# World Bank

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**Abstract**

This document aims to consolidate available indicators as a *sandbox* tool for next analyses. I make use of the available data to ask about inequality and development. If one were to be borned among the poorest 10th percent of population what is preferable: 1) To live in a country where the income share held by the lowest 10 percent is similar to the countries of europe with a GDP to population proportion as the one held by countries in latin america? 2) Or to live in a country with a GDP to population proportion similar to the United States and an income share held by the lowest 10 percent similar to the latin amercan countries? GDP & GNI per Capita estimations, presented on a section with the same name, were constructed to address these questions. In section GDP and Population I make use of available data to develop a simple model based on normal distribution for GDP and Population growth rates using mean and standard deviations for the current century. The simple model has two baseline scenarios, one with no population growth and the other with both GDP and Population growth rates equal to the averages of the same period. In each section it is possible to compare among countries of the OCDE plus the economies of Brazil and China. As a first approach it is possible to see a clear difference between countries of Europe and America *kpi's* such as goverment expenses, health and income share among the lowest 10 percent of the population have consistently different averages among the century.

## Contents

## Summary

This document aims to consolidate available indicators as a *sandbox* tool for next analyses. For an easier navigation of the document, each indicator is fitted into the following categories:

- Economy
- Goverment
- Health
- Demographics

Altough some of them may overlapse with each other, for example poverty meassures, I do think this mechanism does allow for a better user experience of the document. Please refer to the table of contents whenever necessary.

For this document I focused on the OCDE Countries plus China and Brazil.

Database extracted from: https://databank.worldbank.org/data/source/world-development-indicators#

Country list from: https://www.oecd.org/about/members-and-partners/

After each indicator I have copied **World Bank's** metadata including:

- Long Description
- Source (when needed)
- Statistical Concept & Methodology (when needed)
- Limitations & Exceptions (when needed)

The extraction period is from 2000 to the last available date (in most cases 2017). Looking forward to an standarized presentation for each indicator first I present a table with the summary of average and standard deviation then followed by a box plot graph. When possible I also present graphs wiht the time series of the indicator for each of the countries. Finally, I aggregate the countries into region time series to see region's trends and compare them with the three biggest economies (United States, China and Japan).

# Economy

## GDP (constant 2010 US$)

GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2010 U.S. dollars. Dollar figures for GDP are converted from domestic currencies using 2010 official exchange rates. For a few countries where the official exchange rate does not reflect the rate effectively applied to actual foreign exchange transactions, an alternative conversion factor is used.

Gross domestic product (GDP) represents the sum of value added by all its producers. Value added is the value of the gross output of producers less the value of intermediate goods and services consumed in production, before accounting for consumption of fixed capital in production. The United Nations System of National Accounts calls for value added to be valued at either basic prices (excluding net taxes on products) or producer prices (including net taxes on products paid by producers but excluding sales or value added taxes). Both valuations exclude transport charges that are invoiced separately by producers. Total GDP is measured at purchaser prices. Value added by industry is normally measured at basic prices. When value added is measured at producer prices.

Growth rates of GDP and its components are calculated using the least squares method and constant price data in the local currency. Constant price U.S. dollar series are used to calculate regional and income group growth rates. Local currency series are converted to constant U.S. dollars using an exchange rate in the common reference year.

Each industry's contribution to growth in the economy's output is measured by growth in the industry's value added. In principle, value added in constant prices can be estimated by measuring the quantity of goods and services produced in a period, valuing them at an agreed set of base year prices, and subtracting the cost of intermediate inputs, also in constant prices. This double-deflation method requires detailed information on the structure of prices of inputs and outputs.

In many industries, however, value added is extrapolated from the base year using single volume indexes of outputs or, less commonly, inputs. Particularly in the services industries, including most of government, value added in constant prices is often imputed from labor inputs, such as real wages or number of employees. In the absence of well defined measures of output, measuring the growth of services remains difficult.

Moreover, technical progress can lead to improvements in production processes and in the quality of goods and services that, if not properly accounted for, can distort measures of value added and thus of growth. When inputs are used to estimate output, as for nonmarket services, unmeasured technical progress leads to underestimates of the volume of output. Similarly, unmeasured improvements in quality lead to underestimates of the value of output and value added. The result can be underestimates of growth and productivity improvement and overestimates of inflation.

Informal economic activities pose a particular measurement problem, especially in developing countries, where much economic activity is unrecorded. A complete picture of the economy requires estimating household outputs produced for home use, sales in informal markets, barter exchanges, and illicit or deliberately unreported activities. The consistency and completeness of such estimates depend on the skill and methods of the compiling statisticians.

Rebasing of national accounts can alter the measured growth rate of an economy and lead to breaks in series that affect the consistency of data over time. When countries rebase their national accounts, they update the weights assigned to various components to better reflect current patterns of production or uses of output. The new base year should represent normal operation of the economy - it should be a year without major shocks or distortions. Some developing countries have not rebased their national accounts for many years. Using an old base year can be misleading because implicit price and volume weights become progressively less relevant and useful.

To obtain comparable series of constant price data for computing aggregates, the World Bank rescales GDP and value added by industrial origin to a common reference year. Because rescaling changes the implicit weights used in forming regional and income group aggregates, aggregate growth rates are not comparable with those from earlier editions with different base years. Rescaling may result in a discrepancy between the rescaled GDP and the sum of the rescaled components. To avoid distortions in the growth rates, the discrepancy is left unallocated. As a result, the weighted average of the growth rates of the components generally does not equal the GDP grow

Table 1 reports the averages for the current century.

Table 1: GDP (constant 2010 US$ '000 M)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 386 | 29 |
| Belgium | 471 | 36 |
| Brazil | 2,017 | 318 |
| Chile | 210 | 44 |
| China | 5,602 | 2,592 |
| Czech Republic | 198 | 27 |
| Denmark | 325 | 17 |
| Estonia | 20 | 3 |
| European Union | 16,814 | 1,135 |
| Finland | 242 | 16 |
| France | 2,620 | 154 |
| Germany | 3,429 | 238 |
| Greece | 280 | 33 |
| Hungary | 132 | 12 |
| Iceland | 14 | 2 |
| Ireland | 234 | 53 |
| Israel | 225 | 43 |
| Italy | 2,116 | 56 |
| Japan | 5,714 | 243 |
| Korea, Rep. | 1,030 | 199 |
| Latin America & Caribbean | 5,050 | 797 |
| Latvia | 25 | 4 |
| Lithuania | 38 | 7 |
| Luxembourg | 52 | 7 |
| Mexico | 1,064 | 121 |
| Middle East & North Africa | 2,609 | 539 |
| Netherlands | 825 | 56 |
| New Zealand | 145 | 20 |
| Norway | 426 | 35 |
| Poland | 451 | 89 |
| Portugal | 231 | 6 |
| Slovak Republic | 83 | 17 |
| Slovenia | 46 | 5 |
| South Asia | 1,957 | 653 |
| Spain | 1,370 | 103 |
| Sub-Saharan Africa | 1,280 | 318 |
| Sweden | 479 | 52 |
| Turkey | 789 | 222 |
| United Kingdom | 2,464 | 205 |
| United States | 14,931 | 1,386 |
| World | 64,247 | 9,434 |

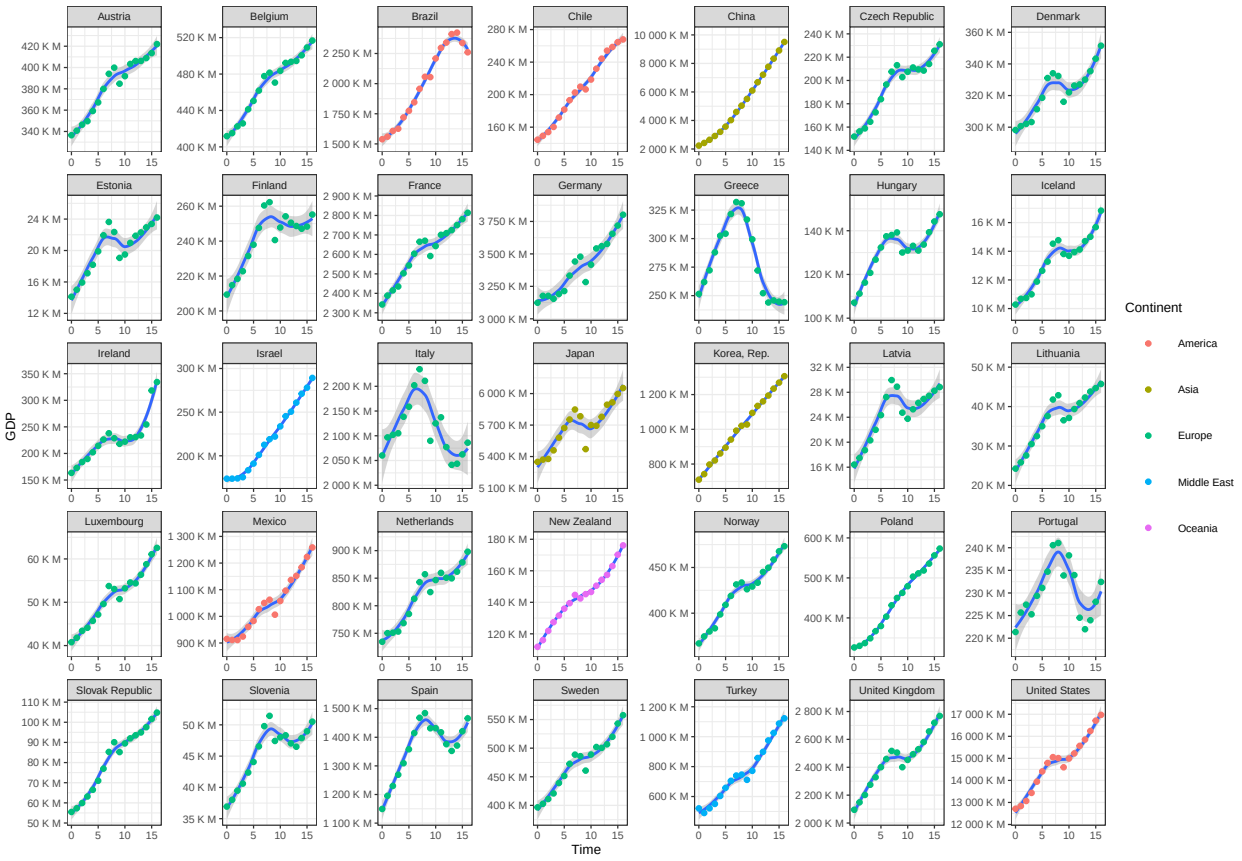



Figure 1: GDP (constant 2010 US$)

In Figure 1 it is possible to see the *GDP trend* from the current century. In the Figure 2 it is possible to see the trend for the biggest countries and regions of the world

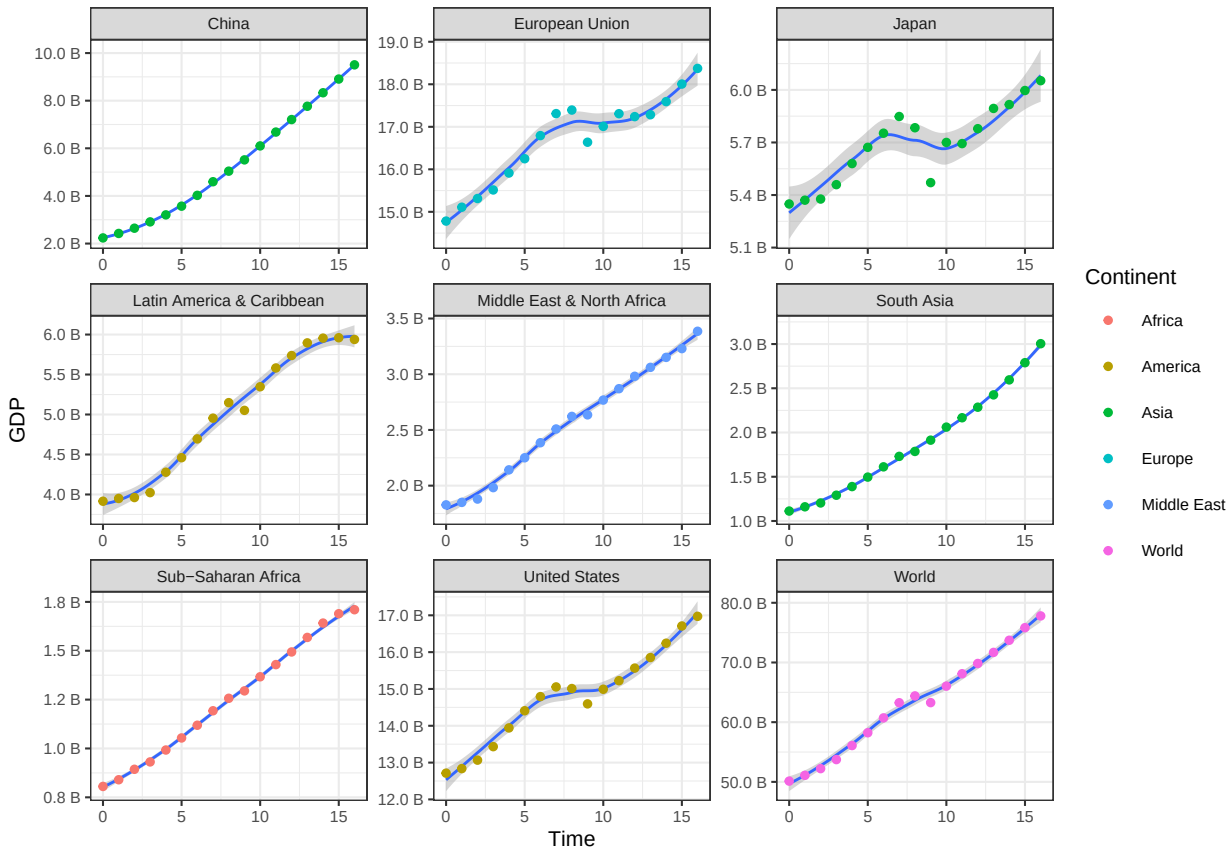



Figure 2: GDP (constant 2010 US$) regions and biggest countries

## GDP growth (annual %)

Table 2: GDP growth (annual %)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 1.6 | 1.7 |
| Belgium | 1.6 | 1.4 |
| Brazil | 2.5 | 3 |
| Chile | 3.9 | 2.2 |
| China | 9.3 | 2.1 |
| Czech Republic | 2.9 | 2.9 |
| Denmark | 1.3 | 1.9 |
| Estonia | 4.1 | 6 |
| European Union | 1.6 | 1.8 |
| Finland | 1.6 | 3.1 |
| France | 1.4 | 1.4 |
| Germany | 1.4 | 2.2 |
| Greece | 0.23 | 4.5 |
| Hungary | 2.3 | 2.9 |
| Iceland | 3.3 | 3.6 |
| Ireland | 5.2 | 6.3 |
| Israel | 3.5 | 2.1 |
| Italy | 0.38 | 2.1 |
| Japan | 0.96 | 2 |
| Korea, Rep. | 4.1 | 2 |
| Latin America & Caribbean | 2.7 | 2.4 |
| Latvia | 3.9 | 6.3 |
| Lithuania | 4.2 | 5.5 |
| Luxembourg | 3 | 3 |
| Mexico | 2.2 | 2.4 |
| Middle East & North Africa | 3.9 | 2 |
| Netherlands | 1.5 | 1.9 |
| New Zealand | 2.9 | 1.5 |
| Norway | 1.7 | 1.3 |
| Poland | 3.7 | 1.6 |
| Portugal | 0.65 | 2.1 |
| Slovak Republic | 3.9 | 3.4 |
| Slovenia | 2.3 | 3.4 |
| South Asia | 6.3 | 1.6 |
| Spain | 1.8 | 2.6 |
| Sub-Saharan Africa | 4.6 | 1.5 |
| Sweden | 2.3 | 2.5 |
| Turkey | 5.2 | 4.5 |
| United Kingdom | 1.9 | 1.8 |
| United States | 2 | 1.6 |
| World | 2.9 | 1.4 |

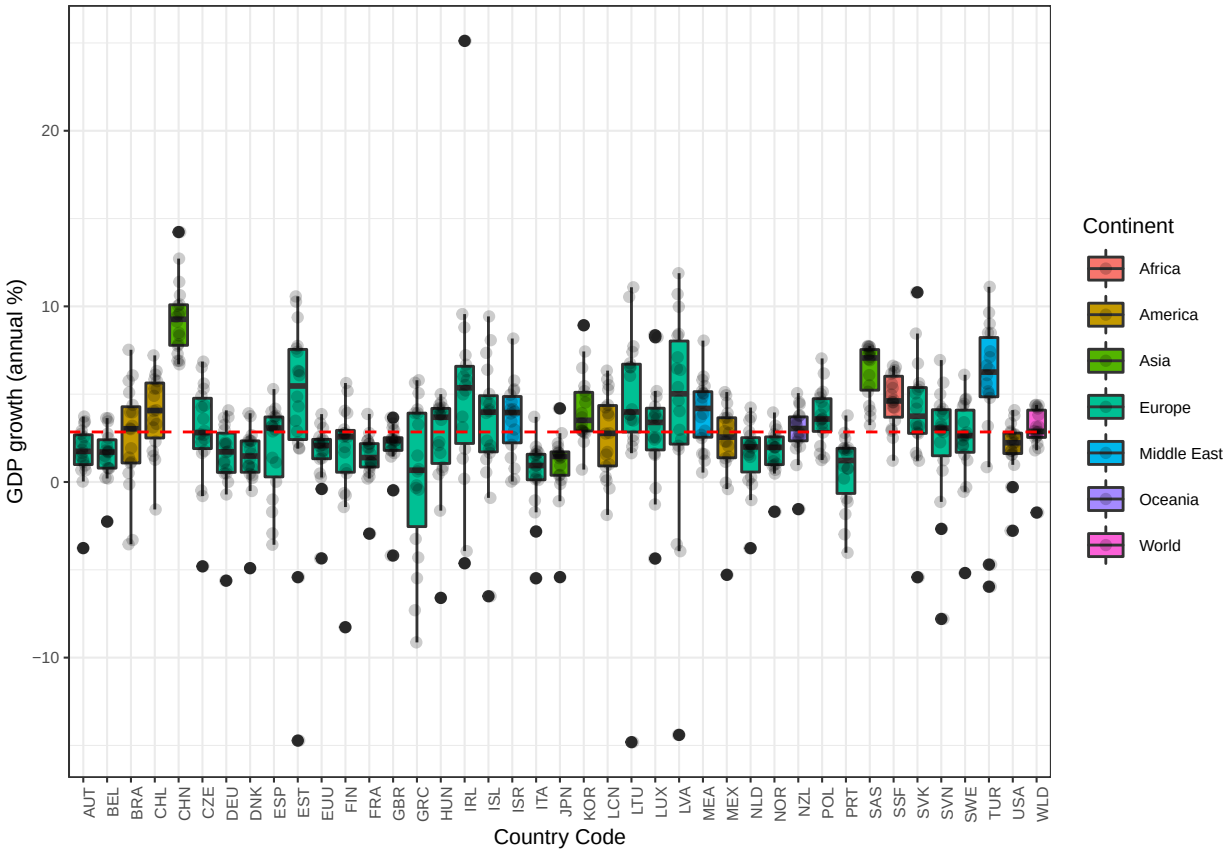



Figure 3: GDP growth rate boxplots: 2000 - 2017

## GDP per capita (constant 2010 US$)

Table 3: GDP per capita (constant 2010 US$)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 46,150 | 2,370 |
| Belgium | 43,577 | 1,860 |
| Brazil | 10,377 | 1,129 |
| Chile | 12,486 | 1,970 |
| China | 4,174 | 1,828 |
| Czech Republic | 19,004 | 2,346 |
| Denmark | 58,782 | 2,014 |
| Estonia | 15,259 | 2,695 |
| European Union | 33,553 | 1,778 |
| Finland | 45,378 | 2,474 |
| France | 40,695 | 1,220 |
| Germany | 41,889 | 3,067 |
| Greece | 25,502 | 2,779 |
| Hungary | 13,184 | 1,358 |
| Iceland | 43,528 | 4,245 |
| Ireland | 53,111 | 8,754 |
| Israel | 30,015 | 2,687 |
| Italy | 35,973 | 1,437 |
| Japan | 44,802 | 1,948 |
| Korea, Rep. | 20,835 | 3,454 |
| Latin America & Caribbean | 8,578 | 838 |
| Latvia | 11,716 | 2,567 |
| Lithuania | 12,052 | 2,979 |
| Luxembourg | 103,053 | 4,956 |
| Mexico | 9,235 | 379 |
| Middle East & North Africa | 6,835 | 707 |
| Netherlands | 49,874 | 2,423 |
| New Zealand | 33,788 | 2,496 |
| Norway | 87,899 | 2,974 |
| Poland | 11,835 | 2,375 |
| Portugal | 22,064 | 552 |
| Slovak Republic | 15,367 | 3,094 |
| Slovenia | 22,618 | 2,074 |
| South Asia | 1,206 | 311 |
| Spain | 30,556 | 1,229 |
| Sub-Saharan Africa | 1,481 | 166 |
| Sweden | 51,223 | 3,649 |
| Turkey | 10,884 | 2,256 |
| United Kingdom | 39,581 | 1,952 |
| United States | 48,933 | 2,470 |
| World | 9,381 | 781 |

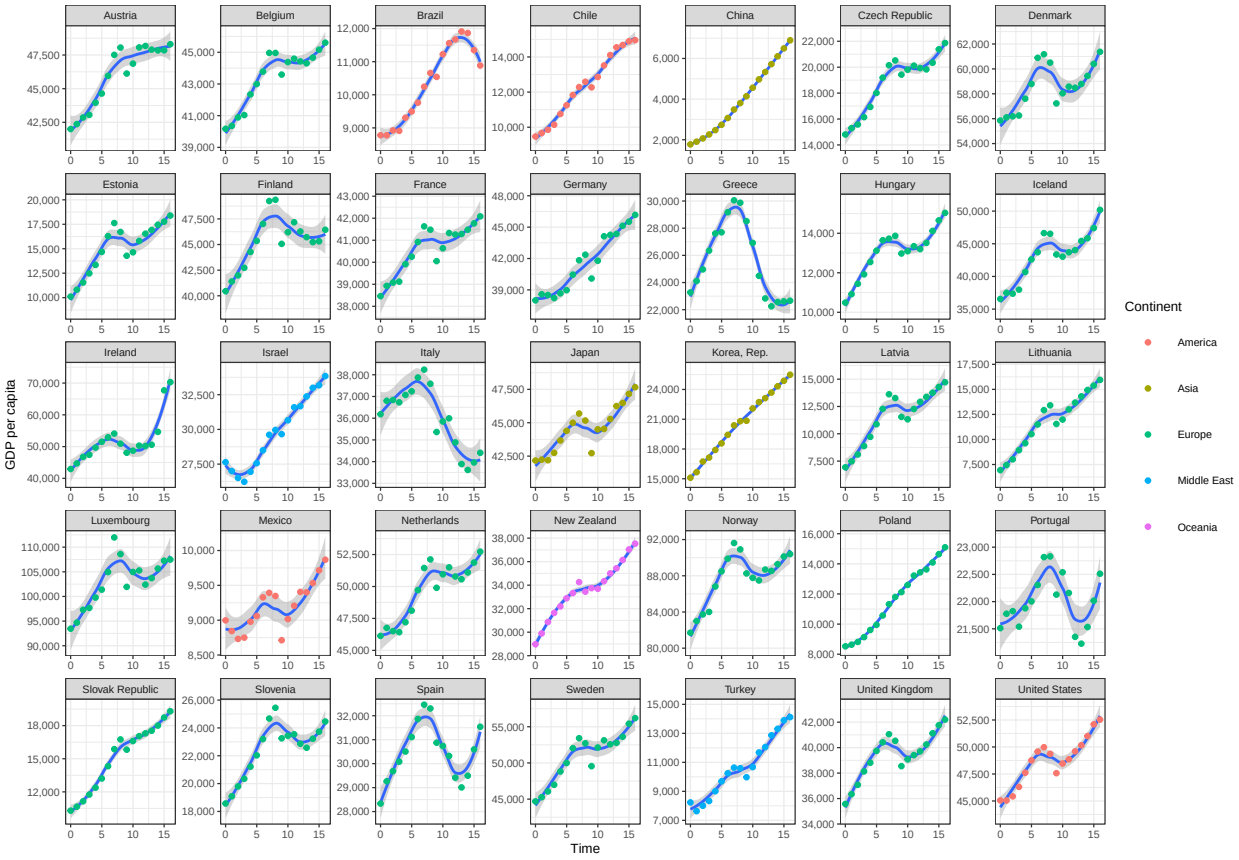



Figure 4: GDP per capita

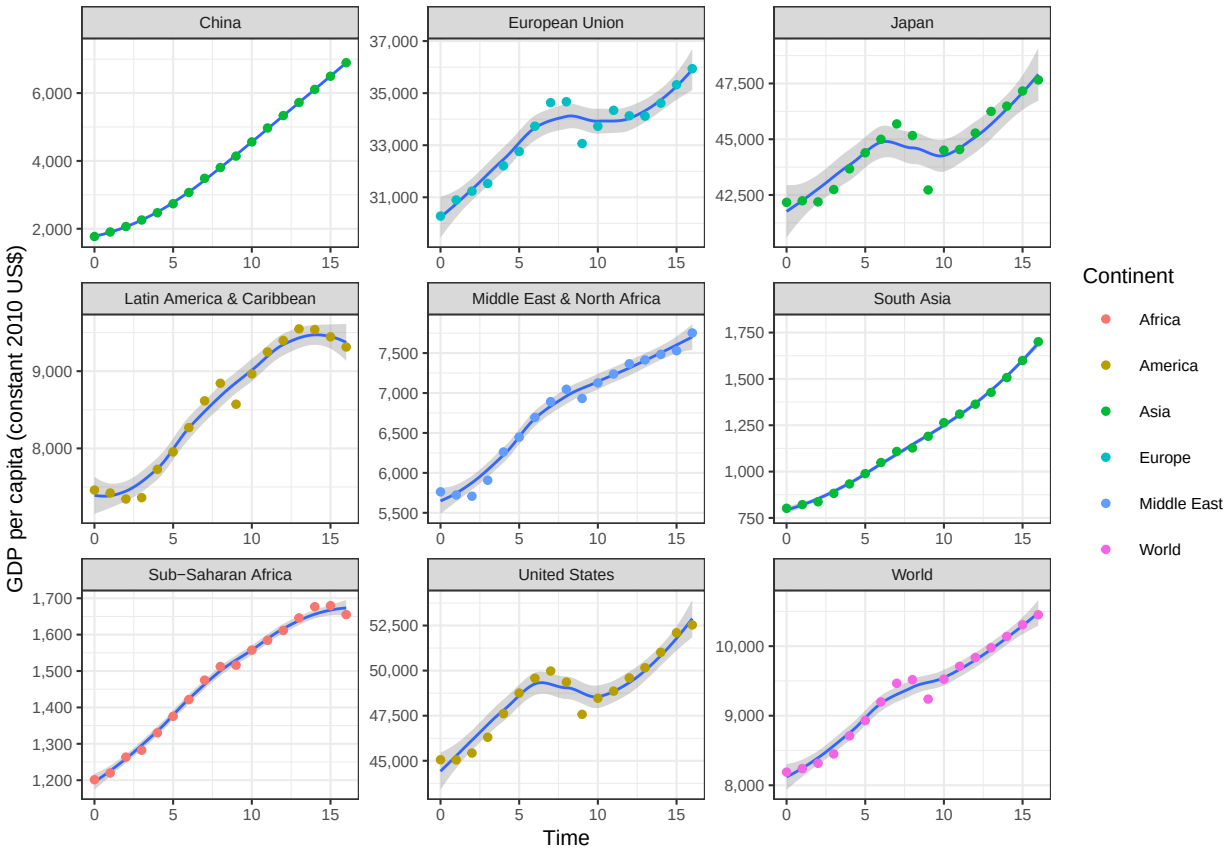



Figure 5: GDP per capita regions and biggest countries

## GDP per capita growth (annual %)

Table 4: GDP per capita growth (annual %)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 1.1 | 1.7 |
| Belgium | 0.97 | 1.5 |
| Brazil | 1.4 | 2.9 |
| Chile | 2.9 | 2.2 |
| China | 8.7 | 2.1 |
| Czech Republic | 2.7 | 2.9 |
| Denmark | 0.82 | 2 |
| Estonia | 4.4 | 6.1 |
| European Union | 1.3 | 1.8 |
| Finland | 1.2 | 3.2 |
| France | 0.78 | 1.4 |
| Germany | 1.4 | 2.4 |
| Greece | 0.23 | 4.3 |
| Hungary | 2.6 | 2.9 |
| Iceland | 2.1 | 3.2 |
| Ireland | 3.7 | 6.3 |
| Israel | 1.5 | 2.1 |
| Italy | 0.04 | 2.2 |
| Japan | 0.95 | 2 |
| Korea, Rep. | 3.6 | 2 |
| Latin America & Caribbean | 1.4 | 2.3 |
| Latvia | 5.1 | 6.2 |
| Lithuania | 5.5 | 5.6 |
| Luxembourg | 1.1 | 3.1 |
| Mexico | 0.78 | 2.4 |
| Middle East & North Africa | 1.9 | 1.9 |
| Netherlands | 1.1 | 1.9 |
| New Zealand | 1.6 | 1.3 |
| Norway | 0.78 | 1.4 |
| Poland | 3.8 | 1.6 |
| Portugal | 0.61 | 2 |
| Slovak Republic | 3.9 | 3.4 |
| Slovenia | 2.1 | 3.5 |
| South Asia | 4.7 | 1.6 |
| Spain | 1 | 2.4 |
| Sub-Saharan Africa | 1.8 | 1.5 |
| Sweden | 1.6 | 2.6 |
| Turkey | 3.7 | 4.4 |
| United Kingdom | 1.2 | 1.8 |
| United States | 1.1 | 1.5 |
| World | 1.7 | 1.4 |

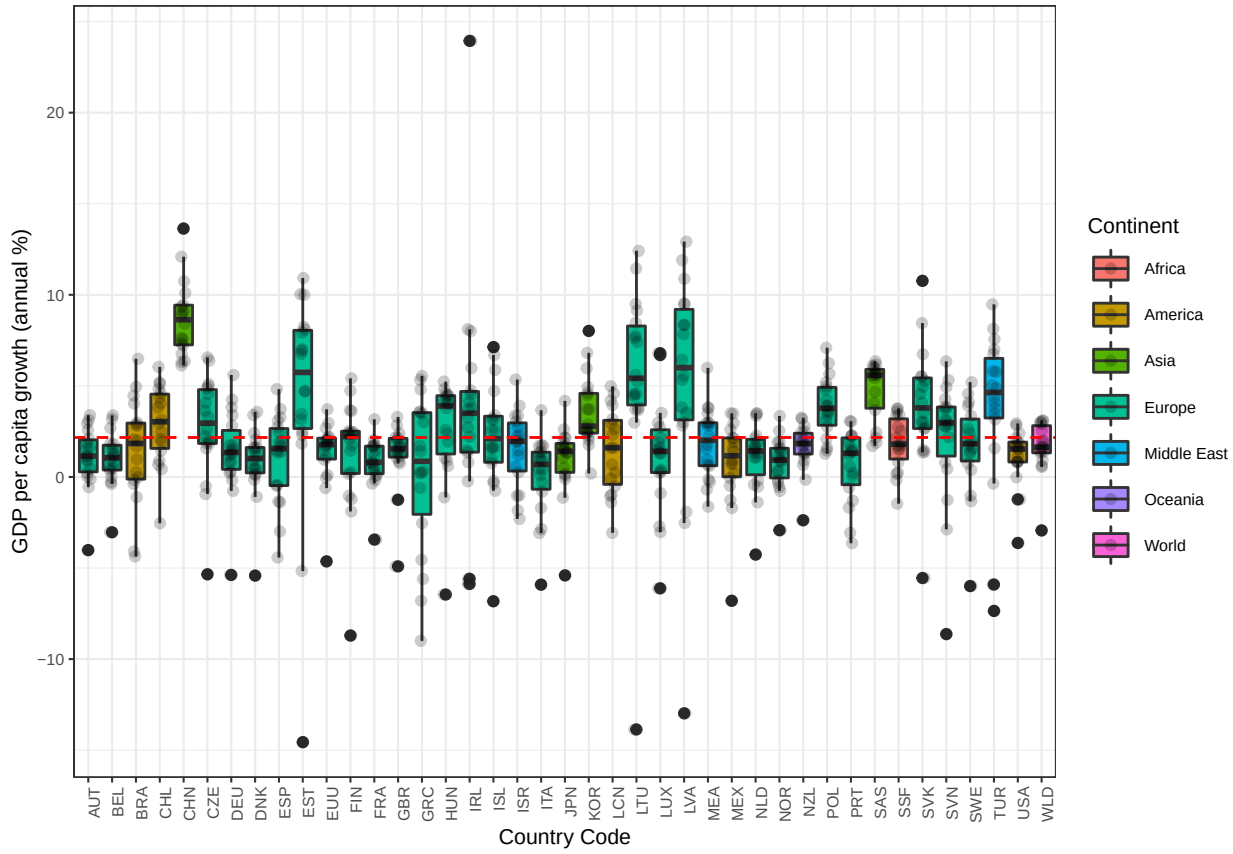



Figure 6: GDP per capita growth rate boxplots: 2000 - 2017

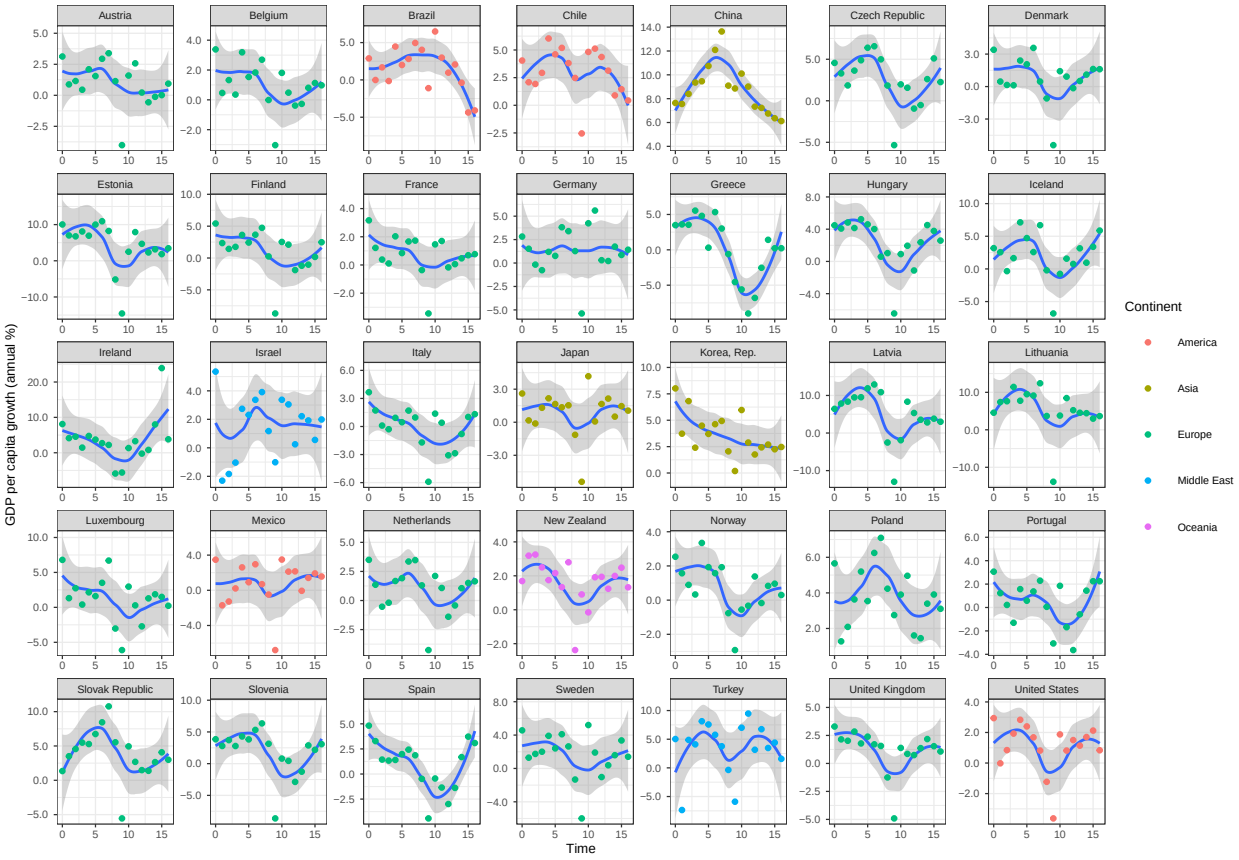



Figure 7: GDP per capita growth rate

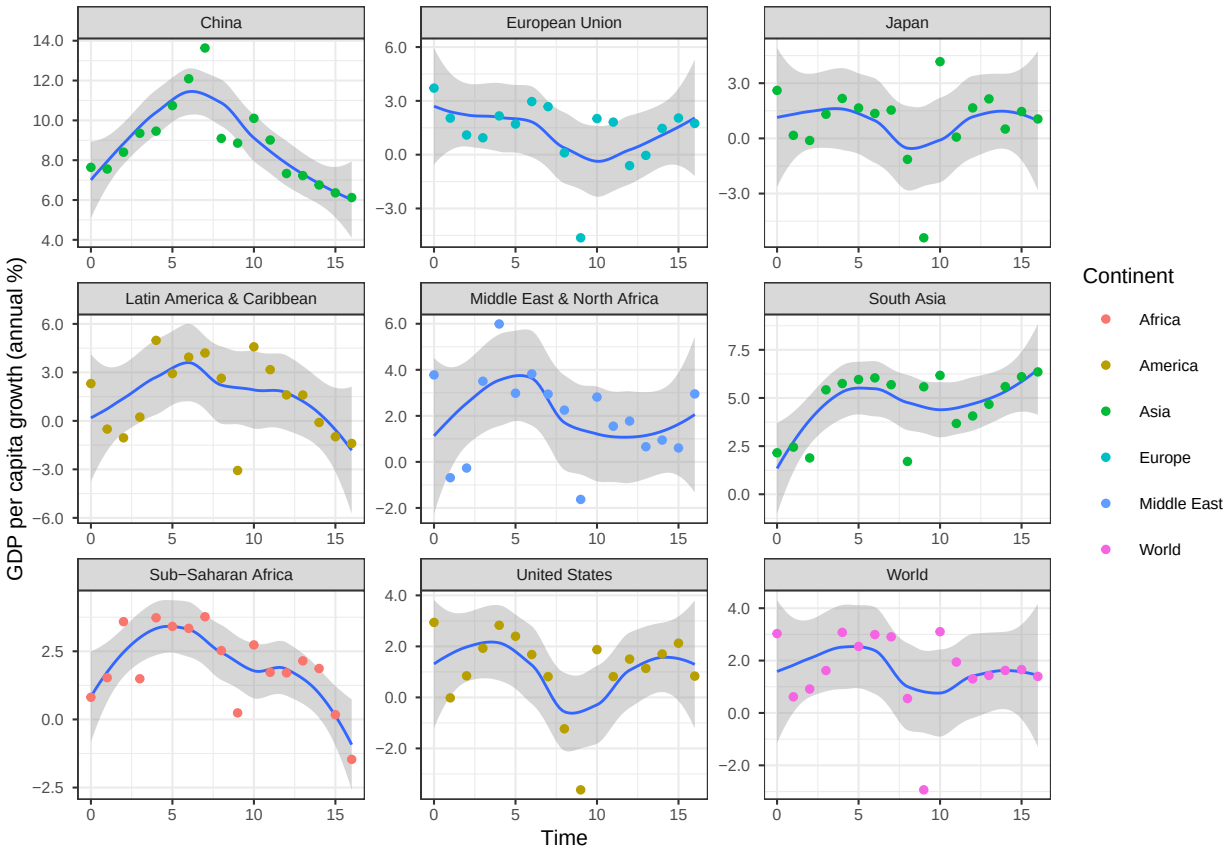



Figure 8: GDP per capita growth rate regions and biggest countries

## GDP per person employed (constant 2011 PPP $)

GDP per person employed is gross domestic product (GDP) divided by total employment in the economy. Purchasing power parity (PPP) GDP is GDP converted to 2011 constant international dollars using PPP rates. An international dollar has the same purchasing power over GDP that a U.S. dollar has in the United States.

GDP per person employed represents labor productivity — output per unit of labor input. To compare labor productivity levels across countries, GDP is converted to international dollars using purchasing power parity rates which take account of differences in relative prices between countries.

