in article: Figure 5

Article appendix: Appendix Table II-B1

URL: <http://wid.world/document/t-piketty-e-saez-g-zucman-distributional-national-accounts-methods-and-estimates-for-the-united-states-2016/>

## Figure 2.4.1b. Pre-tax incomes of the Top 1% and Bottom 50% in the USA, 1962-2014

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Saez and Zucman (2016)

Figure number in article: Figure 5

Article appendix: Appendix Tables II-B7 and II-B10

URL: <http://wid.world/document/t-piketty-e-saez-g-zucman-distributional-national-accounts-methods-and-estimates-for-the-united-states-2016/>

## Figure 2.4.2. Pre-tax and post-tax income of the Bottom 50% in the USA, 1962-2014

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report). Post-tax national income is measured after all taxes, transfers and government spending. Pre-tax national income fractiles are ranked by pre-tax national income, and post-tax national income fractiles are ranked by post-

tax national income. Hence, the two sets of fractiles do not represent the same groups of individuals due to re-ranking when switching from one income definition to another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Saez and Zucman (2016)

Figure number in article: Figure 3

Article appendix: Appendix Tables II-B7, II-C7 and II-C3c

URL: <http://wid.world/document/t-piketty-e-saez-g-zucman-distributional-national-accounts-methods-and-estimates-for-the-united-states-2016/>

**Figure 2.4.3a. Pre-tax income of the Bottom 50% by age group in the USA, 1979-2014**

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Saez and Zucman (2018)

Figure number in article: Figure IV

Article appendix: Appendix Tables II-B7 and II-B7b

URL: <http://gabriel-zucman.eu/files/PSZ2018QJE.pdf>

### Figure 2.4.3b. Post-tax income of the Bottom 50% by age group in the USA, 1979-2014

Post-tax national income is measured after all taxes, transfers and government spending.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Saez and Zucman (2016)

Figure number in article: Figure 4

Article appendix: Appendix Tables II-C7, II-C7b and II-C7d

URL: <http://wid.world/document/t-piketty-e-saez-g-zucman-distributional-national-accounts-methods-and-estimates-for-the-united-states-2016/>

### Figure 2.4.4. The “U-shaped evolution” of the national income share of the Top 10% in the USA, 1917-2014

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report). Post-tax national income is measured after all taxes, transfers and government spending. Pre-tax national income fractiles are ranked by pre-tax national income, and post-tax national income fractiles are ranked by post-tax national income. Hence, the two sets of fractiles do not represent the same groups of individuals due to re-ranking when switching from one income definition to another.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Saez and Zucman (2018)

Figure number in article: Figure V

Article appendix: Appendix Tables II-B1 and II-C1

URL: <http://gabriel-zucman.eu/files/PSZ2018QJE.pdf>

#### Figure 2.4.5. The share of capital in pre-tax income in the USA, 1913-2014

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report). As the total pre-tax income is the sum of capital income and labor income, the chart can also be read symmetrically from the top x-axis line as the fraction of labor income in top groups.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Saez and Zucman (2018)

Figure number in article: Figure VIII

Article appendix: Appendix Table II-B2d

URL: <http://gabriel-zucman.eu/files/PSZ2018QJE.pdf>

## Figure 2.4.6. Average tax rate by pre-tax income group in the USA, 1913-2014

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report). Taxes include all forms of taxes at the federal, state, and local level. Tax rates are expressed as a fraction of pre-tax income.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Saez and Zucman (2018)

Figure number in article: Figure IX

Article appendix: Appendix Table II-G1

URL: <http://gabriel-zucman.eu/files/PSZ2018QJE.pdf>

## Figure 2.4.7. Post-tax income of the Middle 40% in the USA, 1962-2014: The role of transfers

Post-tax national income is measured after all taxes, transfers and government spending.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Saez and Zucman (2018)

Figure number in article: Figure X

Article appendix: Appendix Table II-C3b

URL: <http://gabriel-zucman.eu/files/PSZ2018QJE.pdf>

### Figure 2.4.8. Difference in the pre-tax labor income between working-age men and women in the USA, 1962-2014

Pre-tax labor income is factor labor income plus pensions, Social Security, and unemployment insurance benefits, minus the corresponding contributions. Pensions and Social Security benefits are split 50/50 within couples

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Saez and Zucman (2018)

Figure number in article: Figure VI

Article appendix: Appendix Table II-F1

URL: <http://gabriel-zucman.eu/files/PSZ2018QJE.pdf>

### Figure 2.4.9. Share of women in the employed population by labor income group in the USA, 1962-2014

Factor labor income excludes pensions, Social Security, and unemployment insurance benefits and is gross of the corresponding contributions. The groups are defined relative to the full population of adults with positive factor labor income (either from salaried or non-salaried work).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Saez and Zucman (2018)

Figure number in article: Figure VII

Article appendix: Appendix Table II-F1

URL: <http://gabriel-zucman.eu/files/PSZ2018QJE.pdf>

### Table 2.5.1. The distribution of national income in France, 2014

Estimates use 2016 Purchasing Power Parity values. Average income corresponds to pre-tax national income per adult.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

Figure number in article: Table 1

Article appendix: Appendix Table B1

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-inequality-dynamics-in-france-1900-2014-evidence-from-distributional-national-accounts-2016/>

## Figure 2.5.1. Incomes shares in France, 1900-2013: The rise of the lower and middle classes

Estimates use 2016 Purchasing Power Parity values. Average income corresponds to pre-tax national income per adult.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

Figure number in article: Figure 3

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-inequality-dynamics-in-france-1900-2014-evidence-from-distributional-national-accounts-2016/>

## Figure 2.5.2. Average annual real growth by income group in France, 1950-2014

The growth incidence curve uses the total cumulated real growth of pre-tax national income per adult by percentiles.

Total cumulated income growth corresponds to the total growth rate between two specified dates. For example, an income growth rate of 100% represents a doubling in income over the period. The share of income growth captured measures the extent to which income groups benefit from growth relative to each other. For example, if the share of growth captured is 50%, half of all new income over the period was accrued by the corresponding income group.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

Figure number in article: Figure 6d

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-inequality-dynamics-in-france-1900-2014-evidence-from-distributional-national-accounts-2016/>

## Table 2.5.2. Income growth and inequality in France, 1900-2014

Total cumulated income growth corresponds to the total growth rate between two specified dates. For example, an income growth rate of 100% represents a doubling in income over the period. The share of income growth captured measures the extent to which income groups benefit from growth relative to each other. For example, if the share of growth captured is 50%, half of all new income over the period was accrued by the corresponding income group.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

Figure number in article: Table 2a

Article appendix: Appendix B

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-inequality-dynamics-in-france-1900-2014-evidence-from-distributional-national-accounts-2016/>

## Figure 2.5.3. Rising top inequality in France, 1983-2013

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

Figure number in article: Figure 5a

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-inequality-dynamics-in-france-1900-2014-evidence-from-distributional-national-accounts-2016/>

Figure 2.5.4a. Gender gap by age in France, 1970-2012, and Figure 2.5.4.b. Share of women in top labor income groups in France, 1970-2012

The gender gap is measured by the ratio between the average labor income of men and women by age (including non participants in the labor market). Labor income includes wages, pensions, unemployment insurance and 70% of mixed income.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

Figure number in article: Figure 14b and Figure 15b

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-inequality-dynamics-in-france-1900-2014-evidence-from-distributional-national-accounts-2016/>

Figure 2.6.1. Top 1% income share in Germany, 1871-2013

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Bartels (2017)

URL : [wid.world/methodology](http://wid.world/methodology)

## Figure 2.6.2. Income shares in Germany, 1961-2013

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Bartels (2017)

URL : [wid.world/methodology](http://wid.world/methodology)

### Figure 2.6.3. Income inequality in Germany, 1983-2013

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Bartels (2017)

URL : [wid.world/methodology](http://wid.world/methodology)

### Table 2.7.1. The distribution of national income in China, 2015

Estimates use 2016 Purchasing Power Parity values.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Yang and Zucman (2017)

Figure number in article: Table 2

Article appendix: Appendix B

URL: <http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016/>

### Figure 2.7.1. Income shares in China, 1978-2015

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Yang and Zucman (2017)

Figure number in article: Figure 10

URL: <http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016/>

## Table 2.7.2. Income growth and inequality in China, 1978-2015

Total cumulated income growth corresponds to the total growth rate between two specified dates. For example, an income growth rate of 100% represents a doubling in income over the period. The share of income growth captured measures the extent to which income groups benefit from growth relative to each other. For example, if the share of growth captured is 50%, half of all new income over the period was accrued by the corresponding income group.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Yang and Zucman (2017)

Figure number in article: Table 3

URL: <http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016/>

## Figure 2.7.2. Average annual real growth by income group in China, France and the USA, 1978-2015

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Yang and Zucman (2017)

Figure number in article: Figure 27

URL: <http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016/>

Figure 2.7.3a. Income share of the Top 10% in rural and urban China, 1978-2015 and Figure 2.7.3b. Income share of the Bottom 50% in rural and urban China, 1978-2015

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Piketty, Yang and Zucman (2017)

Figure number in article: Figure 16 and Figure 18

URL: <http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016/>

### Figure 2.8.1. Average national income per adult in Russia and Western Europe, 1980-2016

Average income corresponds to average national income per adult.

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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

Western Europe is an arithmetic average of Germany, France, and the UK.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

Figure number in article: Figure 1a

Article appendix: Appendix A

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

### Table 2.8.1. The distribution of national income in Russia, 2016

Estimates use 2016 Purchasing Power Parity values. Average income corresponds to pre-tax national income per adult.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

Figure number in article: Table 1

Article appendix: Appendix B

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

## Figure 2.8.2. Ratio between national income per adult in Russia and Western Europe, 1870-2016

Average income corresponds to average national income per adult.

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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

Western Europe is an arithmetic average of Germany, France, and the UK.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

Figure number in article: Table 2

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

## Table 2.8.2. Income growth and inequality in Russia, 1989-2016

Total cumulated income growth corresponds to the total growth rate between two specified dates. For example, an income growth rate of 100% represents a doubling in income over the period. The share of income growth captured measures the extent to which income groups benefit from growth relative to each other. For example, if the share of growth captured is 50%, half of all new income over the period was accrued by the corresponding income group.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

Figure number in article: Figure 1b

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

### Figure 2.8.3. Top 10% income share in France, Russia and the USA, 1905-2015

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

Figure number in article: Figure 11a

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

### Figure 2.8.4. Total income growth by percentile in Russia, 1989-2016

Total cumulated growth corresponds to the total growth rate between two specified dates. For example, an income growth rate of 100% represents a doubling in income over the period.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

Figure number in article: Figure 9a

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

### Figure 2.8.5. Income shares in Russia, 1905-2015

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

Figure number in article: Figure 8c

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

### Table 2.8.3. Average annual real growth by percentile in Russia, 1905-2016

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

Figure number in article: Table 3

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

### Figure 2.8.6. Average annual real growth by percentile in Russia, 1905-2016

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the

pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

Figure number in article: Figure 9b

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

Figure 2.9.1a. Top 10% and Middle 40% income shares in India, 1951-2014

Income inequality is measured using the distribution of pre-tax national income among adults.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual.

Fiscal years overlap from one year to another, the data stops in 2013-2014.

More detailed information is available in : Chancel & Piketty (2017)

Figure number in article: Figure 9

URL: <http://wid.world/document/chancelpiketty2017widworld/>

### Figure 2.9.1b. Top 1% and Bottom 50% income shares in India, 1951-2014

Income inequality is measured using the distribution of pre-tax national income among adults.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual.

Fiscal years overlap from one year to another, the data stops in 2013-2014.

More detailed information is available in : Chancel & Piketty (2017)

Figure number in article: Figure 10 and Figure 6

URL: <http://wid.world/document/chancelpiketty2017widworld/>

### Figure 2.9.2. Top 1% income share in India, 1922-2014

Income inequality is measured using the distribution of pre-tax national income among adults.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual.

Fiscal years overlap from one year to another, the data stops in 2013-2014.

More detailed information is available in : Chancel & Piketty (2017)

Figure number in article: Figure 6

URL: <http://wid.world/document/chancelpiketty2017widworld/>

### Figure 2.9.3a. Income growth in India, 1951-2014: Full population vs. Bottom 50%

Income inequality is measured using the distribution of pre-tax national income among adults.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual.

Fiscal years overlap from one year to another, the data stops in 2013-2014.

More detailed information is available in : Chancel & Piketty (2017)

Figure number in article: Figure 1a

URL: <http://wid.world/document/chancelpiketty2017widworld/>

### Figure 2.9.3b. Income growth in India, 1951-2014: Full population vs. Top 10% vs. Top 1%

Income inequality is measured using the distribution of pre-tax national income among adults.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual.

Fiscal years overlap from one year to another, the data stops in 2013-2014.

More detailed information is available in : Chancel & Piketty (2017)

Figure number in article: Figure 1c

URL:<http://wid.world/document/chancelpiketty2017widworld/>

### Table 2.9.1. Total income growth by percentile in China, France, India and the USA, 1980-2014

Income inequality is measured using the distribution of pre-tax national income among adults.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the

pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual.

Fiscal years overlap from one year to another, the data stops in 2013-2014.

More detailed information is available in : Chancel & Piketty (2017)

Figure number in article: Figure 13

URL: <http://wid.world/document/chancelpiketty2017widworld/>

#### Figure 2.9.4. Total income growth by percentile in India, 1980-2014

Total cumulated income growth corresponds to the total growth rate between two specified dates. For example, an income growth rate of 100% represents a doubling in income over the period.

The share of income growth captured measures the extent to which income groups benefit from growth relative to each other. For example, if the share of growth captured is 50%, half of all new income over the period was accrued by the corresponding income group.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual.

Fiscal years overlap from one year to another, the data stops in 2013-2014.

More detailed information is available in : Chancel & Piketty (2017)

Figure number in article: Figure 11

URL: <http://wid.world/document/chancelpiketty2017widworld/>

## Table 2.9.2. Income growth and inequality in India, 1951-1980

Total cumulated income growth corresponds to the total growth rate between two specified dates. For example, an income growth rate of 100% represents a doubling in income over the period. The share of income growth captured measures the extent to which income groups benefit from growth relative to each other. For example, if the share of growth captured is 50%, half of all new income over the period was accrued by the corresponding income group.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual.

Fiscal years overlap from one year to another, the data stops in 2013-2014.

More detailed information is available in : Chancel & Piketty (2017)

Figure number in article: Figure 15 and Figure 16

URL: <http://wid.world/document/chancelpiketty2017widworld/>

### Table 2.9.3. The distribution of national income in India, 2014

Estimates use 2016 Purchasing Power Parity values.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual.

Fiscal years overlap from one year to another, the data stops in 2013-2014.

More detailed information is available in : Chancel & Piketty (2017)

Figure number in article: Figure 14

URL: <http://wid.world/document/chancelpiketty2017widworld/>

## Figure 2.10.1. Inequality in the Middle East, Western Europe and the USA, 2012-2016

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Western Europe is the merged distribution of France, Germany and the UK.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

Western Europe is the combined distribution of Germany, France, the UK and the rest of Europe. The rest of Europe is a normalized distribution of Germany, France, and the UK.

More detailed information is available in : Alvaredo, Assouad and Piketty (2017)

Figure number in article: Figure 7a

URL: <http://wid.world/document/alvaredoassouadpiketty-middleeast-widworldwp201715/>

## Figure 2.10.2. Top 10% income shares in the Middle East and other countries, 2012-2016

Income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Western Europe is the merged distribution of France, Germany and the UK.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

Western Europe is the combined distribution of Germany, France, the UK and the rest of Europe. The rest of Europe is a normalized distribution of Germany, France, and the UK.

More detailed information is available in : Alvaredo, Assouad and Piketty (2017)

Figure number in article: Figure 5b

URL: <http://wid.world/document/alvaredoassouadpiketty-middleeast-widworldwp201715/>

### Figure 2.10.3. Average income in the Middle East and Western Europe, 1990-2016

Average income corresponds to average national income per adult. Western Europe is the arithmetic average of France, Germany and the UK.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

More detailed information is available in : Alvaredo, Assouad and Piketty (2017)

Figure number in article: Figure 1a

URL: <http://wid.world/document/alvaredoassouadpiketty-middleeast-widworldwp201715/>

### Table 2.10.1. Population and income in the Middle East, 2016

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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

More detailed information is available in : Alvaredo, Assouad and Piketty (2017)

Figure number in article: Table 1

URL: <http://wid.world/document/alvaredoassouadpiketty-middleeast-widworldwp201715/>

#### Figure 2.10.4 Share of foreigners in Gulf countries, 1990-2015

The share of foreigners in the adult population is measured by censuses, administrative sources and household surveys.

The population is comprised of individuals over age 20.

More detailed information is available in : Alvaredo, Assouad and Piketty (2017)

Figure number in article: Figure 4b

URL: <http://wid.world/document/alvaredoassouadpiketty-middleeast-widworldwp201715/>

### Figure 2.11.1. Bottom 50% and Top 10% income shares in Brazil, 2015

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Morgan (2017)

Figure number in article: Table 2

URL: <http://wid.world/document/extreme-persistent-inequality-new-evidence-brazil-combining-national-accounts-surveys-fiscal-data-2001-2015-wid-world-working-paper-201712/>

### Table 2.11.1. The distribution of national income in Brazil, 2015

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Morgan (2017)

Figure number in article: Table 2

URL: <http://wid.world/document/extreme-persistent-inequality-new-evidence-brazil-combining-national-accounts-surveys-fiscal-data-2001-2015-wid-world-working-paper-201712/>

### Table 2.11.2. Survey income and national income series in Brazil, 2015: Comparing income shares

This table compares two series: one obtained from raw survey estimates (survey income series) and the other combining national accounts, surveys and fiscal data (WID.world series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Morgan (2017)

Figure number in article: Table 3

URL: <http://wid.world/document/extreme-persistent-inequality-new-evidence-brazil-combining-national-accounts-surveys-fiscal-data-2001-2015-wid-world-working-paper-201712/>

Figure 2.11.2.a. Income shares of the Middle 40% and Top 1% in Brazil, 2001-2015 and Figure 2.12.2.b. Income shares of the Bottom 50% and Top 0.1% in Brazil, 2001-2015

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Morgan (2017)

Figure number in article: Figure 3 and Figure 4

URL: <http://wid.world/document/extreme-persistent-inequality-new-evidence-brazil-combining-national-accounts-surveys-fiscal-data-2001-2015-wid-world-working-paper-201712/>

Figure 2.11.3. Top 10% income share in Brazil, 2001-2015: National income series vs. survey income series

This figure compares two series: one obtained from raw survey estimates (survey income series) and the other combining national accounts, surveys and fiscal data (national income series).

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the

pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Morgan (2017)

Figure number in article: Figure 5

URL: <http://wid.world/document/extreme-persistent-inequality-new-evidence-brazil-combining-national-accounts-surveys-fiscal-data-2001-2015-wid-world-working-paper-201712/>

### Table 2.11.3. Income growth and inequality in Brazil, 2001-2015

Total cumulated income growth corresponds to the total growth rate between two specified dates. For example, an income growth rate of 100% represents a doubling in income over the period.

The share of income growth captured measures the extent to which income groups benefit from growth relative to each other. For example, if the share of growth captured is 50%, half of all new income over the period was accrued by the corresponding income group.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Morgan (2017)

Figure number in article: Table 4

URL: <http://wid.world/document/extreme-persistent-inequality-new-evidence-brazil-combining-national-accounts-surveys-fiscal-data-2001-2015-wid-world-working-paper-201712/>

### Figure 2.12.1. Top 1% income share in South Africa, 1914-2012

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

The population is comprised of individuals over age 15.

The base unit is the tax unit defined by national fiscal administrations to measure personal income taxes. Until 1989, the tax units are individuals aged 15+ minus married women. From 1990, the tax units are individuals aged 15+.

More detailed information is available in : Alvaredo & Atkinson (2010)

Figure number in article: Figure 2

Article appendix: Appendix Tables A.5A, A.5B and A.5C

URL: <http://wid.world/document/alvaredo-facundo-and-atkinson-anthony-b-2011-colonial-rule-apartheid-and-natural-resources-top-incomes-in-south-africa-1903-2007-cepr-discussion-paper-8155/>

## Figure 2.12.2. Average income per adult and average income of the Top 1% in South Africa, 1914-2014

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 15.