Table 5: GDP per person employed (constant 2011 PPP $)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 89,252 | 3,268 |
| Belgium | 99,567 | 3,011 |
| Brazil | 30,649 | 2,318 |
| Chile | 45,152 | 3,523 |
| China | 16,208 | 7,443 |
| Czech Republic | 57,871 | 6,471 |
| Denmark | 89,409 | 4,402 |
| Estonia | 51,452 | 6,699 |
| European Union | 77,798 | 3,635 |
| Finland | 85,914 | 3,801 |
| France | 89,505 | 3,233 |
| Germany | 86,341 | 2,351 |
| Greece | 68,320 | 3,512 |
| Hungary | 56,552 | 4,044 |
| Iceland | 70,634 | 6,643 |
| Ireland | 107,018 | 22,847 |
| Israel | 73,479 | 2,659 |
| Italy | 95,641 | 1,649 |
| Japan | 71,733 | 2,929 |
| Korea, Rep. | 58,365 | 8,376 |
| Latin America & Caribbean | 31,092 | 1,689 |
| Latvia | 42,949 | 7,948 |
| Lithuania | 48,839 | 9,891 |
| Luxembourg | 207,349 | 9,480 |
| Mexico | 39,551 | 726 |
| Middle East & North Africa | 54,812 | 3,023 |
| Netherlands | 89,048 | 4,536 |
| New Zealand | 63,969 | 3,276 |
| Norway | 122,067 | 4,703 |
| Poland | 49,527 | 6,520 |
| Portugal | 56,877 | 2,950 |
| Slovak Republic | 54,593 | 8,782 |
| Slovenia | 60,271 | 5,567 |
| South Asia | 11,100 | 3,244 |
| Spain | 79,084 | 3,947 |
| Sub-Saharan Africa | 8,612 | 1,083 |
| Sweden | 87,348 | 6,391 |
| Turkey | 58,544 | 9,455 |
| United Kingdom | 77,193 | 2,890 |
| United States | 104,938 | 6,833 |

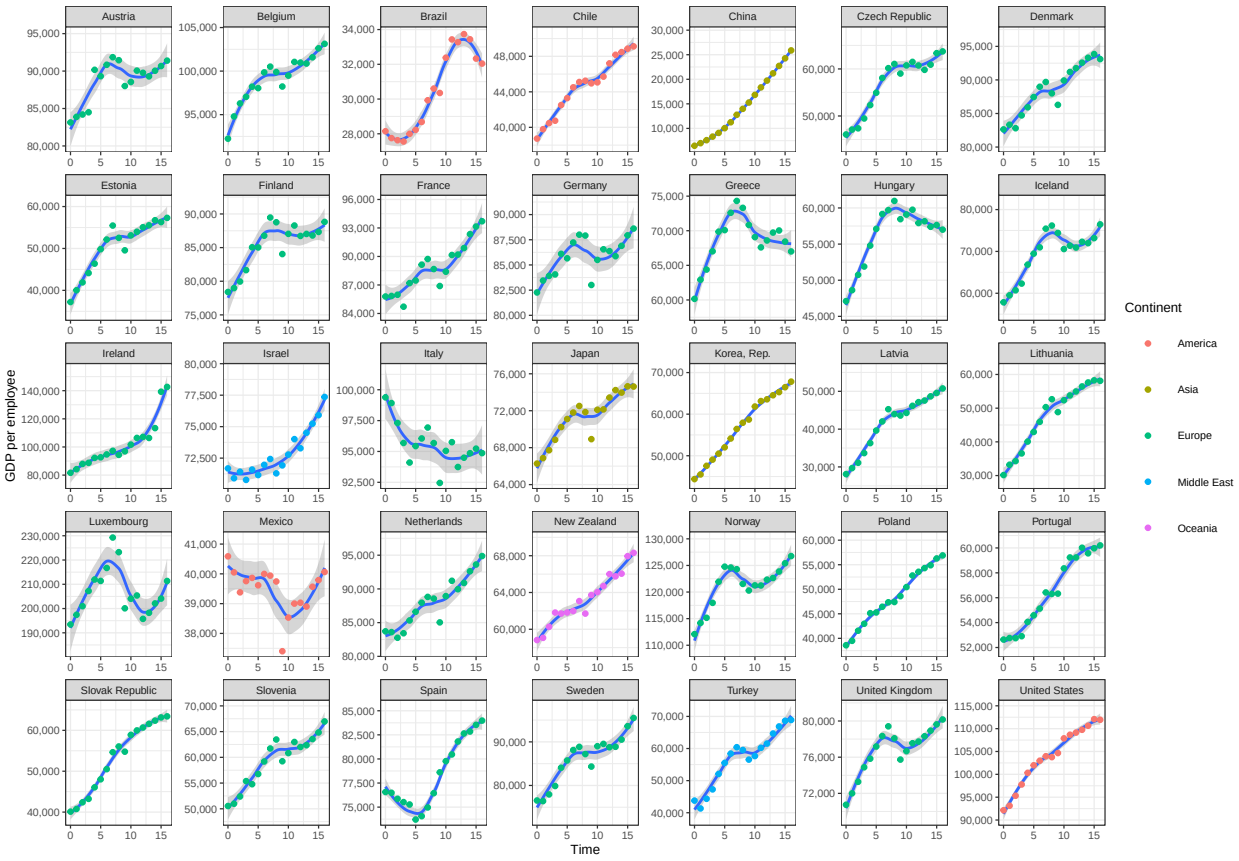



Figure 9: GDP per person employed

| Country Name | Mean | SD |
|---|---|---|
| World | 30,040 | 3,964 |

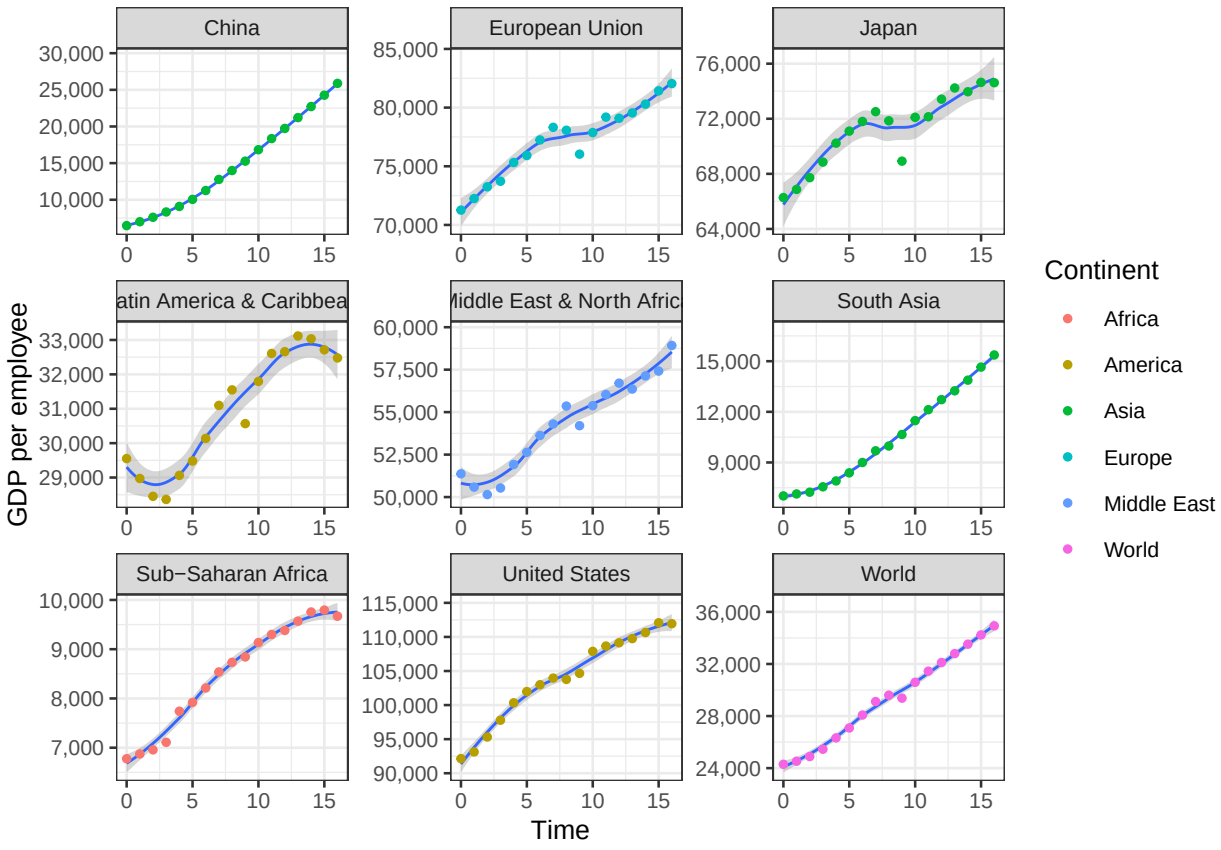



Figure 10: GDP per person employed regions and biggest countries

## GNI (constant 2010 US$)

GNI (formerly GNP) is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. Data are in constant 2010 U.S. dollars.

Because development encompasses many factors - economic, environmental, cultural, educational, and institutional - no single measure gives a complete picture. However, the total earnings of the residents of an economy, measured by its gross national income (GNI), is a good measure of its capacity to provide for the well-being of its people.

Table 6: GNI (constant 2010 US$ '000 M)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 385 | 30 |
| Belgium | 477 | 35 |
| Brazil | 1,969 | 318 |
| Chile | 199 | 44 |
| China | 5,582 | 2,587 |
| Czech Republic | 186 | 23 |
| Denmark | 329 | 22 |
| Estonia | 20 | 3 |
| European Union | 16,821 | 1,123 |
| Finland | 244 | 17 |
| France | 2,672 | 165 |
| Germany | 3,473 | 275 |
| Greece | 277 | 29 |
| Hungary | 126 | 12 |
| Iceland | 11 | NA |
| Ireland | 196 | 39 |
| Israel | 221 | 44 |
| Italy | 2,113 | 58 |
| Japan | 5,833 | 267 |
| Korea, Rep. | 1,031 | 203 |
| Latin America & Caribbean | 4,889 | 788 |
| Latvia | 25 | 4 |
| Luxembourg | 46 | 8 |
| Mexico | 1,043 | 116 |
| Middle East & North Africa | 2,616 | 552 |
| Netherlands | 828 | 55 |
| New Zealand | 130 | 14 |
| Norway | 431 | 41 |
| Poland | 469 | 67 |
| Portugal | 225 | 5 |
| Slovak Republic | 88 | 12 |
| Slovenia | 47 | 3 |
| South Asia | 1,952 | 644 |
| Spain | 1,355 | 100 |
| Sub-Saharan Africa | 1,223 | 309 |
| Sweden | 487 | 54 |
| Turkey | 779 | 221 |
| United Kingdom | 2,463 | 175 |
| United States | 15,021 | 1,439 |
| World | 64,209 | 9,401 |

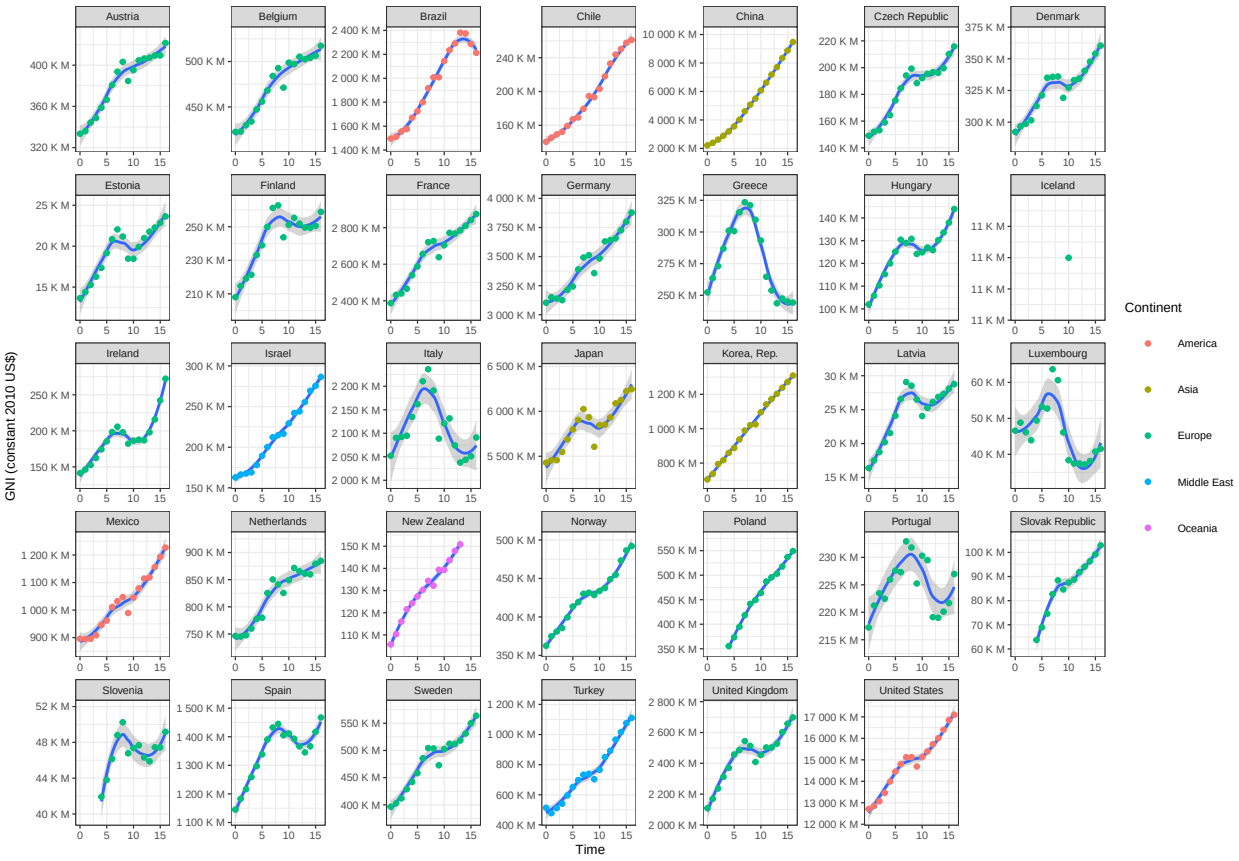



Figure 11: GNI (constant 2010 US$)

## GNI growth (annual %)

Table 7: GDP growth (annual %)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 1.7 | 2 |
| Belgium | 1.5 | 2.2 |
| Brazil | 2.7 | 3.2 |
| Chile | 3.8 | 2.5 |
| China | 9.3 | 2.2 |
| Czech Republic | 2.6 | 2.8 |
| Denmark | 1.4 | 2 |
| Estonia | 3.7 | 5.4 |
| European Union | 1.6 | 1.8 |
| Finland | 1.7 | 3.1 |
| France | 1.4 | 1.6 |
| Germany | 1.6 | 2.1 |
| Greece | 0.18 | 4.2 |
| Hungary | 2.4 | 2.6 |
| Iceland | 1.9 | 6.9 |
| Ireland | 4.6 | 5.2 |
| Israel | 3.7 | 2.2 |
| Italy | 0.42 | 2 |

| Country Name | Mean | SD |
|---|---|---|
| Japan | 1 | 2.2 |
| Korea, Rep. | 4.2 | 2.2 |
| Latin America & Caribbean | 2.7 | 2.5 |
| Latvia | 3.9 | 5.5 |
| Lithuania | 3.4 | 7.9 |
| Luxembourg | 0.69 | 10 |
| Mexico | 2.2 | 2.6 |
| Middle East & North Africa | 3.9 | 2 |
| Netherlands | 1.5 | 2.2 |
| New Zealand | 2.8 | 1.9 |
| Norway | 2 | 1.3 |
| Poland | 3.8 | 1.7 |
| Portugal | 0.55 | 1.9 |
| Slovak Republic | 4.1 | 3.8 |
| Slovenia | 1.7 | 3.8 |
| South Asia | 6.2 | 1.5 |
| Spain | 1.9 | 2.4 |
| Sub-Saharan Africa | 4.7 | 1.9 |
| Sweden | 2.4 | 2.8 |
| Turkey | 5.3 | 4.8 |
| United Kingdom | 1.8 | 2 |
| United States | 2 | 1.6 |
| World | 2.9 | 1.5 |

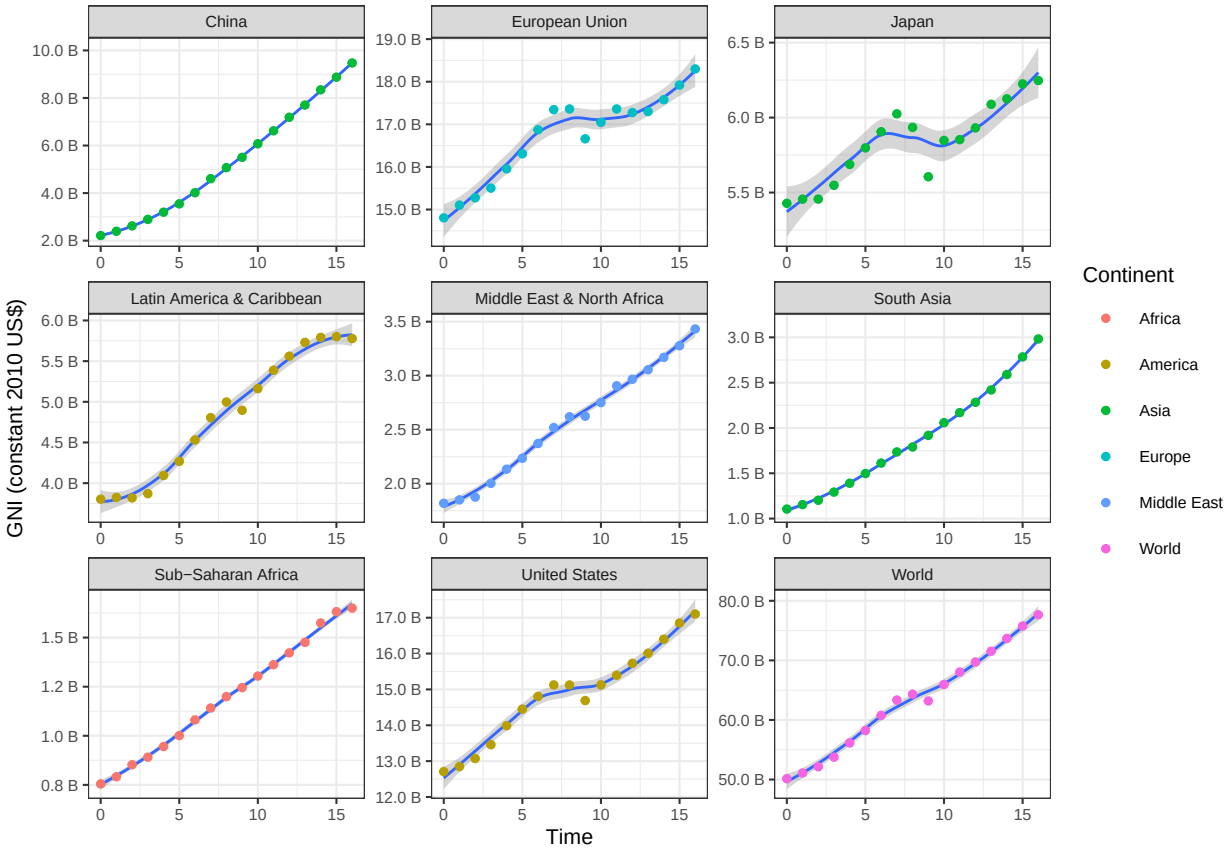



Figure 12: GNI (constant 2010 US$) regions and biggest countries

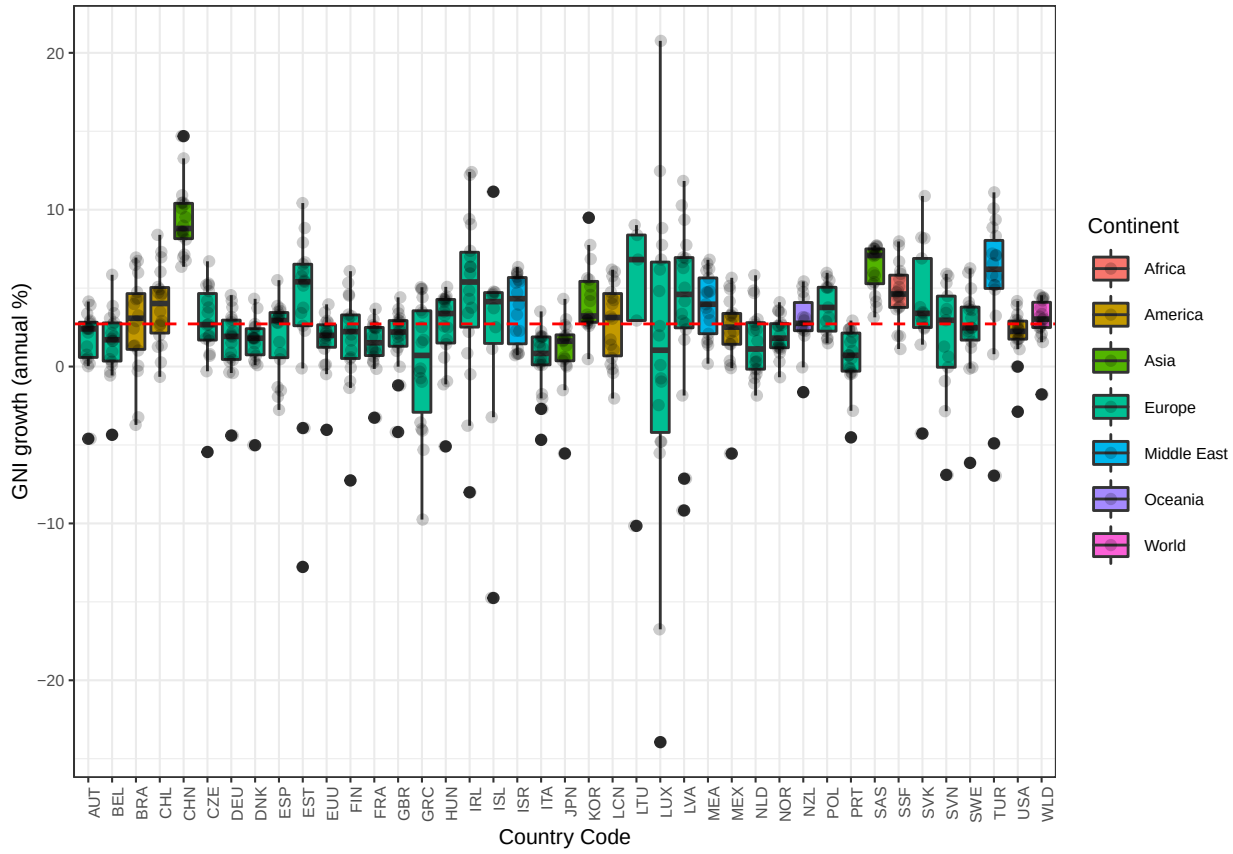



Figure 13: GNI growth boxplots: 2000 - 2017

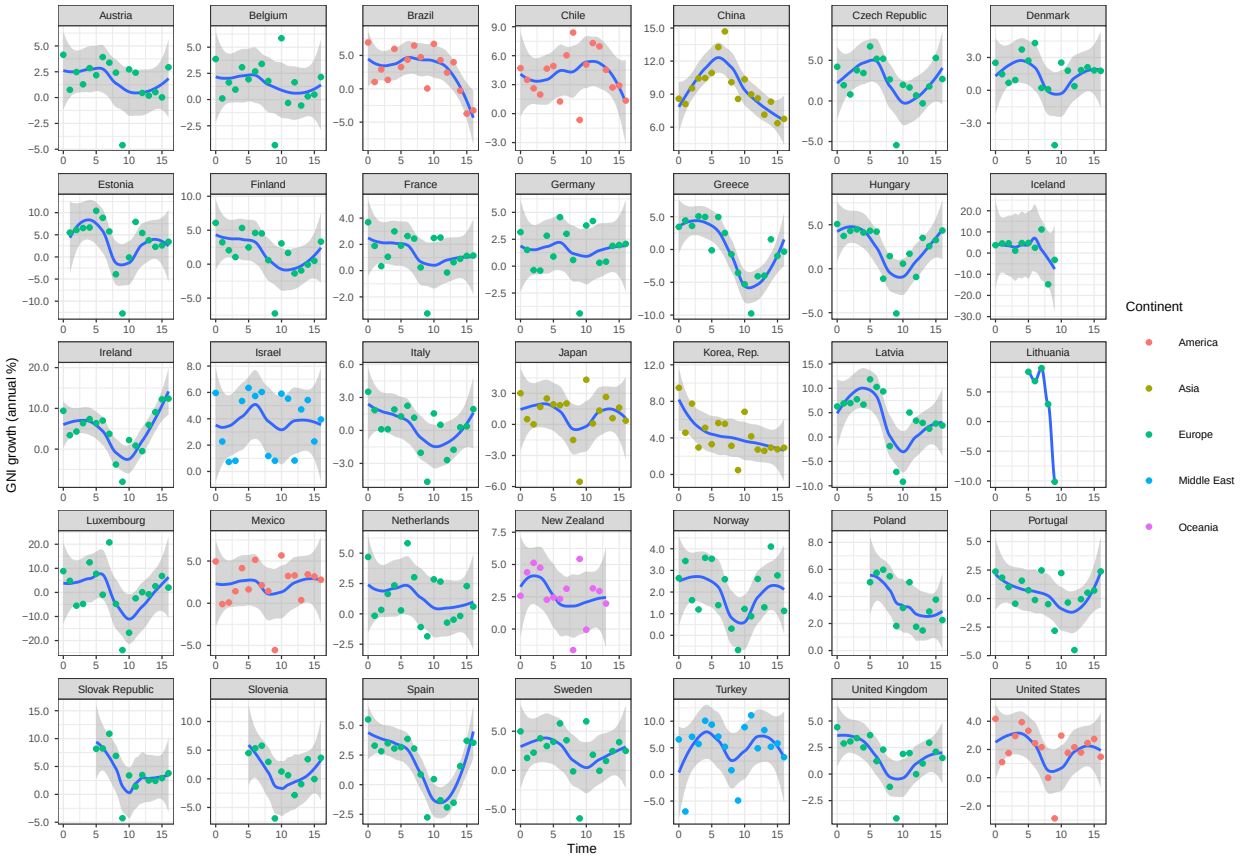



Figure 14: GNI growth rate

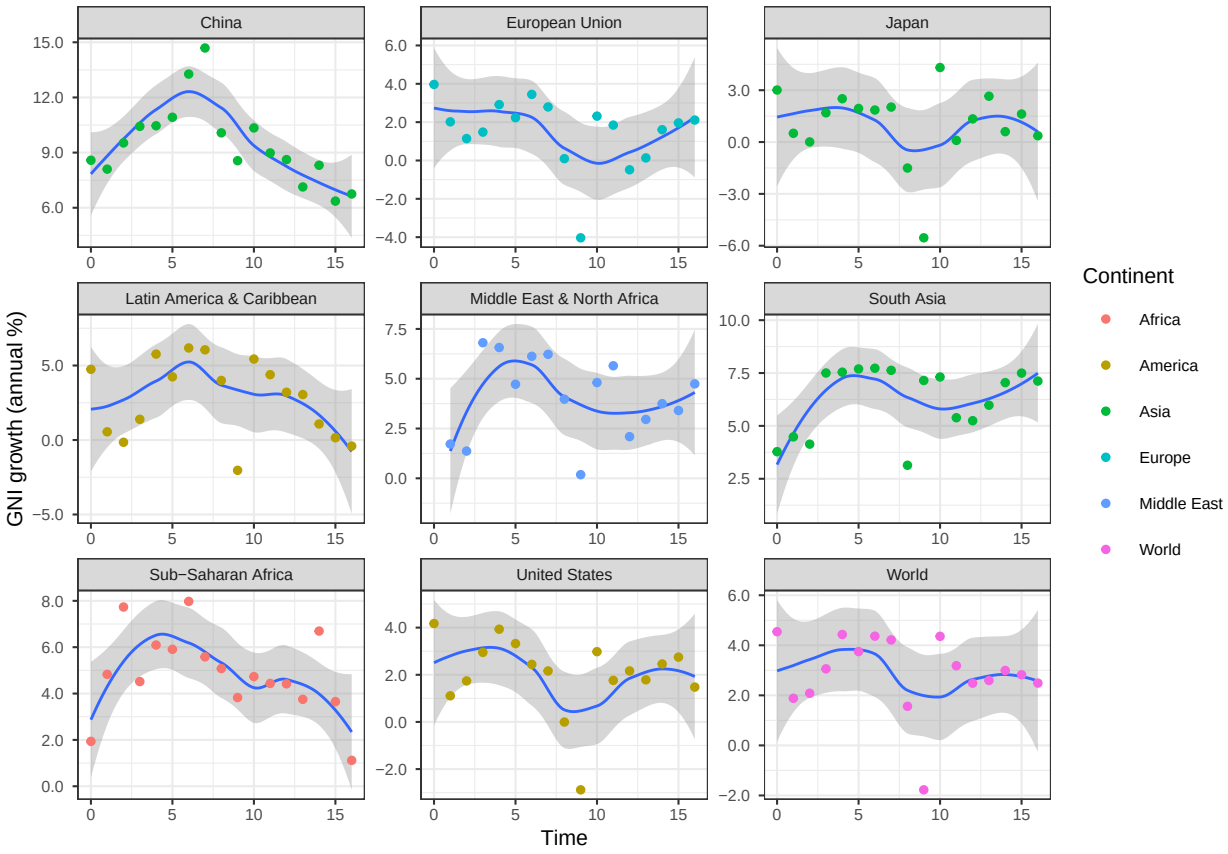



Figure 15: GNI growth rate regions and biggest countries

## GNI per capita (constant 2010 US$)

## Income share held by subgroups of population

Percentage share of income or consumption is the share that accrues to subgroups of population indicated by deciles or quintiles.

Inequality in the distribution of income is reflected in the share of income or consumption accruing to a portion of the population ranked by income or consumption levels. The portions ranked lowest by personal income receive the smallest shares of total income.

Data on the distribution of income or consumption come from nationally representative household surveys. Where the original data from the household survey were available, they have been used to directly calculate the income or consumption shares by quintile. Otherwise, shares have been estimated from the best available grouped data.

The distribution data have been adjusted for household size, providing a more consistent measure of per capita income or consumption. No adjustment has been made for spatial differences in cost of living within countries, because the data needed for such calculations are generally unavailable. For further details on the estimation method for low- and middle-income economies, see Ravallion and Chen (1996).

Despite progress in the last decade, the challenges of measuring poverty remain. The timeliness, frequency, quality, and comparability of household surveys need to increase substantially, particularly in the poorest countries. The availability and quality of poverty monitoring data remains low in small states, countries with fragile situations, and low-income countries and even some middle-income countries. The low frequency and lack of comparability of the data available in some countries create uncertainty over the magnitude of poverty reduction.

Besides the frequency and timeliness of survey data, other data quality issues arise in measuring household living standards. The surveys ask detailed questions on sources of income and how it was spent, which must be carefully recorded by trained personnel. Income is generally more difficult to measure accurately, and consumption comes closer to the notion of living standards. And income can vary over time even if living standards do not. But consumption data are not always available: the latest estimates reported here use consumption data for about two-thirds of countries.

However, even similar surveys may not be strictly comparable because of differences in timing or in the quality and training of enumerators. Comparisons of countries at different levels of development also pose a potential problem because of differences in the relative importance of the consumption of nonmarket goods. The local market value of all consumption in kind (including own production, particularly important in underdeveloped rural economies) should be included in total consumption expenditure but may not be. Most survey data now include valuations for consumption or income from own production, but valuation methods vary.

Survey year is the year in which the underlying household survey data were collected or, when the data collection period bridged two calendar years, the year in which most of the data were collected.

Percentage shares by quintile may not sum to 100 because of rounding.

**Income share held by lowest 10%**

Table 8: Income share held by lowest 10%

| Country Name | Mean | SD |
|---|---|---|
| Austria | 3.1 | 0.22 |
| Belgium | 3.4 | 0.066 |
| Brazil | 1 | 0.12 |
| Chile | 1.7 | 0.22 |
| China | 2.3 | 0.22 |
| Czech Republic | 3.8 | 0.1 |
| Denmark | 3.8 | 0.2 |
| Estonia | 2.6 | 0.26 |
| Finland | 3.8 | 0.078 |
| France | 3.2 | 0.15 |
| Germany | 3.4 | 0.12 |
| Greece | 2.4 | 0.34 |
| Hungary | 3.2 | 0.32 |
| Iceland | 3.8 | 0.14 |
| Ireland | 3.1 | 0.16 |
| Israel | 1.9 | 0.2 |
| Italy | 2.2 | 0.23 |
| Japan | 2.7 | NA |
| Korea, Rep. | 2.6 | 0.05 |
| Latvia | 2.2 | 0.16 |
| Lithuania | 2.3 | 0.23 |
| Luxembourg | 3.2 | 0.16 |
| Mexico | 1.8 | 0.24 |
| Netherlands | 3.5 | 0.11 |
| Norway | 3.6 | 0.15 |
| Poland | 3.2 | 0.16 |
| Portugal | 2.5 | 0.19 |
| Slovak Republic | 3.2 | 0.23 |
| Slovenia | 3.9 | 0.17 |
| Spain | 2.2 | 0.27 |
| Sweden | 3.3 | 0.26 |
| Turkey | 2.1 | 0.099 |
| United Kingdom | 2.8 | 0.16 |
| United States | 1.7 | 0.082 |

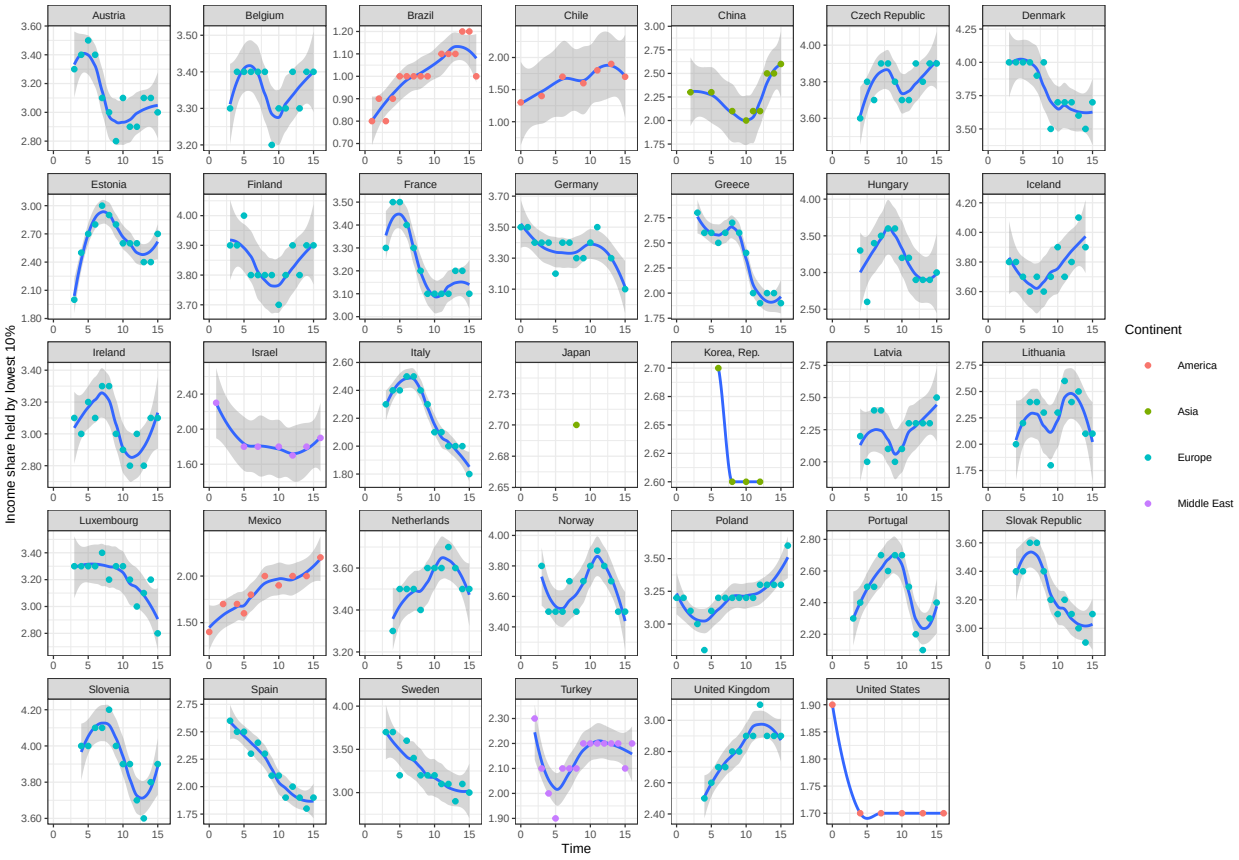



Figure 16: Income share held by lowest 10%

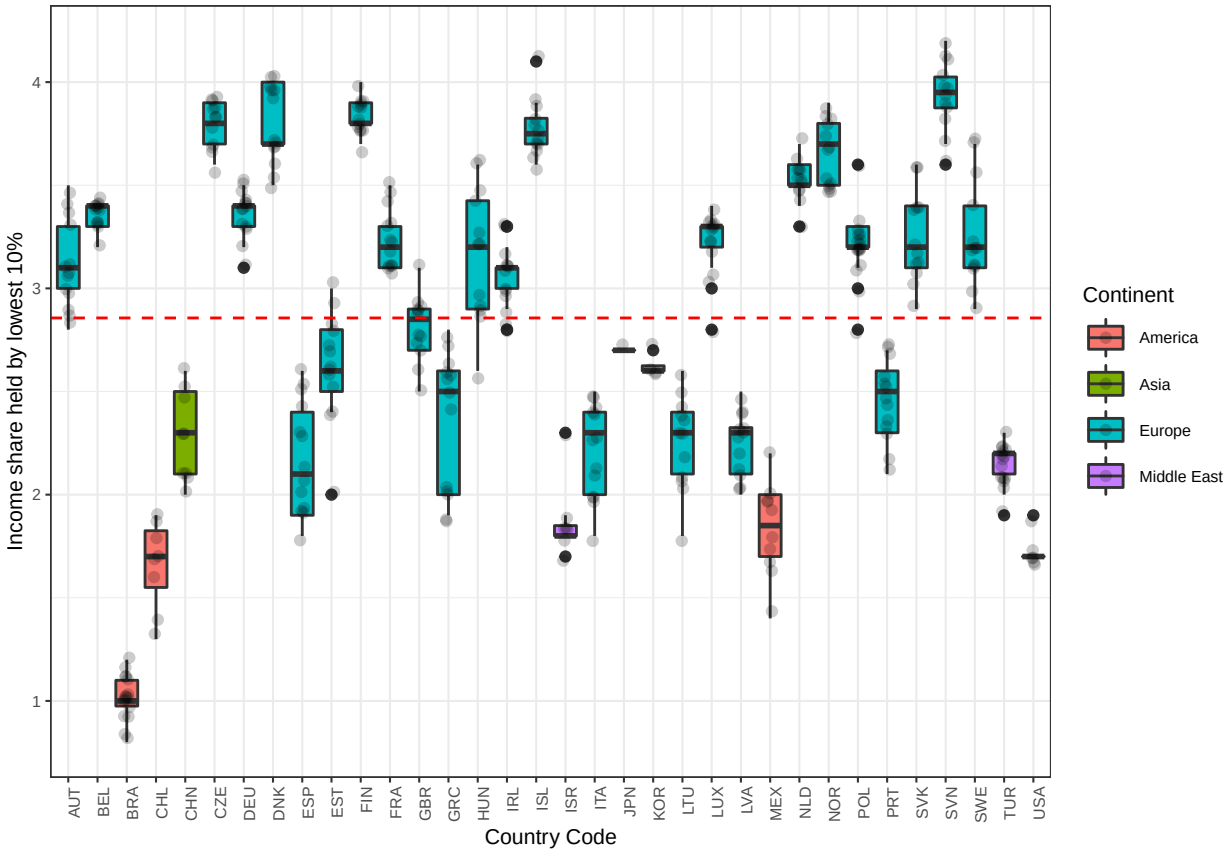



Figure 17: Income share held by lowest 10% boxplots: 2000 - 2017

**Income share held by lowest 20%**

Table 9: Income share held by lowest 20%

| Country Name | Mean | SD |
|---|---|---|
| Austria | 8.1 | 0.36 |
| Belgium | 8.6 | 0.086 |
| Brazil | 3.1 | 0.35 |
| Chile | 4.6 | 0.5 |
| China | 5.7 | 0.48 |
| Czech Republic | 9.5 | 0.22 |
| Denmark | 9.5 | 0.31 |
| Estonia | 7.3 | 0.49 |
| Finland | 9.3 | 0.087 |
| France | 8.1 | 0.29 |
| Germany | 8.4 | 0.25 |
| Greece | 6.6 | 0.55 |
| Hungary | 8.1 | 0.58 |
| Iceland | 9.3 | 0.33 |
| Ireland | 7.8 | 0.27 |
| Israel | 5.1 | 0.4 |
| Italy | 6.6 | 0.36 |
| Japan | 7.4 | NA |
| Korea, Rep. | 7.3 | 0.05 |
| Latvia | 6.4 | 0.35 |
| Lithuania | 6.4 | 0.44 |
| Luxembourg | 7.9 | 0.36 |
| Mexico | 4.9 | 0.55 |
| Netherlands | 8.8 | 0.2 |
| Norway | 9.2 | 0.23 |
| Poland | 7.8 | 0.32 |
| Portugal | 6.7 | 0.29 |
| Slovak Republic | 8.8 | 0.38 |
| Slovenia | 9.7 | 0.29 |
| Spain | 6.4 | 0.51 |
| Sweden | 8.7 | 0.4 |
| Turkey | 5.7 | 0.2 |
| United Kingdom | 7.2 | 0.26 |
| United States | 5.2 | 0.14 |

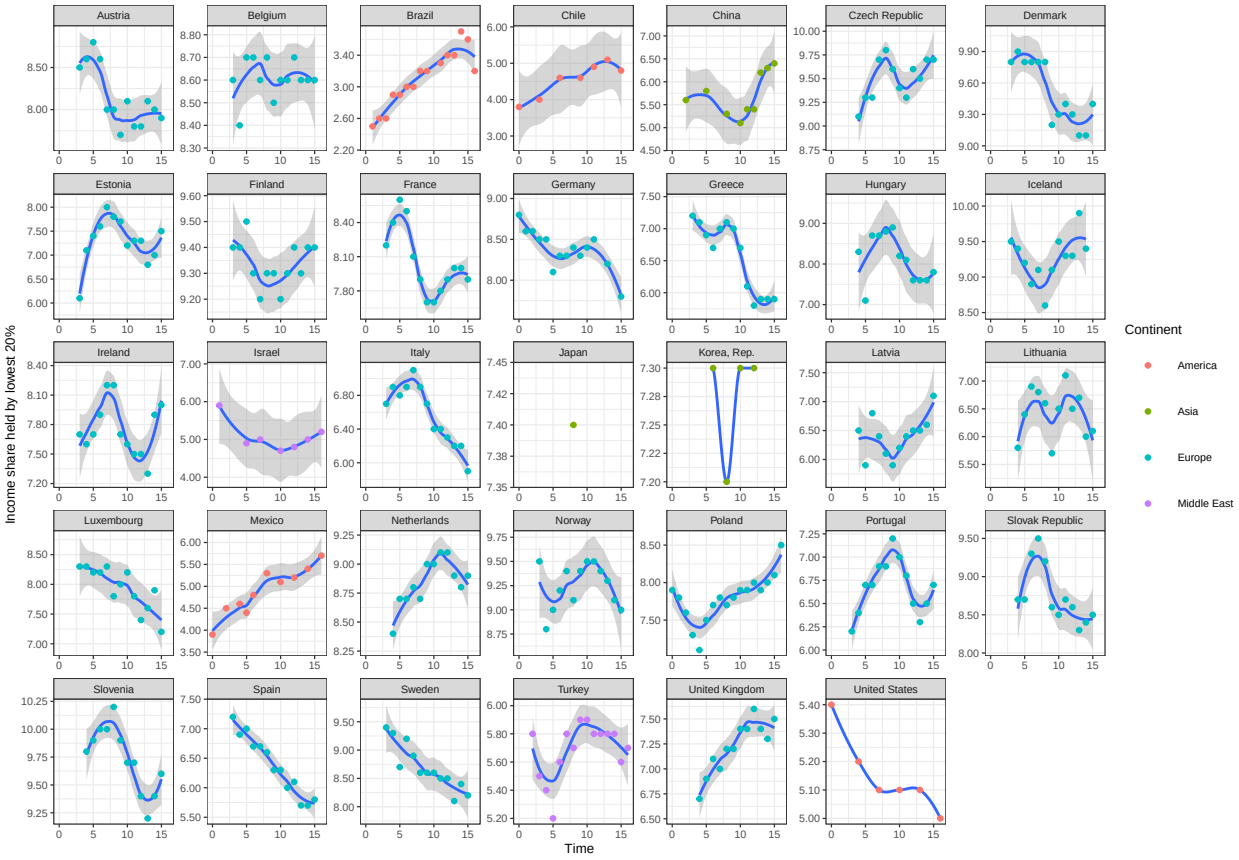



Figure 18: Income share held by lowest 20%

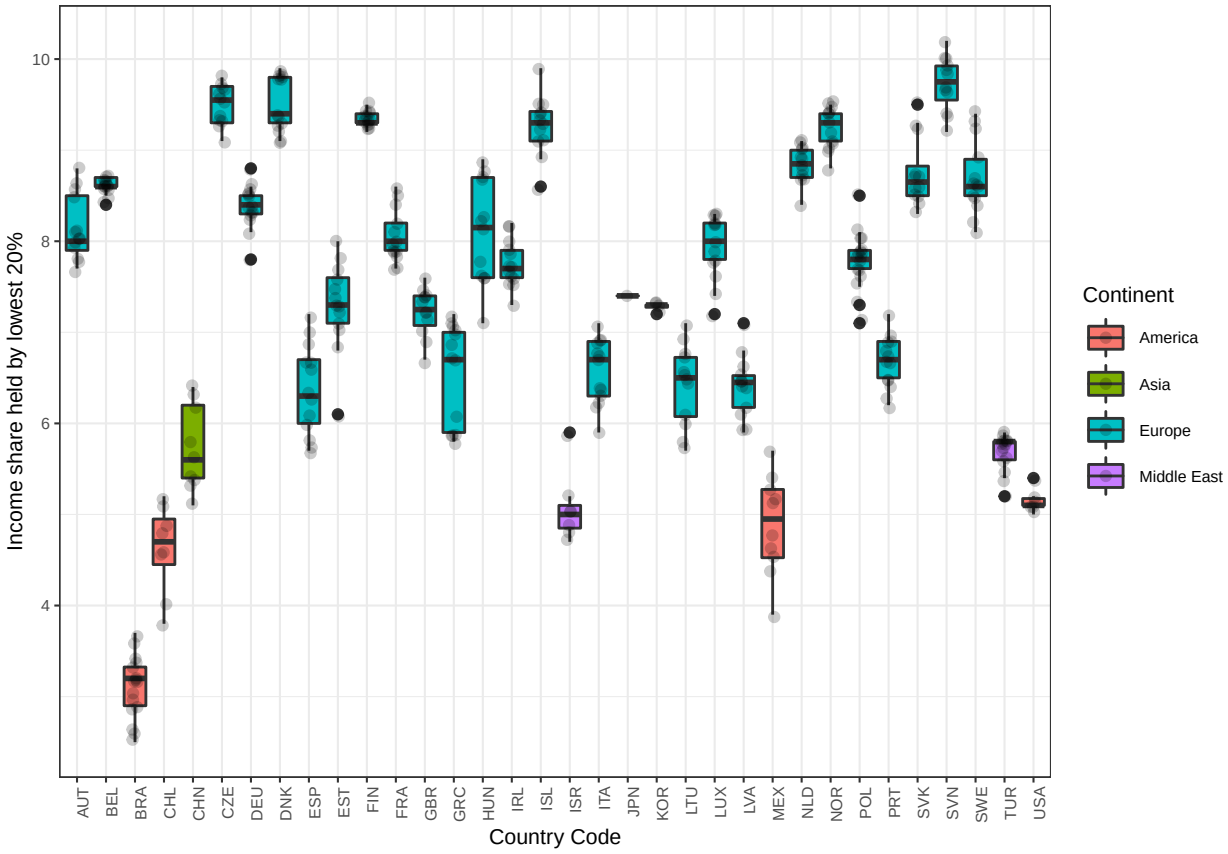



Figure 19: Income share held by lowest 20% boxplots: 2000 - 2017

**Income share held by second 20%**

Table 10: Income share held by second 20%

| Country Name | Mean | SD |
|---|---|---|
| Austria | 13 | 0.12 |
| Belgium | 14 | 0.21 |
| Brazil | 7 | 0.62 |
| Chile | 8.6 | 0.54 |
| China | 9.9 | 0.5 |
| Czech Republic | 15 | 0.1 |
| Denmark | 14 | 0.26 |
| Estonia | 13 | 0.41 |
| Finland | 14 | 0.12 |
| France | 13 | 0.24 |
| Germany | 13 | 0.19 |
| Greece | 12 | 0.28 |
| Hungary | 13 | 0.44 |
| Iceland | 14 | 0.45 |
| Ireland | 13 | 0.2 |
| Israel | 10 | 0.36 |
| Italy | 12 | 0.14 |
| Japan | 13 | NA |
| Korea, Rep. | 13 | 0.082 |
| Latvia | 12 | 0.48 |
| Lithuania | 12 | 0.39 |
| Luxembourg | 13 | 0.41 |
| Mexico | 9 | 0.6 |
| Netherlands | 14 | 0.22 |
| Norway | 14 | 0.36 |
| Poland | 12 | 0.32 |
| Portugal | 12 | 0.38 |
| Slovak Republic | 15 | 0.31 |
| Slovenia | 15 | 0.13 |
| Spain | 12 | 0.42 |
| Sweden | 14 | 0.19 |
| Turkey | 10 | 0.4 |
| United Kingdom | 12 | 0.16 |
| United States | 10 | 0.19 |