The base unit is the tax unit defined by national fiscal administrations to measure personal income taxes. Until 1989, the tax units are individuals aged 15+ minus married women. From 1990, the tax units are individuals aged 15+.

More detailed information is available in : Alvaredo & Atkinson (2010)

Figure number in article: Figure 13

Article appendix: Appendix Tables A.4A, A.5A, A.5B and A.5C

## Figure 2.12.3. Top 1% and top 10% shares in emerging countries.

Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax/transfer system, but after taking into account the operation of the pension, unemployment insurance and other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 15 in South Africa, age 20 in other countries.

In South Africa, the base unit is the tax unit defined by national fiscal administrations to measure personal income taxes. Until 1989, the tax units are individuals aged 15+ minus married women. From 1990, the tax units are individuals aged 15+.

More detailed information for South Africa is available in : Alvaredo & Atkinson (2010) and WID.world updates.

URL : <http://wid.world/document/alvaredo-facundo-and-atkinson-anthony-b-2011-colonial-rule-apartheid-and-natural-resources-top-incomes-in-south-africa-1903-2007-cepr-discussion-paper-8155/>

For Brazil and the Middle East, see Morgan (2017) and Alvaredo, Assouad and Piketty (2017) on [wid.world/methodology](http://wid.world/methodology) .

## Part 3 – Public versus private capital dynamics

Figure 3.1.1. Net private wealth to net national income ratio in rich countries, 1970-2016

Net Private Wealth to Net National Income Ratio is the division of net private wealth by net national income. Private wealth consists of net wealth of the personal sector (households) and the non-profit sector (philanthropy foundations, religious organizations, universities, etc.). 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Piketty & Zucman (2014). Series updated by Estevez-Bauluz (2017).

Figure number in Piketty & Zucman (2014): Figure I

URL: <http://piketty.pse.ens.fr/files/PikettyZucman2014QJE.pdf> and [wid.world/methodology](http://wid.world/methodology)

### Figure 3.1.2. Net national wealth to net national income ratio in emerging and rich countries, 1990-2015

Net National Wealth to National Income Ratio is the division of national wealth by national income. Net national wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the national economy, minus its debts. 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Piketty & Zucman (2014). Series updated by Estevez-Bauluz (2017)

Figure number in Piketty & Zucman (2014): Figure VI

URL: <http://piketty.pse.ens.fr/files/PikettyZucman2014QJE.pdf> and [wid.world/methodology](http://wid.world/methodology)

### Figure 3.1.3. Net private wealth and net public wealth to national income ratios in rich countries, 1970-2015

Net Private Wealth to Net National Income Ratio is the division of net private wealth by net national income.

Net Public Wealth to Net National Income Ratio is the division of net wealth of the public sector by net national income.

Private wealth consists of net wealth of the personal sector (households) and the non-profit sector (philanthropy foundations, religious organizations, universities, etc.).

Net public wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the general government sector (central government, state government, local government, and social security funds), minus its debts. The government sector includes all national, regional and local government, social security administrations, and more generally all entities relying primarily upon public financing (taxes, contributions, and other compulsory payments).

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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Piketty & Zucman (2014). Series updated by Estevez-Bauluz (2017).

Figure number in Piketty & Zucman (2014): Figure V

URL: <http://piketty.pse.ens.fr/files/PikettyZucman2014QJE.pdf> and  
[wid.world/methodology](http://wid.world/methodology)

### Figure 3.1.4a. Public assets to net national income ratio in rich countries, 1970-2015

Public Assets to National Income Ratio is the division of total public assets by national income.

The government sector includes all national, regional and local government, social security administrations, and more generally all entities relying primarily upon public financing (taxes, contributions, and other compulsory payments). 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Piketty and Zucman (2014) and Estevez-Bauluz (2017)

URL: <http://piketty.pse.ens.fr/files/PikettyZucman2014QJE.pdf> and  
[wid.world/methodology](http://wid.world/methodology)

### Figure 3.1.4b. Public debt to net national income ratio in rich countries, 1970-2015

Public Debt to National Income Ratio is the division of total public debt by national income.

The government sector includes all national, regional and local government, social security administrations, and more generally all entities relying primarily upon public financing (taxes, contributions, and other compulsory payments). 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Piketty and Zucman (2014) and Estevez-Bauluz (2017)

URL: <http://piketty.pse.ens.fr/files/PikettyZucman2014QJE.pdf> and [wid.world/methodology](http://wid.world/methodology)

### Figure 3.1.5. The share of public wealth in national wealth in rich countries, 1978-2015

Net public wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the general government sector (central government, state government, local government, and social security funds), minus its debts. The government sector includes all national, regional and local government, social security administrations, and more generally all entities relying primarily upon public financing (taxes, contributions, and other compulsory payments). Net national wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the national economy, minus its debts. 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 government sector.

More detailed information is available in : Piketty, Yang and Zucman (2017)

Figure number in Piketty & Zucman (2014): Figure 7e

<http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016>

### Table 3.2.1. Domestic capital accumulation in rich countries, 1970-2015: Housing vs. other domestic capital

Domestic capital equals market-value national wealth minus net foreign assets. It excludes natural resources other than land (i.e. sub-soil assets or forests) owned by the public or the private (households & NPISH) sectors. Housing accounts for housing assets (dwellings plus land underlying) owned by all institutional sectors: private, corporate and government sectors.

Net national wealth is the total value of assets (cash, housing, bonds, equities, etc.)

owned by the national economy, minus its debts. 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 government sector.

More detailed information is available in : Piketty & Zucman (2014). Series updated by Estevez-Bauluz (2017).

Figure number in Piketty & Zucman (2014): Table II

Article appendix: Appendix Figure A92 and Appendix Table A78

URL: <http://piketty.pse.ens.fr/files/PikettyZucman2014QJE.pdf> and [wid.world/methodology](http://wid.world/methodology)

### Figure 3.2.1. Net national and net foreign wealth in rich countries, 1970-2015

Net national wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the national economy, minus its debts. Net foreign assets are the total value of the assets that a country owns abroad, minus the total value of the domestic assets owned by foreigners. 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Piketty & Zucman (2014). Series updated by Estevez-Bauluz (2017).

Figure number in Piketty & Zucman (2014): Figure VI

URL: <http://piketty.pse.ens.fr/files/PikettyZucman2014QJE.pdf> and [wid.world/methodology](http://wid.world/methodology)

### Figure 3.2.2. Long-run trends in the national wealth of rich countries, 1870-2015

Net national wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the national economy, minus its debts. 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Piketty & Zucman (2014). Series updated by Estevez-Bauluz (2017).

Figure number in Piketty & Zucman (2014): Figure II

URL: <http://piketty.pse.ens.fr/files/PikettyZucman2014QJE.pdf> and  
[wid.world/methodology](http://wid.world/methodology)

### Figure 3.3.1. Net private wealth to net national income ratios in China, Russia and rich countries, 1980-2015: The rise of private wealth

Net Private Wealth to Net National Income Ratio is the division of net private wealth by net national income. Private wealth consists of net wealth of the personal sector (households) and the non-profit sector (philanthropy foundations, religious organizations, universities, etc.). 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

### Figure 3.3.2. Net national wealth to net national income ratios in China, Russia and rich countries, 1980-2015: National wealth accumulation

Net National Wealth to National Income Ratio is the division of national wealth by national income. Net national wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the national economy, minus its debts. 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

### Figure 3.3.3. The share of public wealth in national wealth in former communist and rich countries, 1980-2015: The decline of public property

Net public wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the general government sector (central government, state government, local government, and social security funds), minus its debts.

The government sector includes all national, regional and local government, social security administrations, and more generally all entities relying primarily upon public financing (taxes, contributions, and other compulsory payments). Net national wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the national economy, minus its debts. 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 government sector.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

### Figure 3.3.4. Net foreign assets in former communist countries, 1990-2015

Net foreign assets are the total value of the assets that a country owns abroad, minus the total value of the domestic assets owned by foreigners. 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

### Figure 3.4.1. The asset composition of national wealth in China, 1978-2015

Net foreign assets are the total value of the assets that a country owns abroad, minus the total value of the domestic assets owned by foreigners. National agricultural land is agricultural land owned by the national economy. Agricultural land is defined as land devoted to agriculture measured at their market value.

National housing assets are places of residence and land owned by sectors of the national economy and measured at their market value. Other domestic capital includes: a) the market value of corporations, and b) the value of other non-financial assets held by the private and public sectors net of their liabilities.

More detailed information is available in : Piketty, Yang and Zucman (2017)

URL:<http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016/>

### Figure 3.4.2. The structure of national wealth in China, 1978-2015

Net national wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the national economy, minus its debts. Net public wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the general government sector (central government, state government, local government, and social security funds), minus its debts. Private wealth consists of net wealth of the personal sector (households) and the non-profit sector (philanthropy foundations, religious organizations, universities, etc.). 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Piketty, Yang and Zucman (2017)

URL: <http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016/>

### Figure 3.4.3. The share of private property by type of asset in China, 1978-2015: The rise of private property

Private wealth consists of net wealth of the personal sector (households) and the non-profit sector (philanthropy foundations, religious organizations, universities, etc.). National housing assets are places of residence and land owned by sectors of the national economy and measured at their market value. Other domestic capital includes: a) the market value of corporations, and b) the value of other non-financial assets held by the private and public sectors net of their liabilities. Financial assets are intangible assets whose value is derived from a contractual claim (bank deposits, bonds, and stocks). Corporate equity debt is the total value of equity debts of the corporate sector (companies). The corporate sector - in the national accounts sense - includes all financial and non-financial corporations with an economic activity in a given country,

whatever their legal status (with the exceptions of unincorporated enterprises included in the personal sector).

More detailed information is available in : Piketty, Yang and Zucman (2017)

URL: <http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016/>

Figure 3.4.4. The changing shares of public property in China and rich countries, 1978-2015

Net public wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the general government sector (central government, state government, local government, and social security funds), minus its debts. The government sector includes all national, regional and local government, social security administrations, and more generally all entities relying primarily upon public financing (taxes, contributions, and other compulsory payments). Net national wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the national economy, minus its debts. 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 government sector.