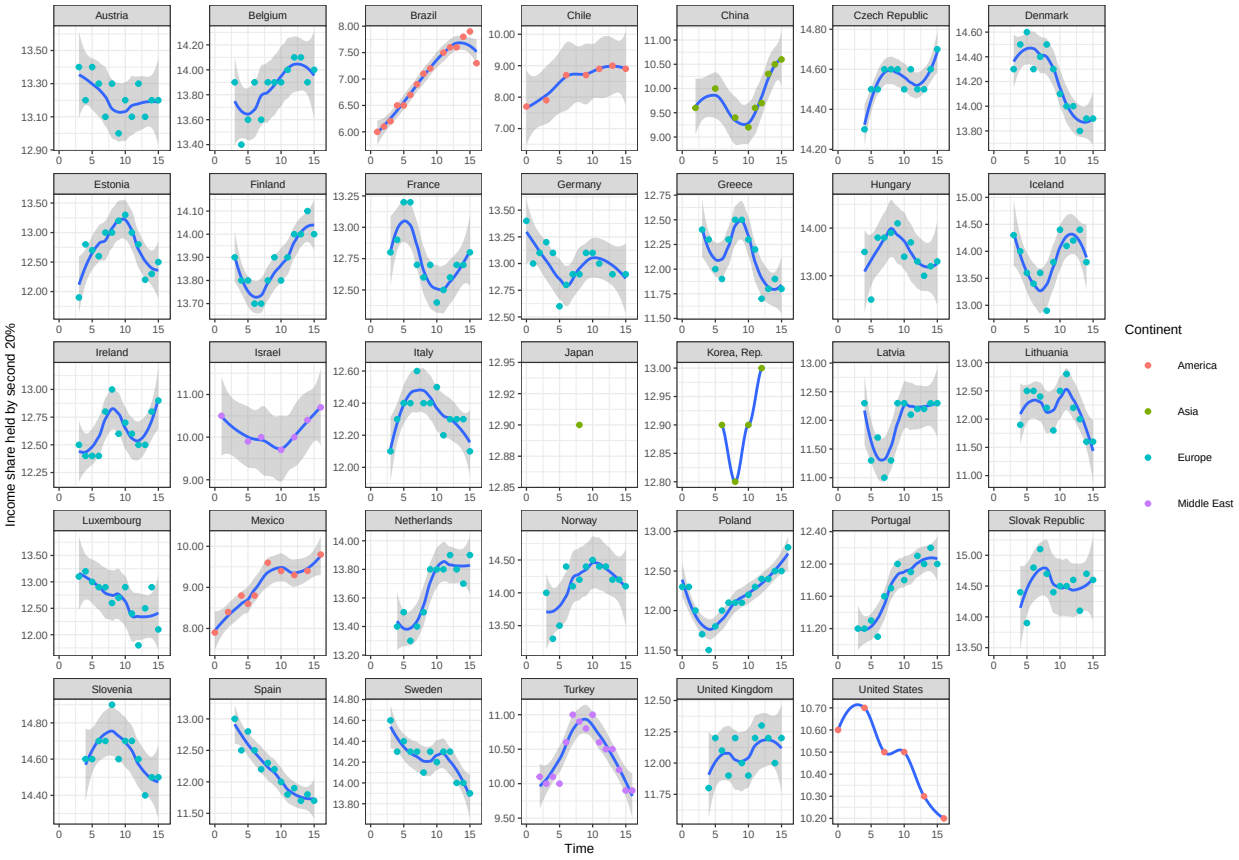



Figure 20: Income share held by second 20%

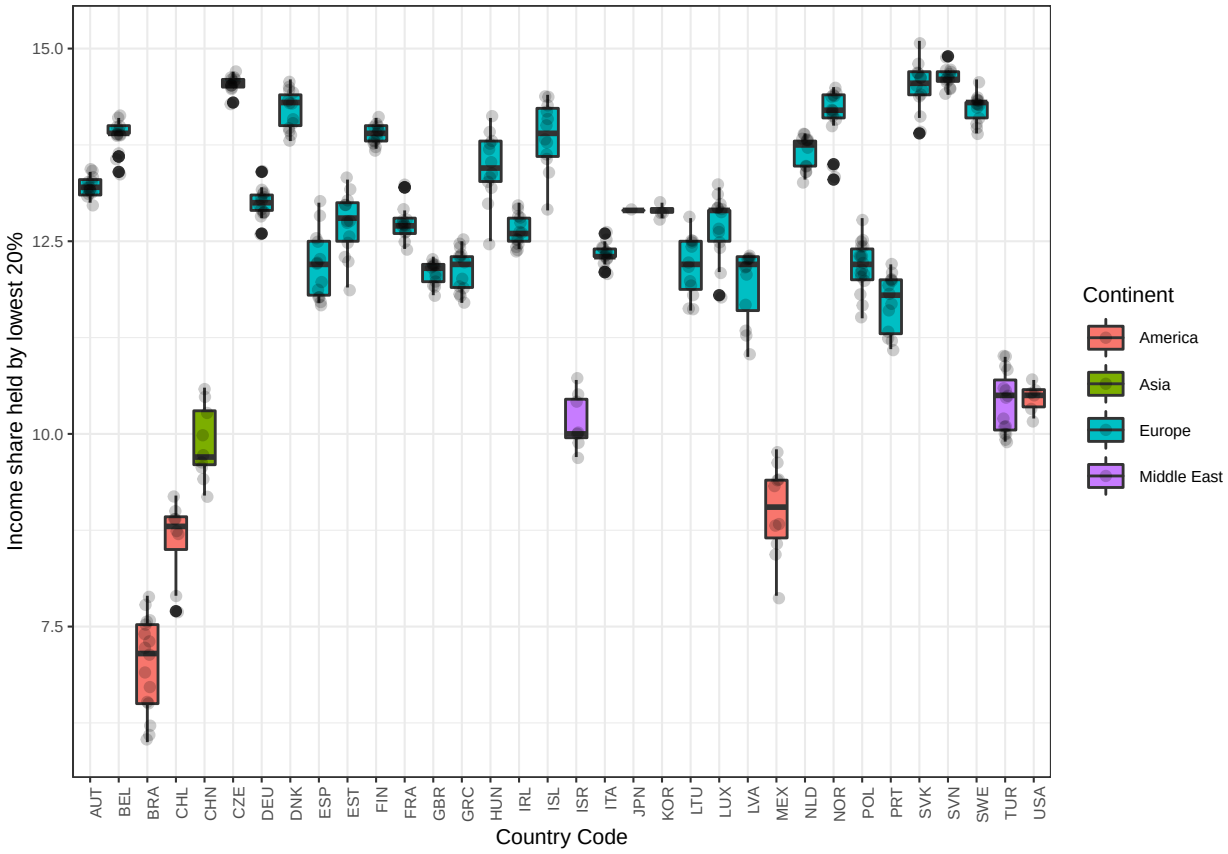
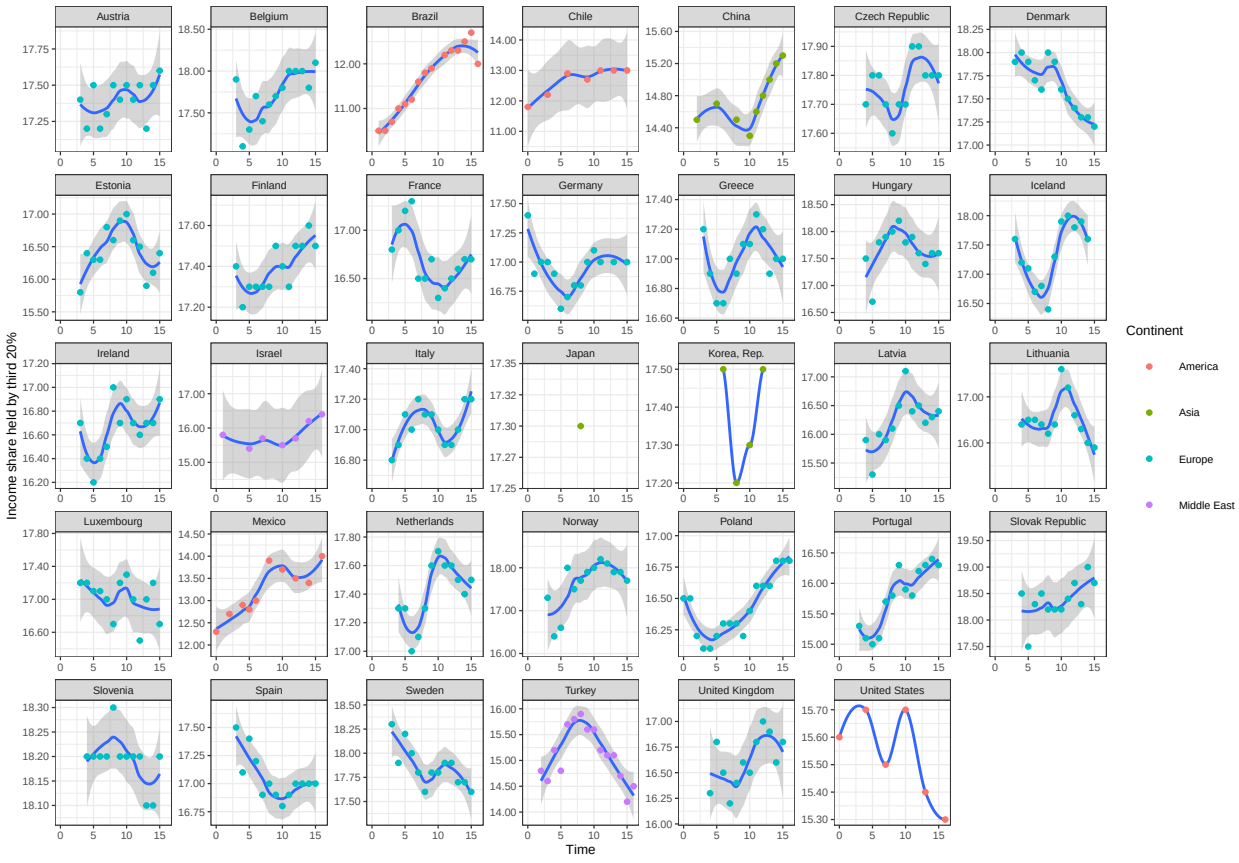



Figure 21: Income share held by second 20% boxplots: 2000 - 2017

**Income share held by third 20%**

Table 11: Income share held by third 20%

| Country Name | Mean | SD |
|---|---|---|
| Austria | 17 | 0.14 |
| Belgium | 18 | 0.3 |
| Brazil | 12 | 0.73 |
| Chile | 13 | 0.48 |
| China | 15 | 0.34 |
| Czech Republic | 18 | 0.089 |
| Denmark | 18 | 0.28 |
| Estonia | 16 | 0.36 |
| Finland | 17 | 0.12 |
| France | 17 | 0.3 |
| Germany | 17 | 0.19 |
| Greece | 17 | 0.18 |
| Hungary | 18 | 0.38 |
| Iceland | 17 | 0.53 |
| Ireland | 17 | 0.23 |
| Israel | 16 | 0.36 |
| Italy | 17 | 0.13 |
| Japan | 17 | NA |
| Korea, Rep. | 17 | 0.15 |
| Latvia | 16 | 0.44 |
| Lithuania | 16 | 0.47 |
| Luxembourg | 17 | 0.24 |
| Mexico | 13 | 0.56 |
| Netherlands | 17 | 0.22 |
| Norway | 18 | 0.56 |
| Poland | 16 | 0.24 |
| Portugal | 16 | 0.51 |
| Slovak Republic | 18 | 0.37 |
| Slovenia | 18 | 0.051 |
| Spain | 17 | 0.2 |
| Sweden | 18 | 0.21 |
| Turkey | 15 | 0.52 |
| United Kingdom | 17 | 0.25 |
| United States | 16 | 0.16 |


Austria
Belgium
Brazil
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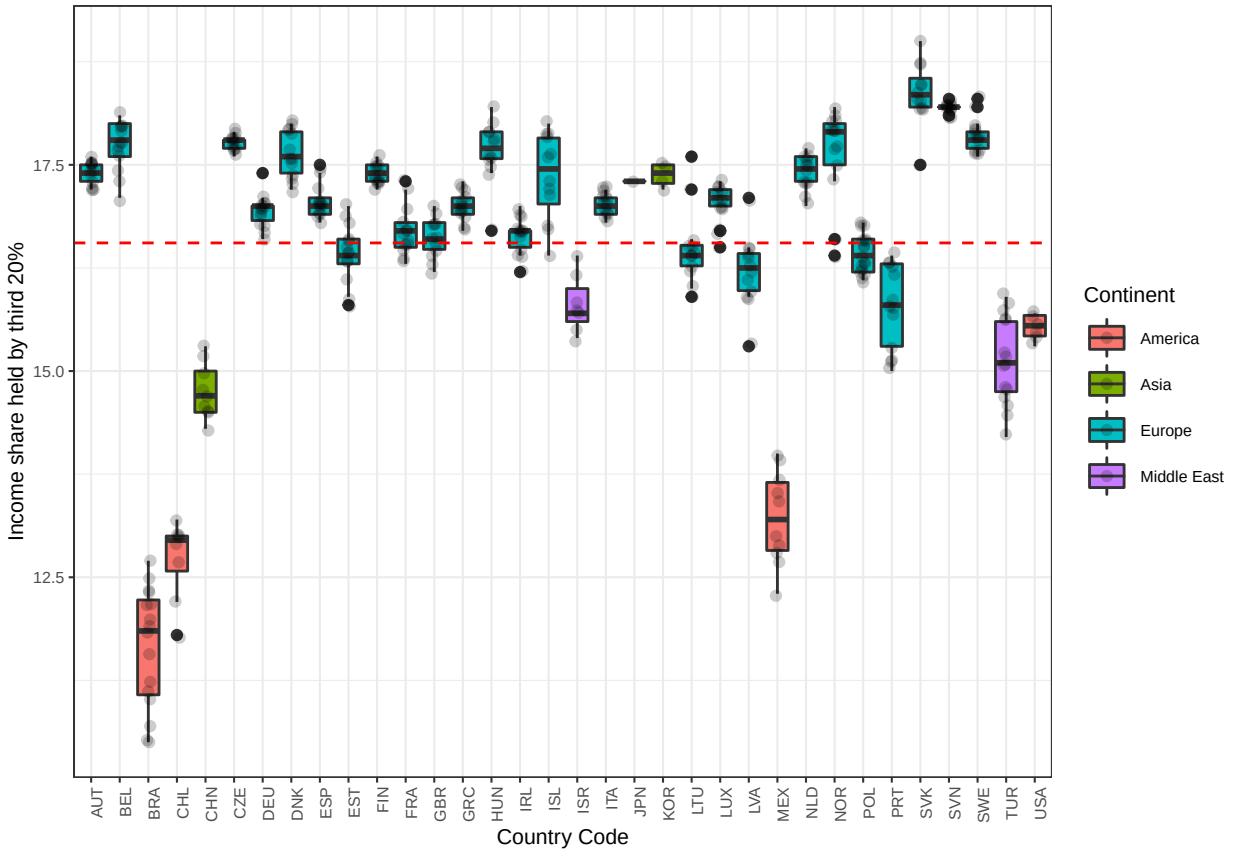
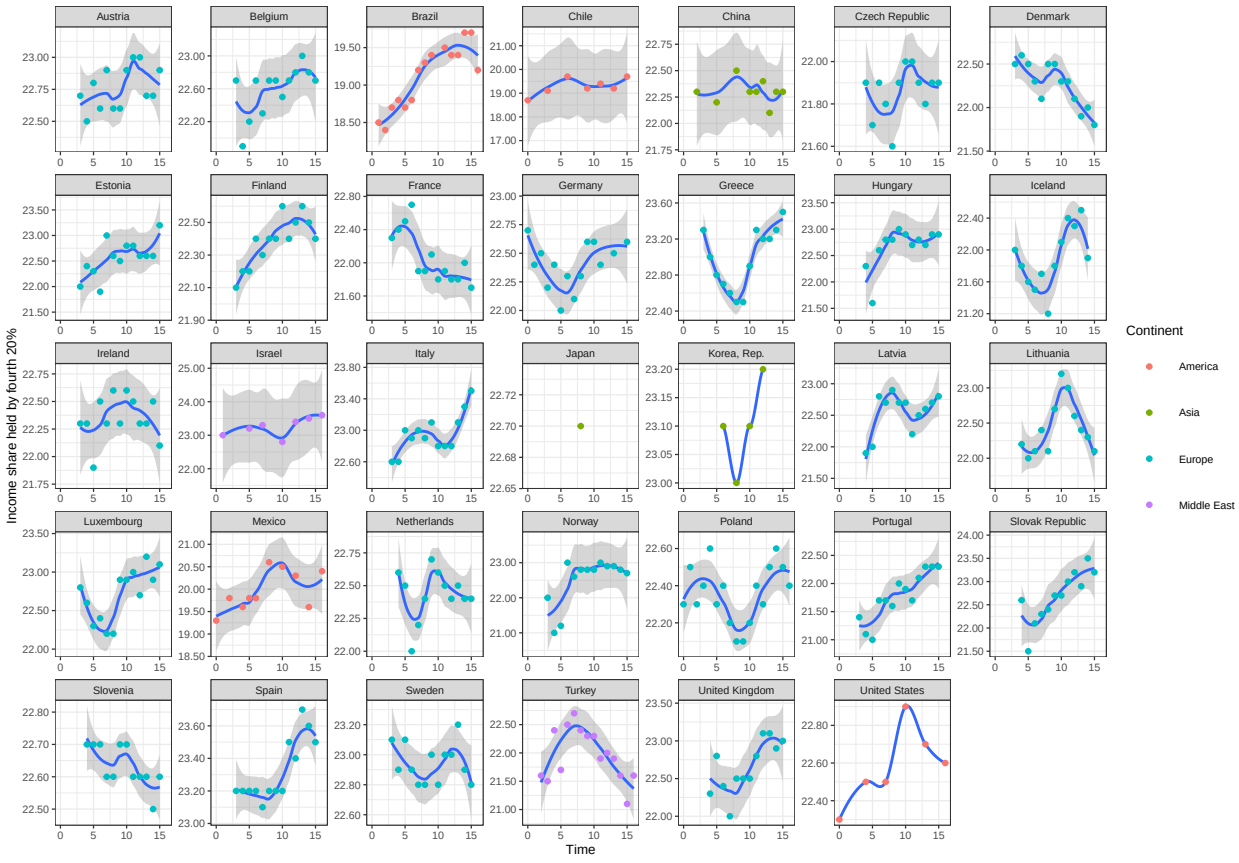
Czech Republic
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Israel
Italy
Japan
Korea, Rep.
Latvia
Lithuania
Luxembourg
Mexico
Netherlands
Norway
Poland
Portugal
Slovak Republic
Slovenia
Spain
Sweden
Turkey
United Kingdom
United States
Income share held by third 20%
Time
Continent
America
Asia
Europe
Middle East


Income share held by third 20%
17.5
15.0
12.5
AUT
BEL
BRA
CHL
CHN
CZE
DEU
DNK
ESP
EST
FIN
FRA
GBR
GRC
HUN
IRL
ISL
ISR
ITA
JPN
KOR
LTU
LUX
LVA
MEX
NLD
NOR
POL
PRT
SVK
SVN
SWE
TUR
USA
Country Code
Continent
America
Asia
Europe
Middle East

**Income share held by fourth 20%**

Table 12: Income share held by fourth 20%

| Country Name | Mean | SD |
|---|---|---|
| Austria | 23 | 0.17 |
| Belgium | 23 | 0.3 |
| Brazil | 19 | 0.42 |
| Chile | 19 | 0.34 |
| China | 22 | 0.11 |
| Czech Republic | 22 | 0.12 |
| Denmark | 22 | 0.26 |
| Estonia | 23 | 0.36 |
| Finland | 22 | 0.15 |
| France | 22 | 0.32 |
| Germany | 22 | 0.2 |
| Greece | 23 | 0.34 |
| Hungary | 23 | 0.38 |
| Iceland | 22 | 0.38 |
| Ireland | 22 | 0.2 |
| Israel | 23 | 0.28 |
| Italy | 23 | 0.26 |
| Japan | 23 | NA |
| Korea, Rep. | 23 | 0.082 |
| Latvia | 23 | 0.33 |
| Lithuania | 22 | 0.38 |
| Luxembourg | 23 | 0.34 |
| Mexico | 20 | 0.44 |
| Netherlands | 22 | 0.19 |
| Norway | 22 | 0.67 |
| Poland | 22 | 0.15 |
| Portugal | 22 | 0.43 |
| Slovak Republic | 23 | 0.55 |
| Slovenia | 23 | 0.065 |
| Spain | 23 | 0.19 |
| Sweden | 23 | 0.13 |
| Turkey | 22 | 0.45 |
| United Kingdom | 23 | 0.34 |
| United States | 23 | 0.2 |


Austria
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Czech Republic
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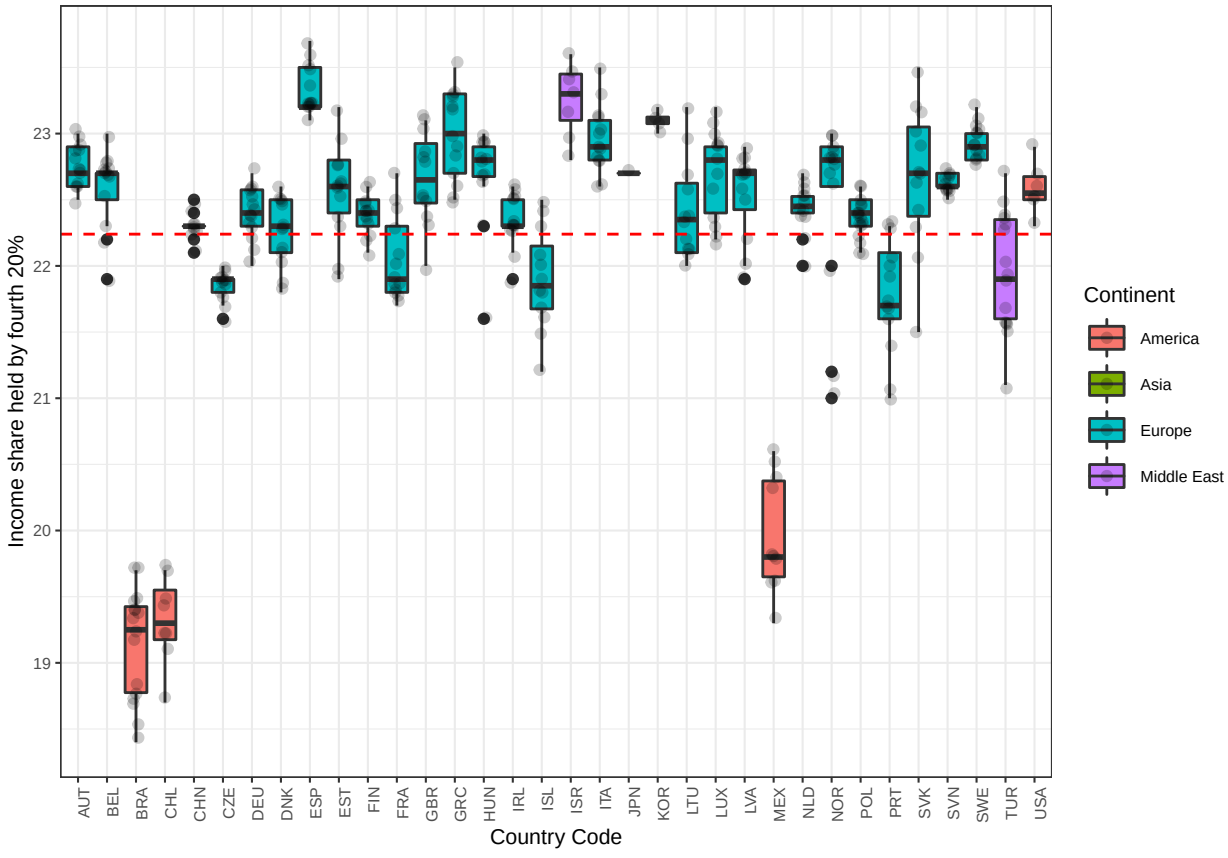
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Israel
Italy
Japan
Korea, Rep.
Latvia
Lithuania
Luxembourg
Mexico
Netherlands
Norway
Poland
Portugal
Slovak Republic
Slovenia
Spain
Sweden
Turkey
United Kingdom
United States
Income share held by fourth 20%
Time
Continent
America
Asia
Europe
Middle East


Income share held by fourth 20%
Country Code
AUT
BEL
BRA
CHL
CHN
CZE
DEU
DNK
ESP
EST
FIN
FRA
GBR
GRC
HUN
IRL
ISL
ISR
ITA
JPN
KOR
LTU
LUX
LVA
MEX
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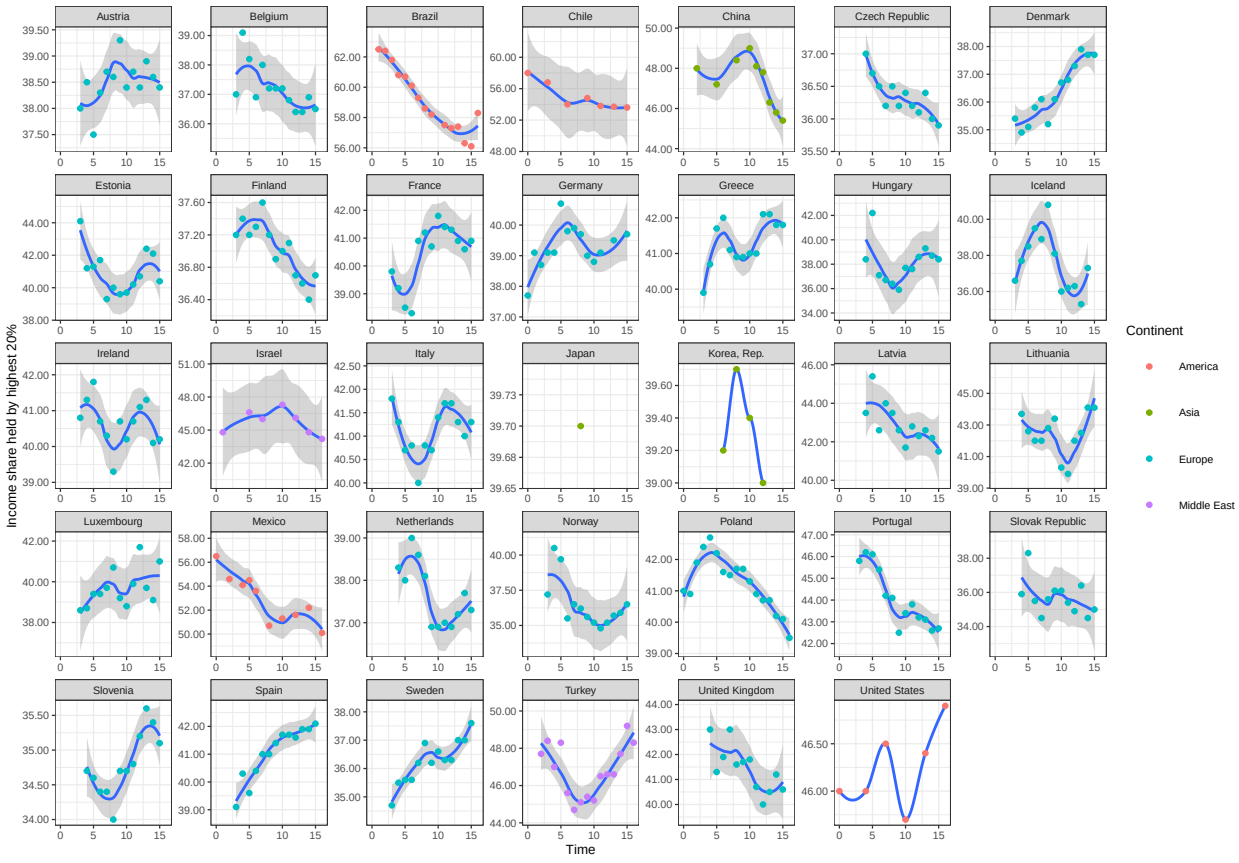
NOR
POL
PRT
SVK
SVN
SWE
TUR
USA
Continent
America
Asia
Europe
Middle East

**Income share held by highest 20%**

Table 13: Income share held by highest 20%

| Country Name | Mean | SD |
|---|---|---|
| Austria | 38 | 0.43 |
| Belgium | 37 | 0.79 |
| Brazil | 59 | 2.1 |
| Chile | 55 | 1.8 |
| China | 47 | 1.2 |
| Czech Republic | 36 | 0.31 |
| Denmark | 36 | 1.1 |
| Estonia | 41 | 1.4 |
| Finland | 37 | 0.35 |
| France | 40 | 1.1 |
| Germany | 39 | 0.7 |
| Greece | 41 | 0.66 |
| Hungary | 38 | 1.7 |
| Iceland | 38 | 1.6 |
| Ireland | 41 | 0.65 |
| Israel | 46 | 1.1 |
| Italy | 41 | 0.51 |
| Japan | 40 | NA |
| Korea, Rep. | 39 | 0.3 |
| Latvia | 43 | 1.1 |
| Lithuania | 42 | 1.3 |
| Luxembourg | 40 | 0.94 |
| Mexico | 53 | 2 |
| Netherlands | 38 | 0.73 |
| Norway | 36 | 1.7 |
| Poland | 41 | 0.86 |
| Portugal | 44 | 1.4 |
| Slovak Republic | 36 | 1 |
| Slovenia | 35 | 0.46 |
| Spain | 41 | 0.94 |
| Sweden | 36 | 0.78 |
| Turkey | 47 | 1.4 |
| United Kingdom | 41 | 0.93 |
| United States | 46 | 0.43 |


Austria
Belgium
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Chile
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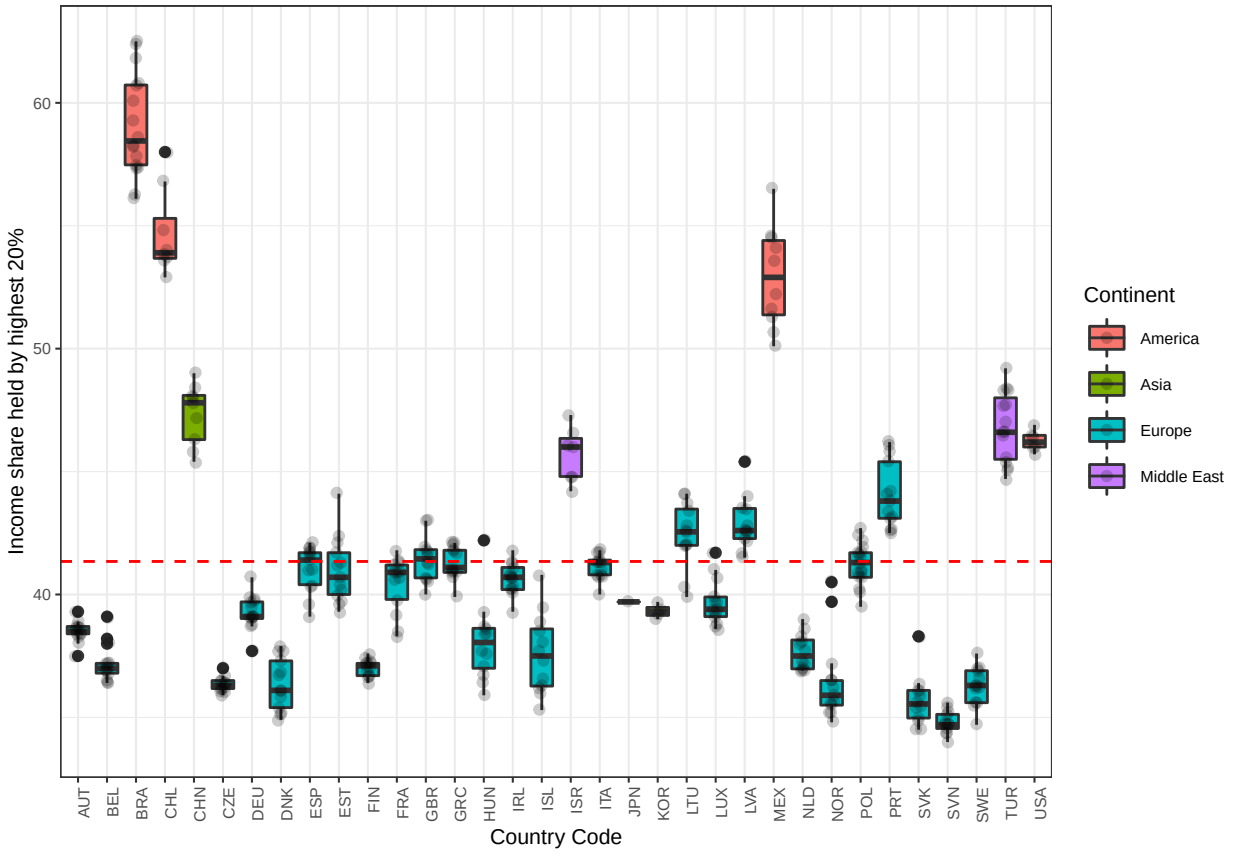
Czech Republic
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Israel
Italy
Japan
Korea, Rep.
Latvia
Lithuania
Luxembourg
Mexico
Netherlands
Norway
Poland
Portugal
Slovak Republic
Slovenia
Spain
Sweden
Turkey
United Kingdom
United States
Income share held by highest 20%
Time
Continent
America
Asia
Europe
Middle East


Income share held by highest 20%
60
50
40
AUT
BEL
BRA
CHL
CHN
CZE
DEU
DNK
ESP
EST
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FRA
GBR
GRC
HUN
IRL
ISL
ISR
ITA
JPN
KOR
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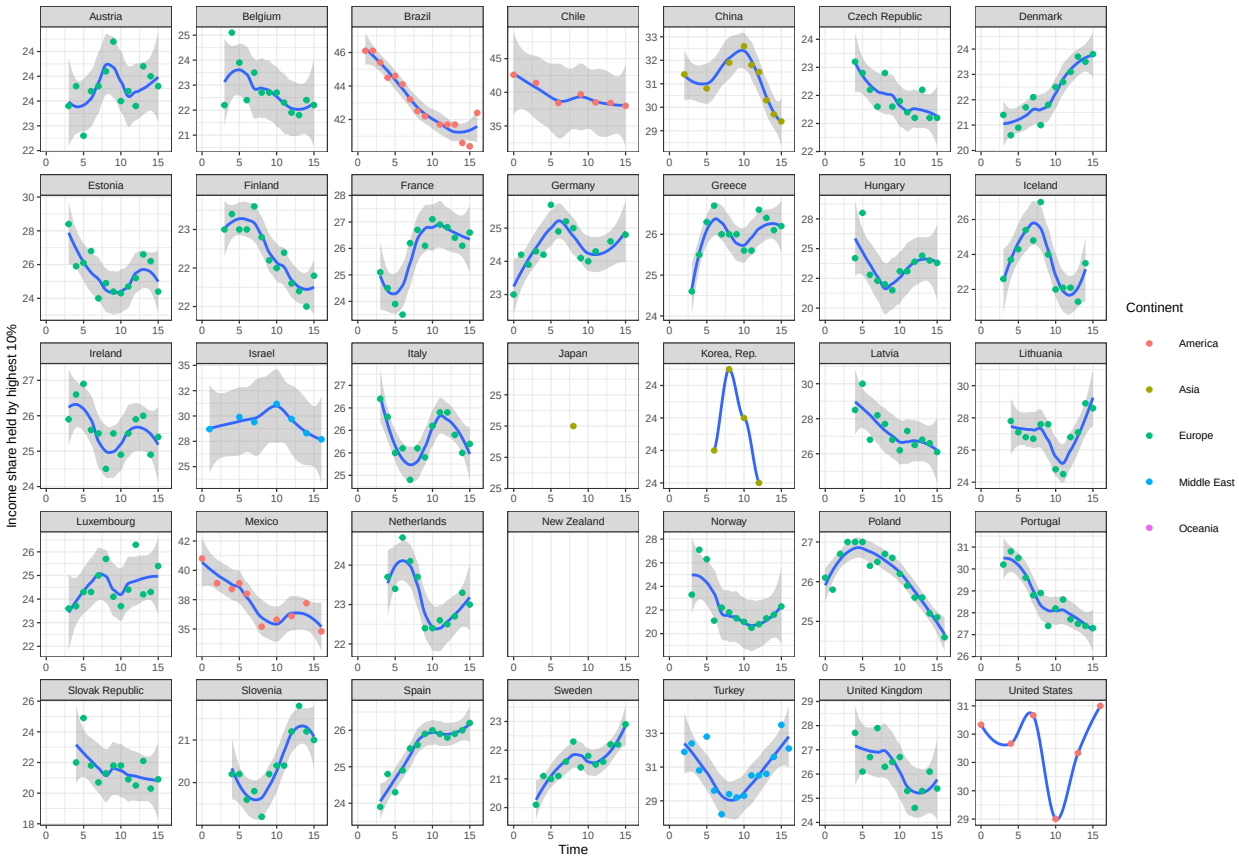
LUX
LVA
MEX
NLD
NOR
POL
PRT
SVK
SVN
SWE
TUR
USA
Country Code
Continent
America
Asia
Europe
Middle East

**Income share held by highest 10%**

Table 14: Income share held by highest 10%

| Country Name | Mean | SD |
|---|---|---|
| Austria | 24 | 0.46 |
| Belgium | 23 | 0.92 |
| Brazil | 43 | 1.8 |
| Chile | 39 | 1.7 |
| China | 31 | 1.1 |
| Czech Republic | 22 | 0.35 |
| Denmark | 22 | 1.1 |
| Estonia | 26 | 1.3 |
| Finland | 23 | 0.4 |
| France | 26 | 1.2 |
| Germany | 24 | 0.66 |
| Greece | 26 | 0.55 |
| Hungary | 24 | 1.7 |
| Iceland | 24 | 1.7 |
| Ireland | 26 | 0.66 |
| Israel | 29 | 1.2 |
| Italy | 26 | 0.51 |
| Japan | 25 | NA |
| Korea, Rep. | 24 | 0.3 |
| Latvia | 27 | 1.1 |
| Lithuania | 27 | 1.3 |
| Luxembourg | 25 | 0.83 |
| Mexico | 37 | 2 |
| Netherlands | 23 | 0.74 |
| Norway | 22 | 2.1 |
| Poland | 26 | 0.72 |
| Portugal | 29 | 1.3 |
| Slovak Republic | 22 | 1.2 |
| Slovenia | 21 | 0.37 |
| Spain | 25 | 0.73 |
| Sweden | 22 | 0.71 |
| Turkey | 31 | 1.5 |
| United Kingdom | 26 | 0.98 |
| United States | 30 | 0.43 |


Austria
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Czech Republic
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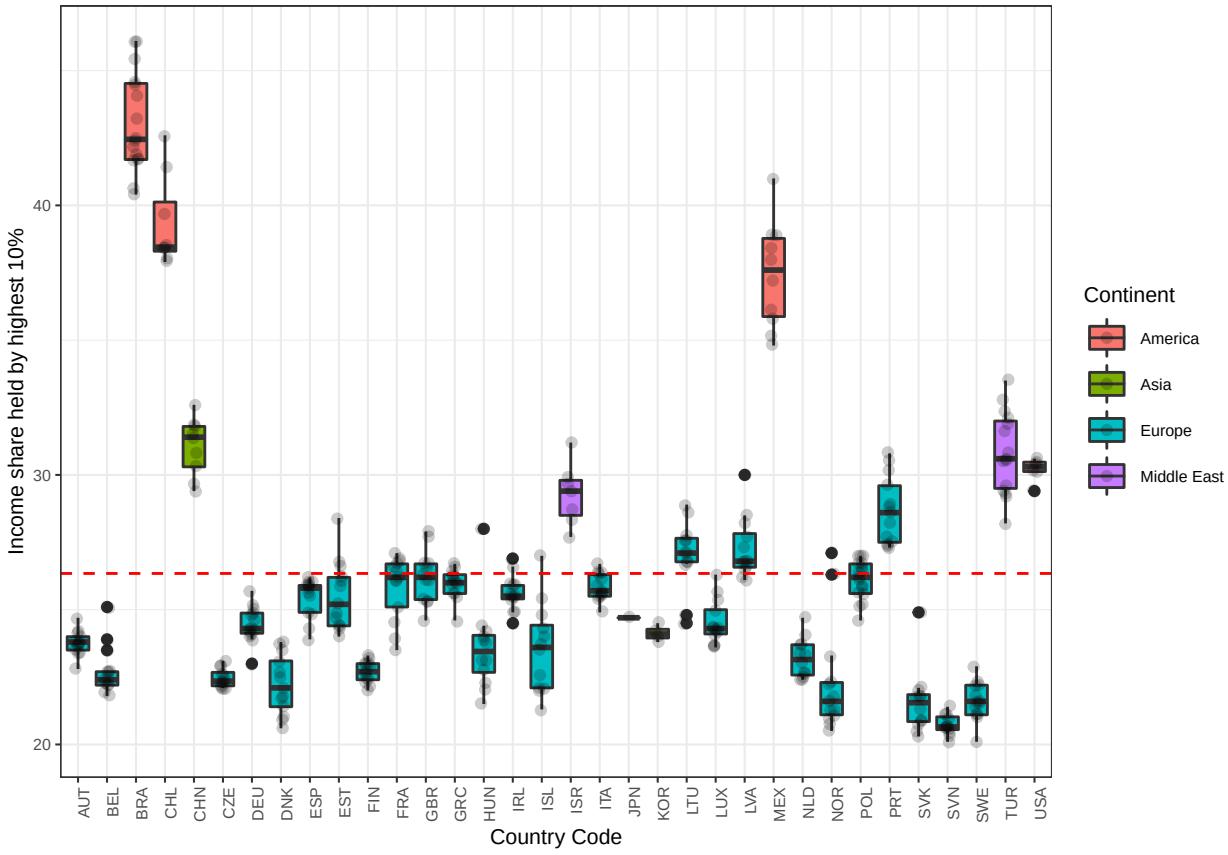
Italy
Japan
Korea, Rep.
Latvia
Lithuania
Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Republic
Slovenia
Spain
Sweden
Turkey
United Kingdom
United States
Income share held by highest 10%
Time
Continent
America
Asia
Europe
Middle East
Oceania


Income share held by highest 10%
40
30
20
AUT
BEL
BRA
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DEU
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FRA
GBR
GRC
HUN
IRL
ISL
ISR
ITA
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PRT
SVK
SVN
SWE
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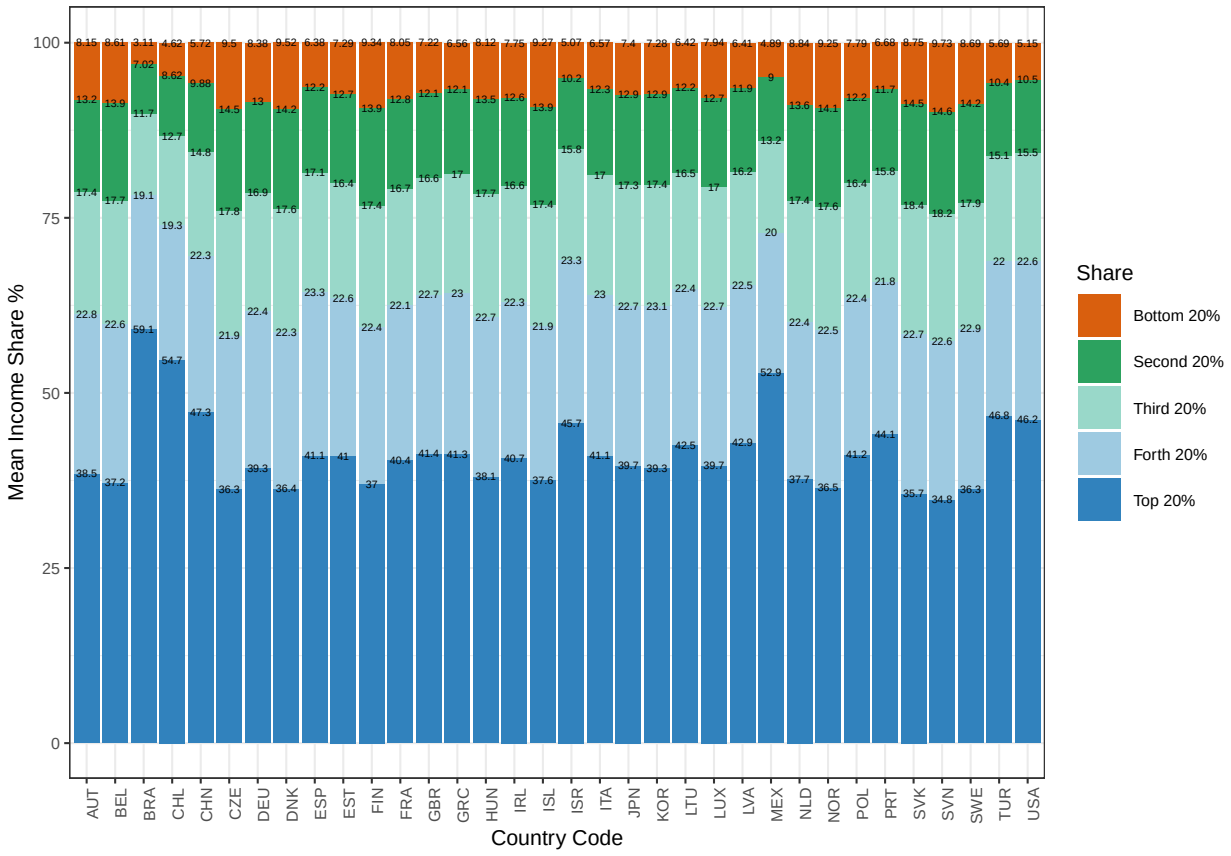
USA
Country Code
Continent
America
Asia
Europe
Middle East

## GDP & GNI per Capita estimations

Based on the **mean income share** from the period in this section I present the estimates for the **GDP per Capita** and the **GNI per Capita** for each of the **subgroups of population**.