More detailed information is available in : Piketty, Yang and Zucman (2017)

URL: <http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016/>

### Figure 3.4.5. Domestic financial liabilities in China and rich countries, 1978-2015: The rise of financial intermediation

Domestic financial liabilities are comprised of private liabilities, government liabilities, corporation non-equity liabilities and equity liabilities. Domestic capital is comprised of private domestic capital, government domestic capital and corporate domestic capital (book value).

More detailed information is available in : Piketty, Yang and Zucman (2017)

URL: <http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016/>

### Figure 3.4.6. Foreign financial liabilities in China and rich countries, 1978-2015: The rise of foreign ownership

Foreign financial liabilities are comprised of private liabilities, government liabilities, corporation non-equity liabilities and equity liabilities.

More detailed information is available in : Piketty, Yang and Zucman (2017)

URL: <http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016/>

### Figure 3.5.1. The structure of national wealth in Russia, 1990-2015

Net national wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the national economy, minus its debts. Net public wealth is the total value of assets (cash, housing, bonds, equities, etc.) owned by the general government sector (central government, state government, local government, and social security funds), minus its debts.

Private wealth consists of net wealth of the personal sector (households) and the non-profit sector (philanthropy foundations, religious organizations, universities, etc.). 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

### Figure 3.5.2. The asset composition of private wealth in Russia, 1990-2015

Private wealth consists of net wealth of the personal sector (households) and the non-profit sector (philanthropy foundations, religious organizations, universities, etc.). Net foreign assets are the total value of the assets that a country owns abroad, minus the total value of the domestic assets owned by foreigners. National agricultural land is agricultural land owned by the national economy. Agricultural land is defined as land devoted to agriculture measured at their market value.

National housing assets are places of residence and land owned by sectors of the national economy and measured at their market value. Other domestic capital includes: a) the market value of corporations, and b) the value

of other non-financial assets held by the private and public sectors net of their liabilities. Offshore wealth is defined as wealth owned by households in all the world's tax havens at the end of each year.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

### Figure 3.5.3. Trade surplus and missing foreign assets in Russia, 1990-2015

Annual trade surplus (net exports) is equal to exports minus its imports. Net foreign income is the difference between gross domestic product and the gross national product.

Net foreign assets are the total value of the assets that a country owns abroad, minus the total value of the domestic assets owned by foreigners. 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

### Figure 3.5.4. Official foreign assets and liabilities in Russia, 1990-2015

Net foreign assets are the total value of the assets that a country owns abroad, minus the total value of the domestic assets owned by foreigners. Gross foreign assets are the total value of the assets that country owns abroad. Gross foreign liabilities are the total value of the domestic assets owned by foreigners. 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Novokmet, Piketty and Zucman (2017)

URL: <http://wid.world/document/soviets-oligarchs-inequality-property-russia-1905-2016/>

## Part 4 – Trends in global wealth inequality

### Figure 4.1.1. Top 1% and Bottom 75% shares of global wealth, 1980-2017: China, Europe and the USA

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series) in all countries. The distribution of global wealth corresponds to the merged distribution of China, Europe and the US. Data from China and the US come from WID.world. The distribution for Europe is extrapolated from three countries: France using Accounting for Wealth Inequality Dynamics: Methods, Estimates and Simulations for France (1800-2014) by Garbinti, Goupille-Lebret and Piketty (2016); Great-Britain using Top Wealth Shares in the UK over more than a century by Facundo Alvaredo, Antony Atkinson and Salvatore Morelli (2016) (we only have the the top 10% of the distribution, so we use the French distribution to impute the bottom 90%); and Spain using Housing Bubbles, Offshore Assets and Wealth Inequality in Spain by Clara Martínez-Toledano Toledano (2017). The distribution of these countries is combined with the following proportions: 60% United Kingdom, 20% France and 20% Spain (because the three countries have had fairly stable distributions of wealth since 1980 compared to China and the United States, the proportions have a modest impact on the results). Estimates of wealth in the very recent years are extrapolated from the last available year assuming a constant wealth/income ratio.

Net personal wealth is the total value of non-financial and financial assets (housing, land, deposits, bonds, equities, etc.) held by households, minus their debts. WID.world estimates for the world as a whole are based on estimates of regional wealth to income ratios. For the China/Europe/USA aggregate, Europe is represented by France, Germany and the UK. Market Exchange Rates (MER) are used to aggregate countries: levels and growth values differ from Purchasing Power Parity estimates.

The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using national income deflators (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : T. Blanchet, "Estimates of the global distribution of wealth" (WID.world Technical Note 2017)

URL: [wid.world/methodology](http://wid.world/methodology)

#### Table 4.1.1. Global wealth growth and inequality, 1980-2017

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series) in all countries. The distribution of global wealth corresponds to the merged distribution of China, Europe and the US. Data from China and the US come from WID.world. The distribution for Europe is extrapolated from three countries: France using Accounting for Wealth Inequality Dynamics: Methods, Estimates and Simulations for France (1800-2014) by Garbinti, Goupille-Lebret and Piketty (2016); Great-Britain using Top Wealth Shares in the UK over more than a century by Facundo Alvaredo, Antony Atkinson and Salvatore Morelli (2016) (we only have the the top 10% of the distribution, so we use the French distribution to impute the bottom 90%); and Spain using Housing Bubbles, Offshore Assets and Wealth Inequality in Spain by Clara Martínez-Toledano Toledano (2017). The distribution of these countries is combined with the following proportions: 60% United Kingdom, 20% France and 20% Spain (because the three countries have had fairly stable distributions of wealth since 1980 compared to China and the United States, the proportions have a modest impact on the results). Estimates of wealth in the very recent years are extrapolated from the last available year assuming a constant wealth/income ratio.

Net personal wealth is the total value of non-financial and financial assets (housing, land, deposits, bonds, equities, etc.) held by households, minus their debts. WID.world estimates for the world as a whole are based on estimates of regional wealth to income ratios. For the China/Europe/USA aggregate, Europe is represented by France, Germany and the UK. Market Exchange Rates (MER) are used to aggregate countries: levels and growth values differ from Purchasing Power Parity estimates.

The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using national income deflators (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : T. Blanchet (2017) Estimates of the global distribution of wealth (WID.world Technical Note 2017/7)

URL: [wid.world/methodology](http://wid.world/methodology)

#### Table 4.1.2. Share of global wealth growth captured by wealth group, 1980-2017

The share of growth captured measures the extent to which wealth groups benefit from growth relative to each other. For example, if the share of wealth growth captured is 50%, half of all new wealth value created over the period was accrued by the corresponding wealth group. Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series) in all countries. The distribution of global wealth corresponds to the merged distribution of China, Europe and the US. Data from China and the US come from WID.world. The distribution for Europe is

extrapolated from three countries: France using Accounting for Wealth Inequality Dynamics: Methods, Estimates and Simulations for France (1800-2014) by Garbinti, Goupille-Lebret and Piketty (2016); Great-Britain using Top Wealth Shares in the UK over more than a century by Facundo Alvaredo, Antony Atkinson and Salvatore Morelli (2016) (we only have the the top 10% of the distribution, so we use the French distribution to impute the bottom 90%); and Spain using Housing Bubbles, Offshore Assets and Wealth Inequality in Spain by Clara Martínez-Toledano Toledano (2017). The distribution of these countries is combined with the following proportions: 60% United Kingdom, 20% France and 20% Spain (because the three countries have had fairly stable distributions of wealth since 1980 compared to China and the United States, the proportions have a modest impact on the results). Estimates of wealth in the very recent years are extrapolated from the last available year assuming a constant wealth/income ratio. We use Forbes data limited to the region composed of China, Europe and the United States to make comparisons that are consistent with our estimates of the complete distribution.

Net personal wealth is the total value of non-financial and financial assets (housing, land, deposits, bonds, equities, etc.) held by households, minus their debts. WID.world estimates for the world as a whole are based on estimates of regional wealth to income ratios. For the China/Europe/USA aggregate, Europe is represented by France, Germany and the UK. Market Exchange Rates (MER) are used to aggregate countries: levels and growth values differ from Purchasing Power Parity estimates.

The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using national income deflators (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : T. Blanchet (2017) Estimates of the global distribution of wealth (WID.world Technical Note 2017/7)

URL: [wid.world/methodology](http://wid.world/methodology)

### Figure 4.1.2. Global wealth growth by percentile, 1987-2017: China, Europe and the USA

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series) in all countries. The distribution of global wealth corresponds to the merged distribution of China, Europe and the US. Data from China and the US come from WID.world. The distribution for Europe is extrapolated from three countries: France using Accounting for Wealth Inequality Dynamics: Methods, Estimates and Simulations for France (1800-2014) by Garbinti, Goupille-Lebret and Piketty (2016); Great-Britain using Top Wealth Shares in the UK over more than a century by Facundo Alvaredo, Antony Atkinson and Salvatore Morelli (2016) (we only have the the top 10% of the distribution, so we use the French distribution to impute the bottom 90%); and Spain using Housing Bubbles, Offshore Assets and Wealth Inequality in Spain by Clara Martínez-Toledano Toledano (2017). The distribution of these countries is combined with the following proportions: 60% United Kingdom, 20% France and 20% Spain (because the three countries have had fairly stable distributions of wealth since 1980 compared to China and the United States, the proportions have a modest impact on the results). Estimates of wealth in the very recent years are extrapolated from the last available year assuming a constant wealth/income ratio.

Net personal wealth is the total value of non-financial and financial assets (housing, land, deposits, bonds, equities, etc.) held by households, minus their debts. WID.world estimates for the world as a whole are based on estimates of regional wealth to income ratios. For the China/Europe/USA aggregate, Europe is represented by

France, Germany and the UK. Market Exchange Rates (MER) are used to aggregate countries: levels and growth values differ from Purchasing Power Parity estimates.