### Mean Income Share



**Lowest 10%**

Table 15: Per Capita estimations (Lowest 10%)

| Country Name | GDP x Capita | GNI x Capita | Income share held | Pop (#) |
|---|---|---|---|---|
| Brazil | 525 | 512 | 1.01% | 19,337,835 |
| Chile | 1,046 | 989 | 1.66% | 1,671,194 |
| Mexico | 847 | 831 | 1.83% | 11,488,533 |
| United States | 4,249 | 4,275 | 1.73% | 30,454,714 |
| China | 481 | 479 | 2.28% | 132,657,611 |
| Japan | 6,048 | 6,174 | 2.70% | 12,754,602 |
| Korea, Rep. | 2,747 | 2,747 | 2.62% | 4,923,666 |
| Austria | 7,215 | 7,207 | 3.12% | 834,856 |
| Belgium | 7,317 | 7,418 | 3.35% | 1,079,022 |
| Czech Republic | 3,616 | 3,408 | 3.80% | 1,038,138 |
| Denmark | 11,152 | 11,286 | 3.79% | 551,939 |
| Estonia | 1,989 | 1,912 | 2.62% | 134,302 |
| Finland | 8,732 | 8,782 | 3.85% | 533,380 |
| France | 6,595 | 6,726 | 3.24% | 6,432,375 |
| Germany | 7,044 | 7,133 | 3.36% | 8,189,178 |
| Greece | 3,004 | 2,977 | 2.35% | 1,095,408 |
| Hungary | 2,091 | 1,995 | 3.18% | 1,000,920 |
| Iceland | 8,258 | 6,745 | 3.77% | 31,121 |
| Ireland | 8,175 | 6,819 | 3.05% | 437,875 |
| Italy | 3,982 | 3,976 | 2.22% | 5,886,456 |
| Latvia | 1,297 | 1,293 | 2.24% | 214,554 |
| Lithuania | 1,339 | NaN | 2.26% | 316,641 |
| Luxembourg | 16,577 | 14,657 | 3.21% | 50,232 |
| Netherlands | 8,798 | 8,827 | 3.52% | 1,652,699 |
| Norway | 16,044 | 16,237 | 3.65% | 483,709 |
| Poland | 1,893 | 1,968 | 3.20% | 3,811,005 |
| Portugal | 2,707 | 2,644 | 2.45% | 1,045,542 |
| Slovak Republic | 2,499 | 2,646 | 3.25% | 539,442 |
| Slovenia | 4,452 | 4,576 | 3.93% | 202,945 |
| Spain | 3,328 | 3,292 | 2.18% | 4,479,271 |
| Sweden | 8,373 | 8,525 | 3.26% | 932,468 |
| United Kingdom | 5,566 | 5,563 | 2.81% | 6,216,037 |
| Israel | 2,832 | 2,777 | 1.87% | 744,275 |
| Turkey | 1,182 | 1,168 | 2.14% | 7,140,915 |

Table 15 allows to see that the impact of Gross National Income is bigger than the percentage of income share held by population. For example, zooming Table 15 it is possible to see that there is a clear difference between income share held by lowest 10th percent of population in America and Europe. In Europe all of the countries presented an average for the current century bigger than 3% rather in America all of them presented an average lesser than 2%. More precisely for Mexico's case it is possible to see that the income share held by lowest 10th percent of population is slighly higher (as a percentage) than the one of the United States. However, given their GNI difference in reallity a USA citizen lifes with an average of $5.14 = (4,275/831)$ times more annual income than a Mexican citizen (eventhough as a percentage of their respectively GNI Mexico's income share held by lowest 10th percent is 10 percentual points higher than the one of the United States!).

**Lowest 20% (1st quintile)**

Table 16: Per Capita estimations (Lowest 20%)

| Country Name | GDP x Capita | GNI x Capita | Income share held | Pop (#) |
|---|---|---|---|---|
| Brazil | 1,620 | 1,581 | 3.11% | 38,675,670 |
| Chile | 2,910 | 2,752 | 4.62% | 3,342,389 |
| Mexico | 2,264 | 2,219 | 4.89% | 22,977,065 |
| United States | 12,625 | 12,700 | 5.15% | 60,909,429 |
| China | 1,208 | 1,204 | 5.72% | 265,315,222 |
| Japan | 16,576 | 16,921 | 7.40% | 25,509,203 |
| Korea, Rep. | 7,612 | 7,614 | 7.28% | 9,847,332 |
| Austria | 18,819 | 18,799 | 8.15% | 1,669,713 |
| Belgium | 18,779 | 19,038 | 8.61% | 2,158,043 |
| Czech Republic | 9,040 | 8,519 | 9.50% | 2,076,277 |
| Denmark | 27,982 | 28,317 | 9.52% | 1,103,878 |
| Estonia | 5,547 | 5,331 | 7.29% | 268,604 |
| Finland | 21,201 | 21,323 | 9.34% | 1,066,761 |
| France | 16,401 | 16,727 | 8.05% | 12,864,749 |
| Germany | 17,543 | 17,765 | 8.38% | 16,378,355 |
| Greece | 8,373 | 8,300 | 6.56% | 2,190,816 |
| Hungary | 5,344 | 5,099 | 8.12% | 2,001,840 |
| Iceland | 20,272 | 16,556 | 9.27% | 62,243 |
| Ireland | 20,757 | 17,314 | 7.75% | 875,749 |
| Italy | 11,808 | 11,790 | 6.57% | 11,772,912 |
| Latvia | 3,709 | 3,697 | 6.41% | 429,109 |
| Lithuania | 3,810 | NaN | 6.42% | 633,282 |
| Luxembourg | 41,026 | 36,273 | 7.94% | 100,465 |
| Netherlands | 22,067 | 22,139 | 8.84% | 3,305,397 |
| Norway | 40,685 | 41,175 | 9.25% | 967,417 |
| Poland | 4,610 | 4,794 | 7.79% | 7,622,011 |
| Portugal | 7,366 | 7,194 | 6.68% | 2,091,085 |
| Slovak Republic | 6,727 | 7,123 | 8.75% | 1,078,884 |
| Slovenia | 11,018 | 11,323 | 9.73% | 405,891 |
| Spain | 9,762 | 9,656 | 6.38% | 8,958,543 |
| Sweden | 22,315 | 22,720 | 8.69% | 1,864,936 |
| United Kingdom | 14,319 | 14,312 | 7.22% | 12,432,073 |
| Israel | 7,674 | 7,526 | 5.07% | 1,488,550 |
| Turkey | 3,140 | 3,104 | 5.69% | 14,281,830 |

**Second 20% (2nd quintile)**

Table 17: Per Capita estimations (Second 20%)

| Country Name | GDP x Capita | GNI x Capita | Income share held | Pop (#) |
|---|---|---|---|---|
| Brazil | 3,660 | 3,573 | 7.02% | 38,675,670 |
| Chile | 5,426 | 5,131 | 8.62% | 3,342,389 |
| Mexico | 4,166 | 4,085 | 9.00% | 22,977,065 |
| United States | 25,658 | 25,812 | 10.47% | 60,909,429 |
| China | 2,086 | 2,078 | 9.88% | 265,315,222 |
| Japan | 28,896 | 29,498 | 12.90% | 25,509,203 |
| Korea, Rep. | 13,498 | 13,500 | 12.90% | 9,847,332 |
| Austria | 30,530 | 30,498 | 13.22% | 1,669,713 |
| Belgium | 30,240 | 30,658 | 13.86% | 2,158,043 |
| Czech Republic | 13,838 | 13,040 | 14.54% | 2,076,277 |
| Denmark | 41,757 | 42,259 | 14.20% | 1,103,878 |
| Estonia | 9,671 | 9,295 | 12.72% | 268,604 |
| Finland | 31,504 | 31,686 | 13.88% | 1,066,761 |
| France | 25,972 | 26,489 | 12.75% | 12,864,749 |
| Germany | 27,220 | 27,564 | 13.00% | 16,378,355 |
| Greece | 15,469 | 15,334 | 12.12% | 2,190,816 |
| Hungary | 8,861 | 8,455 | 13.46% | 2,001,840 |
| Iceland | 30,354 | 24,790 | 13.88% | 62,243 |
| Ireland | 33,792 | 28,187 | 12.62% | 875,749 |
| Italy | 22,164 | 22,131 | 12.33% | 11,772,912 |
| Latvia | 6,911 | 6,890 | 11.94% | 429,109 |
| Lithuania | 7,215 | NaN | 12.17% | 633,282 |
| Luxembourg | 65,594 | 57,995 | 12.69% | 100,465 |
| Netherlands | 34,068 | 34,180 | 13.65% | 3,305,397 |
| Norway | 62,178 | 62,927 | 14.13% | 967,417 |
| Poland | 7,202 | 7,489 | 12.18% | 7,622,011 |
| Portugal | 12,908 | 12,606 | 11.70% | 2,091,085 |
| Slovak Republic | 11,167 | 11,824 | 14.52% | 1,078,884 |
| Slovenia | 16,555 | 17,014 | 14.62% | 405,891 |
| Spain | 18,630 | 18,428 | 12.18% | 8,958,543 |
| Sweden | 36,534 | 37,197 | 14.23% | 1,864,936 |
| United Kingdom | 23,948 | 23,936 | 12.08% | 12,432,073 |
| Israel | 15,392 | 15,094 | 10.17% | 1,488,550 |
| Turkey | 5,746 | 5,680 | 10.41% | 14,281,830 |

**Third 20% (3rd quintile)**

Table 18: Per Capita estimations (Third 20%)

| Country Name | GDP x Capita | GNI x Capita | Income share held | Pop (#) |
|---|---|---|---|---|
| Brazil | 6,078 | 5,933 | 11.66% | 38,675,670 |
| Chile | 8,006 | 7,571 | 12.72% | 3,342,389 |
| Mexico | 6,119 | 6,000 | 13.22% | 22,977,065 |
| United States | 38,079 | 38,307 | 15.53% | 60,909,429 |
| China | 3,118 | 3,107 | 14.77% | 265,315,222 |
| Japan | 38,752 | 39,559 | 17.30% | 25,509,203 |
| Korea, Rep. | 18,181 | 18,183 | 17.37% | 9,847,332 |
| Austria | 40,197 | 40,155 | 17.40% | 1,669,713 |
| Belgium | 38,665 | 39,199 | 17.72% | 2,158,043 |
| Czech Republic | 16,907 | 15,932 | 17.77% | 2,076,277 |
| Denmark | 51,869 | 52,491 | 17.64% | 1,103,878 |
| Estonia | 12,497 | 12,011 | 16.43% | 268,604 |
| Finland | 39,485 | 39,714 | 17.39% | 1,066,761 |
| France | 34,023 | 34,701 | 16.71% | 12,864,749 |
| Germany | 35,475 | 35,924 | 16.94% | 16,378,355 |
| Greece | 21,692 | 21,503 | 17.00% | 2,190,816 |
| Hungary | 11,632 | 11,099 | 17.67% | 2,001,840 |
| Iceland | 37,974 | 31,013 | 17.36% | 62,243 |
| Ireland | 44,562 | 37,170 | 16.65% | 875,749 |
| Italy | 30,612 | 30,566 | 17.03% | 11,772,912 |
| Latvia | 9,385 | 9,356 | 16.22% | 429,109 |
| Lithuania | 9,785 | NaN | 16.50% | 633,282 |
| Luxembourg | 87,936 | 77,748 | 17.02% | 100,465 |
| Netherlands | 43,448 | 43,590 | 17.41% | 3,305,397 |
| Norway | 77,579 | 78,513 | 17.63% | 967,417 |
| Poland | 9,718 | 10,105 | 16.43% | 7,622,011 |
| Portugal | 17,414 | 17,007 | 15.78% | 2,091,085 |
| Slovak Republic | 14,127 | 14,958 | 18.37% | 1,078,884 |
| Slovenia | 20,592 | 21,164 | 18.19% | 405,891 |
| Spain | 26,075 | 25,792 | 17.05% | 8,958,543 |
| Sweden | 45,855 | 46,687 | 17.86% | 1,864,936 |
| United Kingdom | 32,933 | 32,916 | 16.62% | 12,432,073 |
| Israel | 23,930 | 23,468 | 15.81% | 1,488,550 |
| Turkey | 8,348 | 8,252 | 15.12% | 14,281,830 |

**Fourth 20% (4th quintile)**

Table 19: Per Capita estimations (Fourth 20%)

| Country Name | GDP x Capita | GNI x Capita | Income share held | Pop (#) |
|---|---|---|---|---|
| Brazil | 9,980 | 9,741 | 19.14% | 38,675,670 |
| Chile | 12,150 | 11,490 | 19.31% | 3,342,389 |
| Mexico | 9,244 | 9,064 | 19.97% | 22,977,065 |
| United States | 55,361 | 55,693 | 22.58% | 60,909,429 |
| China | 4,708 | 4,692 | 22.30% | 265,315,222 |
| Japan | 50,848 | 51,908 | 22.70% | 25,509,203 |
| Korea, Rep. | 24,171 | 24,175 | 23.10% | 9,847,332 |
| Austria | 52,584 | 52,528 | 22.76% | 1,669,713 |
| Belgium | 49,287 | 49,969 | 22.59% | 2,158,043 |
| Czech Republic | 20,800 | 19,602 | 21.86% | 2,076,277 |
| Denmark | 65,464 | 66,249 | 22.26% | 1,103,878 |
| Estonia | 17,161 | 16,493 | 22.56% | 268,604 |
| Finland | 50,819 | 51,113 | 22.38% | 1,066,761 |
| France | 44,925 | 45,820 | 22.06% | 12,864,749 |
| Germany | 46,901 | 47,495 | 22.40% | 16,378,355 |
| Greece | 29,328 | 29,073 | 22.98% | 2,190,816 |
| Hungary | 14,924 | 14,240 | 22.67% | 2,001,840 |
| Iceland | 47,910 | 39,127 | 21.90% | 62,243 |
| Ireland | 59,821 | 49,898 | 22.35% | 875,749 |
| Italy | 41,258 | 41,197 | 22.95% | 11,772,912 |
| Latvia | 13,045 | 13,005 | 22.54% | 429,109 |
| Lithuania | 13,299 | NaN | 22.42% | 633,282 |
| Luxembourg | 117,353 | 103,758 | 22.71% | 100,465 |
| Netherlands | 55,989 | 56,173 | 22.43% | 3,305,397 |
| Norway | 99,004 | 100,196 | 22.50% | 967,417 |
| Poland | 13,225 | 13,751 | 22.36% | 7,622,011 |
| Portugal | 24,025 | 23,463 | 21.78% | 2,091,085 |
| Slovak Republic | 17,433 | 18,458 | 22.68% | 1,078,884 |
| Slovenia | 25,620 | 26,331 | 22.63% | 405,891 |
| Spain | 35,660 | 35,273 | 23.32% | 8,958,543 |
| Sweden | 58,908 | 59,977 | 22.95% | 1,864,936 |
| United Kingdom | 44,907 | 44,884 | 22.66% | 12,432,073 |
| Israel | 35,193 | 34,514 | 23.26% | 1,488,550 |
| Turkey | 12,128 | 11,989 | 21.97% | 14,281,830 |

**Highest 20% (5th quintile)**

Table 20: Per Capita estimations (Fifth 20%)

| Country Name | GDP x Capita | GNI x Capita | Income share held | Pop (#) |
|---|---|---|---|---|
| Brazil | 30,803 | 30,066 | 59.1% | 38,675,670 |
| Chile | 34,414 | 32,543 | 54.7% | 3,342,389 |
| Mexico | 24,496 | 24,019 | 52.9% | 22,977,065 |
| United States | 113,378 | 114,057 | 46.2% | 60,909,429 |
| China | 9,994 | 9,959 | 47.3% | 265,315,222 |
| Japan | 88,928 | 90,781 | 39.7% | 25,509,203 |
| Korea, Rep. | 41,149 | 41,155 | 39.3% | 9,847,332 |
| Austria | 88,907 | 88,814 | 38.5% | 1,669,713 |
| Belgium | 81,189 | 82,311 | 37.2% | 2,158,043 |
| Czech Republic | 34,582 | 32,590 | 36.3% | 2,076,277 |
| Denmark | 106,927 | 108,210 | 36.4% | 1,103,878 |
| Estonia | 31,167 | 29,955 | 41.0% | 268,604 |
| Finland | 84,052 | 84,538 | 37.0% | 1,066,761 |
| France | 82,316 | 83,956 | 40.4% | 12,864,749 |
| Germany | 82,242 | 83,283 | 39.3% | 16,378,355 |
| Greece | 52,709 | 52,250 | 41.3% | 2,190,816 |
| Hungary | 25,075 | 23,926 | 38.1% | 2,001,840 |
| Iceland | 82,257 | 67,178 | 37.6% | 62,243 |
| Ireland | 108,830 | 90,779 | 40.7% | 875,749 |
| Italy | 73,902 | 73,793 | 41.1% | 11,772,912 |
| Latvia | 24,822 | 24,746 | 42.9% | 429,109 |
| Lithuania | 25,174 | NaN | 42.5% | 633,282 |
| Luxembourg | 205,090 | 181,331 | 39.7% | 100,465 |
| Netherlands | 93,988 | 94,296 | 37.7% | 3,305,397 |
| Norway | 160,607 | 162,540 | 36.5% | 967,417 |
| Poland | 24,390 | 25,361 | 41.2% | 7,622,011 |
| Portugal | 48,636 | 47,499 | 44.1% | 2,091,085 |
| Slovak Republic | 27,435 | 29,047 | 35.7% | 1,078,884 |
| Slovenia | 39,391 | 40,485 | 34.8% | 405,891 |
| Spain | 62,769 | 62,089 | 41.1% | 8,958,543 |
| Sweden | 93,111 | 94,801 | 36.3% | 1,864,936 |
| United Kingdom | 82,134 | 82,092 | 41.4% | 12,432,073 |
| Israel | 69,132 | 67,798 | 45.7% | 1,488,550 |
| Turkey | 25,850 | 25,553 | 46.8% | 14,281,830 |

**Highest 10%**

Table 21: Per Capita estimations (Highest 10%)

| Country Name | GDP x Capita | GNI x Capita | Income share held | Pop (#) |
|---|---|---|---|---|
| Brazil | 44,918 | 43,845 | 43.1% | 19,337,835 |
| Chile | 49,529 | 46,837 | 39.4% | 1,671,194 |
| Mexico | 34,652 | 33,977 | 37.4% | 11,488,533 |
| United States | 148,065 | 148,952 | 30.2% | 30,454,714 |
| China | 13,109 | 13,064 | 31.0% | 132,657,611 |
| Japan | 110,656 | 112,962 | 24.7% | 12,754,602 |
| Korea, Rep. | 50,487 | 50,495 | 24.1% | 4,923,666 |
| Austria | 109,788 | 109,672 | 23.8% | 834,856 |
| Belgium | 99,280 | 100,652 | 22.8% | 1,079,022 |
| Czech Republic | 42,758 | 40,294 | 22.5% | 1,038,138 |
| Denmark | 130,656 | 132,224 | 22.2% | 551,939 |
| Estonia | 38,838 | 37,327 | 25.5% | 134,302 |
| Finland | 103,070 | 103,666 | 22.7% | 533,380 |
| France | 105,233 | 107,330 | 25.8% | 6,432,375 |
| Germany | 102,358 | 103,653 | 24.4% | 8,189,178 |
| Greece | 66,274 | 65,697 | 26.0% | 1,095,408 |
| Hungary | 31,067 | 29,643 | 23.6% | 1,000,920 |
| Iceland | 103,112 | 84,210 | 23.6% | 31,121 |
| Ireland | 137,186 | 114,431 | 25.6% | 437,875 |
| Italy | 92,913 | 92,776 | 25.8% | 5,886,456 |
| Latvia | 31,589 | 31,491 | 27.3% | 214,554 |
| Lithuania | 32,053 | NaN | 27.0% | 316,641 |
| Luxembourg | 253,630 | 224,247 | 24.5% | 50,232 |
| Netherlands | 115,847 | 116,227 | 23.2% | 1,652,699 |
| Norway | 196,722 | 199,091 | 22.4% | 483,709 |
| Poland | 30,896 | 32,127 | 26.1% | 3,811,005 |
| Portugal | 63,293 | 61,812 | 28.7% | 1,045,542 |
| Slovak Republic | 33,188 | 35,138 | 21.6% | 539,442 |
| Slovenia | 46,900 | 48,202 | 20.7% | 202,945 |
| Spain | 77,788 | 76,945 | 25.4% | 4,479,271 |
| Sweden | 110,904 | 112,917 | 21.6% | 932,468 |
| United Kingdom | 103,919 | 103,865 | 26.2% | 6,216,037 |
| Israel | 88,588 | 86,878 | 29.3% | 744,275 |
| Turkey | 34,040 | 33,649 | 30.8% | 7,140,915 |

## GDP and Population

In this section I simulate scenarios based on the **GDP annual growth rate**, current **GDP** level, **Population** and **Population growth**. The main idea on this part of the text is to see how much time would it take for less develop countries at the *current rates* to get to a level of the develpoment - meassure by the **GDP per capita** - similar to the more develop ones. From that based scenario I will perform simulations based on different GDP **GDP annual growth rate**s and see how the dinamycs behaive.

First let's have a summary of what we just saw in the prior sections. In Table 22 I report the averages for the current century.

Table 22: Summary of Indicators 2000 - 2017

| Country Name | GDP per capita | GDP '000 M | Pop (#) |
|---|---|---|---|
| Brazil | 10,377 | 2,017 | 193,378,349 |
| Chile | 12,486 | 210 | 16,711,945 |
| Mexico | 9,235 | 1,064 | 114,885,325 |
| United States | 48,933 | 14,931 | 304,547,144 |
| China | 4,174 | 5,602 | 1,326,576,111 |
| Japan | 44,802 | 5,714 | 127,546,017 |
| Korea, Rep. | 20,835 | 1,030 | 49,236,661 |
| Austria | 46,150 | 386 | 8,348,563 |
| Belgium | 43,577 | 471 | 10,790,215 |
| Czech Republic | 19,004 | 198 | 10,381,383 |
| Denmark | 58,782 | 325 | 5,519,388 |
| Estonia | 15,259 | 20 | 1,343,018 |
| Finland | 45,378 | 242 | 5,333,805 |
| France | 40,695 | 2,620 | 64,323,747 |
| Germany | 41,889 | 3,429 | 81,891,776 |
| Greece | 25,502 | 280 | 10,954,080 |
| Hungary | 13,184 | 132 | 10,009,199 |
| Iceland | 43,528 | 14 | 311,214 |
| Ireland | 53,111 | 234 | 4,378,747 |
| Italy | 35,973 | 2,116 | 58,864,560 |
| Latvia | 11,716 | 25 | 2,145,543 |
| Lithuania | 12,052 | 38 | 3,166,409 |
| Luxembourg | 103,053 | 52 | 502,324 |
| Netherlands | 49,874 | 825 | 16,526,986 |
| Norway | 87,899 | 426 | 4,837,087 |
| Poland | 11,835 | 451 | 38,110,054 |
| Portugal | 22,064 | 231 | 10,455,424 |
| Slovak Republic | 15,367 | 83 | 5,394,419 |
| Slovenia | 22,618 | 46 | 2,029,455 |
| Spain | 30,556 | 1,370 | 44,792,714 |
| Sweden | 51,223 | 479 | 9,324,682 |
| United Kingdom | 39,581 | 2,464 | 62,160,366 |
| Israel | 30,015 | 225 | 7,442,750 |
| Turkey | 10,884 | 789 | 71,409,152 |
| New Zealand | 33,788 | 145 | 4,282,417 |

Theoretically there exists two sides of the inequality issue, eventhough they are not disassociated they can be exposed as: 1) **Redistribute** more the current resources 2) **Grew the economy** at the current inequallity ratios

For example, as a simplistic approach lets make the following exercise. What would happen if at the current **inequallity ratios** Mexico, my country, had the **GDP per captia** of his northern neighbour, United States.

What will need to be Mexico's **Gross Domestic Product**?

Table 23: GDP Estimations for Mexico. GDP Actual: 1.1 BN USD (2011), Population: 129 at 2017

| Country Name | GDP Estimated '000 M | GDP per capita (aim) | Ratio Est/Act |
|---|---|---|---|
| Brazil | 1,340 | 10,377 | 1.3 |
| Chile | 1,613 | 12,486 | 1.5 |
| United States | 6,320 | 48,933 | 5.9 |
| China | 539 | 4,174 | 0.51 |
| Japan | 5,787 | 44,802 | 5.4 |
| Korea, Rep. | 2,691 | 20,835 | 2.5 |
| Austria | 5,961 | 46,150 | 5.6 |
| Belgium | 5,629 | 43,577 | 5.3 |
| Czech Republic | 2,455 | 19,004 | 2.3 |
| Denmark | 7,592 | 58,782 | 7.1 |
| Estonia | 1,971 | 15,259 | 1.9 |
| Finland | 5,861 | 45,378 | 5.5 |
| France | 5,256 | 40,695 | 4.9 |
| Germany | 5,411 | 41,889 | 5.1 |
| Greece | 3,294 | 25,502 | 3.1 |
| Hungary | 1,703 | 13,184 | 1.6 |
| Iceland | 5,622 | 43,528 | 5.3 |
| Ireland | 6,860 | 53,111 | 6.4 |
| Italy | 4,646 | 35,973 | 4.4 |
| Latvia | 1,513 | 11,716 | 1.4 |
| Lithuania | 1,557 | 12,052 | 1.5 |
| Luxembourg | 13,311 | 103,053 | 13 |
| Netherlands | 6,442 | 49,874 | 6.1 |
| Norway | 11,353 | 87,899 | 11 |
| Poland | 1,529 | 11,835 | 1.4 |
| Portugal | 2,850 | 22,064 | 2.7 |
| Slovak Republic | 1,985 | 15,367 | 1.9 |
| Slovenia | 2,921 | 22,618 | 2.7 |
| Spain | 3,947 | 30,556 | 3.7 |
| Sweden | 6,616 | 51,223 | 6.2 |
| United Kingdom | 5,112 | 39,581 | 4.8 |
| Israel | 3,877 | 30,015 | 3.6 |
| Turkey | 1,406 | 10,884 | 1.3 |
| New Zealand | 4,364 | 33,788 | 4.1 |

Table 23 shows the **GDP estimations** that results from the multiplication of the **GDP per capita** of the different countries times the **current population** of the country. In fourth column it's possible to see the number of times the current **GDP** must grow to accomplish that level.

How much time does it is expected to lapse before it happen?

To address this question I first construct non-stochastics models that captures the averages of the period. In a second part I propose a stochastic model for the growth rates. Where instead of a constant growth rate in each iteration I propose the realization of a normal distribution function with the mean and standard deviation of the period for each variable.

Both sections are based on a *first order autonomos and homogenous differential equation system.* Before starting simulations let's review the maths involved in it.

$$\textbf{[GDP growth]} \Rightarrow \dot{GDP} = \alpha \times GDP$$

$$where\ \alpha = \sum_{t=T_0}^{T_f} \frac{GDPgrowth_t}{T}, T = T_f - T_0$$

and

$$\textbf{[Population growth]} \Rightarrow \dot{Pop} = \beta \times Pop$$

$$where\ \beta = \sum_{t=T_0}^{T_f} \frac{Popgrowth_t}{T}, T = T_f - T_0$$

Both Population and GDP growth at a **constant rate**. And it can be easily calculated in the following manner:

$$\dot{GDP} = \alpha GDP \leftrightarrow \frac{\dot{GDP}}{GDP} = \alpha \leftrightarrow \int \frac{\dot{GDP}}{GDP} dt = \int \alpha dt \leftrightarrow \ln GDP = \alpha t + k \leftrightarrow GDP = Ke^{\alpha t}$$

finally as we know the last value of the series *(t=0)* $\equiv t = 20017$ we can find the value for $K$

$$GDP(0) = GDP_{2017} \rightarrow Ke^{\alpha 0} = K = GDP_{2017}$$
$$\Rightarrow GDP(t) = GDP_{2017}e^{\alpha t},\ t \in [1, 17] \tag{1}$$

Similarly for population

$$\dot{Pop} = \beta Pop \leftrightarrow \frac{\dot{Pop}}{Pop} = \beta \leftrightarrow \int \frac{\dot{Pop}}{Pop} dt = \int \beta dt \leftrightarrow \ln Pop = \beta t + k \leftrightarrow Pop = Ke^{\beta t}$$

as we also know the last value of the series *(t=0)* $\equiv t = 20017$ we can find the value for $K$

$$Pop(0) = Pop_{2017} \rightarrow Ke^{\beta 0} = K = Pop_{2017}$$

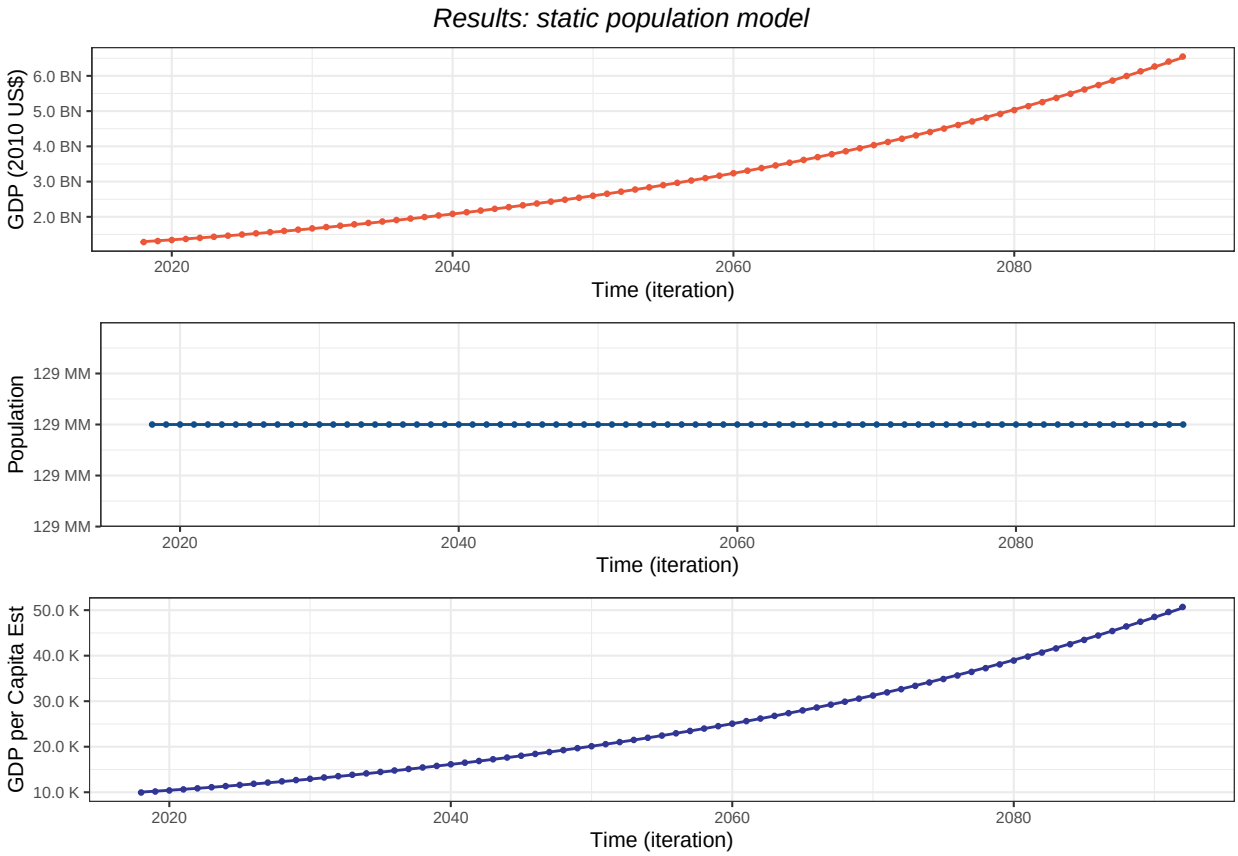
$$\Rightarrow Pop(t) = Pop_{2017}e^{\beta t},\ t \in [1, 17] \tag{2}$$

Equations (1) and (2) describe the dynamics that GDP and Population will follow in the simulations. During the non-stochastic implementation of the models the variables follow a constant growth rate. In the stochastic section the growth rates $\alpha$ and $\beta$ are modeled by normal distributions using period's mean and standard deviation for each of the two variables.

### Non-stochastic models

### Static Population Model

### Results of static population model




The results of this model captures the **average GDP growth rate** of this century. It is based on a static population (**population growth rate** = 0). Under this circumstances the followings yiels:

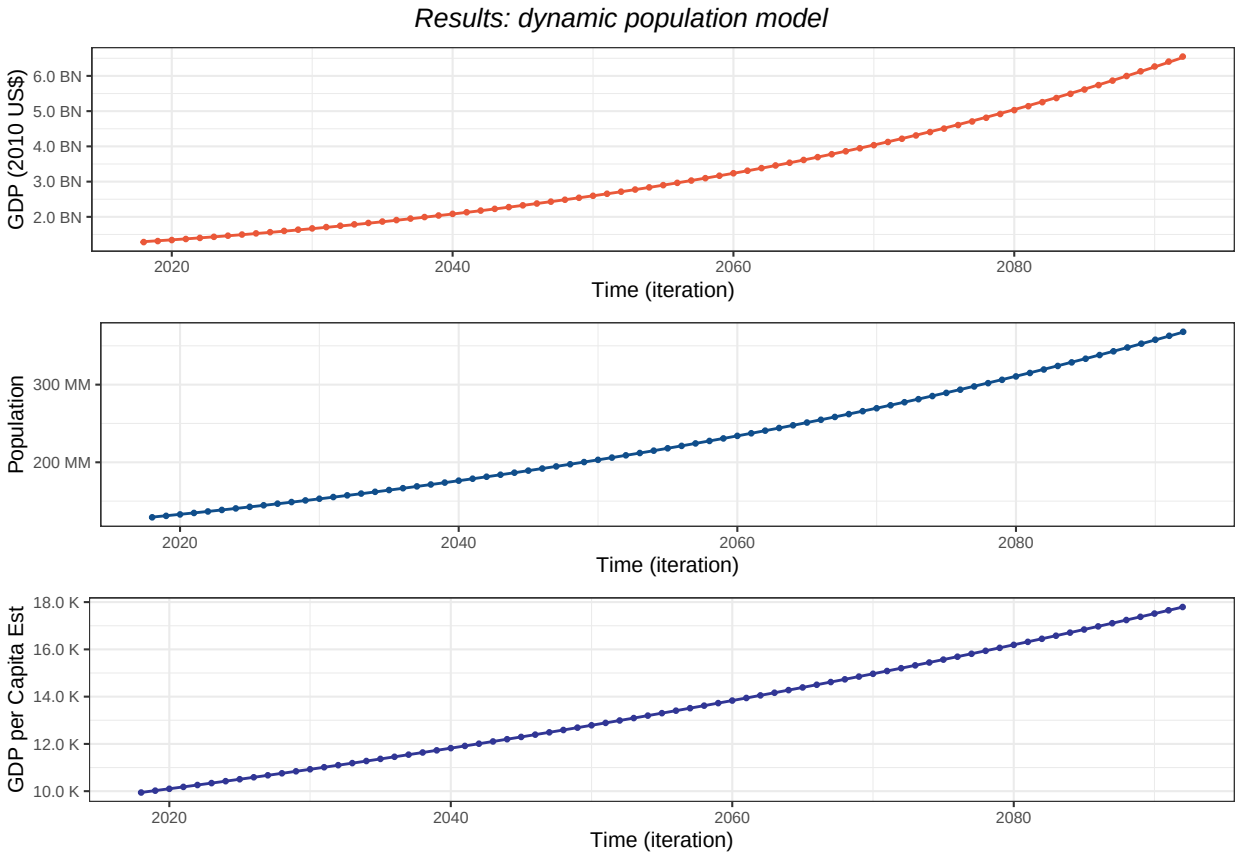
Table 24: Static population model for Mexico. Starting year: 2017, GDP Actual: 1.1 BN

| CAGR (GDP) | CAGR (Pop) | Years (#) | GDP BN | GDP x Cap | GDP x Cap Grw | Pop MM |
|---|---|---|---|---|---|---|
| 0.022 | 0 | 73 | 6.32 | 48,933 | 392% | 129 |

In this first version of the model I aim simulate a **no population growth** [$\beta \equiv$ *CAGR of (Population)* $= 0$] scenario where at the current **average GDP growth rate** [$\alpha \equiv$ *CAGR of (GDP)*] and the number of iterations (or Years) as stated in Table 24 columns 1 and 2 means that if the country continues for the number of years (in column 3) **having each year** those results it will end up with the figures in the rest of the columns (approximately US current GDP per capita).

### Dynamic Population Second Model

### Results of dynamic population model




The results of this model captures the **average GDP growth rate** ($\alpha$)of this century. It's based on a growing population at current **average population growth rate** ($\beta$).

Under this circumstances the followings yields:

Table 25: Dynamic population model for Mexico. Starting year: 2017 GDP Actual: 1.1 BN

| CAGR (GDP) | CAGR (Pop) | Years (#) | GDP BN (Est.) | GDP x Cap | GDP x Cap Grw | Pop MM |
|---|---|---|---|---|---|---|
| 0.022 | 0.014 | 73 | 6.32 | 17,793 | 79.0% | 368 |

In this versions of the model I aim to simulate a baseline scenario at the current **average population growth rate** [$\alpha$ = *CAGR of (GDP)*] and **average GDP growth rate** [$\beta$ = *CAGR of (Population)*] with the number of iterations (or Years) as stated in Table 25 columns 1 and 2 means that if the country continues for the number of years (in column 3) **having each year** those results it will end up with the figures in the rest of the columns.

In the following section I will run simulations based on a **stochastic model** for both **population** and **GDP growth rates**.

**Stochastic models**

**Dynamic Stochastic growth on population and GDP**

In this part of the study I use a dynamic system where $\alpha$ and $\beta$ behaives as follow:

$$\alpha \sim N(\mu_{G\dot{D}P}, \sigma_{G\dot{D}P})$$

$$\beta \sim N(\mu_{\dot{Pop}}, \sigma_{\dot{Pop}})$$

This means that in each iteration/year the growth rate will be the realization of the propose distribution for each random variable.

**Results of Simulation**

Table 26 shows the results of a hundred runs of the model.