The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using national income deflators (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : T. Blanchet (2017) Estimates of the global distribution of wealth (WID.world Technical Note 2017/7)

URL: [wid.world/methodology](http://wid.world/methodology)

### Figure 4.1.3. Global wealth inequality, 1980-2050: China, Europe and the USA

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series) in all countries. The distribution of global wealth corresponds to the merged distribution of China, Europe and the US. Data from China and the US come from WID.world. The distribution for Europe is extrapolated from three countries: France using Accounting for Wealth Inequality Dynamics: Methods, Estimates and Simulations for France (1800-2014) by Garbinti, Goupille-Lebret and Piketty (2016); Great-Britain using Top Wealth Shares in the UK over more than a century by Facundo Alvaredo, Antony Atkinson and Salvatore Morelli (2016) (we only have the the top 10% of the distribution, so we use the French distribution to impute the bottom 90%); and Spain using Housing Bubbles, Offshore Assets and Wealth Inequality in Spain by Clara Martínez-Toledano Toledano (2017). The distribution of these countries is combined with the following proportions: 60%

United Kingdom, 20% France and 20% Spain (because the three countries have had fairly stable distributions of wealth since 1980 compared to China and the United States, the proportions have a modest impact on the results). Estimates of wealth in the very recent years are extrapolated from the last available year assuming a constant wealth/income ratio.

Net personal wealth is the total value of non-financial and financial assets (housing, land, deposits, bonds, equities, etc.) held by households, minus their debts. WID.world estimates for the world as a whole are based on estimates of regional wealth to income ratios. For the China/Europe/USA aggregate, Europe is represented by France, Germany and the UK. Market Exchange Rates (MER) are used to aggregate countries: levels and growth values differ from Purchasing Power Parity estimates.

The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using national income deflators (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : T. Blanchet (2017) Estimates of the global distribution of wealth (WID.world Technical Note 2017/7)

URL: [wid.world/methodology](http://wid.world/methodology)

### Figure 4.2.1. Top 1% personal wealth share in emerging and rich countries, 1913-2015

Wealth inequality is measured by the distribution of net personal wealth among adults in all countries.

Net personal wealth is the total value of non-financial and financial assets (housing, land, deposits, bonds, equities, etc.) held by households, minus their debts.

The population is comprised of individuals over age 20.

For the UK, the base unit is the adult individual. For France, Russia, China and the US, the base unit is the adult individual but resources are split equally within couples.

More detailed information is available in : China: Piketty, Yang and Zucman (2017).

France: Garbinti, Goupille-Lebret and Piketty (2016)

UK: Alvaredo, Atkinson and Morelli (2016).

US: Saez and Zucman (2016).

URL:

China: <http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016/>

France: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-wealth-concentration-in-france-1800-2014-methods-estimates-and-simulations-2016/>

UK: <http://wid.world/document/f-alvaredo-b-atkinson-s-morelli-2017-top-wealth-shares-uk-century-wid-world-working-paper/>

US: <http://gabriel-zucman.eu/files/SaezZucman2016QJE.pdf>

Figure 4.2.2. Top 10% personal wealth share in emerging and rich countries, 1913-2015

Wealth inequality is measured by the distribution of net personal wealth among adults in all countries.

Net personal wealth is the total value of non-financial and financial assets (housing, land, deposits, bonds, equities, etc.) held by households, minus their debts.

The population is comprised of individuals over age 20.

For the UK, the base unit is the adult individual. For France, Russia, China and the US, the base unit is the adult individual but resources are split equally within couples.

More detailed information is available in : China: Piketty, Yang and Zucman (2017).

France: Garbinti, Goupille-Lebret and Piketty (2016)

UK: Alvaredo, Atkinson and Morelli (2016).

US: Piketty, Saez and Zucman (2016).

URL:

<http://wid.world/document/t-piketty-l-yang-and-g-zucman-capital-accumulation-private-property-and-inequality-in-china-1978-2015-2016/>

France: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-wealth-concentration-in-france-1800-2014-methods-estimates-and-simulations-2016/>

UK: <http://wid.world/document/f-alvaredo-b-atkinson-s-morelli-2017-top-wealth-shares-uk-century-wid-world-working-paper/>

US: <http://gabriel-zucman.eu/files/SaezZucman2016QJE.pdf>

#### Table 4.3.1. The distribution of household wealth in the USA, 2012

Wealth inequality is measured by the distribution of household wealth.

The wealth distribution in the United States is obtained by capitalizing income tax returns.

Estimates correct for inflation using the national income deflator (base 2016).

The unit is the family (either a single person aged 20 or above or a married couple, in both cases with children dependents if any).

Fractiles are defined relative to the total number of families in the population.

More detailed information is available in : Saez & Zucman (2016)

URL: <http://gabriel-zucman.eu/files/SaezZucman2016QJE.pdf>

### Figure 4.3.1a. Wealth shares of the Top 10%, Top 10-1% and Top 1% in the USA, 1913-2012

Wealth inequality is measured by the distribution of household wealth.

The wealth distribution in the United States is obtained by capitalizing income tax returns.

The unit is the family (either a single person aged 20 or above or a married couple, in both cases with children dependents if any).

Fractiles are defined relative to the total number of families in the population.

More detailed information is available in : Saez & Zucman (2016)

URL: <http://gabriel-zucman.eu/files/SaezZucman2016QJE.pdf>

### Figure 4.3.1b. Wealth shares of the Top 1-0.1% and Top 0.1% in the USA, 1913-2012

Wealth inequality is measured by the distribution of household wealth.

The wealth distribution in the United States is obtained by capitalizing income tax returns.

The unit is the family (either a single person aged 20 or above or a married couple, in both cases with children dependents if any).

Fractiles are defined relative to the total number of families in the population.

More detailed information is available in : Saez & Zucman (2016)

URL: <http://gabriel-zucman.eu/files/uswealth/SaezZucman2014WP.zip>

## Figure 4.3.2. Composition of the wealth share of the Bottom 90% in the USA, 1917-2012

Wealth inequality is measured by the distribution of household wealth.

The wealth distribution in the United States is obtained by capitalizing income tax returns.

Housing (net of mortgages) includes owner- and tenant-occupied housing net of mortgage debt.

Sole proprietorships and partnerships are business assets including sole proprietorships, farms including land and equipment, partnerships, and intellectual property products.

Equities are corporate equities for both publicly traded and closely held corporations including S-corporations.

Currency, deposits, and bonds are net fixed income claims including bonds, saving and current deposits, and currency, and are net of all non-mortgage debt.

Pensions include individual retirement accounts, defined contribution pensions funds such as 401(k)s, funded defined benefits pensions, and life insurance reserves, but exclude unfunded defined benefit entitlements and Social Security. Pensions are typically invested in both fixed income claims and corporate equities.

Estimates correct for inflation using the national income deflator (base 2016).

The unit is the family (either a single person aged 20 or above or a married couple, in both cases with children dependents if any).

Fractiles are defined relative to the total number of families in the population.

More detailed information is available in : Saez & Zucman (2016)

Article appendix: Online Appendix Table A2

URL: <http://gabriel-zucman.eu/files/SaezZucman2016QJE.pdf>

### Figure 4.3.3. Average wealth of the Bottom 90% and Top 1% in the USA, 1946-2012

Wealth inequality is measured by the distribution of household wealth.

The wealth distribution in the United States is obtained by capitalizing income tax returns.

Estimates correct for inflation using the national income deflator (base 2016).

The unit is the family (either a single person aged 20 or above or a married couple, in both cases with children dependents if any).

Fractiles are defined relative to the total number of families in the population.

More detailed information is available in : Saez & Zucman (2016)

URL: <http://gabriel-zucman.eu/files/SaezZucman2016QJE.pdf>

### Table 4.4.1. The distribution of personal wealth in France, 2014

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

The distribution of wealth in France is obtained by capitalizing income tax returns.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-wealth-concentration-in-france-1800-2014-methods-estimates-and-simulations-2016/>

#### Figure 4.4.1. Wealth shares in France, 1800-2014

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

The distribution of wealth in France is obtained by capitalizing income tax returns.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-wealth-concentration-in-france-1800-2014-methods-estimates-and-simulations-2016/>

#### Figure 4.4.2. Top wealth shares in France, 1800-2014

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

The distribution of wealth in France is obtained by capitalizing income tax returns.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-wealth-concentration-in-france-1800-2014-methods-estimates-and-simulations-2016/>

### Figure 4.4.3. Composition of personal wealth in France, 1970-2014

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

The distribution of wealth in France is obtained by capitalizing income tax returns. Housing assets consist of the value of the building and the value of the land underlying the building.

Business assets include all non-financial assets held by households other than housing assets.

Financial assets are made-up of four categories: deposits (including currency and saving accounts); bonds (including loans), equities (including investment funds shares) and life insurance (including pension funds).

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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-wealth-concentration-in-france-1800-2014-methods-estimates-and-simulations-2016/>

#### Figure 4.4.4. Asset composition by wealth group in France, 2012

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

The distribution of wealth in France is obtained by capitalizing income tax returns. Housing assets consist of the value of the building and the value of the land underlying the building. Business assets include all non-financial assets held by households other than housing assets.

Financial assets are made-up of four categories: deposits (including currency and saving accounts); bonds (including loans), equities (including investment funds shares) and life insurance (including pension funds). 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

URL:<http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-wealth-concentration-in-france-1800-2014-methods-estimates-and-simulations-2016/>

#### Figure 4.4.5a. Composition of the wealth share of the Top 1% in France, 1970-2014

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

The distribution of wealth in France is obtained by capitalizing income tax returns. Housing assets consist of the value of the building and the value of the land underlying the building. Business assets include all non-financial assets held by households other than housing assets.

Financial assets are made-up of four categories: deposits (including currency and saving accounts); bonds (including loans), equities (including investment funds shares) and life insurance (including pension funds). 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-wealth-concentration-in-france-1800-2014-methods-estimates-and-simulations-2016/>

#### Figure 4.4.5b. Composition of the wealth share of the Middle 40% in France, 1970-2014

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

The distribution of wealth in France is obtained by capitalizing income tax returns. Housing assets consist of the value of the building and the value of the land underlying the building.

Business assets include all non-financial assets held by households other than housing assets.

Financial assets are made-up of four categories: deposits (including currency and saving accounts); bonds (including loans), equities (including investment funds shares) and life insurance (including pension funds).

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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-wealth-concentration-in-france-1800-2014-methods-estimates-and-simulations-2016/>

#### Figure 4.4.6. Savings rates by wealth groups in France, 1970-2012

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

Synthetic saving rates can be thought of as some form of average saving rate of the group (taking into account all the inter-group mobility effects). Synthetic rates therefore do not mean that all individuals in their respective wealth groups save at exactly the same rate. The distribution of wealth in France is obtained by capitalizing income tax returns.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-wealth-concentration-in-france-1800-2014-methods-estimates-and-simulations-2016/>

#### Figure 4.4.7. Age-wealth profiles in France, 1970-2010

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

The distribution of wealth in France is obtained by capitalizing income tax returns.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-wealth-concentration-in-france-1800-2014-methods-estimates-and-simulations-2016/>

#### Figure 4.4.8. Top 10% wealth share simulations in France, 1800-2150

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

Steady state wealth share trajectories are calculated using the synthetic saving rates and average rates of return of wealth groups, as well as differences in the respective groups' labor incomes.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Garbinti, Goupille-Lebret and Piketty (2017)

URL: <http://wid.world/document/b-garbinti-j-goupille-and-t-piketty-wealth-concentration-in-france-1800-2014-methods-estimates-and-simulations-2016/>

#### Figure 4.5.1. Composition of household wealth in Spain, 1984-2014

Net personal wealth is the total value of non-financial and financial assets (housing, land, deposits, bonds, equities, etc.) held by households, minus their debts. Net housing includes owner- and tenant-occupied housing net of mortgage debt, the latter approximated by total household liabilities.

Unincorporated business assets include the total value of the business of sole proprietorships.

Financial assets cover equities, investment funds, fixed income assets (mainly bonds), saving and current deposits, currency, life insurance reserves and pension funds, excluding Social Security.

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. National income has an internationally agreed definition (established by the United Nations System of National Accounts). It includes corrections for income hidden in tax havens. 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 government sector.

More detailed information is available in : Martínez-Toledano (2017)

URL: [wid.world/methodology](http://wid.world/methodology)

#### Table 4.5.1. The distribution of household wealth in Spain, 2013

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

Wealth includes net housing, unincorporated business assets and financial assets (equities, fixed income assets (mainly bonds), saving and current deposits, currency, life insurance reserves, pension and investment funds). The distribution of wealth in Spain is constructed by capitalizing taxable income and

accounting for the assets that do not generate taxable income (main residence (1999-2013), life insurance, pension and investment funds) with the SHF.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Martínez-Toledano (2017)

URL: [wid.world/methodology](http://wid.world/methodology)

### Figure 4.5.2. Wealth shares in Spain, 1984-2013

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

Wealth includes net housing, unincorporated business assets and financial assets (equities, fixed income assets (mainly bonds), saving and current deposits, currency, life insurance reserves, pension and investment funds).

The distribution of wealth in Spain is constructed by capitalizing taxable income and accounting for the assets that do not generate taxable income (main residence (1999-2013), life insurance, pension and investment funds) with the SHF.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Martínez-Toledano (2017)

URL: [wid.world/methodology](http://wid.world/methodology)

### Figure 4.5.3. Asset composition by wealth group in Spain, 2013

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

The asset composition by wealth group is estimated using the mixed capitalization-survey method.

Financial assets are made-up of four categories: deposits (including currency and saving accounts); bonds (including loans), equities (including investment funds shares) and life insurance (including pension funds).

Net housing includes owner- and tenant-occupied housing net of mortgage debt, the latter approximated by total household liabilities.

Unincorporated business assets include the total value of the business of sole proprietorships.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Martínez-Toledano (2017)

URL: [wid.world/methodology](http://wid.world/methodology)

### Figure 4.5.4. Composition of the wealth share of the Top 1% in Spain, 1984-2013

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

The asset composition by wealth group is estimated using the mixed capitalization-survey method.

Financial assets are made-up of four categories: deposits (including currency and saving accounts); bonds (including loans), equities (including investment funds shares)

and life insurance (including pension funds). Net housing includes owner- and tenant-occupied housing net of mortgage debt, the latter approximated by total household liabilities. Unincorporated business assets include the total value of the business of sole proprietorships.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Martínez-Toledano (2017)

URL: [wid.world/methodology](http://wid.world/methodology)

#### Figure 4.5.5. Age-wealth profiles in Spain, 2001-2013

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

Estimations are based on the mixed capitalization-survey method. Results are only available from 1999 onwards, since there is no information available on age in the micro-files for previous years.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Martínez-Toledano (2017)

URL: [wid.world/methodology](http://wid.world/methodology)

#### Figure 4.5.6. Top 1% wealth share in Spain, 1984-2013

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

Wealth shares including and excluding net housing wealth are estimated using the mixed capitalization-survey method. Net housing includes owner- and tenant-occupied housing net of mortgage debt, the latter approximated by total household liabilities.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Martínez-Toledano (2017)

URL: [wid.world/methodology](http://wid.world/methodology)

#### Figure 4.5.7a. Saving rates in Spain, 1999-2012

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

Synthetic saving rates can be thought of as some form of average saving rate of the group (taking into account all the inter-group mobility effects). Synthetic rates therefore do not mean that all individuals in their respective wealth groups save at exactly the same rate. The distribution of wealth in France is obtained by capitalizing income tax returns. The synthetic saving rates use a five-year moving average from 1999 up to to 2012.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Martínez-Toledano (2017)

URL: [wid.world/methodology](http://wid.world/methodology)

#### Figure 4.5.7b. Saving rates on net housing in Spain, 1999-2012

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

Synthetic saving rates can be thought of as some form of average saving rate of the group (taking into account all the inter-group mobility effects). Synthetic rates therefore do not mean that all individuals in their respective wealth groups save at exactly the same rate. The distribution of wealth in France is obtained by capitalizing income tax returns. The synthetic saving rates on housing assets use a five-year moving average from 1999 up to 2012. Net housing includes owner- and tenant-occupied housing net of mortgage debt, the latter approximated by total household liabilities.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Martínez-Toledano (2017)

URL: [wid.world/methodology](http://wid.world/methodology)

#### Figure 4.5.7c. Saving rates on financial assets in Spain, 1999-2012

Wealth inequality is measured by the distribution of net personal wealth among adults (equal-split series).

Synthetic saving rates can be thought of as some form of average saving rate of the group (taking into account all the inter-group mobility effects). Synthetic rates therefore do not mean that all individuals in their respective wealth groups save at exactly the

same rate. The distribution of wealth in France is obtained by capitalizing income tax returns. The synthetic saving rates on financial assets use a five-year moving average from 1999 up to to 2012.

The population is comprised of individuals over age 20.

The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Martínez-Toledano (2017)

URL: [wid.world/methodology](http://wid.world/methodology)

#### Figure 4.5.8. Total unreported offshore assets in Spain, 1984-2015

Offshore wealth is defined as wealth owned by households in all the world's tax havens at the end of each year.

Estimates correct for inflation using the national income deflator (base 2016).

More detailed information is available in : Martínez-Toledano (2017)

URL: [wid.world/methodology](http://wid.world/methodology)

#### Figure 4.6.1. Top wealth shares in the UK, 1895-2013

Wealth inequality is measured by the distribution of net personal wealth among adults (individual series).

Wealth shares in the UK are calculated based on the distribution of estates. The Estate Duty was introduced in 1894, replaced in 1975 by the Capital Transfer Tax and renamed in 1986 Inheritance Tax. Up to 1922, the UK includes the whole of Ireland. From 1922, the UK includes England, Wales, Scotland and Northern Ireland.

The population is comprised of individuals over age 20.

The base unit is the individual.

More detailed information is available in : Alvaredo, Atkinson and Morelli (2017)

URL: <http://wid.world/document/f-alvaredo-b-atkinson-s-morelli-2017-top-wealth-shares-uk-century-wid-world-working-paper/>

### Figure 4.6.2. Wealth shares of the Top 10% and Bottom 90% in the UK, 1895-2012

Wealth inequality is measured by the distribution of net personal wealth among adults (individual series).

Wealth shares in the UK are calculated based on the distribution of estates. The Estate Duty was introduced in 1894, replaced in 1975 by the Capital Transfer Tax and renamed in 1986 Inheritance Tax. Up to 1922, the UK includes the whole of Ireland. From 1922, the UK includes England, Wales, Scotland and Northern Ireland.

The population is comprised of individuals over age 20.

The base unit is the individual.

More detailed information is available in : Alvaredo, Atkinson and Morelli (2017)

URL: <http://wid.world/document/f-alvaredo-b-atkinson-s-morelli-2017-top-wealth-shares-uk-century-wid-world-working-paper/>

### Figure 4.6.3. Wealth thresholds of the top wealth groups in the UK, 1910-2012

Wealth inequality is measured by the distribution of net personal wealth among adults (individual series).

Wealth shares in the UK are calculated based on the distribution of estates. The Estate Duty was introduced in 1894, replaced in 1975 by the Capital Transfer Tax and renamed in 1986 Inheritance Tax. Up to 1922, the UK includes the whole of Ireland. From 1922, the UK includes England, Wales, Scotland and Northern Ireland.

The population is comprised of individuals over age 20.

The base unit is the individual.

More detailed information is available in : Alvaredo, Atkinson and Morelli (2017)

URL: <http://wid.world/document/f-alvaredo-b-atkinson-s-morelli-2017-top-wealth-shares-uk-century-wid-world-working-paper/>

#### Figure 4.6.4. Top 1% wealth share in the UK, 1971-2012

Wealth inequality is measured by the distribution of net personal wealth among adults (individual series).

Wealth shares in the UK are calculated based on the distribution of estates. The Estate Duty was introduced in 1894, replaced in 1975 by the Capital Transfer Tax and renamed in 1986 Inheritance Tax. Up to 1922, the UK includes the whole of Ireland. From 1922, the UK includes England, Wales, Scotland and Northern Ireland. The estimates excluding housing wealth are based on the original ranges, since re-ranking is not possible, and the shares are obtained by linear interpolation.

The population is comprised of individuals over age 20.

The base unit is the individual.

More detailed information is available in : Alvaredo, Atkinson and Morelli (2017)

URL: <http://wid.world/document/f-alvaredo-b-atkinson-s-morelli-2017-top-wealth-shares-uk-century-wid-world-working-paper/>

## Part 5 – Tackling economic inequality

### Figure 5.1.1. Global income share projections of the Bottom 50% and Top 1% , 1980-2050

This figure compares three scenarios. In each scenario (US 1980-2016 trend, Own 1980-2016 trend, EU 1980-2016 trend), the corresponding share of growth captured by each income group in the past period (1980-2016) is applied to each percentile in the future (2017-2050). The resulting projections are based on three parameters: the share of income captured by percentile, the growth rate of national income in each region, and the growth rate of adult population in each region. For the Own 1980-2016 trend scenario, for instance, we first compute the share of growth captured by income group in each country or regions. We then apply this share of growth to income groups within countries or regions, and predict the evolution of inequality within each region based on population and national income projections. Finally, we merge world regions for each year between 2016 and 2050 to get global income inequality projections. National income growth rates projections come from the OECD (for emerging countries we are in fact more optimistic than the OECD, this would tend to reduce the level of global inequality in the coming decades); adult population growth rates come from the UN.