Table 26: Stochastic simulations to the dynamic population model for Mexico. GDP Actual: 1.1 BN on the year 2017

| Scenario | time | GDP BN | Pop MM | GDP x cap | GDP x Cap Growth |
|---|---|---|---|---|---|
| Simulation 1676 | 2092 | 13 | 266 | 48,968 | 392% |
| Simulation 8598 | 2092 | 5.83 | 262 | 22,254 | 124% |
| Simulation 1426 | 2092 | 2.19 | 303 | 7,229 | -27% |
| Simulation 9282 | 2092 | 4.46 | 257 | 17,351 | 75% |
| Simulation 2849 | 2092 | 4.03 | 248 | 16,236 | 63% |
| Simulation 803 | 2092 | 4.38 | 288 | 15,181 | 53% |
| Simulation 2481 | 2092 | 4.25 | 264 | 16,058 | 62% |
| Simulation 602 | 2092 | 3.37 | 275 | 12,248 | 23% |
| Simulation 2731 | 2092 | 2.73 | 166 | 16,426 | 65% |
| Simulation 5337 | 2092 | 6.97 | 283 | 24,601 | 147% |
| Simulation 8575 | 2092 | 3.12 | 317 | 9,844 | -1% |
| Simulation 7635 | 2092 | 3.28 | 306 | 10,706 | 8% |
| Simulation 2334 | 2092 | 3.88 | 306 | 12,650 | 27% |
| Simulation 7914 | 2092 | 3.76 | 275 | 13,642 | 37% |
| Simulation 9054 | 2092 | 2.04 | 268 | 7,603 | -24% |
| Simulation 7324 | 2092 | 2.98 | 270 | 11,022 | 11% |
| Simulation 9925 | 2092 | 5.22 | 264 | 19,810 | 99% |
| Simulation 8015 | 2092 | 7.73 | 276 | 28,012 | 182% |
| Simulation 4777 | 2092 | 3.58 | 265 | 13,504 | 36% |
| Simulation 7483 | 2092 | 4.16 | 254 | 16,335 | 64% |
| Simulation 8596 | 2092 | 2.6 | 326 | 7,968 | -20% |
| Simulation 5104 | 2092 | 14.7 | 294 | 49,998 | 403% |
| Simulation 8347 | 2092 | 4.72 | 236 | 19,976 | 101% |
| Simulation 328 | 2092 | 4.12 | 264 | 15,589 | 57% |
| Simulation 8065 | 2092 | 11 | 270 | 40,717 | 310% |
| Simulation 8243 | 2092 | 2.89 | 40 | 71,512 | 619% |
| Simulation 8961 | 2092 | 3.43 | 257 | 13,341 | 34% |
| Simulation 7803 | 2092 | 4.25 | 251 | 16,936 | 70% |
| Simulation 9911 | 2092 | 3.32 | 259 | 12,823 | 29% |
| Simulation 5955 | 2092 | 10.5 | 225 | 46,591 | 369% |
| Simulation 2719 | 2092 | 5.57 | 235 | 23,678 | 138% |
| Simulation 2032 | 2092 | 2.44 | 266 | 9,153 | -8% |

| Scenario | time | GDP BN | Pop MM | GDP x cap | GDP x Cap Growth |
|---|---|---|---|---|---|
| Simulation 1217 | 2092 | 1.78 | 265 | 6,701 | -33% |
| Simulation 1763 | 2092 | 4.4 | 163 | 27,047 | 172% |
| Simulation 1323 | 2092 | 3.1 | 262 | 11,795 | 19% |
| Simulation 7967 | 2092 | 1.28 | 252 | 5,071 | -49% |
| Simulation 4478 | 2092 | 5.84 | 325 | 17,945 | 80% |
| Simulation 6115 | 2092 | 2.74 | 257 | 10,636 | 7% |
| Simulation 377 | 2092 | 2.76 | 261 | 10,578 | 6% |
| Simulation 604 | 2092 | 3.62 | 276 | 13,118 | 32% |
| Simulation 3315 | 2092 | 23 | 269 | 85,294 | 758% |
| Simulation 7834 | 2092 | 1.48 | 252 | 5,879 | -41% |
| Simulation 3673 | 2092 | 4.76 | 171 | 27,917 | 181% |
| Simulation 8834 | 2092 | 3.73 | 265 | 14,080 | 42% |
| Simulation 9989 | 2092 | 7.78 | 262 | 29,695 | 199% |
| Simulation 2642 | 2092 | 2.52 | 270 | 9,305 | -6% |
| Simulation 6696 | 2092 | 2.91 | 264 | 11,014 | 11% |
| Simulation 4379 | 2092 | 2.65 | 280 | 9,472 | -5% |
| Simulation 1655 | 2092 | 5.59 | 289 | 19,385 | 95% |
| Simulation 4476 | 2092 | 1.93 | 279 | 6,897 | -31% |
| Simulation 5792 | 2092 | 2.39 | 273 | 8,748 | -12% |
| Simulation 7019 | 2092 | 2.19 | 285 | 7,679 | -23% |
| Simulation 6561 | 2092 | 2.83 | 263 | 10,731 | 8% |
| Simulation 9444 | 2092 | 2.34 | 220 | 10,672 | 7% |
| Simulation 7777 | 2092 | 3.51 | 257 | 13,660 | 37% |
| Simulation 5123 | 2092 | 2.85 | 316 | 9,002 | -9% |
| Simulation 9046 | 2092 | 2.74 | 307 | 8,925 | -10% |
| Simulation 9157 | 2092 | 4.99 | 252 | 19,777 | 99% |
| Simulation 9612 | 2092 | 8.57 | 266 | 32,194 | 224% |
| Simulation 4157 | 2092 | 1.97 | 324 | 6,086 | -39% |
| Simulation 4151 | 2092 | 2.19 | 273 | 8,048 | -19% |
| Simulation 2401 | 2092 | 6.49 | 253 | 25,635 | 158% |
| Simulation 2944 | 2092 | 2.34 | 272 | 8,604 | -13% |
| Simulation 2870 | 2092 | 2.44 | 274 | 8,932 | -10% |
| Simulation 3874 | 2092 | 1.67 | 293 | 5,681 | -43% |
| Simulation 4971 | 2092 | 2.36 | 268 | 8,793 | -12% |
| Simulation 5962 | 2092 | 2.56 | 249 | 10,305 | 4% |
| Simulation 2926 | 2092 | 5.53 | 125 | 44,178 | 344% |
| Simulation 4369 | 2092 | 4.03 | 286 | 14,087 | 42% |
| Simulation 731 | 2092 | 4.63 | 249 | 18,618 | 87% |
| Simulation 4838 | 2092 | 8.33 | 246 | 33,829 | 240% |
| Simulation 2324 | 2092 | 2.59 | 239 | 10,848 | 9% |
| Simulation 1964 | 2092 | 2.39 | 267 | 8,963 | -10% |
| Simulation 9483 | 2092 | 8.45 | 294 | 28,758 | 189% |
| Simulation 6079 | 2092 | 7.03 | 254 | 27,650 | 178% |
| Simulation 8535 | 2092 | 1.66 | 278 | 5,978 | -40% |
| Simulation 7549 | 2092 | 1.47 | 290 | 5,057 | -49% |
| Simulation 4390 | 2092 | 4.53 | 173 | 26,264 | 164% |
| Simulation 2710 | 2092 | 3.38 | 243 | 13,934 | 40% |
| Simulation 1479 | 2092 | 1.67 | 242 | 6,902 | -31% |
| Simulation 3664 | 2092 | 2.76 | 339 | 8,148 | -18% |
| Simulation 4236 | 2092 | 4.34 | 270 | 16,066 | 62% |
| Simulation 2592 | 2092 | 2.25 | 255 | 8,826 | -11% |
| Simulation 6234 | 2092 | 3.23 | 277 | 11,663 | 17% |

| Scenario | time | GDP BN | Pop MM | GDP x cap | GDP x Cap Growth |
|---|---|---|---|---|---|
| Simulation 4358 | 2092 | 3.47 | 256 | 13,526 | 36% |
| Simulation 6201 | 2092 | 5.13 | 272 | 18,860 | 90% |
| Simulation 3876 | 2092 | 6.77 | 347 | 19,523 | 96% |
| Simulation 2388 | 2092 | 5.1 | 245 | 20,780 | 109% |
| Simulation 3606 | 2092 | 1.4 | 269 | 5,201 | -48% |
| Simulation 434 | 2092 | 2.73 | 290 | 9,390 | -6% |
| Simulation 7087 | 2092 | 2.12 | 273 | 7,768 | -22% |
| Simulation 7818 | 2092 | 8.33 | 257 | 32,363 | 225% |
| Simulation 3736 | 2092 | 3.51 | 268 | 13,128 | 32% |
| Simulation 7732 | 2092 | 5.61 | 262 | 21,436 | 116% |
| Simulation 2022 | 2092 | 4.17 | 248 | 16,806 | 69% |
| Simulation 3690 | 2092 | 4.36 | 261 | 16,722 | 68% |
| Simulation 7594 | 2092 | 4.84 | 268 | 18,014 | 81% |
| Simulation 4328 | 2092 | 5.89 | 264 | 22,265 | 124% |
| Simulation 5228 | 2092 | 14.1 | 312 | 45,148 | 354% |
| Simulation 1262 | 2092 | 8.24 | 261 | 31,536 | 217% |

Model is configured for iterate the growth rates for **GDP** and **Population** at maximum the number of times (years) necessary for reaching the **GDP per capita aim** level at the cero population growth rate model in Table 24. And it will stop whenever it reaches that level of **GDP per capita** or whenever the **GDP per capita** drops to 80% of its starting level.

Each run of the model represent a hipotetic history line. In the following figures I present the result for the random sample of 10 histories. This makes possible to track year after year how the histories behaive in terms of the mixed realization of $\alpha$ and $\beta$ in each iteration/year, ending up with a highest or lowest **GDP per capita** level. Figure 3, Figure 4 and Figure 5 summarizes the dinamycs in each of the histories.

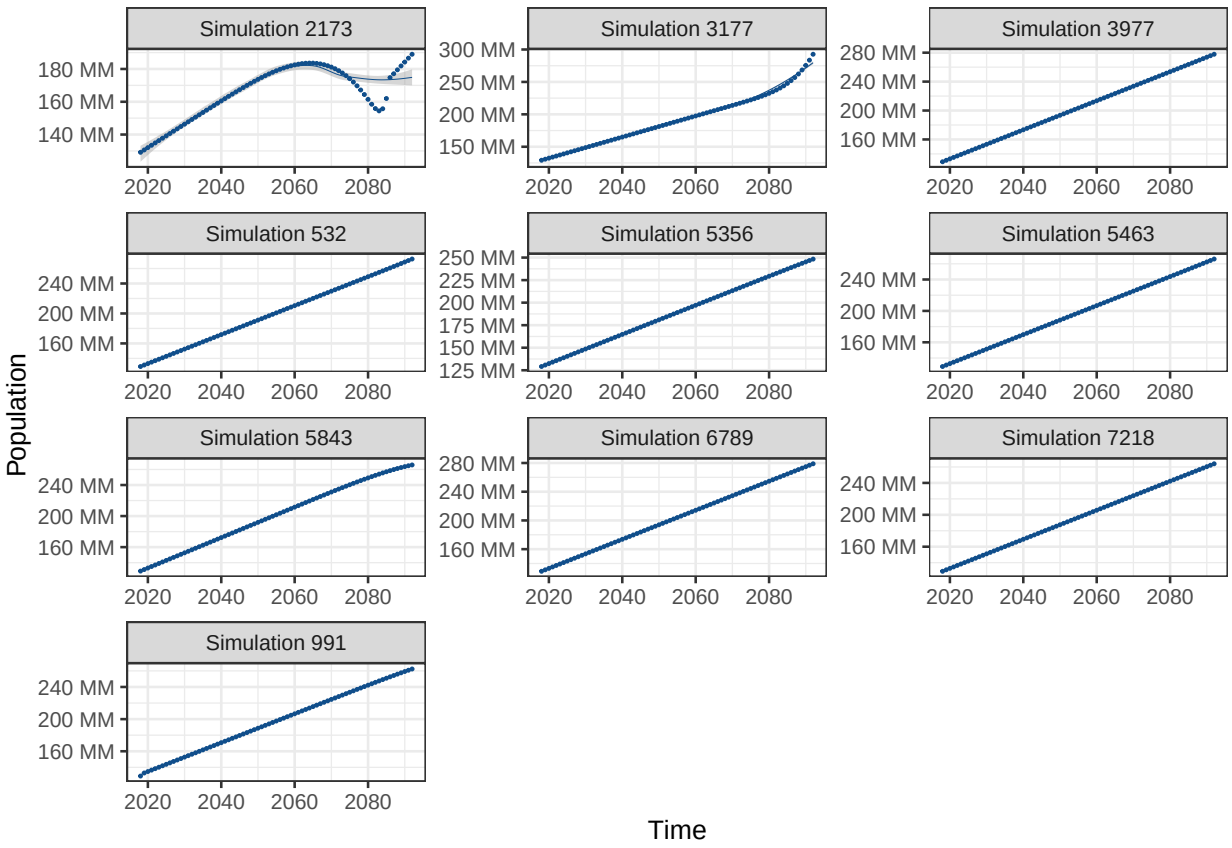



Figure 22: Population Dynamics random sample 10 results (out of 100) 73 iterations

In Figure 3, Figure 4 and Figure 5 we can see scenarios where **GDP per capita** growth to the **GDP per capita aim** at or before the iteration/years boundary. Or the scenarios where the iteration/years boundary elapse and the **GDP per capita** at the end of it, is among the *10 biggest* ones.

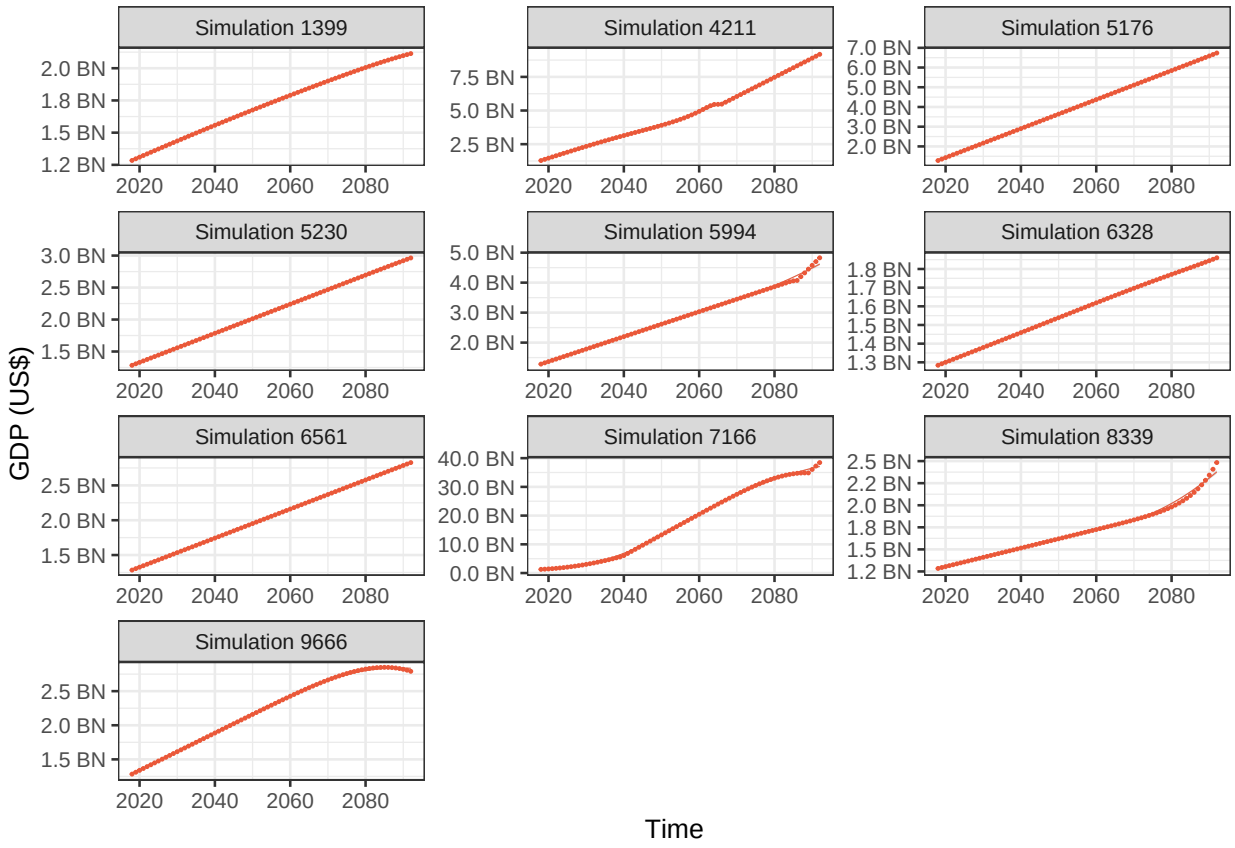



Figure 23: GDP Dynamics random sample 10 results (out of 100) 73 iterations

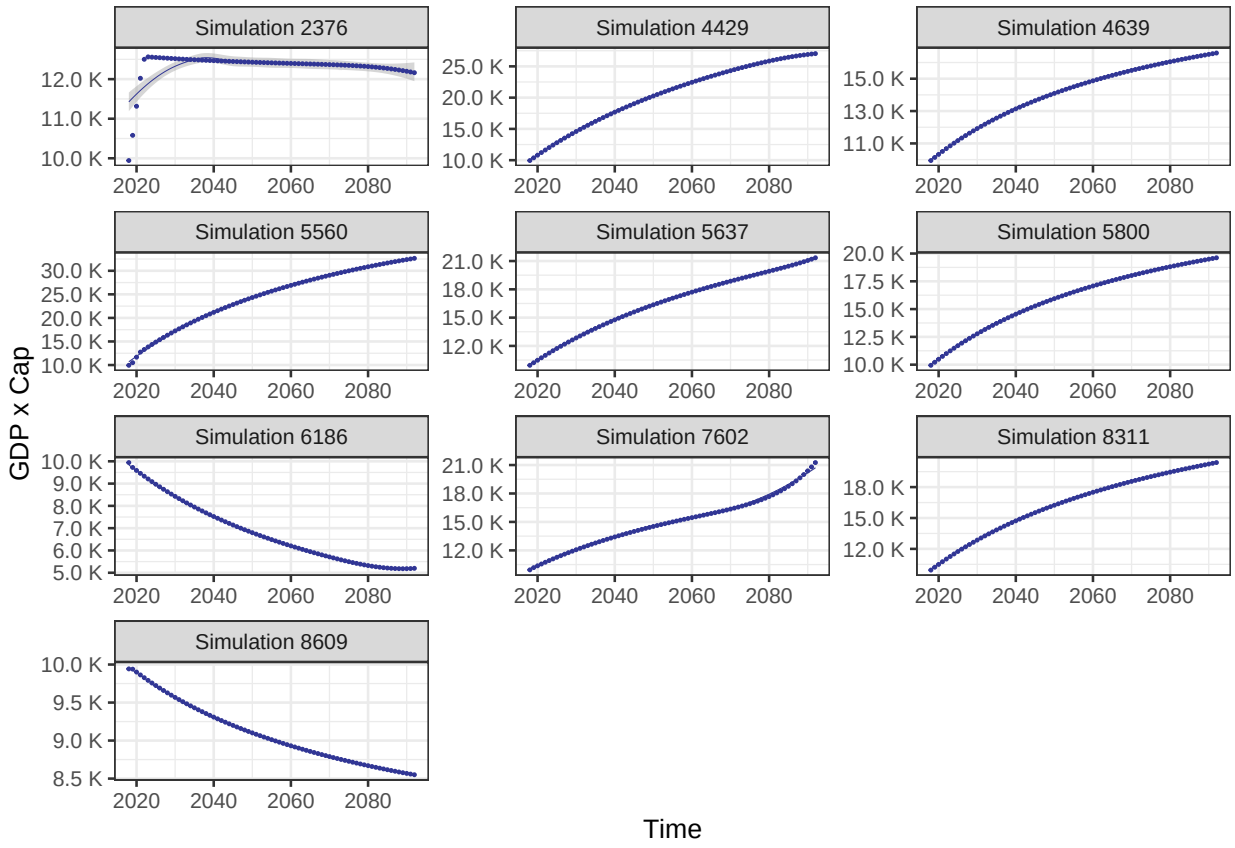



Figure 24: GDP x Capita Dynamics random sample 10 results (out of 100) 73 iterations

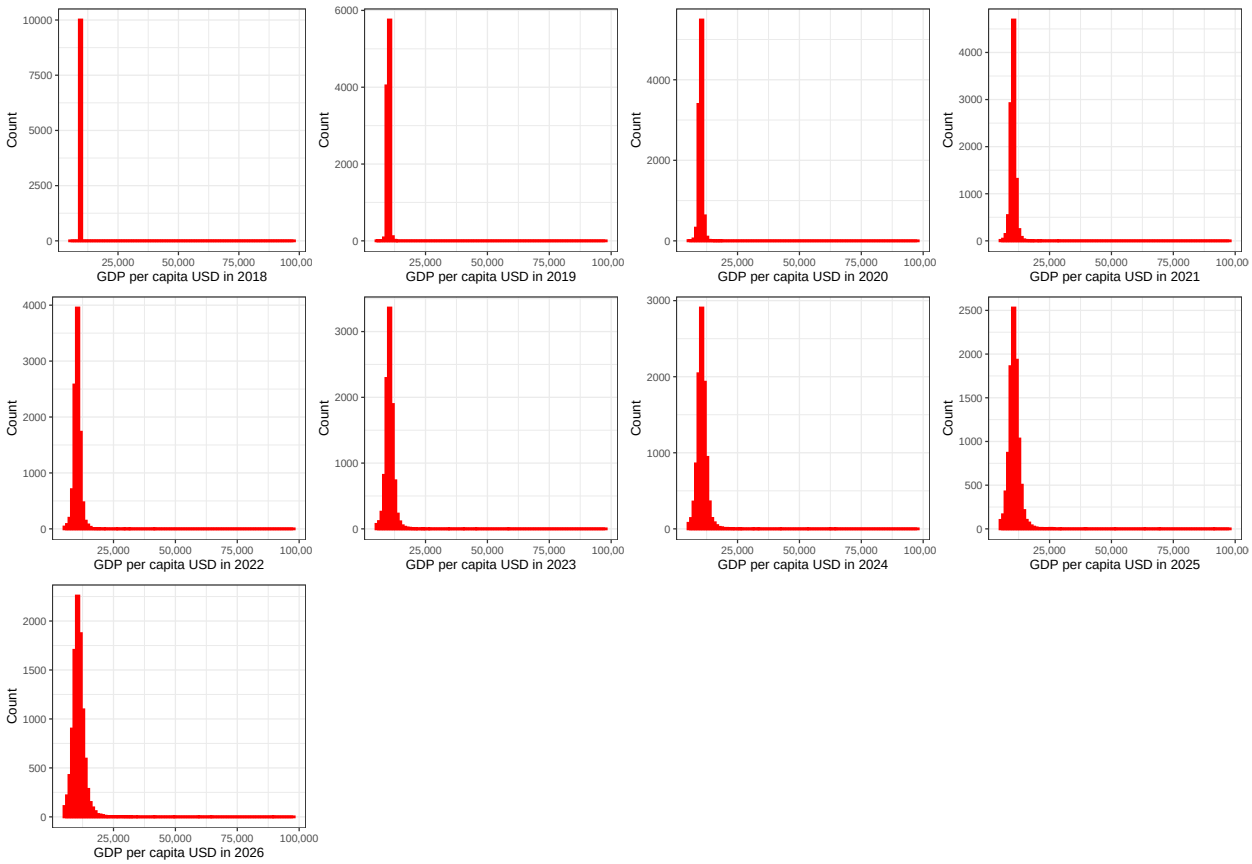
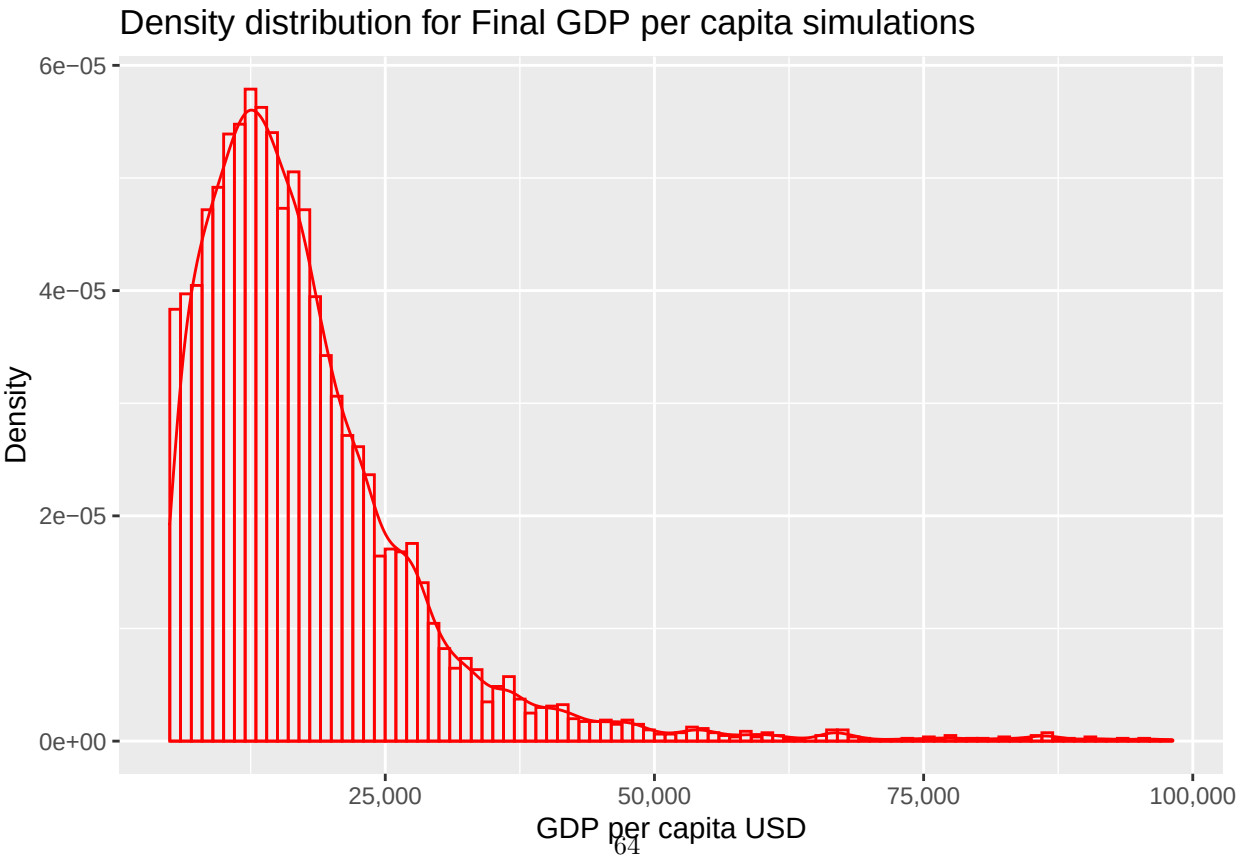