Incomes are reported in 2016 Euros (net of inflation), at Purchasing Power Parity (see definitions below). Values reported correspond to annual incomes per adult.

The World income distribution is the merged distribution of Africa, Asia, Europe, the Middle East, Latin America, Russia, and US-Canada.

For all regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax system, but after taking into account the operation of pension, unemployment insurance as well as other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates for the 1980-2016 period are built as follows.

Europe corresponds to Europe as a whole, and is built as follows. First, the income distributions of France, Germany, and the UK are merged using Generalized Pareto Interpolation ([wid.world/gpinter](http://wid.world/gpinter)), and the resulting distribution is rescaled to the average national income per adult of “Western Europe” (25 countries; Western Europe excludes France, Germany and the UK). The merged distribution is also duplicated and rescaled to the average national income per adult of “Eastern Europe” (23 countries). We thus take into account relatively important between-country inequality between Western European countries and Eastern European countries. Finally, the five aggregates obtained (France, Germany, the UK, Western Europe and Eastern Europe) are merged into a single aggregate using [gpinter](http://wid.world/gpinter). This process allows us to get a simple estimate of inequality at the European level, while taking into consideration the main differences in national income levels and growth trajectories between European regions. When more DINA are available for other Western and Eastern European countries, they will be included in the analysis. Preliminary results suggest that these improvements will only have a moderate impact on overall pan-European inequality levels and only marginal impacts on the trends observed.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined). The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](http://wid.world/gpinter). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

Sub-Saharan Africa is the merged distribution of Sub-Saharan African countries for which survey data is available from PovcalNet. Survey data is corrected with available tax data estimates (which are available at this stage for the recent period only for Ivory Coast and South Africa; we use the gap between surveys and tax data in Ivory Coast and South Africa to correct survey estimates in other African countries). See the Technical Note on the production of African data for more details (L. Chancel and L. Czajka, "Estimating the regional distribution of income in Sub-Saharan Africa", WID.world Technical Note 2017/6).

For Brazil, estimates post-2001 are detailed in M. Morgan "Extreme and Persistent Inequality: New Evidence for Brazil Combining National Accounts, Surveys and Fiscal Data, 2001-2015" WID.world Working Paper 2017/12. Before 2000, we factor in the evolution of Brazilian national income and assume constant inequality levels. Assuming different inequality trajectories between 1980 and 2000 in Brazil does not modify global inequality trends. For the rest of Latin America, we use observed national income and assume that national income growth is distributed in the same way as in Brazil over the period. See L. Chancel and A. Gethin "Building a global income distribution brick by brick", WID.world Technical Note 2017/5 for a detailed description of the method.

The methodology followed to produce income inequality estimates in India and China is described in Piketty, T., Yang, L., Zucman, G., "Capital Accumulation, Private Property and Rising Inequality in China, 1978-2015", WID.world Working Paper, 2017/6 and in Chancel, L., Piketty T., "Indian Income Inequality, 1922-2014: from British Raj to Billionaire Raj?", WID.world Working Paper, 2017/11. For Other Asia (31 countries), we use observed national income and assume national income growth is distributed in the same way as in India and China combined.

In the data underlying this graph, all series are extended to 2016 values are obtained by keeping income shares constant and using known average national income growth rates to predict 2016 each groups' income levels and thresholds. The last year available is: 2016

for Africa and the Middle East; 2015 for Brazil, China and Russia; 2014 for France, the UK, India and the US; 2013 for Germany.

All inequality estimates in our benchmark series are constructed using Purchasing Power Parity estimates. For alternative measures using Market Exchange rates, see the data appendix folders.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20. The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Chancel and Gethin (2017)

URL: [www.wid.world/methodology](http://www.wid.world/methodology)

### Figure 5.1.2. Global average income projections, 1980-2050

This figure compares three scenarios. In each scenario (US 1980-2016 trend, Own 1980-2016 trend, EU 1980-2016 trend), the corresponding share of growth captured by each income group in the past period (1980-2016) is applied to each percentile in the future (2017-2050). The resulting projections are based on three parameters: the share of income captured by percentile, the growth rate of national income in each region, and the growth rate of adult population in each region. For the Own 1980-2016 trend scenario, for instance, we first compute the share of growth captured by income group in each country or regions. We then apply this share of growth to income groups within countries or regions, and predict the evolution of inequality within each region based on population and national income projections. Finally, we merge world regions for each year between 2016 and 2050

to get global income inequality projections. National income growth rates projections come from the OECD (for emerging countries we are in fact more optimistic than the OECD, this would tend to reduce the level of global inequality in the coming decades); adult population growth rates come from the UN.

Incomes are reported in 2016 Euros (net of inflation), at Purchasing Power Parity (see definitions below). Values reported correspond to annual incomes per adult.

The World income distribution is the merged distribution of Africa, Asia, Europe, the Middle East, Latin America, Russia, and US-Canada.

For all regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax system, but after taking into account the operation of pension, unemployment insurance as well as other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates for the 1980-2016 period are built as follows.

Europe corresponds to Europe as a whole, and is built as follows. First, the income distributions of France, Germany, and the UK are merged using Generalized Pareto Interpolation ([wid.world/gpinter](http://wid.world/gpinter)), and the resulting distribution is rescaled to the average national income per adult of “Western Europe” (25 countries; Western Europe excludes France, Germany and the UK). The merged distribution is also duplicated and rescaled to the average national income per adult of “Eastern Europe” (23 countries). We thus take into account relatively important between-country inequality between Western European countries and Eastern European countries. Finally, the five aggregates obtained (France, Germany, the UK, Western Europe and Eastern Europe) are merged into a single aggregate using [gpinter](http://wid.world/gpinter). This process allows us to get a simple estimate of inequality at the European level, while taking into consideration the main differences in national income levels and growth trajectories between European regions. When more DINA are available

for other Western and Eastern European countries, they will be included in the analysis. Preliminary results suggest that these improvements will only have a moderate impact on overall pan-European inequality levels and only marginal impacts on the trends observed.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined. The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](#). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

Sub-Saharan Africa is the merged distribution of Sub-Saharan African countries for which survey data is available from PovcalNet. Survey data is corrected with available tax data estimates (which are available at this stage for the recent period only for Ivory Coast and South Africa; we use the gap between surveys and tax data in Ivory Coast and South Africa to correct survey estimates in other African countries). See the Technical Note on the production of African data for more details (L. Chancel and L. Czajka, "Estimating the regional distribution of income in Sub-Saharan Africa", WID.world Technical Note 2017/6).

For Brazil, estimates post-2001 are detailed in M. Morgan "Extreme and Persistent Inequality: New Evidence for Brazil Combining National Accounts, Surveys and Fiscal Data, 2001-2015" WID.world Working Paper 2017/12. Before 2000, we factor in the evolution of Brazilian national income and assume constant inequality levels. Assuming different inequality trajectories between 1980 and 2000 in Brazil does not modify global inequality trends. For the rest of Latin America, we use observed national income and

assume that national income growth is distributed in the same way as in Brazil over the period. See L. Chancel and A. Gethin "Building a global income distribution brick by brick", WID.world Technical Note 2017/5 for a detailed description of the method.

The methodology followed to produce income inequality estimates in India and China is described in Piketty, T., Yang, L., Zucman, G., "Capital Accumulation, Private Property and Rising Inequality in China, 1978-2015", WID.world Working Paper, 2017/6 and in Chancel, L., Piketty T., "Indian Income Inequality, 1922-2014: from British Raj to Billionaire Raj?", WID.world Working Paper, 2017/11. For Other Asia (31 countries), we use observed national income and assume national income growth is distributed in the same way as in India and China combined.

In the data underlying this graph, all series are extended to 2016 values are obtained by keeping income shares constant and using known average national income growth rates to predict 2016 each groups' income levels and thresholds. The last year available is: 2016 for Africa and the Middle East; 2015 for Brazil, China and Russia; 2014 for France, the UK, India and the US; 2013 for Germany.

All inequality estimates in our benchmark series are constructed using Purchasing Power Parity estimates. For alternative measures using Market Exchange rates, see the data appendix folders.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20. The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Chancel and Gethin (2017)

URL: <http://www.wid.world/methodology>

### Figure 5.1.3. Global average income projections, 1980-2050

This figure compares three scenarios. In each scenario (US 1980-2016 trend, Own 1980-2016 trend, EU 1980-2016 trend), the corresponding share of growth captured by each income group in the past period (1980-2016) is applied to each percentile in the future (2017-2050). The resulting projections are based on three parameters: the share of income captured by percentile, the growth rate of national income in each region, and the growth rate of adult population in each region. For the Own 1980-2016 trend scenario, for instance, we first compute the share of growth captured by income group in each country or regions. We then apply this share of growth to income groups within countries or regions, and predict the evolution of inequality within each region based on population and national income projections. Finally, we merge world regions for each year between 2016 and 2050 to get global income inequality projections. National income growth rates projections come from the OECD (for emerging countries we are in fact more optimistic than the OECD, this would tend to reduce the level of global inequality in the coming decades); adult population growth rates come from the UN.

Incomes are reported in 2016 Euros (net of inflation), at Purchasing Power Parity (see definitions below). Values reported correspond to annual incomes per adult.

The World income distribution is the merged distribution of Africa, Asia, Europe, the Middle East, Latin America, Russia, and US-Canada.

For all regions, income inequality is measured using the distribution of pre-tax national income among adults (equal-split series). Pre-tax national income is the sum of all pre-tax personal income flows accruing to the owners of the production factors, labor and capital, before taking into account the operation of the tax system, but after taking into account the operation of pension, unemployment insurance as well as other social insurance systems (See Box 2.4.1, p.88 of the World Inequality Report).

Estimates for the 1980-2016 period are built as follows.