Figure 25: Histogram results for period 2018 to 2026



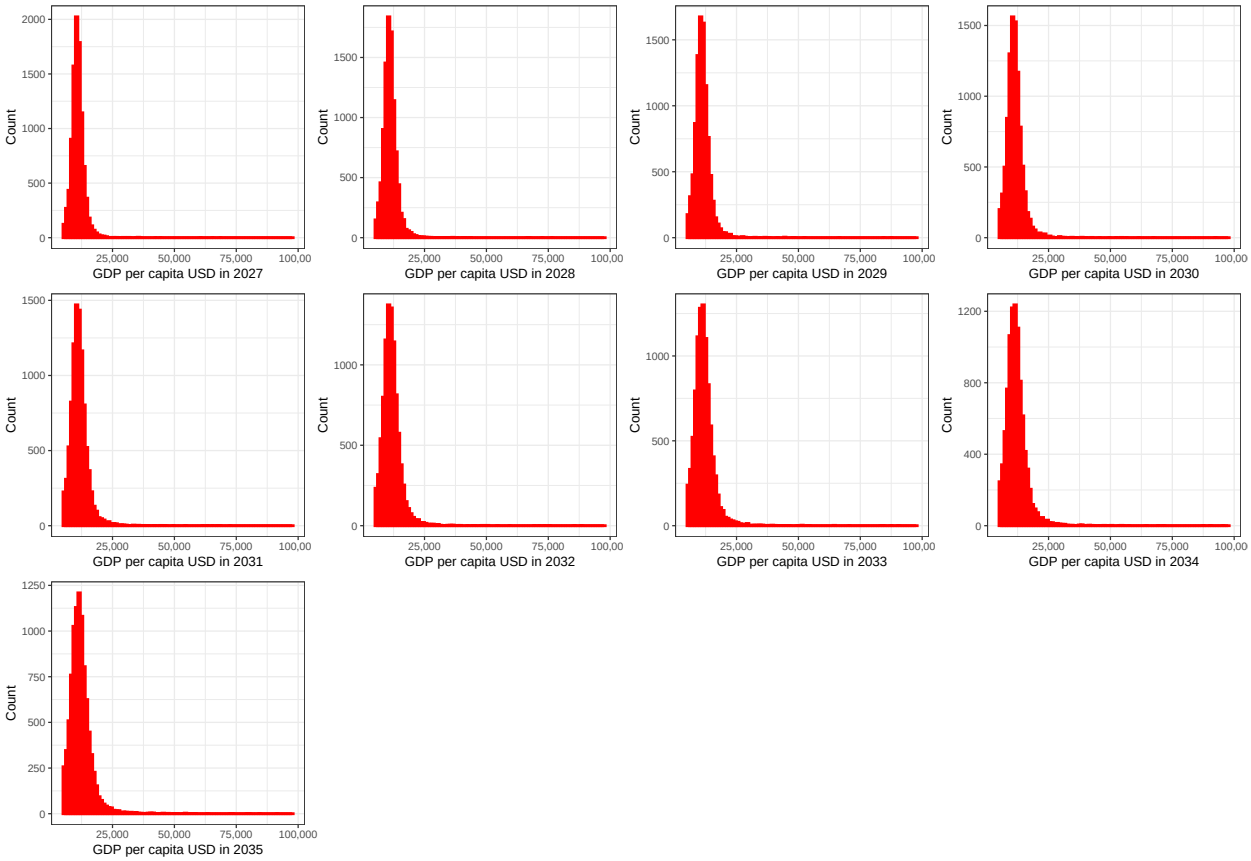



Figure 26: Histogram results for period 2027 to 2035

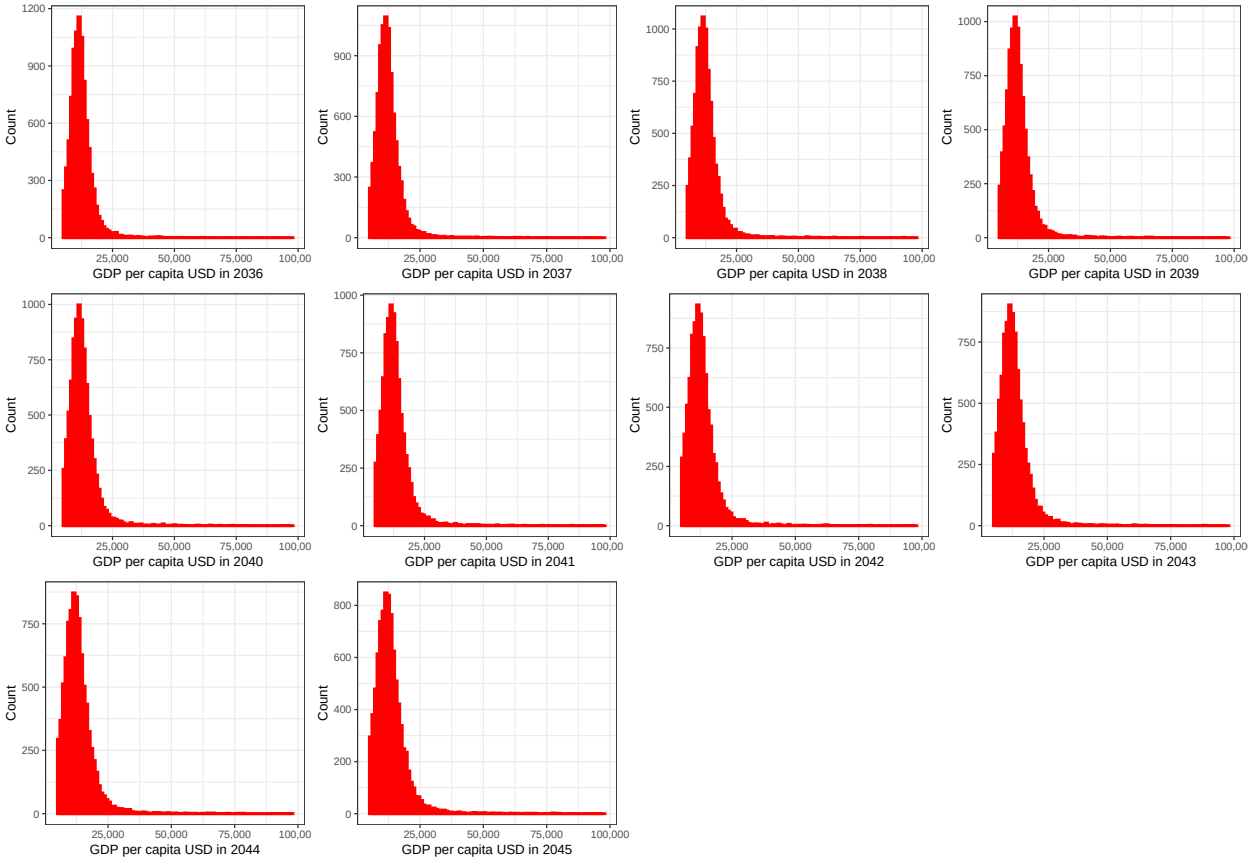



Figure 27: Histogram results for period 2036 to 2045

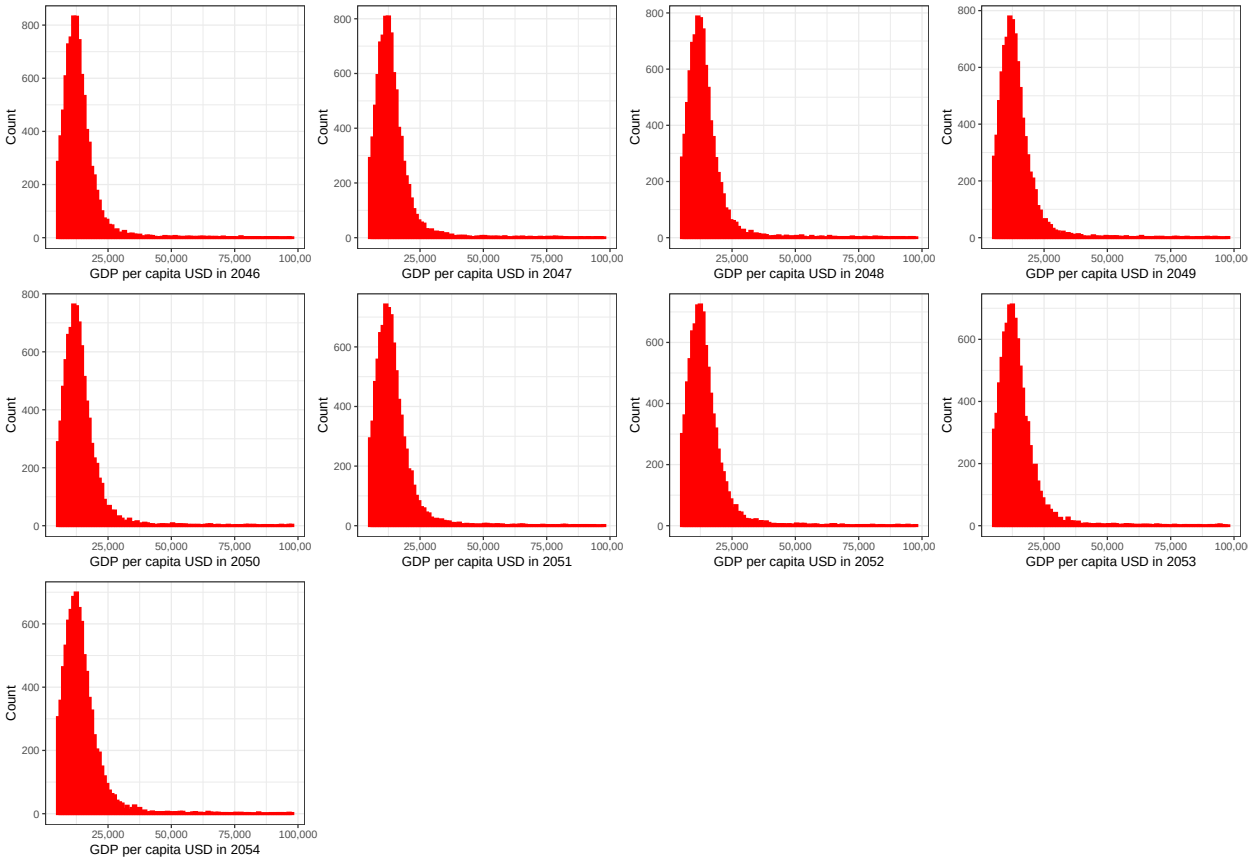



Figure 28: Histogram results for period 2046 to 2054

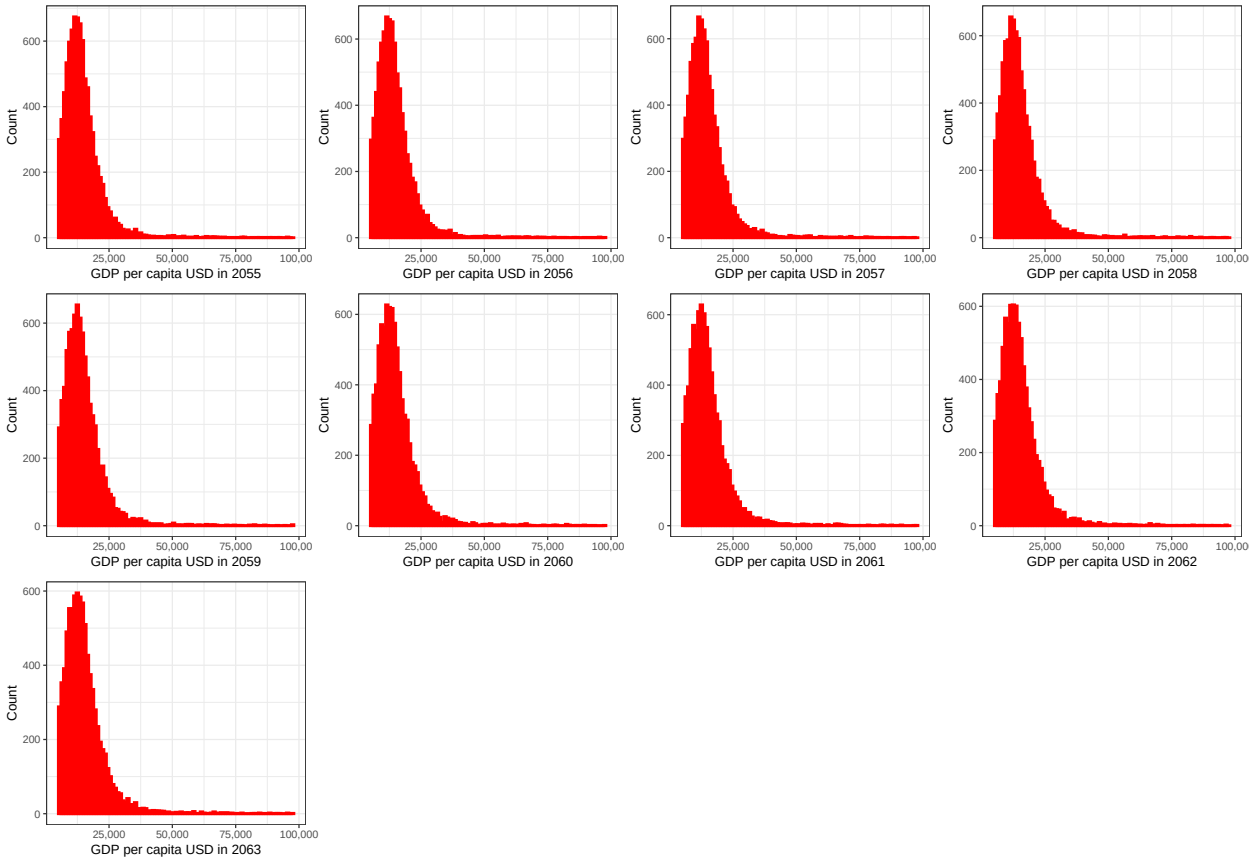



Figure 29: Histogram results for period 2055 to 2063

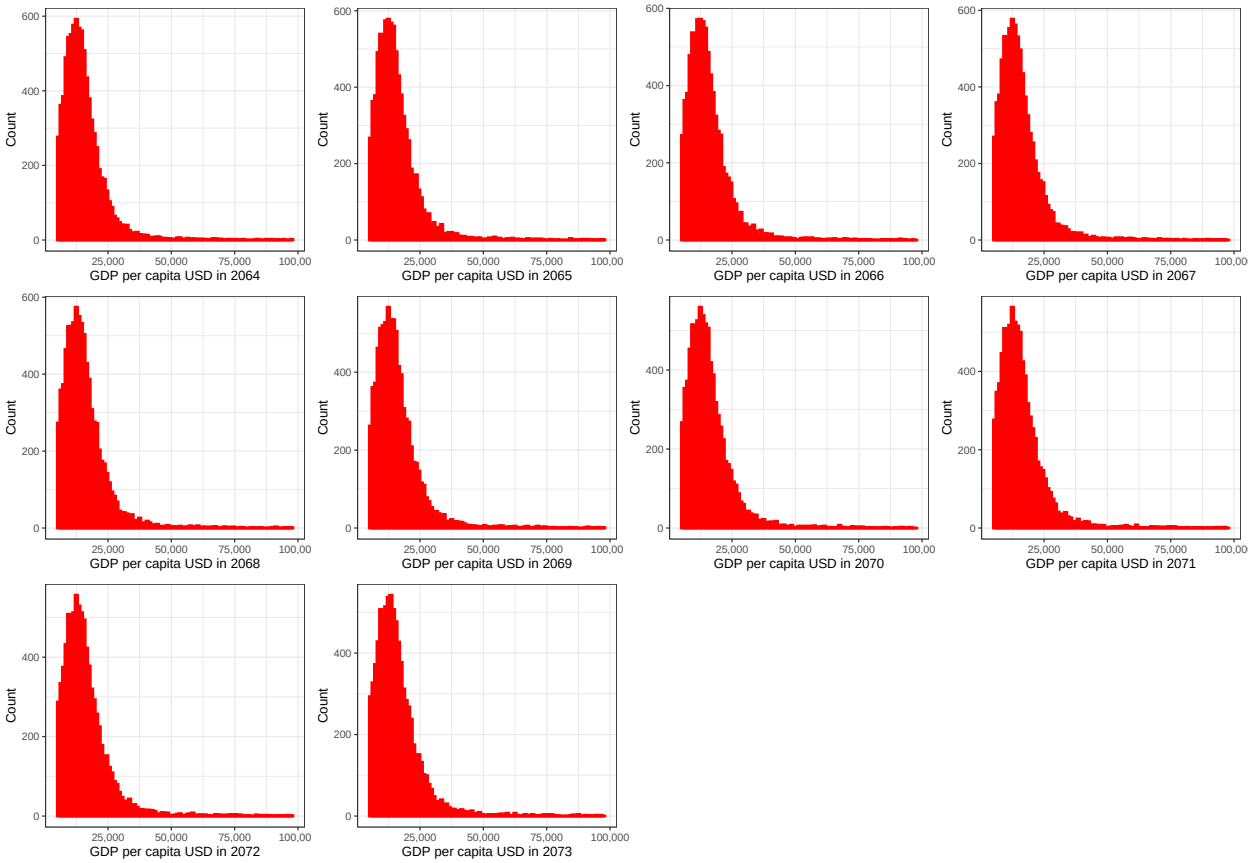



Figure 30: Histogram results for period 2064 to 2073

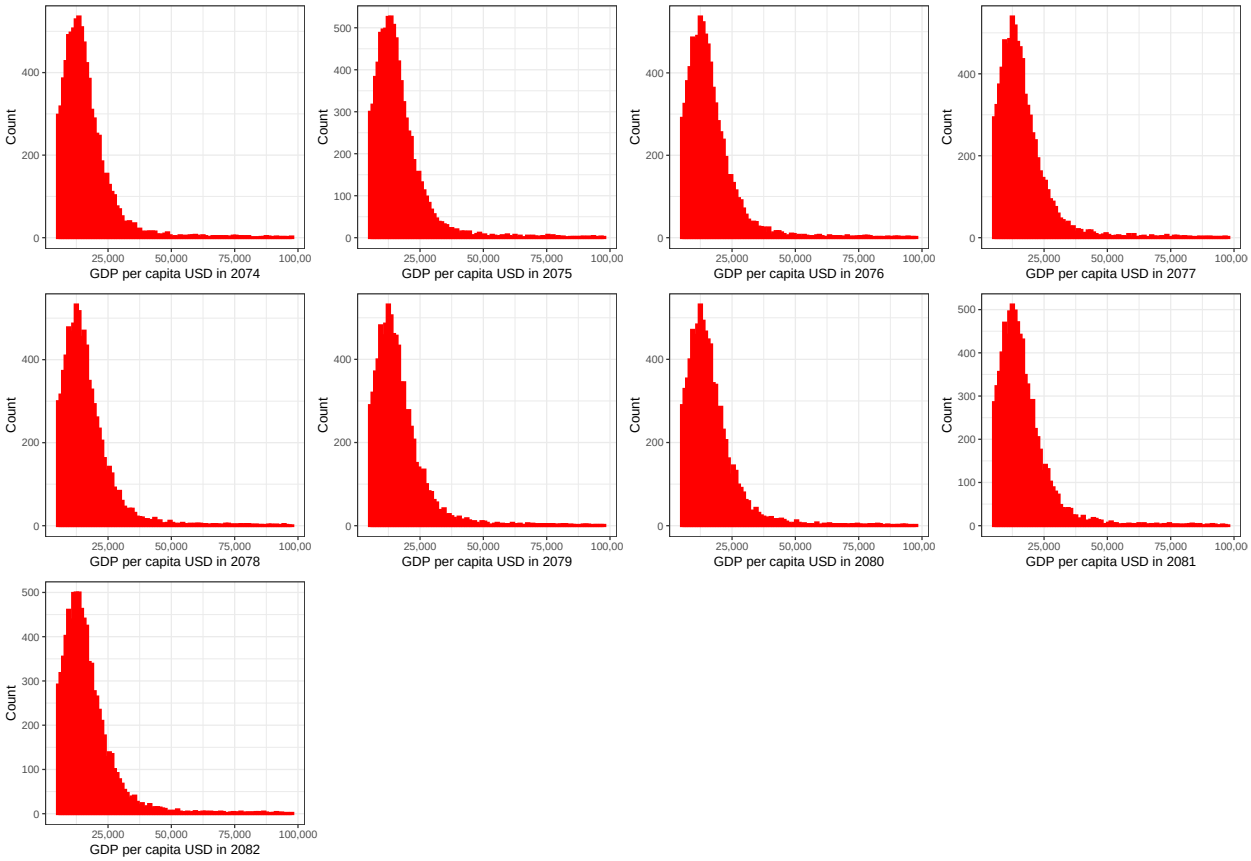



Figure 31: Histogram results for period 2074 to 2082

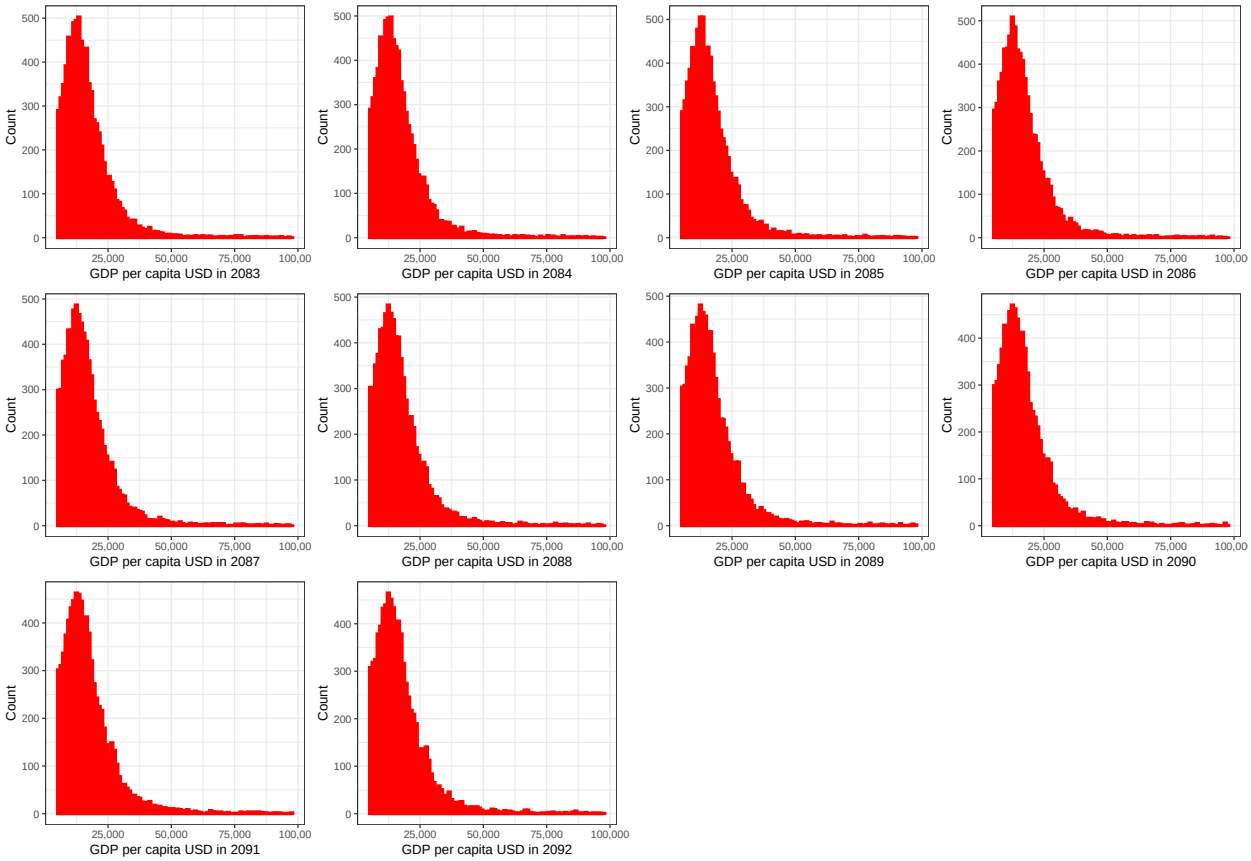



Figure 32: Histogram results for period 2083 to 2092

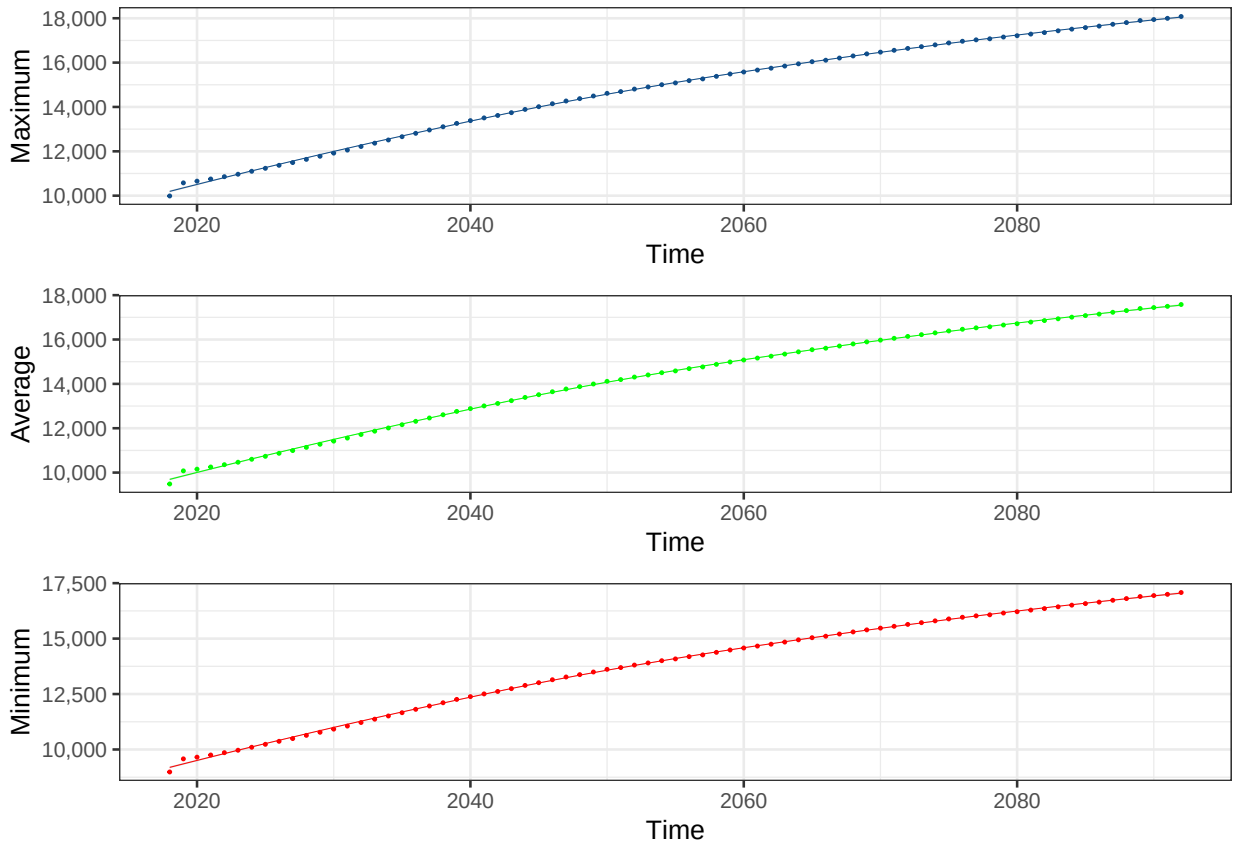



Figure 33: Summary of simulations for a 100 iterations of the model for 73 years

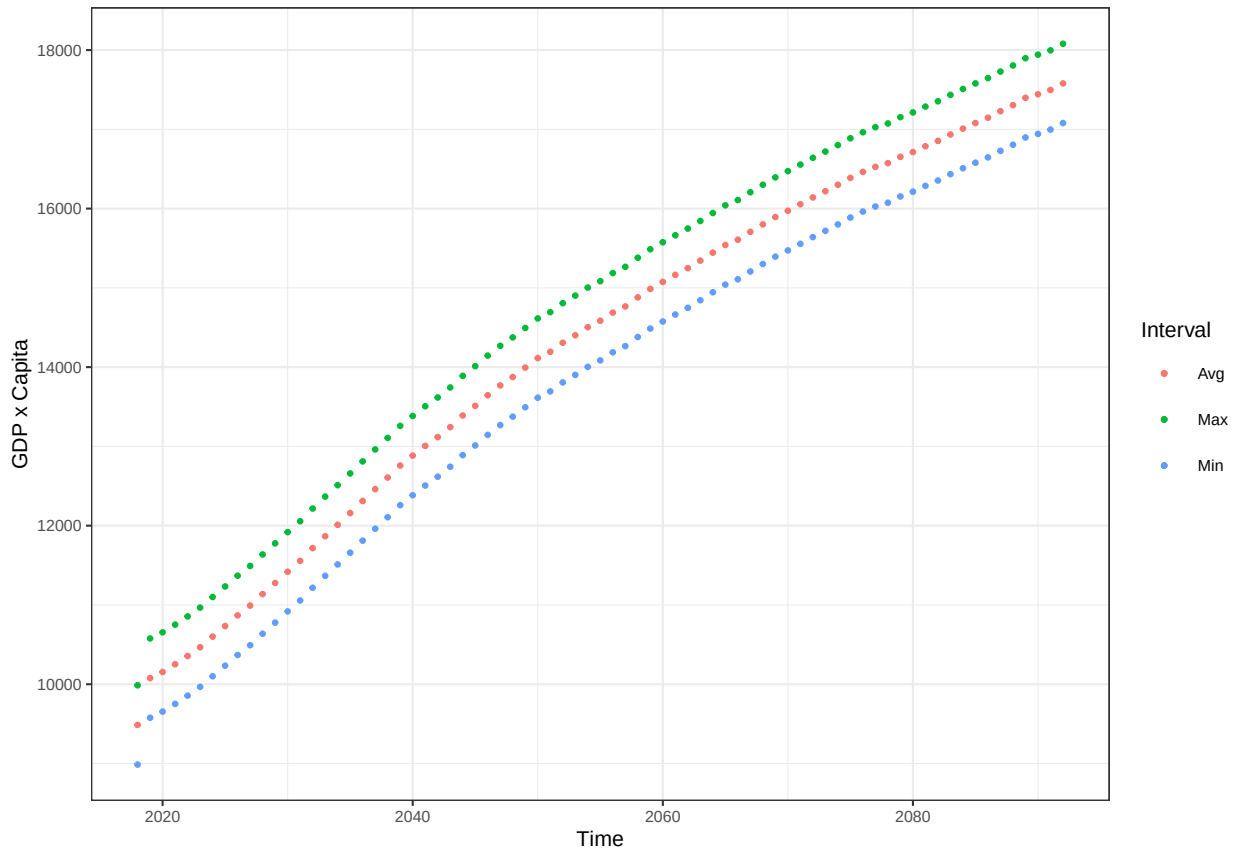



Figure 34: Summary of simulations (other view)

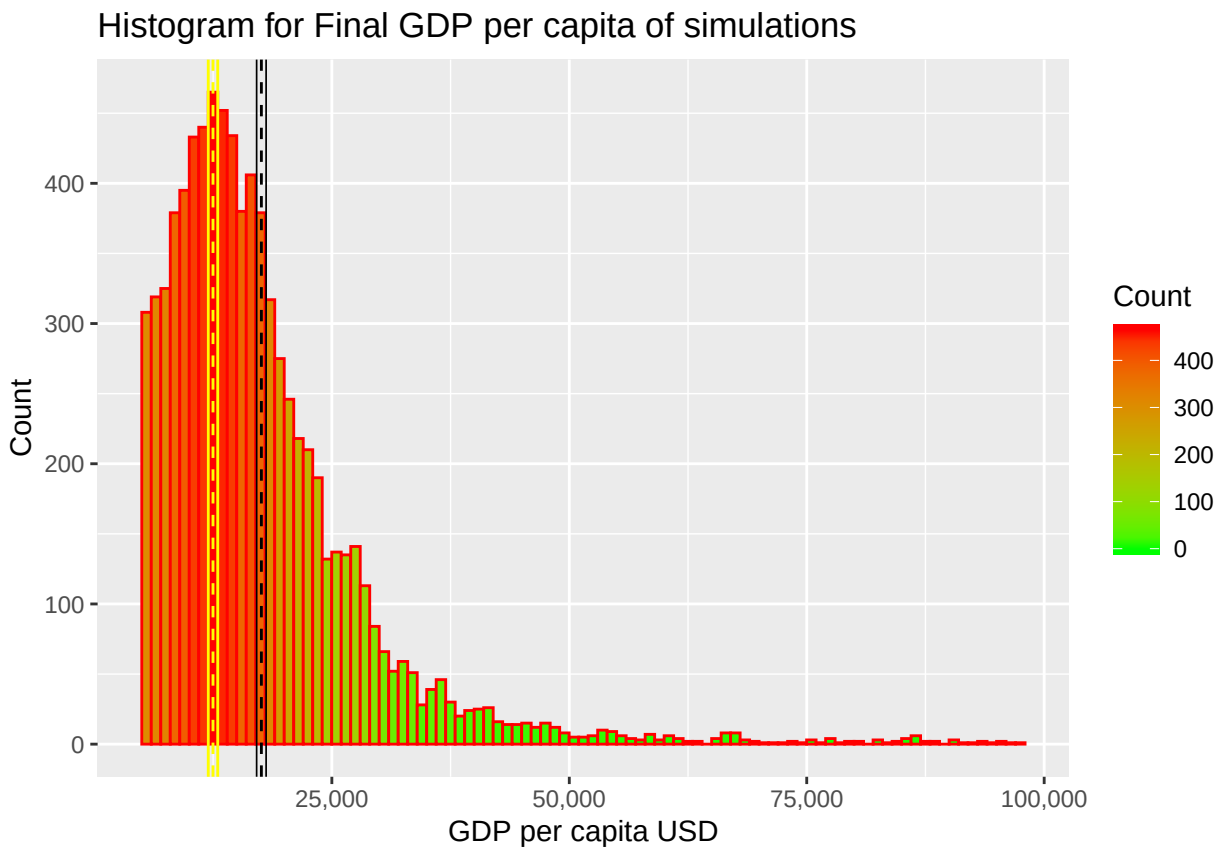



Figure 35: Last Year: GDP x capita

Table 27: Histories aggregation results after 10,000 histories/simulations over 73 years

| Type | Mean | Mode |
|---|---|---|
| Minimum | 17,079 | 11,987 |
| Average | 17,579 | 12,487 |
| Maximum | 18,079 | 12,987 |

## Conclusions to GDP, growth and inequality

In this section and the prior one we have summarized the results of models and estimations, all of them around questions about development, inequallity and economic growth.

In section **GDP & GNI per Capita estimations** in Table 15 we can see that, if meant to be born on the *lowest 10'th of the population*, it is *better* to be born in a country such as Norway where the estimations mean that citizens of that country living at the *lowest 10'th of the population*, lives in average with a yearly ammount of $16,044$ usd or 3.65% of it's GDP. Whereas in the american continent, the same *lowest 10'th of the population* in the United States lives with an average yearly ammount of $4,249$ usd (1.73% of it's GDP), in Chile they live with an average yearly ammount of $1,046$ usd (1.66% of it's GDP). And, in Mexico the *lowest 10'th of the population* lives with - just - an average yearly ammount of 847 usd (1.83% of it's GDP). The insights extracted from it let us think that even if less equal people living in the *lowest 10'th of the population* in countries such as Norway (in Europe), United States (in North America) or even Chile (in South America) lives in average less poor or with more access to goods and services than people of the *lowest 10'th of the population* in Mexico (North America). Makeing simple maths income shared held by *lowest 10'th of the population* in Norway is about $1.99(= \frac{3.65\%}{1.83\%})$ times bigger than Mexico, however given their current **GDP** and **Population** level GDP held by *lowest 10'th of the population* estimations are $18.94(= \frac{16,044}{847})$ times bigger than the one in Mexico.

In section **GDP and Population** we proposed a simple model based on normal distributions for **GDP** and **Population growth**. The aim of this section is to simulate scenarios based in this century averages and standard deviations, where I tried to solved the question, in how many years does Mexico will develop a **GDP** level greater enough, relatively to the **Population**, to address a **GDP per capita** similar to the current level of Mexico's northern neighbor. In the proposed approach we identified two base scenarios, one with zero population growth rate as seen in Table 24 where the main insight is that at the average growth rate of the century it would take about 73 years. And, the second one where I incorporate also the average growth rate of the century to population and find out that after 73 years Mexico will meet a 79% higher **GDP per capita** that the current level. Finally, stochastic models shows simulations that incorporate the fact that economy might suffer upgrades or downgrades above and below the average level during the following 73 years.

As a summary of this sections the following question becomes particularly important: What is more urgent for an economy like Mexico, to increase *average participation/share* of the *lowest quintiles of the population* in the **GDP** or to increase its **GDP** to a level equivalent to the one held by countries such as Norway or the United States as seen in Table 23?

In Table 27 it is possible to see the results for the model run over a 1000 scenarios over 73 years/iterations each.

## Interest rate spread (lending rate minus deposit rate, %)

Interest rate spread is the interest rate charged by banks on loans to private sector customers minus the interest rate paid by commercial or similar banks for demand, time, or savings deposits. The terms and conditions attached to these rates differ by country, however, limiting their comparability.

The interest rate spread - the margin between the cost of mobilizing liabilities and the earnings on assets - measures financial sector efficiency in intermediation. A narrow spread means low transaction costs, which reduces the cost of funds for investment, crucial to economic growth.

Table 28: Interest rate spread (lending rate minus deposit rate, %)
period 2000 - 2017

| Country Name | Mean | SD |
|---|---|---|
| Brazil | 35 | 6.7 |
| Chile | 3.7 | 1.3 |
| China | 3.2 | 0.27 |
| Czech Republic | 4.3 | 0.46 |
| Hungary | 2.4 | 0.56 |
| Israel | 3.4 | 0.38 |
| Japan | 1.2 | 0.45 |
| Korea, Rep. | 1.7 | 0.35 |
| Latin America & Caribbean | 7.3 | 0.5 |
| Mexico | 4.6 | 1.5 |
| Middle East & North Africa | 4.2 | 0.58 |
| Netherlands | 0.29 | 0.97 |
| New Zealand | 1.7 | 0.42 |
| South Asia | 5.4 | 0.88 |
| Sub-Saharan Africa | 7.3 | 0.43 |
| Sweden | 3.2 | 0.42 |
| World | 6.1 | 0.52 |

## Deposit interest rate (%)

Deposit interest rate is the rate paid by commercial or similar banks for demand, time, or savings deposits. The terms and conditions attached to these rates differ by country, however, limiting their comparability.

Many interest rates coexist in an economy, reflecting competitive conditions, the terms governing loans and deposits, and differences in the position and status of creditors and debtors. In some economies interest rates are set by regulation or administrative fiat. In economies with imperfect markets, or where reported nominal rates are not indicative of effective rates, it may be difficult to obtain data on interest rates that reflect actual market transactions. Deposit and lending rates are collected by the International Monetary Fund (IMF) as representative interest rates offered by banks to resident customers. The terms and conditions attached to these rates differ by country, however, limiting their comparability.

Table 29: Deposit interest rate (%)

| Country Name | Mean | SD |
|---|---|---|
| Brazil | 13 | 4.3 |
| Chile | 4.5 | 2 |
| China | 2.4 | 0.69 |
| Czech Republic | 1.3 | 0.8 |

| Country Name | Mean | SD |
|---|---|---|
| France | 2.1 | 0.84 |
| Hungary | 5.7 | 3.1 |
| Israel | 3.1 | 2.4 |
| Japan | 0.36 | 0.23 |
| Korea, Rep. | 4 | 1.6 |
| Mexico | 2.7 | 2 |
| Netherlands | 2.8 | 0.6 |
| New Zealand | 5.1 | 1.4 |
| Sweden | 1.6 | 0.62 |
| Turkey | 26 | 16 |

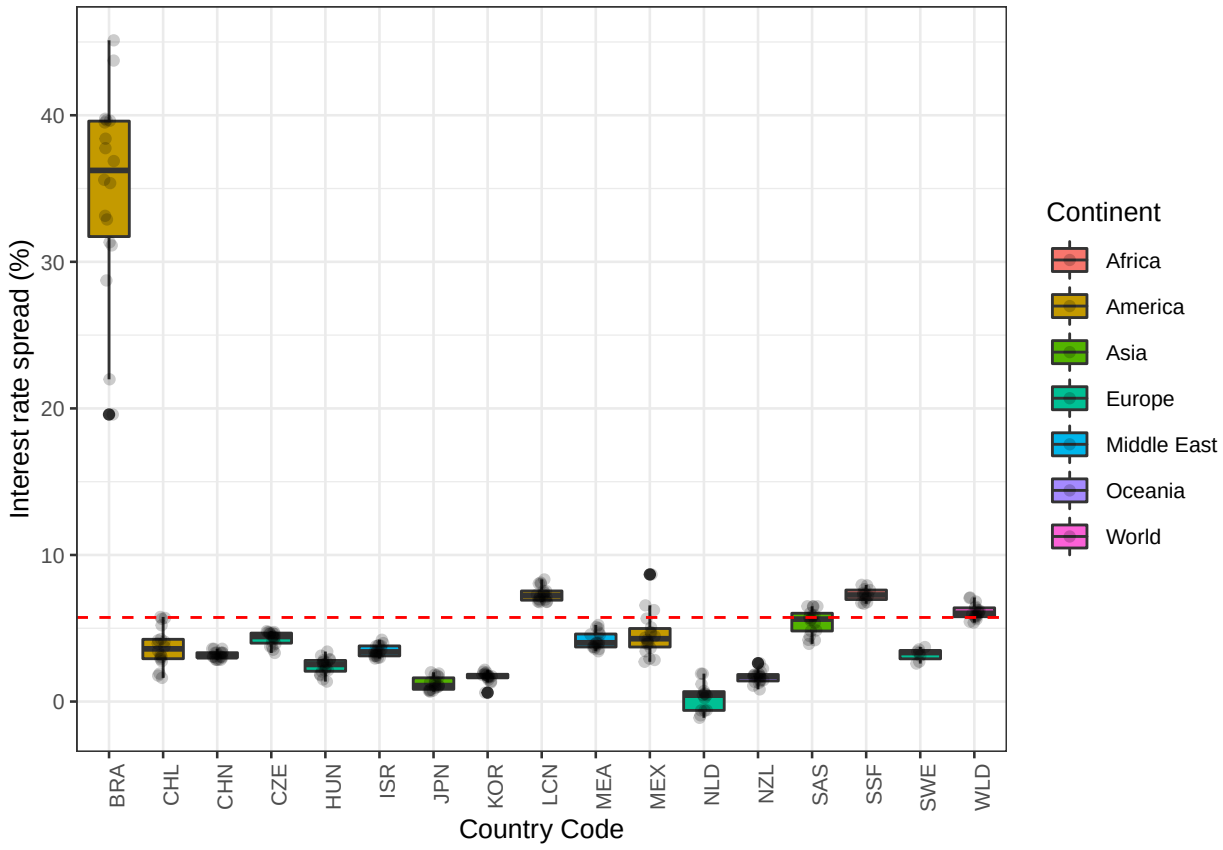



Figure 36: Boxplot interest rates 2000 - 2017

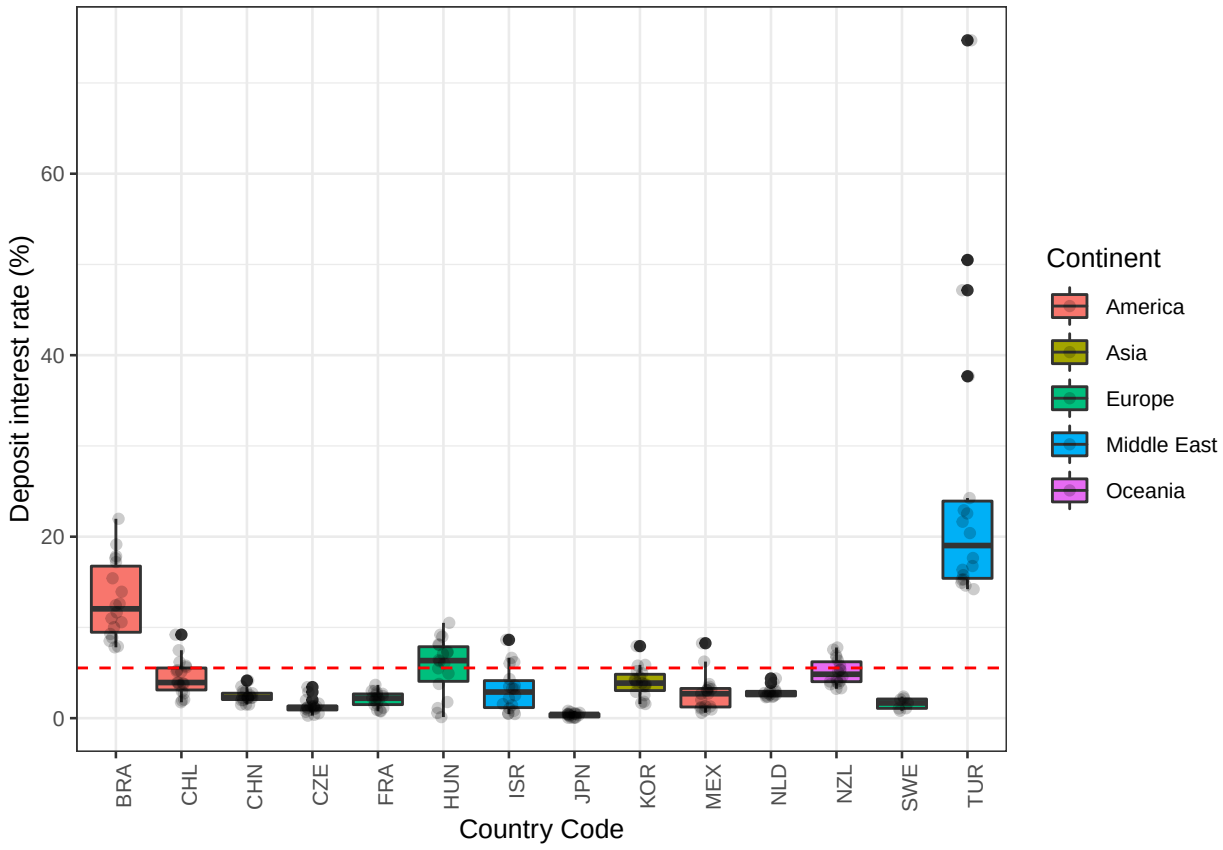



Figure 37: Trendline interest rates 2000 - 2017

## Inflation, consumer prices (annual %)

Table 30: Inflation, consumer prices (annual %)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 1.9 | 0.75 |
| Belgium | 2 | 1.1 |
| Brazil | 6.7 | 2.6 |
| Chile | 3.2 | 1.8 |
| China | 2.2 | 1.9 |
| Czech Republic | 2.2 | 1.6 |
| Denmark | 1.8 | 0.91 |
| Estonia | 3.4 | 2.7 |
| European Union | 2 | 1.2 |
| Finland | 1.5 | 1.3 |
| France | 1.4 | 0.8 |
| Germany | 1.4 | 0.63 |
| Greece | 2.1 | 2 |
| Hungary | 4.4 | 2.9 |
| Iceland | 4.9 | 3.2 |
| Ireland | 2 | 2.6 |
| Israel | 1.6 | 1.8 |
| Italy | 1.8 | 1.1 |
| Japan | 0.037 | 0.94 |
| Korea, Rep. | 2.6 | 1.1 |
| Latin America & Caribbean | 3.9 | 1.5 |
| Latvia | 3.8 | 4.1 |
| Lithuania | 2.4 | 2.8 |
| Luxembourg | 2 | 1 |
| Mexico | 4.6 | 1.6 |
| Middle East & North Africa | 3.2 | 2.1 |
| Netherlands | 1.8 | 0.96 |
| New Zealand | 2.2 | 1.1 |
| Norway | 2.1 | 0.95 |
| Poland | 2.6 | 2.5 |
| Portugal | 2 | 1.5 |
| Slovak Republic | 3.6 | 3.4 |
| Slovenia | 3.2 | 2.9 |
| South Asia | 6 | 2.5 |
| Spain | 2.2 | 1.5 |
| Sub-Saharan Africa | 5.6 | 1.6 |
| Sweden | 1.2 | 1.1 |
| Turkey | 16 | 17 |
| United Kingdom | 2 | 0.87 |
| United States | 2.2 | 1.1 |
| World | 3.5 | 1.7 |

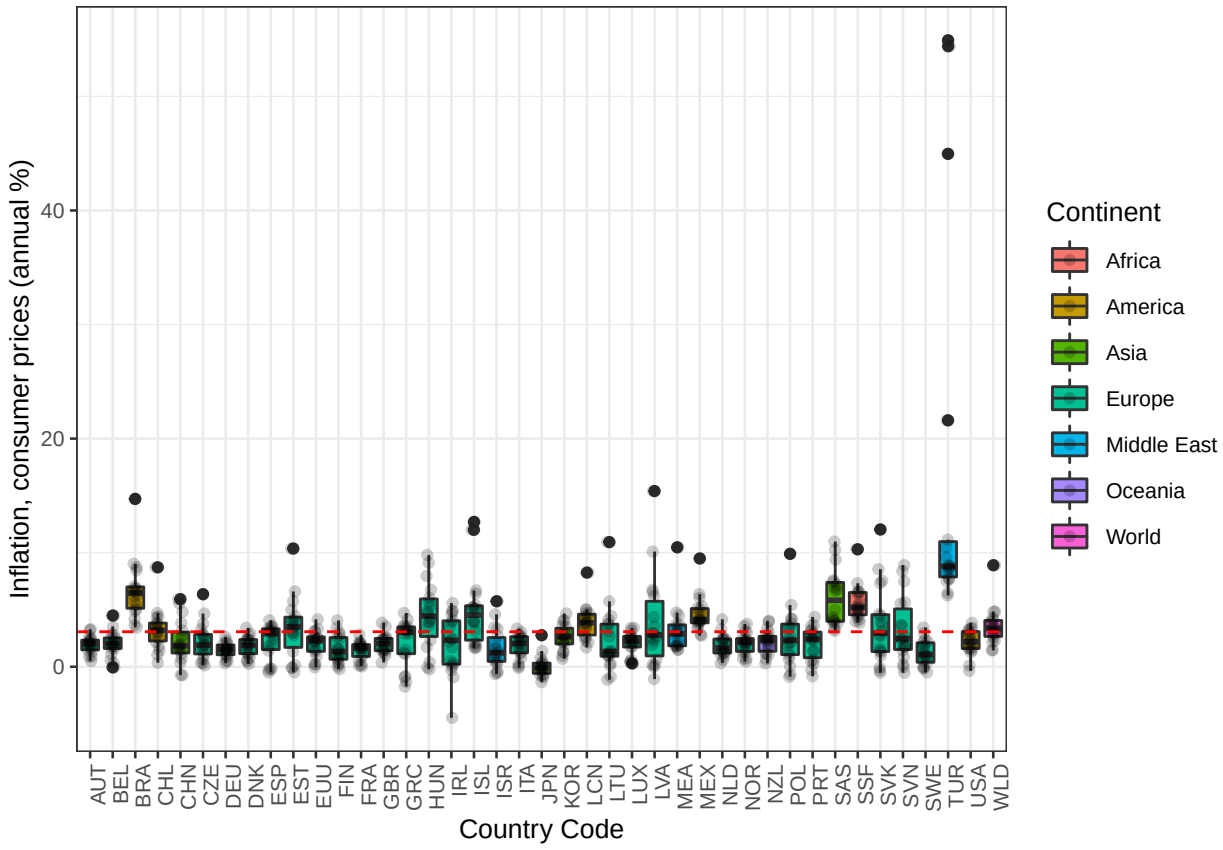



Figure 38: Boxplot inflation rates 2000 - 2017

## Bank capital to assets ratio (%)

Bank capital to assets is the ratio of bank capital and reserves to total assets. Capital and reserves include funds contributed by owners, retained earnings, general and special reserves, provisions, and valuation adjustments. Capital includes tier 1 capital (paid-up shares and common stock), which is a common feature in all countries' banking systems, and total regulatory capital, which includes several specified types of subordinated debt instruments that need not be repaid if the funds are required to maintain minimum capital levels (these comprise tier 2 and tier 3 capital). Total assets include all nonfinancial and financial assets.

The ratio of capital to total assets, without the latter being risk weighted. Capital is measured as total capital and reserves as reported in the sectoral balance sheet; for cross-border consolidated data, Tier 1 capital can also be used. It indicates the extent to which assets are funded by other than own funds and is a measure of capital adequacy of the deposit-taking sector. It complements the capital adequacy ratios compiled based on the methodology agreed to by the Basle Committee on Banking Supervision. Also, it measures financial leverage and is sometimes called the leverage ratio. Data are submitted by national authorities to the IMF following the Financial Soundness Indicators (FSI) Compilation Guide. For country specific metadata, including reporting period, please refer to the GFSR FSI Tables and the Data and Metadata Tables available through FSIs website: http://fsi.imf.org/.

Table 31: Bank capital to assets ratio (%)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 7 | 0.76 |
| Belgium | 5.4 | 1.5 |
| Brazil | 10 | 0.79 |
| Chile | 7.7 | 0.6 |
| China | 8.1 | 0.61 |
| Czech Republic | 6.6 | 0.79 |
| Denmark | 6.2 | 1 |
| Estonia | 10 | 1.5 |
| European Union | 6.9 | 0.81 |
| Finland | 6.5 | 1.9 |
| France | 5.2 | 0.88 |
| Germany | 5 | 0.78 |
| Greece | 8.2 | 2.3 |
| Ireland | 8 | 4.1 |
| Israel | 6.4 | 0.7 |
| Italy | 5.2 | 0.72 |
| Korea, Rep. | 7.8 | 0.63 |
| Latin America & Caribbean | 10 | 0.35 |
| Latvia | 9.8 | 1.2 |
| Lithuania | 10 | 2 |
| Luxembourg | 6.2 | 1.2 |
| Mexico | 10 | 0.63 |
| Netherlands | 4.8 | 0.85 |
| Poland | 8.7 | 0.81 |
| Portugal | 6 | 1 |
| Slovak Republic | 11 | 1.2 |
| South Asia | 7.9 | 0.39 |
| Spain | 6.6 | 0.69 |
| Sub-Saharan Africa | 11 | 0.56 |
| Sweden | 6.1 | 0.004 |
| Turkey | 12 | 0.7 |
| United Kingdom | 5.8 | 0.86 |

| Country Name | Mean | SD |
|---|---|---|
| United States | 12 | 0.4 |
| World | 10 | 0.31 |

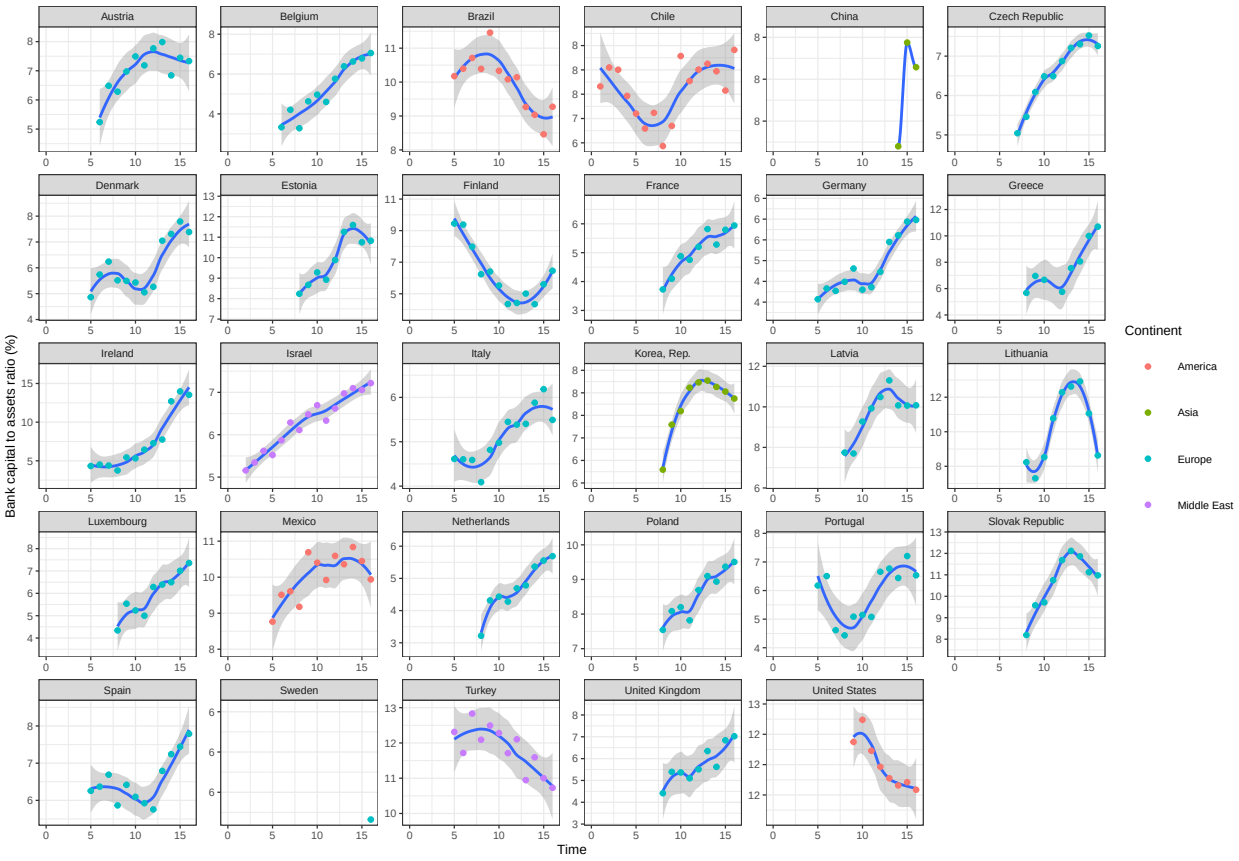



Figure 39: Trendline bank capital to assets ratios 2000 - 2017 non aggregated

## Current account balance (% of GDP)

Current account balance is the sum of net exports of goods and services, net primary income, and net secondary income.

Table 32: Current account balance (% of GDP)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 2.5 | 0.9 |
| Belgium | 0.8 | 1.8 |
| Brazil | -1.6 | 2 |
| Chile | -0.47 | 2.6 |
| China | 3.7 | 2.8 |
| Czech Republic | -2.4 | 2.2 |
| Denmark | 4.9 | 2.6 |
| Estonia | -4.5 | 6.6 |
| Finland | 2.5 | 3.9 |
| France | -0.21 | 0.9 |
| Germany | 5.1 | 3 |
| Greece | -6.7 | 4.4 |
| Hungary | -2.5 | 5.1 |
| Iceland | -5.8 | 9.6 |
| Ireland | 1.6 | 5.3 |

| Country Name | Mean | SD |
|---|---|---|
| Israel | 2.2 | 2.1 |
| Italy | -0.34 | 1.8 |
| Japan | 2.9 | 1.2 |
| Korea, Rep. | 3 | 2.4 |
| Latvia | -5.6 | 7.6 |
| Lithuania | -4.5 | 5.3 |
| Luxembourg | 7.6 | 2.4 |
| Mexico | -1.5 | 0.73 |
| Netherlands | 6.6 | 2.7 |
| New Zealand | -3.7 | 2 |
| Norway | 12 | 3.4 |
| Poland | -3.5 | 2.1 |
| Portugal | -6.3 | 4.9 |
| Slovak Republic | -3.6 | 3.1 |
| Slovenia | 0.62 | 3.6 |
| Spain | -3.4 | 4 |
| Sweden | 5.7 | 1.4 |
| Turkey | -4.2 | 2.5 |
| United Kingdom | -3.4 | 1.2 |
| United States | -3.6 | 1.3 |

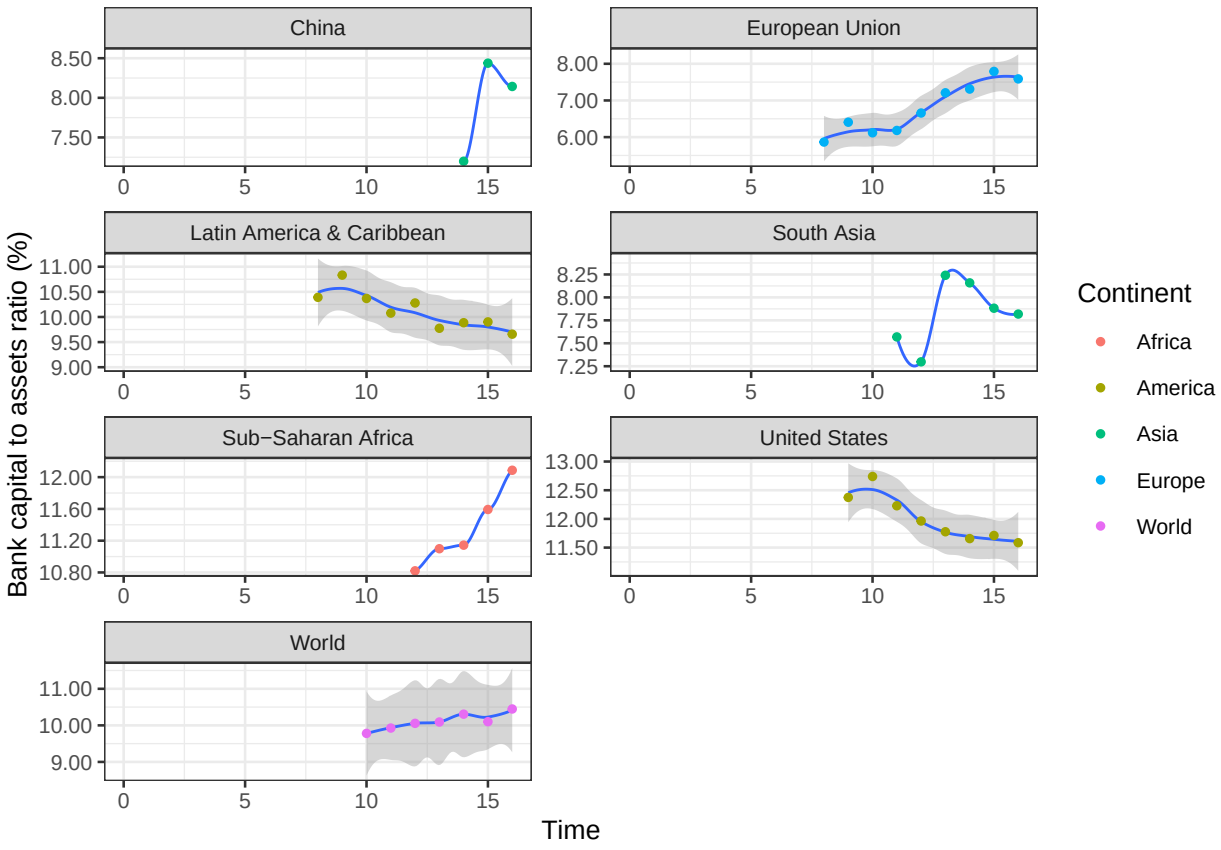



Figure 40: Trendline bank capital to assets ratios 2000 - 2017 aggregated and biggest economies

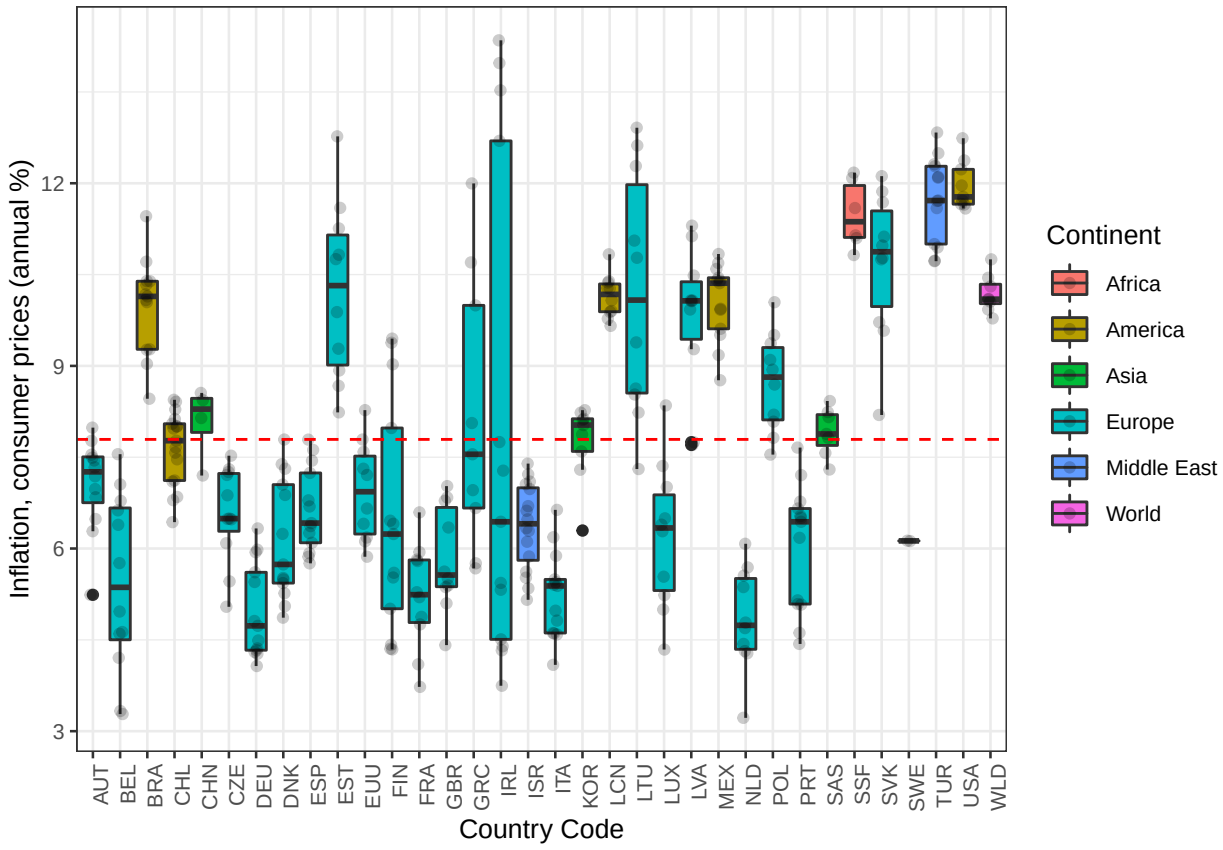



Figure 41: Boxplot bank capital to assets ratios 2000 - 2017

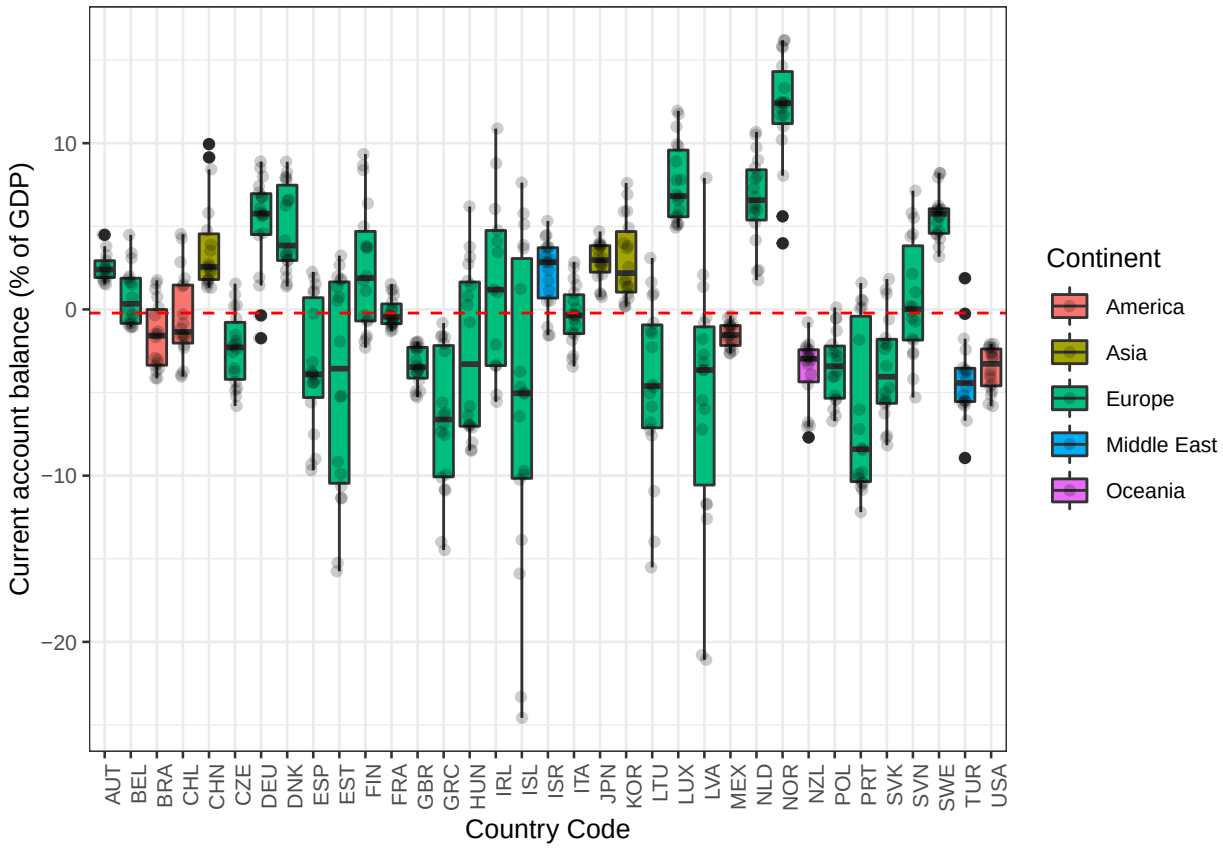



Figure 42: Boxplot Current Account Balance 2000 - 2017

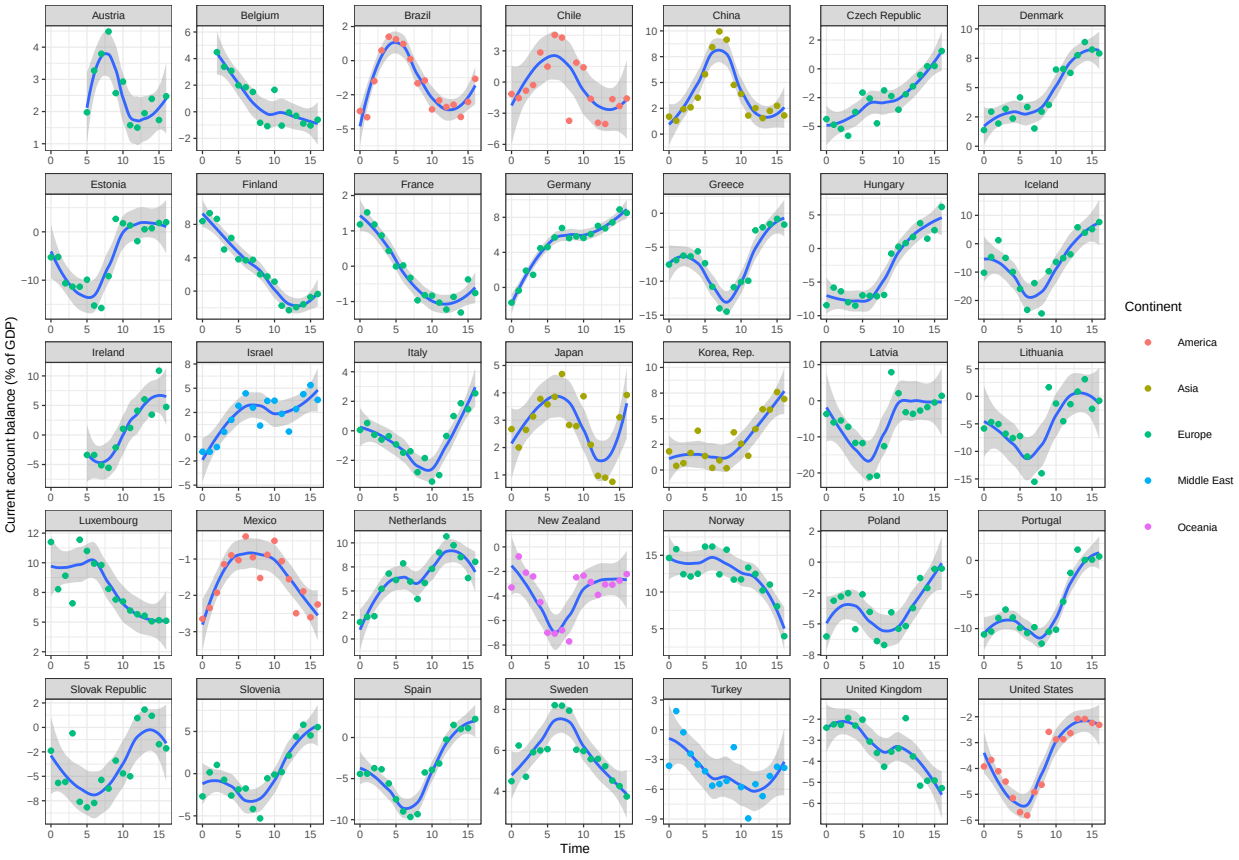



Figure 43: Trendline Current Account Balance 2000 - 2017

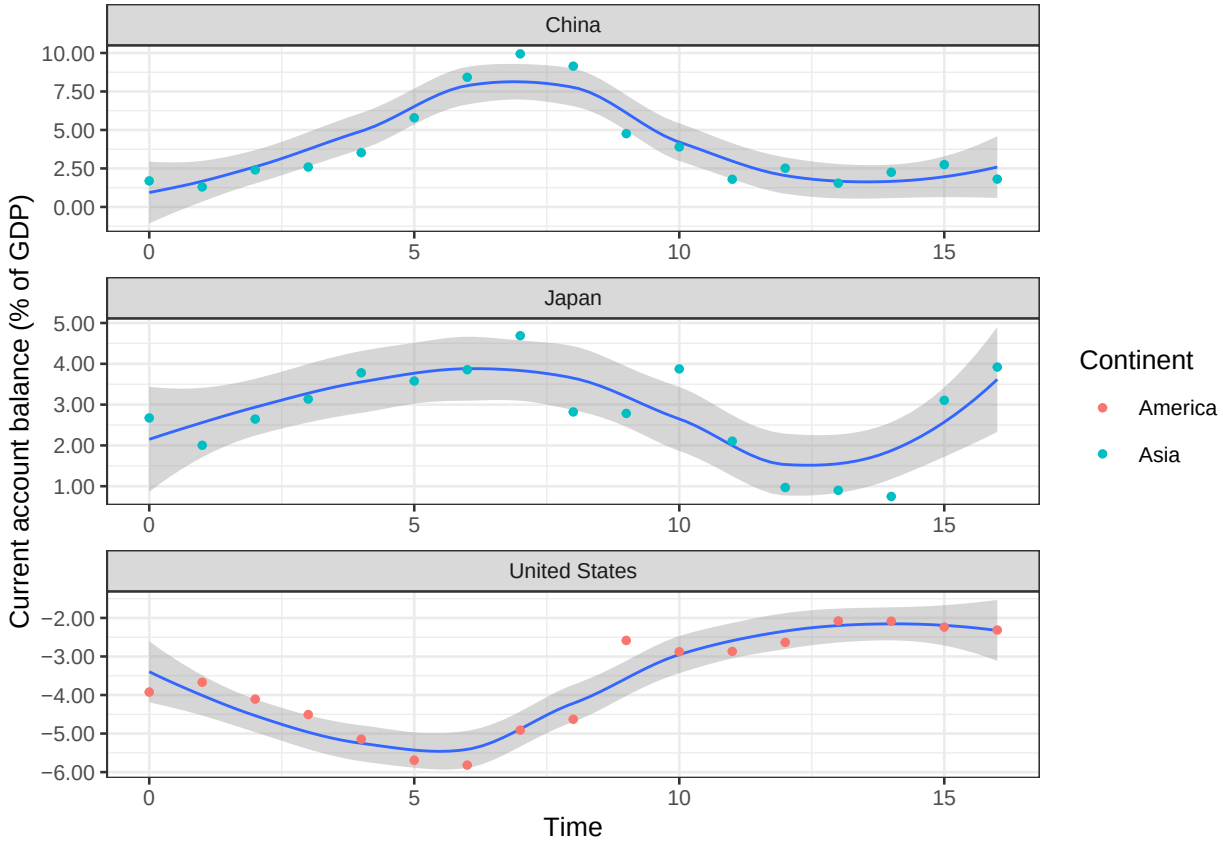



Figure 44: Trendline Current Account Balance 2000 - 2017 aggregated regions and biggest countries

## Domestic credit to private sector (% of GDP)

Domestic credit to private sector refers to financial resources provided to the private sector by financial corporations, such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable, that establish a claim for repayment. For some countries these claims include credit to public enterprises. The financial corporations include monetary authorities and deposit money banks, as well as other financial corporations where data are available (including corporations that do not accept transferable deposits but do incur such liabilities as time and savings deposits). Examples of other financial corporations are finance and leasing companies, money lenders, insurance corporations, pension funds, and foreign exchange companies.

Credit is an important link in money transmission; it finances production, consumption, and capital formation, which in turn affect economic activity. The data on domestic credit provided to the private sector are taken from the financial corporations survey (line 52D) of the International Monetary Fund's (IMF) International Financial Statistics or, when unavailable, from its depository survey (line 32D). The banking sector includes monetary authorities (the central bank) and deposit money banks, as well as other financial corporations where data are available (including institutions that do not accept transferable deposits but do incur such liabilities as time and savings deposits). Examples of other financial corporations are finance and leasing companies, money lenders, insurance corporations, pension funds, and foreign exchange companies.

Private sector development and investment - tapping private sector initiative and investment for socially useful purposes - are critical for poverty reduction. In parallel with public sector efforts, private investment, especially in competitive markets, has tremendous potential to contribute to growth. Private markets are the engine of productivity growth, creating productive jobs and higher incomes. And with government playing a complementary role of regulation, funding, and service provision, private initiative and investment can help provide the basic services and conditions that empower poor people - by improving health, education, and infrastructure.

Credit to the private sector may sometimes include credit to state-owned or partially state-owned enterprises.

Table 33: Domestic credit to private sector (% of GDP)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 91 | 4.7 |
| Belgium | 61 | 4.2 |
| Brazil | 47 | 15 |
| Chile | 92 | 16 |
| China | 125 | 17 |
| Czech Republic | 41 | 10 |
| Denmark | 167 | 21 |
| Estonia | 74 | 15 |
| European Union | 103 | 8.5 |
| Finland | 80 | 15 |
| France | 89 | 9 |
| Germany | 93 | 13 |
| Greece | 90 | 25 |
| Hungary | 44 | 11 |
| Iceland | 146 | 66 |
| Ireland | 105 | 40 |
| Israel | 71 | 4.8 |
| Italy | 81 | 11 |
| Japan | 170 | 13 |
| Korea, Rep. | 128 | 19 |
| Latin America & Caribbean | 36 | 11 |
| Latvia | 61 | 18 |

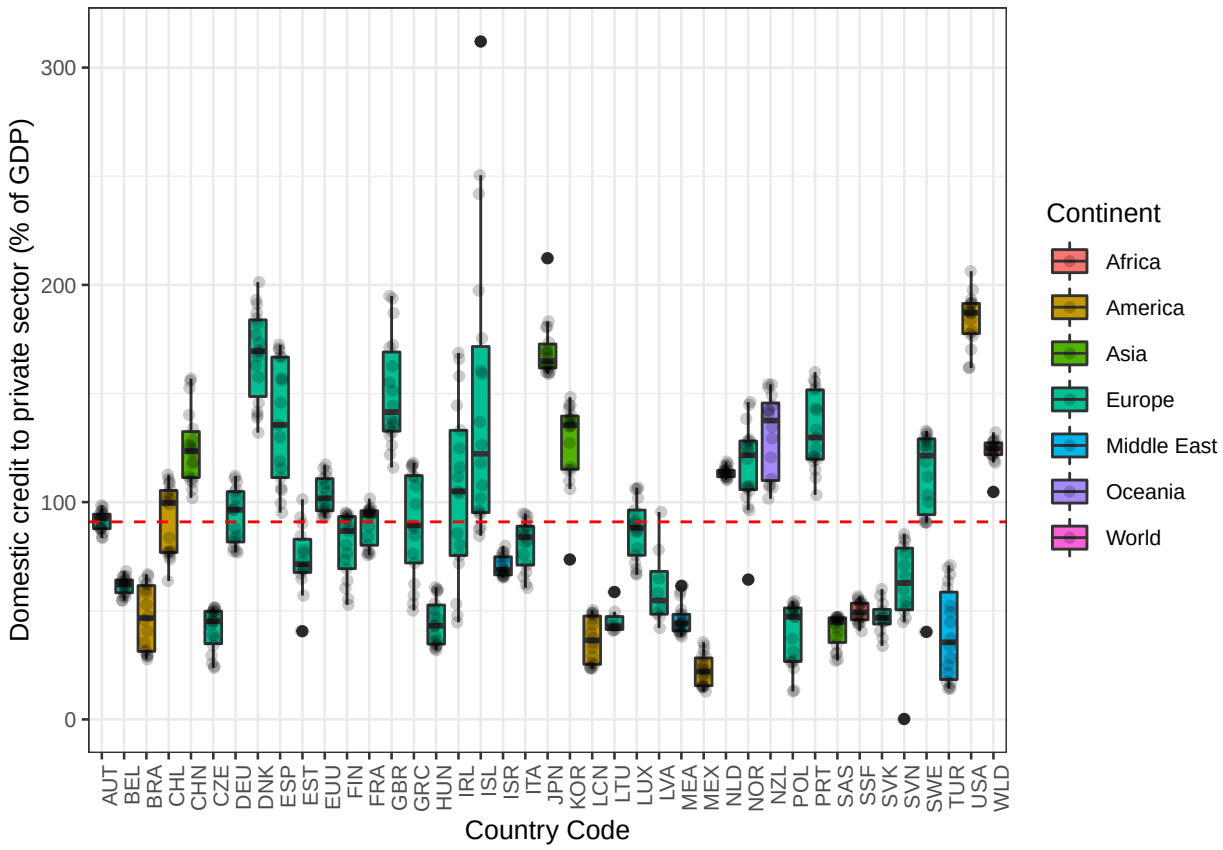



Figure 45: Boxplot Domestic Credit to private sector 2000 - 2017

| Country Name | Mean | SD |
|---|---|---|
| Lithuania | 46 | 6.1 |
| Luxembourg | 87 | 14 |
| Mexico | 23 | 7.2 |
| Middle East & North Africa | 46 | 7 |
| Netherlands | 114 | 2.5 |
| New Zealand | 131 | 19 |
| Norway | 116 | 20 |
| Poland | 39 | 14 |
| Portugal | 133 | 18 |
| Slovak Republic | 47 | 7.5 |
| Slovenia | 61 | 23 |
| South Asia | 41 | 7.4 |
| Spain | 137 | 28 |
| Sub-Saharan Africa | 50 | 4.8 |
| Sweden | 111 | 24 |
| Turkey | 39 | 21 |
| United Kingdom | 150 | 25 |
| United States | 184 | 12 |
| World | 124 | 5.9 |

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```

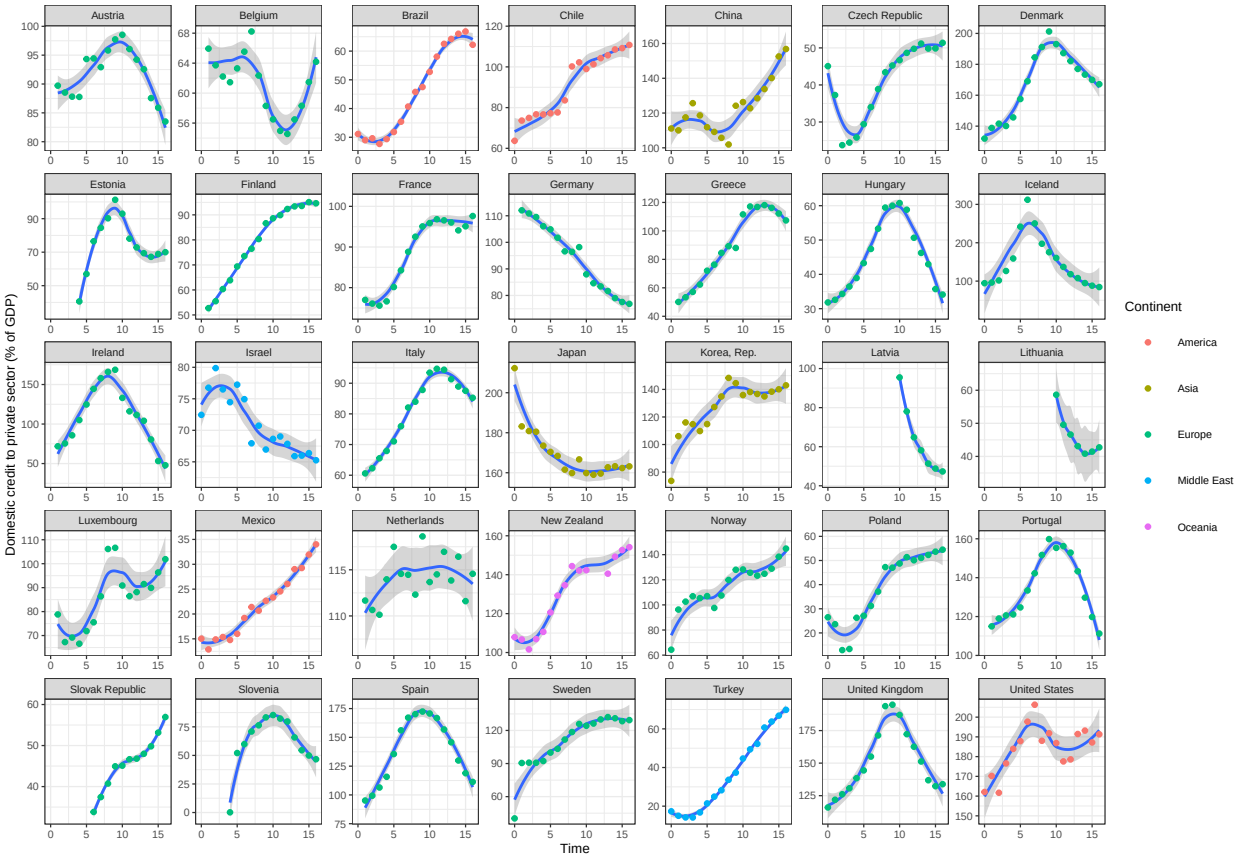



Figure 46: Trendline Domestic Credit to private sector 2000 - 2017

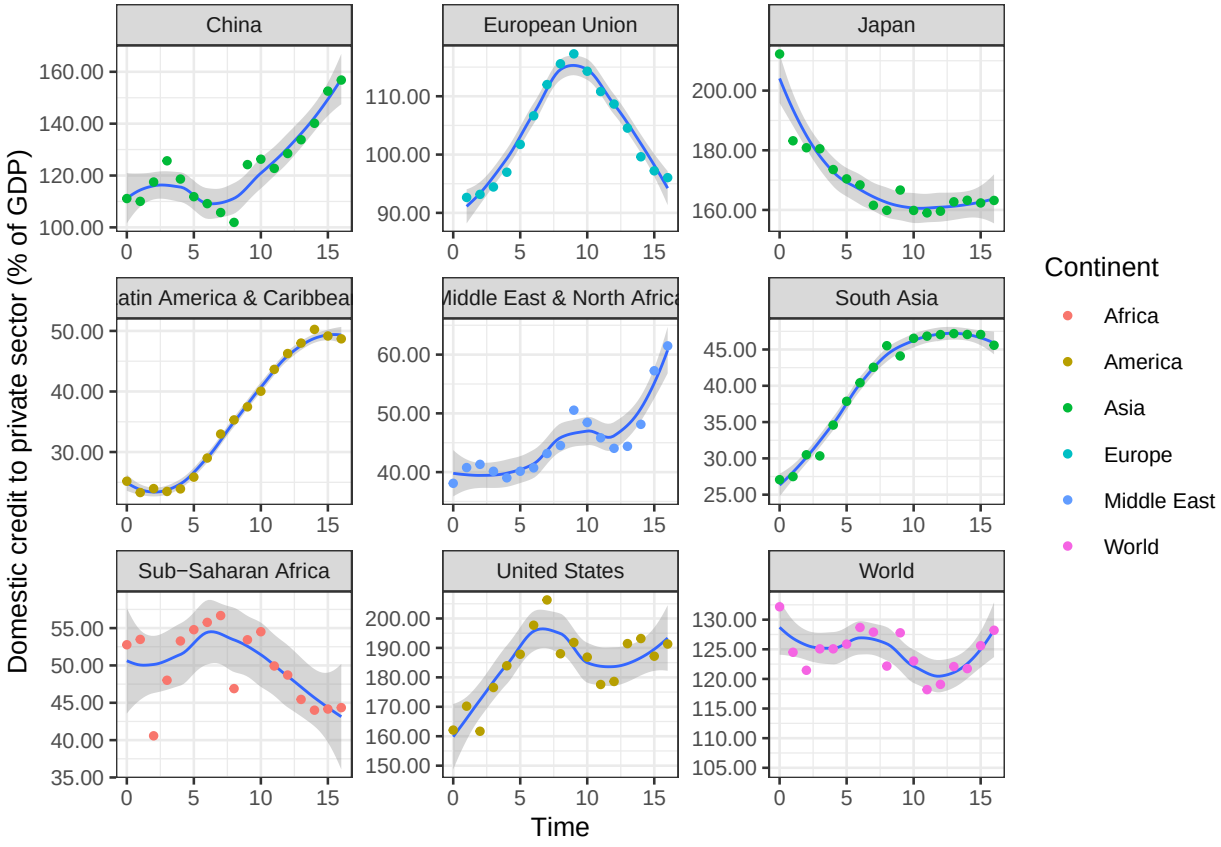



Figure 47: Trendline Domestic Credit to private sector 2000 - 2017 aggregated regions and biggest countries

## Domestic credit to private sector by banks (% of GDP)

Domestic credit to private sector by banks refers to financial resources provided to the private sector by other depository corporations (deposit taking corporations except central banks), such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable, that establish a claim for repayment. For some countries these claims include credit to public enterprises.

Credit is an important link in money transmission; it finances production, consumption, and capital formation, which in turn affect economic activity. The data on domestic credit provided to the private sector by banks are taken from the other depository corporations survey (line 22D) of the International Monetary Fund's (IMF) International Financial Statistics. The other depository corporations include all deposit taking corporations (deposit money banks) except monetary authorities (the central bank).

Private sector development and investment - tapping private sector initiative and investment for socially useful purposes - are critical for poverty reduction. In parallel with public sector efforts, private investment, especially in competitive markets, has tremendous potential to contribute to growth. Private markets are the engine of productivity growth, creating productive jobs and higher incomes. And with government playing a complementary role of regulation, funding, and service provision, private initiative and investment can help provide the basic services and conditions that empower poor people - by improving health, education, and infrastructure.

Credit to the private sector may sometimes include credit to state-owned or partially state-owned enterprises.

Table 34: Domestic credit to private sector by banks (% of GDP)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 91 | 4.8 |
| Belgium | 61 | 4.1 |
| Brazil | 47 | 15 |
| Chile | 70 | 6.7 |
| China | 125 | 17 |
| Czech Republic | 41 | 10 |
| Denmark | 167 | 21 |
| Estonia | 74 | 15 |
| European Union | 103 | 8.5 |
| Finland | 80 | 15 |
| France | 89 | 8.8 |
| Germany | 93 | 13 |
| Greece | 90 | 24 |
| Hungary | 44 | 11 |
| Iceland | 146 | 66 |
| Ireland | 105 | 40 |
| Israel | 71 | 4.8 |
| Italy | 81 | 12 |
| Japan | 105 | 20 |
| Korea, Rep. | 128 | 19 |
| Latin America & Caribbean | 34 | 9.6 |
| Latvia | 61 | 18 |
| Lithuania | 45 | 6.1 |
| Luxembourg | 87 | 14 |
| Mexico | 18 | 4.6 |
| Middle East & North Africa | 45 | 6.6 |
| Netherlands | 114 | 2.5 |
| New Zealand | 129 | 17 |
| Norway | 103 | 14 |

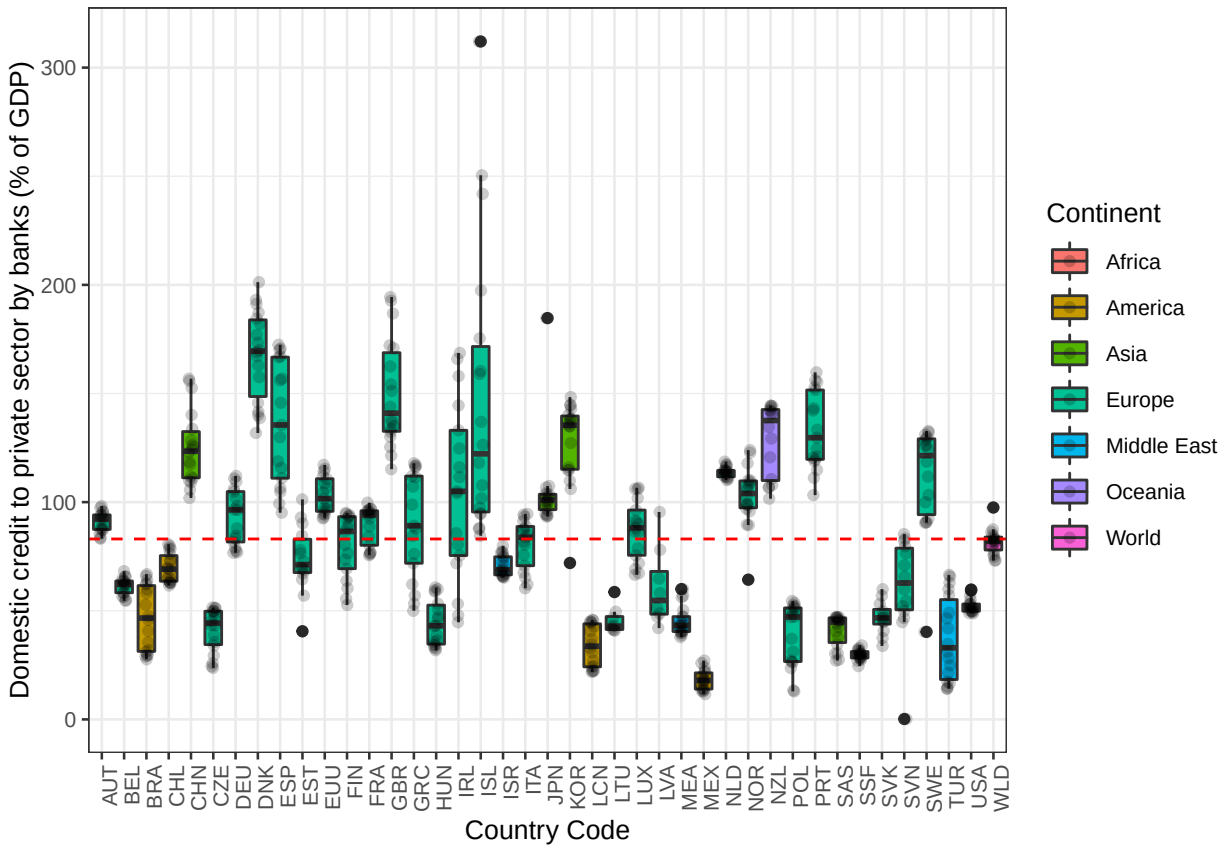



Figure 48: Boxplot Credit to the private sector by banks (% of GDP) 2000 - 2017

| Country Name | Mean | SD |
|---|---|---|
| Poland | 39 | 14 |
| Portugal | 133 | 18 |
| Slovak Republic | 47 | 7.5 |
| Slovenia | 61 | 23 |
| South Asia | 41 | 7.4 |
| Spain | 137 | 28 |
| Sub-Saharan Africa | 30 | 2.3 |
| Sweden | 111 | 24 |
| Turkey | 37 | 19 |
| United Kingdom | 150 | 25 |
| United States | 52 | 3.5 |
| World | 82 | 5.8 |

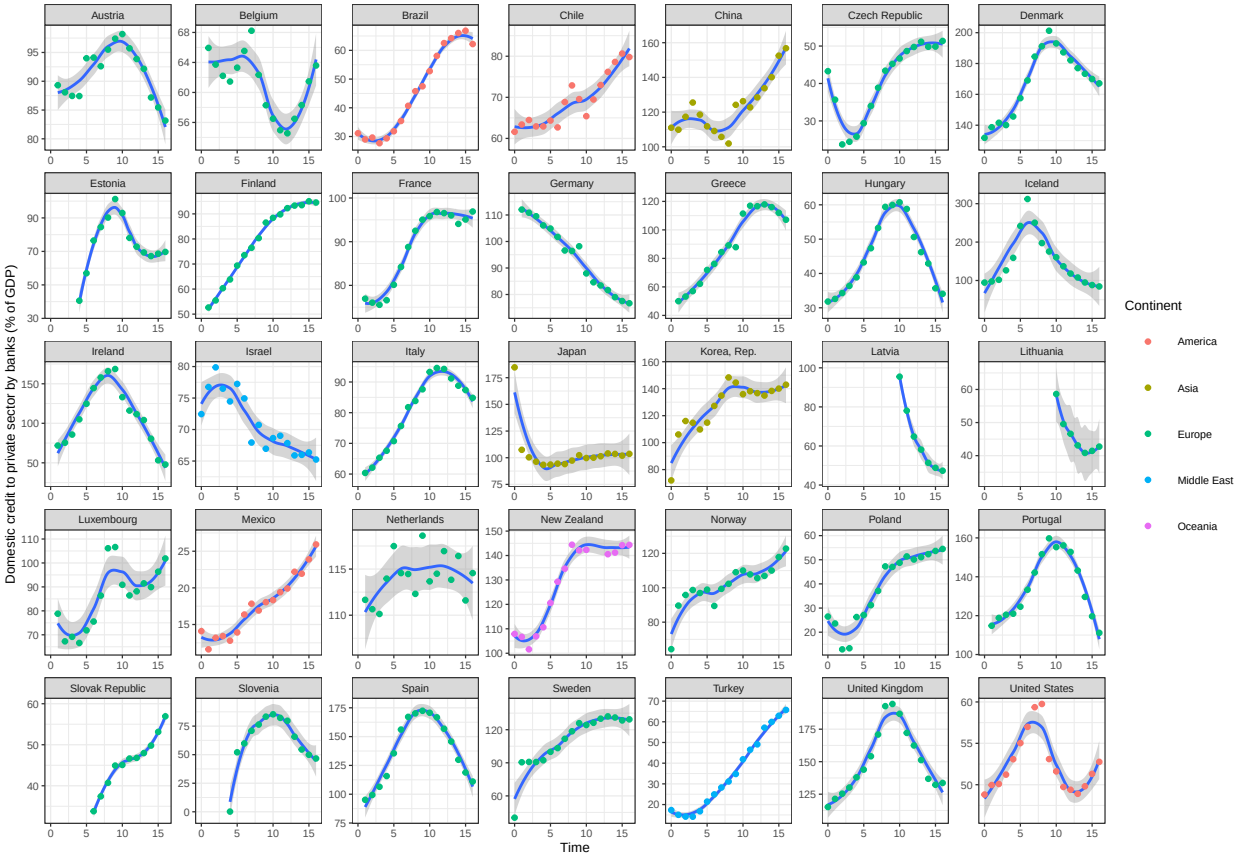



Figure 49: Trendline Credit to the private sector by banks (% of GDP) 2000 - 2017

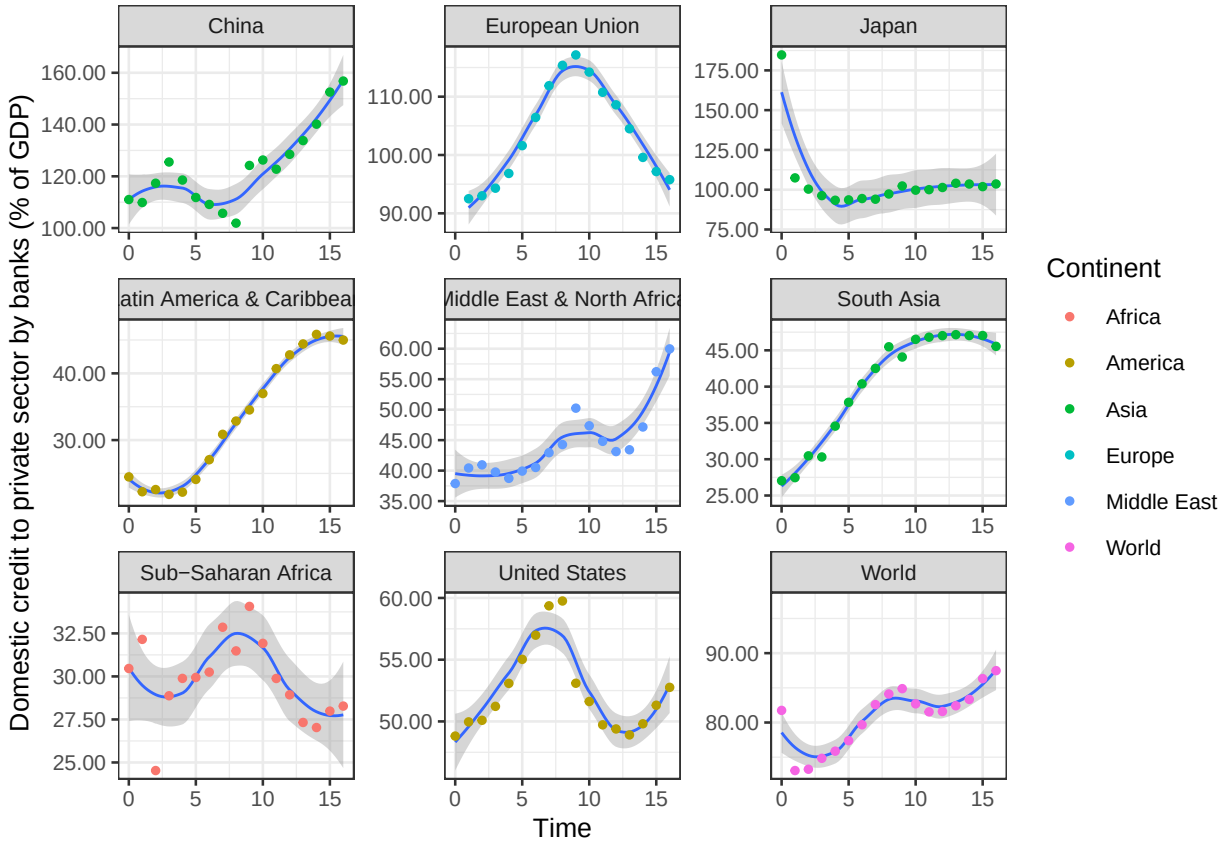



Figure 50: Trendline Credit to the private sector by banks (% of GDP) 2000 - 2017 aggregated regions and biggest countries

## Exports of goods and services (% of GDP)

Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.

Gross domestic product (GDP) from the expenditure side is made up of household final consumption expenditure, general government final consumption expenditure, gross capital formation (private and public investment in fixed assets, changes in inventories, and net acquisitions of valuables), and net exports (exports minus imports) of goods and services. Such expenditures are recorded in purchaser prices and include net taxes on products.

Because policymakers have tended to focus on fostering the growth of output, and because data on production are easier to collect than data on spending, many countries generate their primary estimate of GDP using the production approach. Moreover, many countries do not estimate all the components of national expenditures but instead derive some of the main aggregates indirectly using GDP (based on the production approach) as the control total.

Data on exports and imports are compiled from customs reports and balance of payments data. Although the data from the payments side provide reasonably reliable records of cross-border transactions, they may not adhere strictly to the appropriate definitions of valuation and timing used in the balance of payments or corresponds to the change-of ownership criterion. This issue has assumed greater significance with the increasing globalization of international business. Neither customs nor balance of payments data usually capture the illegal transactions that occur in many countries. Goods carried by travelers across borders in legal but unreported shuttle trade may further distort trade statistics.