Europe corresponds to Europe as a whole, and is built as follows. First, the income distributions of France, Germany, and the UK are merged using Generalized Pareto Interpolation ([wid.world/gpinter](http://wid.world/gpinter)), and the resulting distribution is rescaled to the average national income per adult of “Western Europe” (25 countries; Western Europe excludes France, Germany and the UK). The merged distribution is also duplicated and rescaled to the average national income per adult of “Eastern Europe” (23 countries). We thus take into account relatively important between-country inequality between Western European countries and Eastern European countries. Finally, the five aggregates obtained (France, Germany, the UK, Western Europe and Eastern Europe) are merged into a single aggregate using [gpinter](http://wid.world/gpinter). This process allows us to get a simple estimate of inequality at the European level, while taking into consideration the main differences in national income levels and growth trajectories between European regions. When more DINA are available for other Western and Eastern European countries, they will be included in the analysis. Preliminary results suggest that these improvements will only have a moderate impact on overall pan-European inequality levels and only marginal impacts on the trends observed.

USA-Canada is built as follows. Given that DINA estimates for Canada have not yet been produced we distribute Canadian growth to the Canadian population assuming the same distribution as the one observed in the USA. The simplification seems acceptable given the similar trajectories of top income shares observed in the two countries, and is also justified by the relatively small size of Canada as compared to the USA (implying that different assumptions on the distribution of national income in Canada only have a marginal impact on the distribution of growth in USA and Canada combined). The two countries obtained (US and Canada) are merged into a single aggregate using [gpinter](http://wid.world/gpinter). This process allows us to get a simple estimate of inequality in a region that is broadly comparable in size to Western Europe, while taking into consideration the main differences in national income levels and growth trajectories between the US and Canada.

Sub-Saharan Africa is the merged distribution of Sub-Saharan African countries for which survey data is available from PovcalNet. Survey data is corrected with available tax data estimates (which are available at this stage for the recent period only for Ivory Coast and South Africa; we use the gap between surveys and tax data in Ivory Coast and South Africa to correct survey estimates in other African countries). See the Technical Note on the production of African data for more details (L. Chancel and L. Czajka, "Estimating the regional distribution of income in Sub-Saharan Africa", WID.world Technical Note 2017/6).

For Brazil, estimates post-2001 are detailed in M. Morgan "Extreme and Persistent Inequality: New Evidence for Brazil Combining National Accounts, Surveys and Fiscal Data, 2001-2015" WID.world Working Paper 2017/12. Before 2000, we factor in the evolution of Brazilian national income and assume constant inequality levels. Assuming different inequality trajectories between 1980 and 2000 in Brazil does not modify global inequality trends. For the rest of Latin America, we use observed national income and assume that national income growth is distributed in the same way as in Brazil over the period. See L. Chancel and A. Gethin "Building a global income distribution brick by brick", WID.world Technical Note 2017/5 for a detailed description of the method.

The methodology followed to produce income inequality estimates in India and China is described in Piketty, T., Yang, L., Zucman, G., "Capital Accumulation, Private Property and Rising Inequality in China, 1978-2015", WID.world Working Paper, 2017/6 and in Chancel, L., Piketty T., "Indian Income Inequality, 1922-2014: from British Raj to Billionaire Raj?", WID.world Working Paper, 2017/11. For Other Asia (31 countries), we use observed national income and assume national income growth is distributed in the same way as in India and China combined.

In the data underlying this graph, all inequality series are extended to 2016 values are obtained by keeping income shares constant and using known average national income growth rates to predict 2016 each groups' income levels and thresholds. The last year

available is: 2016 for Africa and the Middle East; 2015 for Brazil, China and Russia; 2014 for France, the UK, India and the US; 2013 for Germany.

All inequality estimates in our benchmark series are constructed using Purchasing Power Parity estimates. For alternative measures using Market Exchange rates, see the data appendix folders.

Purchasing Power Parity (PPP) is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. Converting values to PPP therefore accounts for differences in costs of living between countries, enabling comparisons between income levels in different countries. The Market Exchange Rate (MER) is the rate at which one currency can be exchanged for another.

Estimates correct for inflation using the national income deflator (base 2016).

The population is comprised of individuals over age 20. The base unit is the individual but resources are split equally within couples.

More detailed information is available in : Chancel and Gethin (2017)

URL: <http://www.wid.world/methodology>

## Figure 5.2.2. Top income tax rates in rich countries, 1900-2017

The top marginal income tax rate is the maximum amount of tax paid on an additional unit of income for highest income earners.

US: The top marginal income tax rate reported here includes general income tax supplements (i.e. surtaxes applying to all incomes above a certain level), but excludes all other taxes and social contributions (the uncapped rate of social security contributions on top earnings has been 2.5% since 1994 and was 0% before). Between 1971 and 1981, the top rate applying to earned income was lower than the top rate applying to ordinary unearned income (e.g. capital income). Also, between 1944 and 1963, there was a maximum top effective rate. Here we do not mention the reduced rates applying to capital gains. See Saez, Slemro and Gierz (2011, Table A1) for more details. See also Tax Policy Center website.

France: The top marginal income tax rate reported here includes general income tax supplements (i.e. surtaxes applying to all incomes above a certain level) and the CSG (a proportional income tax applying to all incomes), but excludes all other taxes (e.g. corporate taxes) and social contributions (except the CSG). Between 1919 and 1958, top rates were higher for single taxpayers (e.g. during the interwar period, singles paid a 25% tax surcharge, so that the top rate was 62.5% rather than 50% in 1919-1922, 75% rather than 60% in 1923, etc.); there were also smaller tax surcharges for married taxpayers with no children after three years of marriage. All these tax surcharges were excluded here, because they apply only to a minority of top income taxpayers. For complete details about the history of income tax law in France, see Piketty 2001, Chapters 3-4.

Germany: The top marginal income tax rate reported here includes general income tax supplements (i.e. surtaxes applying to all incomes above a certain level), but excludes all other taxes and social contributions. In 1946-1948 the top rate was set by the Allied Control Council. See Dell (2008) for more details.

More detailed information (for the UK in particular) is available in : Piketty (2014) - Notes for Tables and Figures of Chapter 14.

URL: <http://piketty.pse.ens.fr/files/capital21c/xls/>

See also the appendix excel data files of the World Inequality Report 2018 for the updated series.

### Figure 5.2.3. Top inheritance tax rates in rich countries, 1900-2017

The top inheritance marginal tax rate is the maximum amount of tax paid on an additional unit of inheritance for the highest inheritances.

US : The top inheritance tax rate reported here includes only the federal estate tax (not the additional state-level estate and inheritance taxes). See Kopczuk and Saez (2004) for more details. Note that strictly speaking the new 35% top rate started to apply only to 2011 decedents onwards. For year 2010 decedents (repeal year), there was actually no federal estate tax (but a 15% tax on capital gains did apply, though).

France: The top inheritance tax rate reported here is the top rate applying to the decedent's children. It also includes the "taxe successorale" applied in 1917-1934 (top rate with two

children) and the maximum effective tax rate applied in 1927-1958. See Piketty (2001, Appendix J) for more details.

Germany: The top inheritance tax rate reported here is the top rate applying to the decedent's children. In 1946-1948 the top rate was set by the Allied Control Council. See Beckert (2008) and Dell (2008) for more details.

More detailed information (for the UK in particular) is available in : Piketty (2014) - Notes for Tables and Figures of Chapter 14.

URL: <http://piketty.pse.ens.fr/files/capital21c/xls/>

See also the appendix excel data files of the World Inequality Report 2018 for the updated series.

### Figure 5.3.1. Share of taxes evaded in Scandinavian countries, 2006

Wealth inequality is measured by the distribution of net personal wealth among adults.

The share of taxes evaded corresponds to the total share of taxes owed to the government by wealth group. Estimates combine tax records in Norway, Sweden and Denmark with macroeconomic statistics on wealth hidden in tax havens, random audits, and amnesty data.

More detailed information is available in : Alstadsæter, Johannesen and Zucman (2017)

Figure number in article : Figure 1

URL: <https://gabriel-zucman.eu/files/AJZ2017.pdf>

### Figure 5.4.1. College attendance rates and parent income rank in the USA

Parent income ranks are measured using pre-tax household income obtained from population tax records.

More detailed information is available in : Chetty, Hendren, Kline and Saez (2014)

URL : <http://www.equality-of-opportunity.org/data/> (Online Data Table 10)

#### Figure 5.4.2. The impact of an allocation policy on segregation in France, 2002-2012

Social segregation is measured using the Multigroup Entropy Index (H Index). The data covers all students entering public high schools in Île-de-France.

More detailed information is available in : Fack, Grenet & Benhenda (2014)

URL: <https://www.ipp.eu/wp-content/uploads/2014/07/impact-sectorisation-affectation-mixite-lycees-idf-rapport-IPP-juin-2014.pdf>

#### Figure 5.5.1. Public debt in France and Germany, 1945-1953

Public debt is measured as a percentage of 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. National income has an internationally agreed definition (established by the United Nations System of National Accounts).

More detailed information is available in : Piketty & Zucman (2014), Appendix Table DE6.a for Germany and Table FR6.a for France.

URL: <http://piketty.pse.ens.fr/files/PikettyZucman2014QJE.pdf>

### Table 5.5.1. Real income growth in emerging and rich countries, 1980-2016

Total cumulated growth corresponds to the total growth rate between two specified dates. For example, an income growth rate of 100% represents a doubling in income over the period. When unavailable, 2015-2016 growth rates correspond to the latest year available.

For the Bottom 40%, growth rates are based on projections on the distribution of growth from the latest available year (2015 in Brazil, China, Russia, 2014 in France, USA and 2013 in India). Total national income growth is known up to 2016 for all countries. There is no data available for Brazil for the 1980-2016 period.

For a description of the methodology followed to produce estimates in each individual countries, refer to the methodological documents listed below. They are all available on wid.world at this address: <http://wid.world/methodology/>.

Brazil: Morgan (2017)

China: Piketty, Yang and Zucman (2016)

France: Garbinti, Goupille and Piketty (2016).

India: Chancel & Piketty (2017)

Russia: Novokmet, Piketty and Zucman (2017)

USA: Piketty, Thomas; Saez, Emmanuel and Zucman, Gabriel (2016). *Distributional National Accounts: Methods and Estimates for the United States*