Table 35: Exports of goods and services (% of GDP)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 50 | 3.9 |
| Belgium | 77 | 5.6 |
| Brazil | 13 | 1.8 |
| Chile | 36 | 5.1 |
| China | 26 | 5.4 |
| Czech Republic | 65 | 13 |
| Denmark | 50 | 4.3 |
| Estonia | 70 | 10 |
| European Union | 38 | 3.9 |
| Finland | 39 | 2.6 |
| France | 28 | 1.6 |
| Germany | 41 | 5.8 |
| Greece | 25 | 4.9 |
| Hungary | 76 | 12 |
| Iceland | 43 | 9.4 |
| Ireland | 97 | 15 |
| Israel | 35 | 3.7 |
| Italy | 27 | 2.5 |
| Japan | 15 | 2.6 |
| Korea, Rep. | 43 | 8.3 |
| Latin America & Caribbean | 22 | 1.8 |
| Latvia | 48 | 11 |
| Lithuania | 62 | 15 |
| Luxembourg | 179 | 28 |

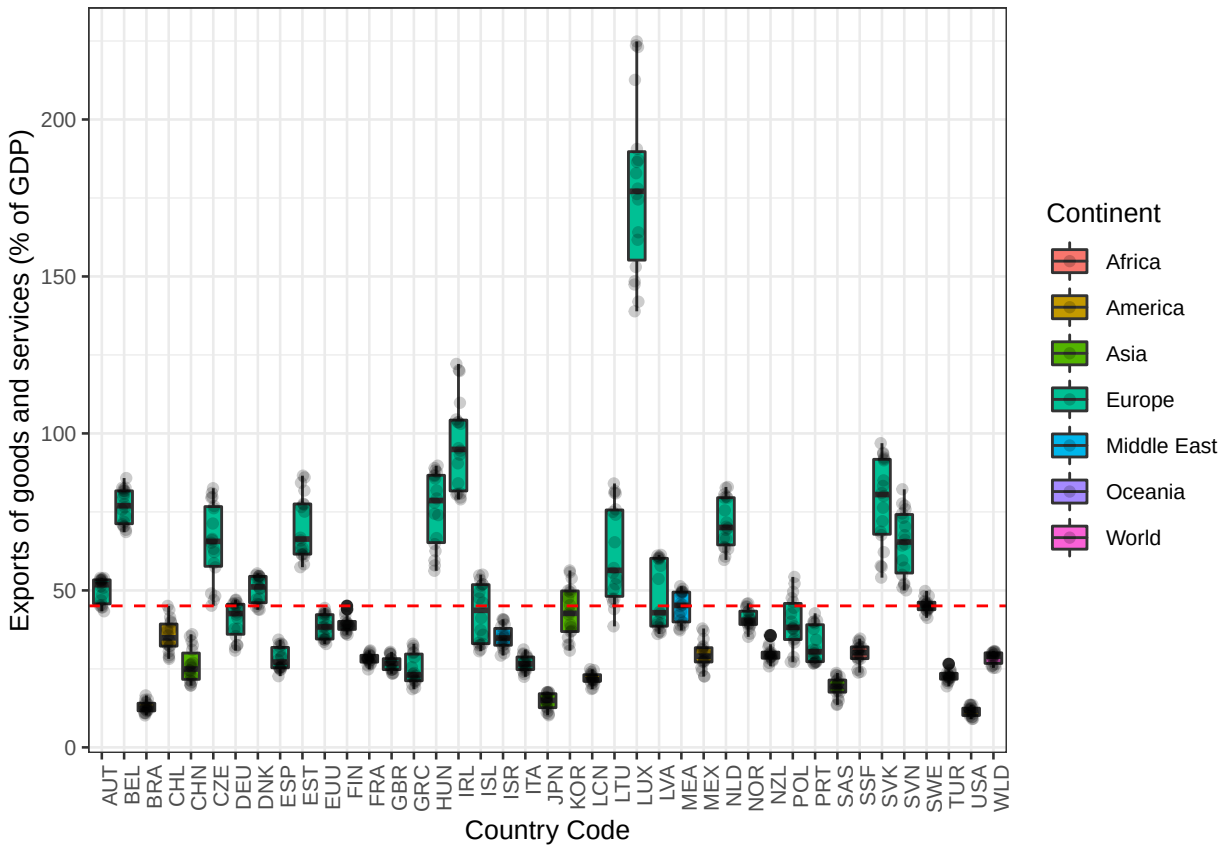



Figure 51: Boxplot Exports of goods and services (% of GDP) 2000 - 2017

| Country Name | Mean | SD |
|---|---|---|
| Mexico | 29 | 4.4 |
| Middle East & North Africa | 45 | 4.9 |
| Netherlands | 71 | 7.9 |
| New Zealand | 30 | 2.7 |
| Norway | 41 | 3.2 |
| Poland | 40 | 8.2 |
| Portugal | 33 | 5.8 |
| Slovak Republic | 78 | 14 |
| Slovenia | 65 | 10 |
| South Asia | 19 | 3.2 |
| Spain | 28 | 3.6 |
| Sub-Saharan Africa | 30 | 3.3 |
| Sweden | 45 | 2.2 |
| Turkey | 23 | 1.7 |
| United Kingdom | 27 | 2.4 |
| United States | 11 | 1.6 |
| World | 29 | 1.9 |

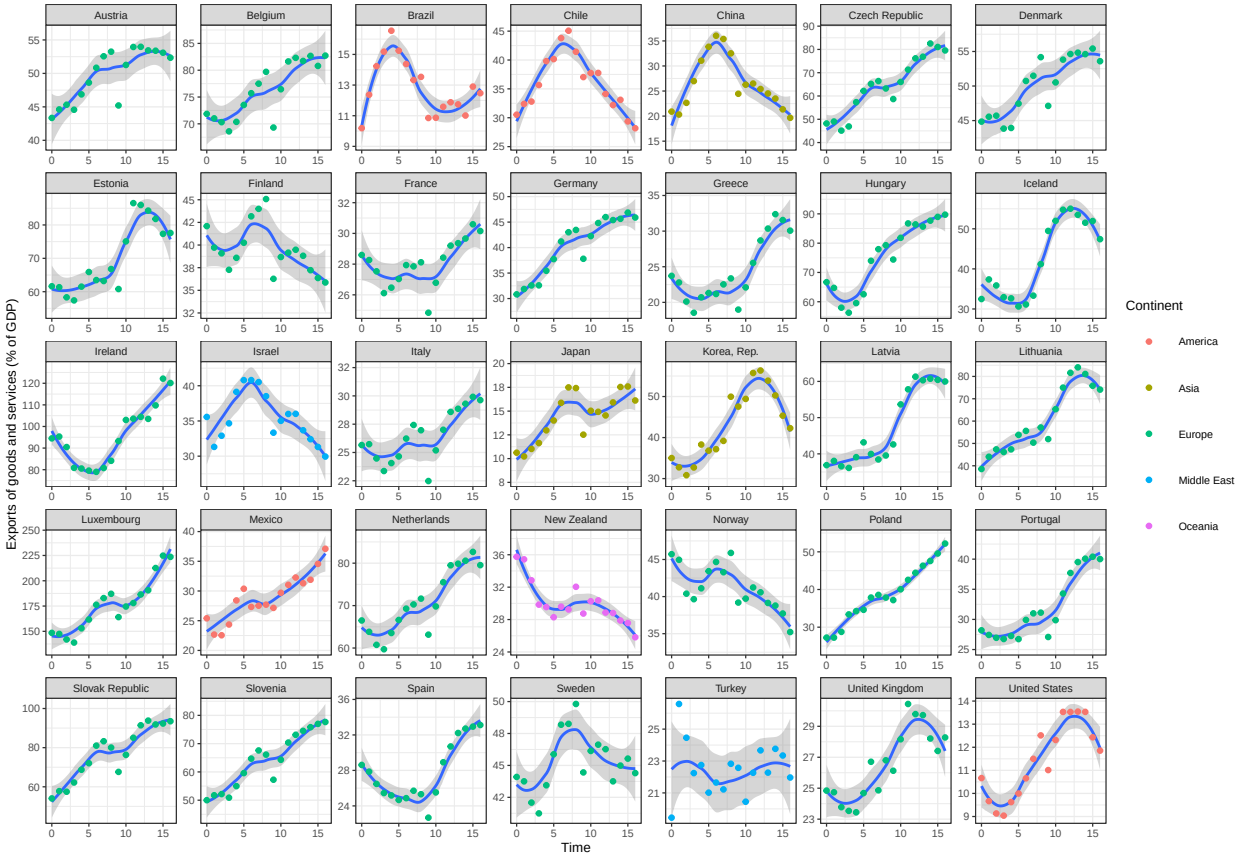



Figure 52: Trendline Exports of goods and services (% of GDP) 2000 - 2017

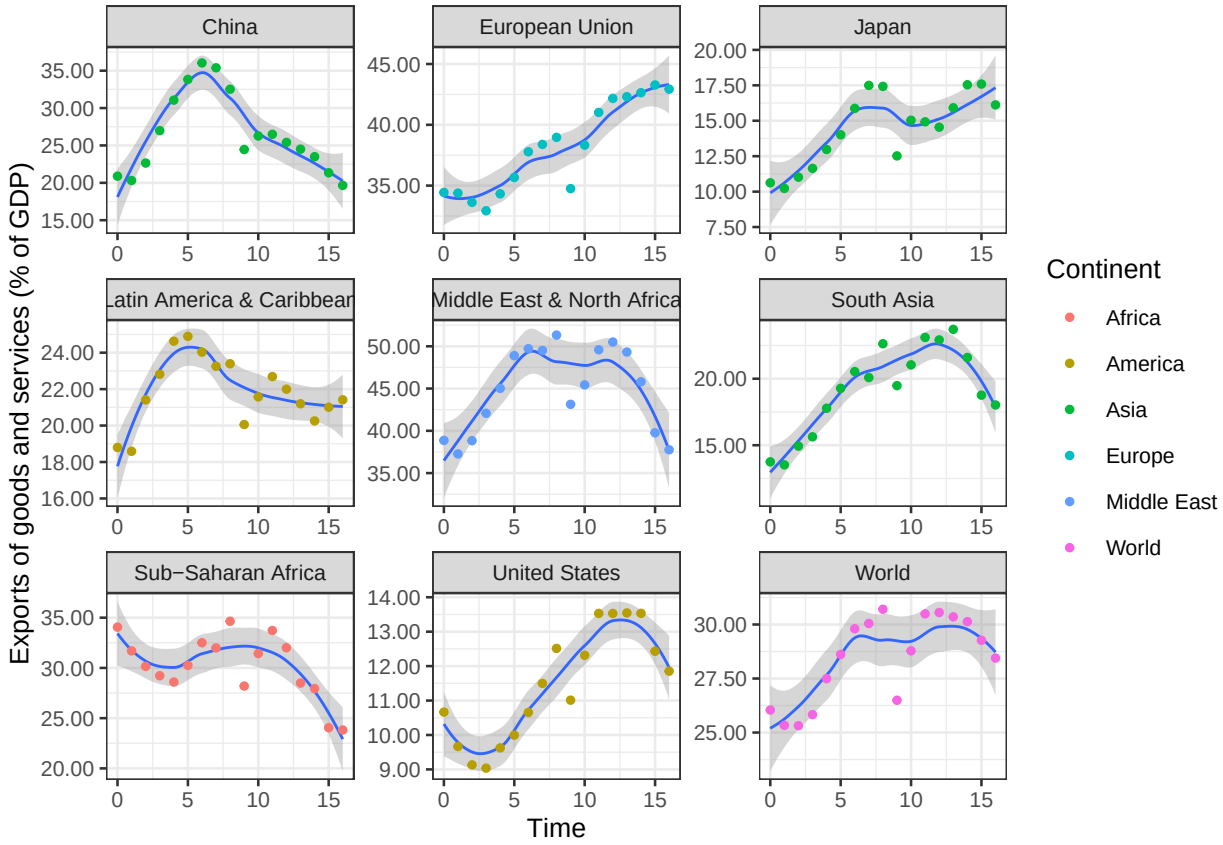



Figure 53: Trendline Exports of goods and services (% of GDP) 2000 - 2017 aggregated regions and biggest countries

## Exports of goods and services (annual % growth)

Annual growth rate of exports of goods and services based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.

Table 36: Exports of goods and services (annual % growth)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 4.3 | 6 |
| Belgium | 4 | 4.7 |
| Brazil | 5.4 | 5.9 |
| Chile | 3 | 4.3 |
| Czech Republic | 8.6 | 8.4 |
| Denmark | 3.6 | 4.6 |
| Estonia | 6.6 | 11 |
| European Union | 4.5 | 5.2 |
| Finland | 3.4 | 7.5 |
| France | 3.2 | 4.8 |
| Germany | 5.4 | 6.4 |
| Greece | 3.3 | 8.9 |
| Hungary | 8.6 | 8.2 |
| Iceland | 5.8 | 5.7 |
| Ireland | 8 | 9.8 |
| Israel | 4.5 | 9.1 |
| Italy | 2.7 | 6.7 |
| Japan | 4.9 | 10 |
| Korea, Rep. | 8.1 | 6.8 |
| Latin America & Caribbean | 3.5 | 4.8 |
| Latvia | 7.6 | 7.6 |
| Lithuania | 10 | 8.9 |
| Luxembourg | 5.8 | 6.5 |
| Mexico | 4.9 | 7.3 |
| Middle East & North Africa | 4.4 | 4.7 |
| Netherlands | 4.2 | 4.6 |
| New Zealand | 2.9 | 2.4 |
| Norway | 0.75 | 2.2 |
| Poland | 8.4 | 6.1 |
| Portugal | 4.5 | 4.9 |
| Slovak Republic | 9.2 | 8.7 |
| Slovenia | 6.6 | 7 |
| South Asia | 10 | 8.9 |
| Spain | 3.7 | 4.7 |
| Sub-Saharan Africa | 5.2 | 7.3 |
| Sweden | 4 | 6 |
| Turkey | 6.9 | 5.6 |
| United Kingdom | 3.4 | 4.7 |
| United States | 3.7 | 5.5 |
| World | 4.6 | 4.9 |

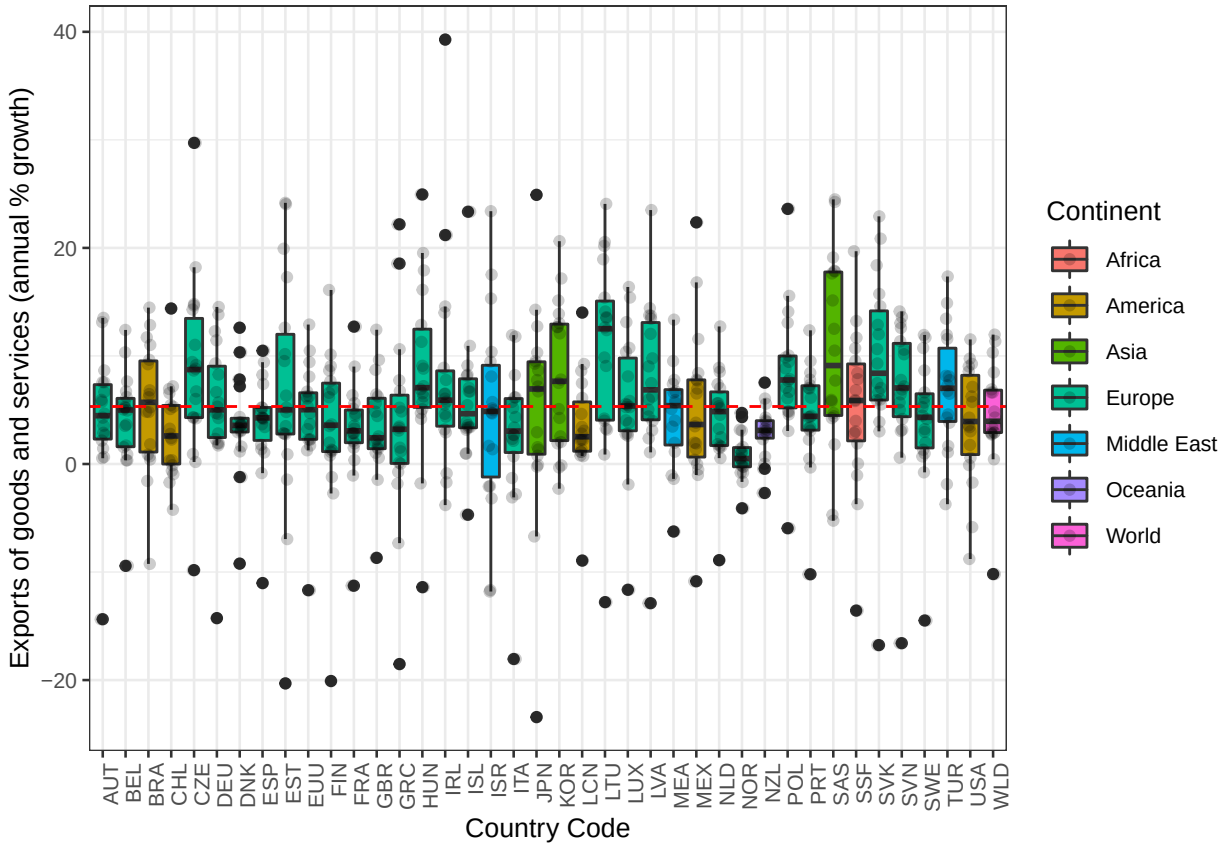



Figure 54: Boxplot Exports of goods and services (annual growth) 2000 - 2017

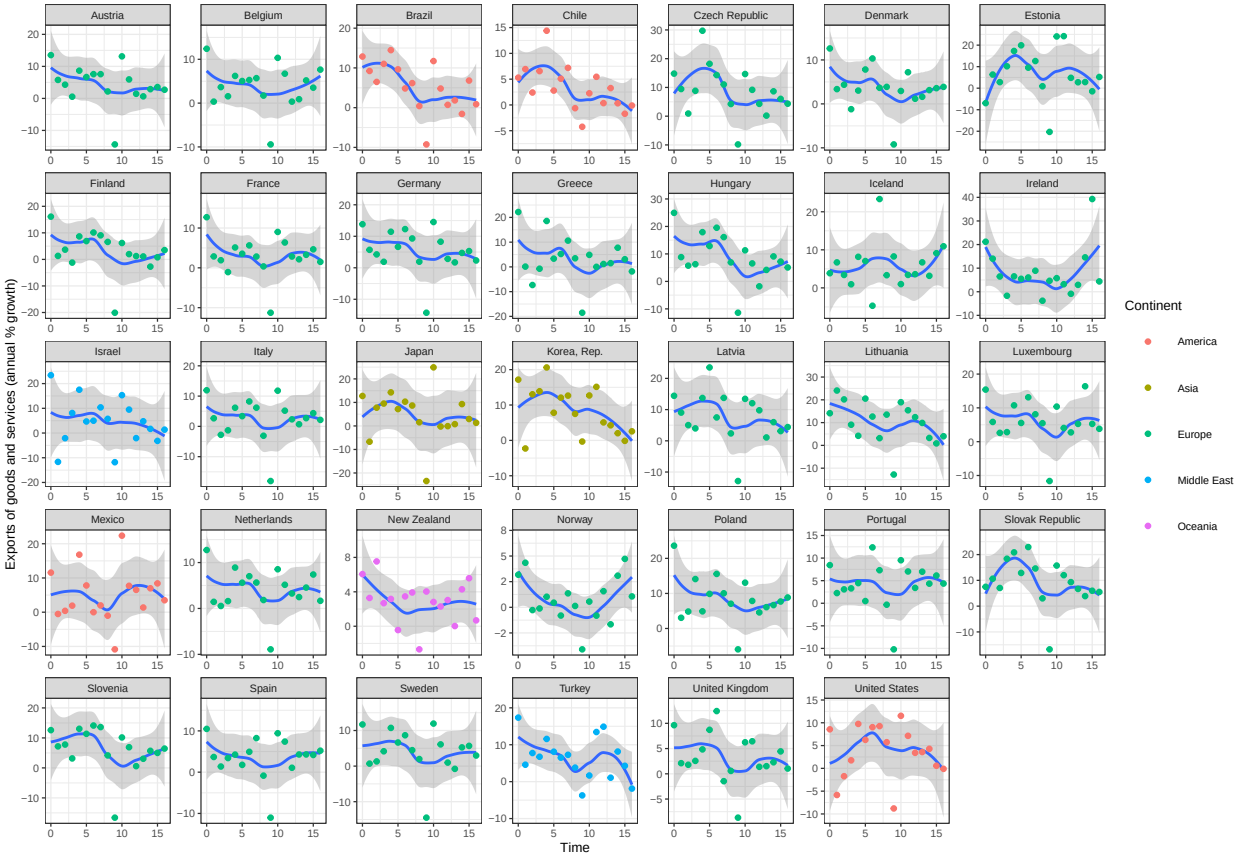



Figure 55: Trendline Exports of goods and services (annual growth) 2000 - 2017

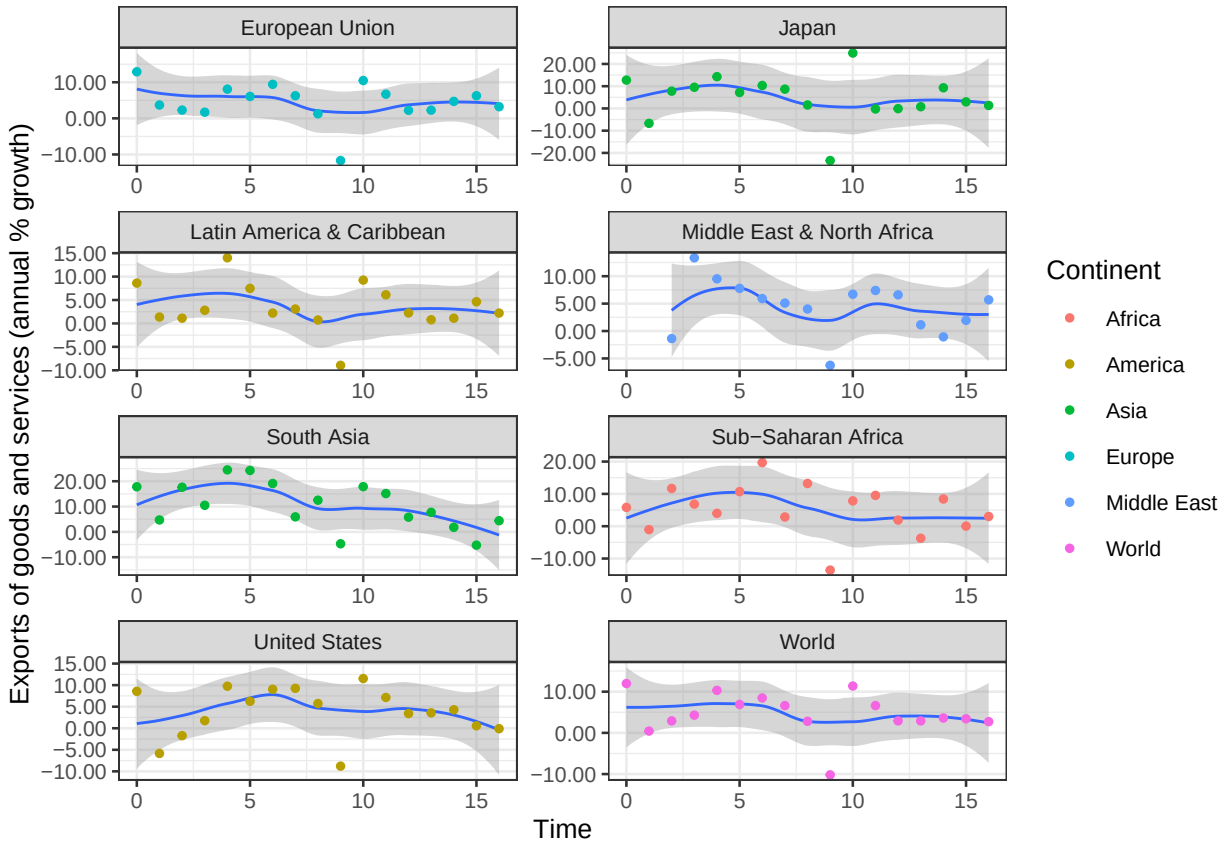



Figure 56: Trendline Exports of goods and services (annual growth) regions and biggest countries 2000 - 2017

## Food exports (% of merchandise exports)

Food comprises the commodities in SITC sections 0 (food and live animals), 1 (beverages and tobacco), and 4 (animal and vegetable oils and fats) and SITC division 22 (oil seeds, oil nuts, and oil kernels).

World Bank staff estimates through the WITS platform from the Comtrade database maintained by the United Nations Statistics Division.

The classification of commodity groups is based on the Standard International Trade Classification (SITC) revision 3.

Previous editions contained data based on the SITC revision 1. Data for earlier years in previous editions may differ because of the change in methodology. Concordance tables are available to convert data reported in one system to another.

Merchandise export shares may not sum to 100 percent because of unclassified trade.

Table 37: Food exports (% of merchandise exports)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 6.5 | 0.9 |
| Belgium | 8.9 | 0.69 |
| Brazil | 30 | 4.4 |
| Chile | 22 | 4.2 |
| China | 3.4 | 0.96 |
| Czech Republic | 4.2 | 0.57 |
| Denmark | 19 | 1.1 |
| Estonia | 9.6 | 1 |
| European Union | 8.6 | 0.9 |
| Finland | 2.3 | 0.42 |
| France | 12 | 0.87 |
| Germany | 5 | 0.62 |
| Greece | 21 | 2.1 |
| Hungary | 7.5 | 0.92 |
| Iceland | 51 | 9.6 |
| Ireland | 9.3 | 1.2 |
| Israel | 2.6 | 0.59 |
| Italy | 7.3 | 0.98 |
| Japan | 0.62 | 0.14 |
| Korea, Rep. | 1.2 | 0.22 |
| Latin America & Caribbean | 21 | 2.6 |
| Latvia | 14 | 4.5 |
| Lithuania | 15 | 2.9 |
| Luxembourg | 8 | 1.6 |
| Mexico | 6 | 0.91 |
| Middle East & North Africa | 2.6 | 0.46 |
| Netherlands | 14 | 1.7 |
| New Zealand | 55 | 4.9 |
| Norway | 7 | 2.3 |
| Poland | 10 | 2 |
| Portugal | 9.8 | 2.2 |
| Slovak Republic | 4.1 | 0.65 |
| Slovenia | 3.8 | 0.53 |
| South Asia | 11 | 1.4 |
| Spain | 15 | 1 |
| Sub-Saharan Africa | 13 | 1.6 |

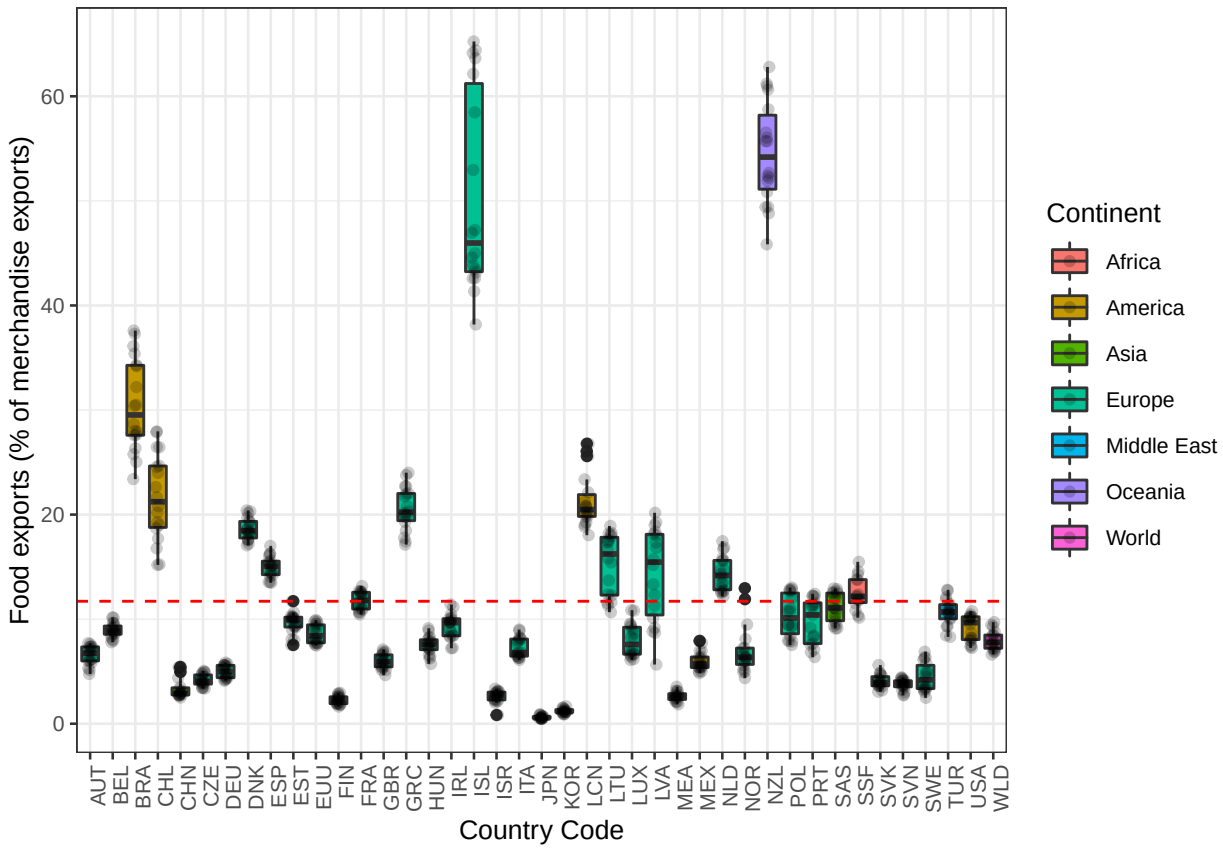



Figure 57: Boxplot Food exports (% of merchandise exports) 2000 - 2017

| Country Name | Mean | SD |
|---|---|---|
| Sweden | 4.5 | 1.4 |
| Turkey | 11 | 1.3 |
| United Kingdom | 6 | 0.72 |
| United States | 9.2 | 1.2 |
| World | 8 | 0.94 |

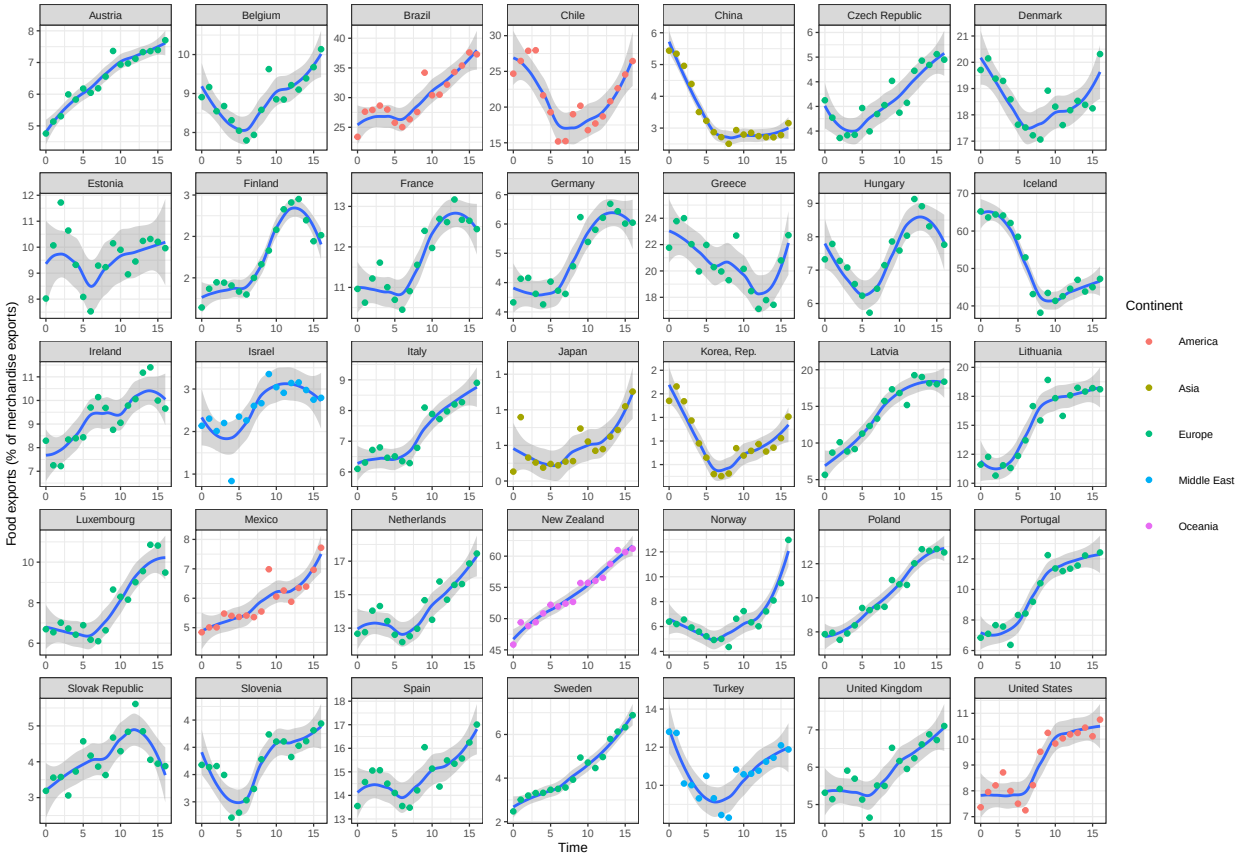



Figure 58: Trendline Food exports (% of merchandise exports) 2000 - 2017

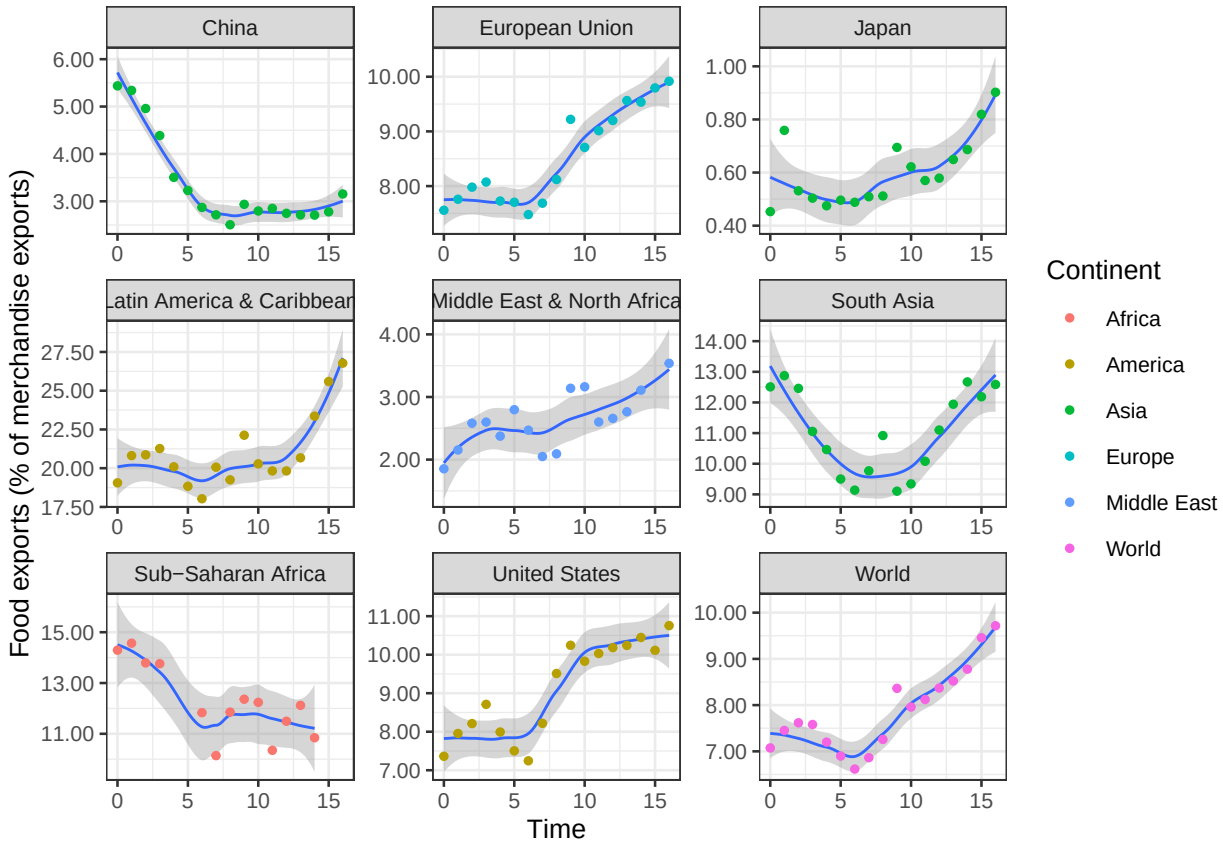



Figure 59: Trendline Food exports (% of merchandise exports) regions and biggest countries 2000 - 2017

## Food imports (% of merchandise imports)

Merchandise import shares may not sum to 100 percent because of unclassified trade.

Table 38: Food imports (% of merchandise imports)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 6.9 | 0.91 |
| Belgium | 8.6 | 0.65 |
| Brazil | 5.4 | 1 |
| Chile | 7.5 | 1.4 |
| China | 4.8 | 1.2 |
| Czech Republic | 5.4 | 0.62 |
| Denmark | 13 | 1.1 |
| Estonia | 10 | 1.2 |
| European Union | 8.7 | 0.88 |
| Finland | 6.5 | 1.3 |
| France | 8.6 | 0.7 |
| Germany | 7.4 | 0.56 |
| Greece | 12 | 1.2 |
| Hungary | 4.4 | 0.91 |
| Iceland | 9.9 | 1.4 |
| Ireland | 9.7 | 2 |
| Israel | 6.8 | 1.2 |
| Italy | 9.4 | 0.95 |
| Japan | 10 | 1.6 |
| Korea, Rep. | 5.1 | 0.65 |
| Latin America & Caribbean | 7.6 | 0.58 |
| Latvia | 13 | 1.9 |
| Lithuania | 11 | 2.2 |
| Luxembourg | 11 | 1.1 |
| Mexico | 6.3 | 0.58 |
| Middle East & North Africa | 13 | 1.4 |
| Netherlands | 11 | 1.9 |
| New Zealand | 9.6 | 1.5 |
| Norway | 8 | 1.1 |
| Poland | 7.2 | 1.2 |
| Portugal | 13 | 1.7 |
| Slovak Republic | 5.8 | 0.56 |
| Slovenia | 7.3 | 1.2 |
| South Asia | 6.3 | 0.94 |
| Spain | 10 | 1 |
| Sub-Saharan Africa | 12 | 1.2 |
| Sweden | 8.7 | 1.6 |
| Turkey | 4.2 | 0.89 |
| United Kingdom | 9.1 | 0.74 |
| United States | 4.9 | 0.69 |
| World | 7.5 | 0.7 |

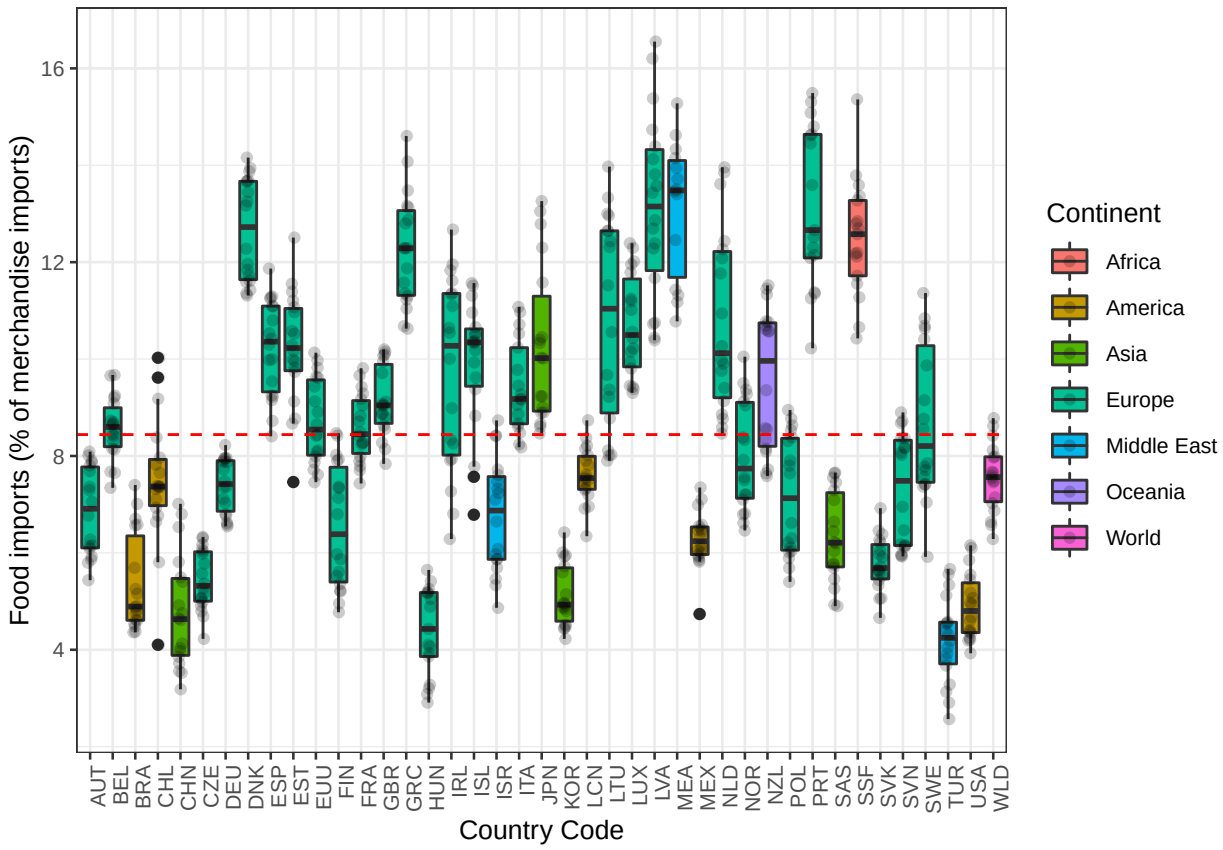



Figure 60: Boxplot Food imports (% of merchandise imports) 2000 - 2017

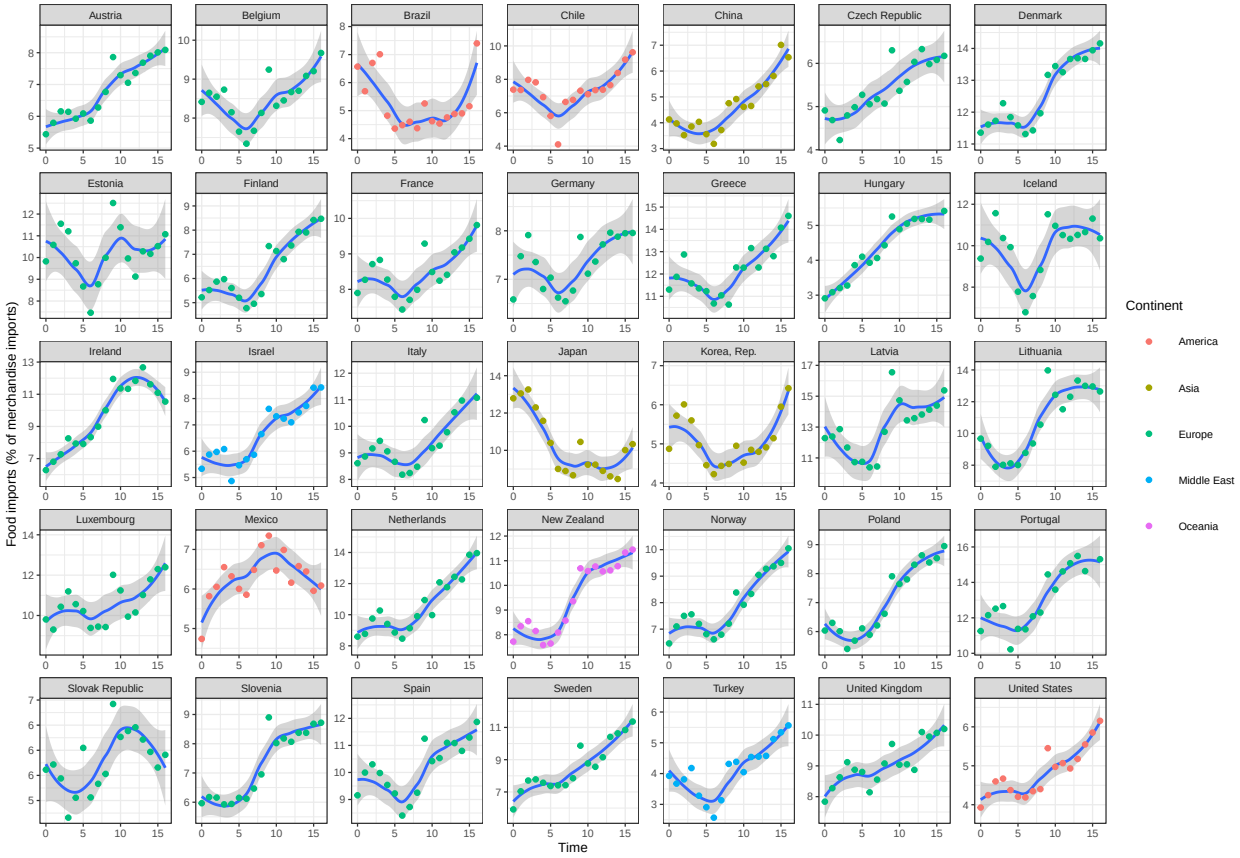



Figure 61: Trendline Food imports (% of merchandise imports) 2000 - 2017

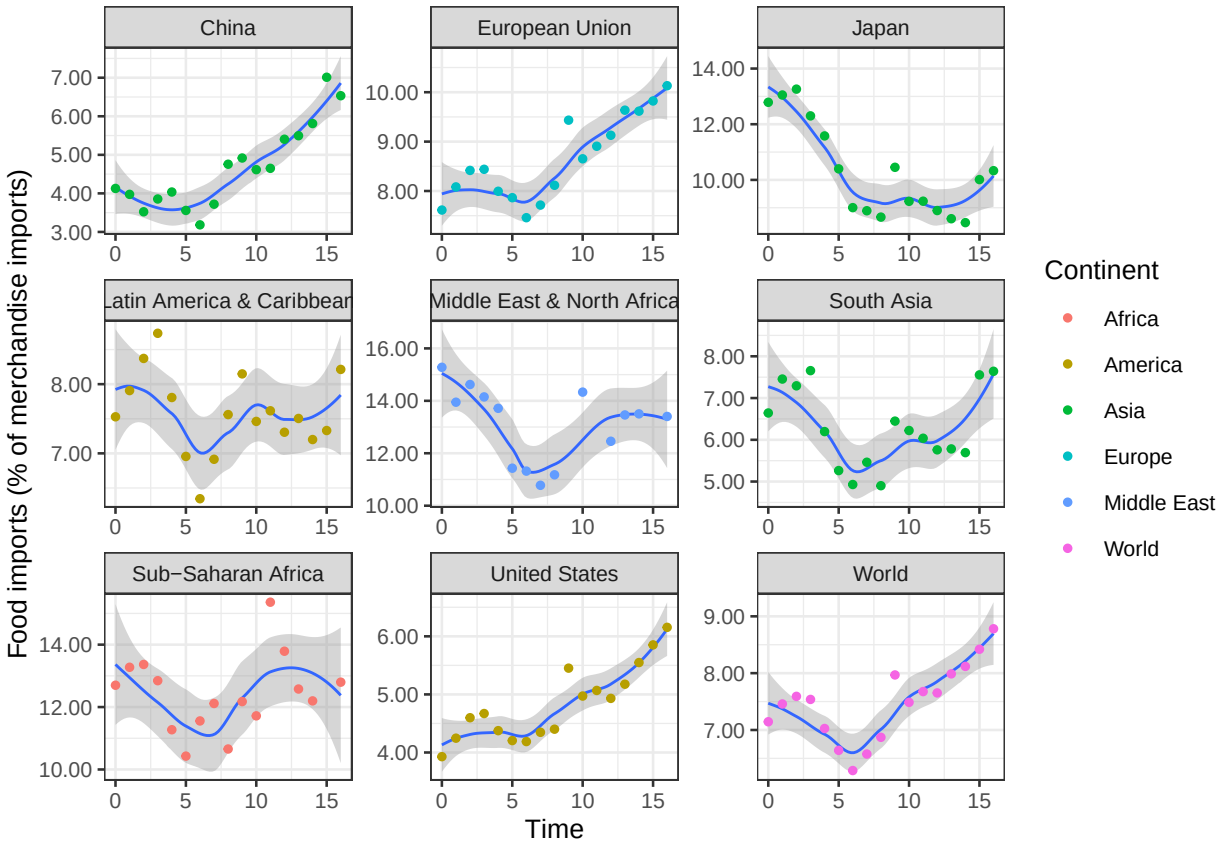



Figure 62: Boxplot Food imports (% of merchandise imports) regions and biggest countries 2000 - 2017

## Final consumption expenditure (% of GDP)

Final consumption expenditure (formerly total consumption) is the sum of household final consumption expenditure (private consumption) and general government final consumption expenditure (general government consumption). This estimate includes any statistical discrepancy in the use of resources relative to the supply of resources.

Table 39: Final consumption expenditure (% of GDP)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 73 | 0.92 |
| Belgium | 74 | 1.4 |
| Brazil | 81 | 2.1 |
| Chile | 73 | 3.7 |
| China | 53 | 4.6 |
| Czech Republic | 69 | 1.9 |
| Denmark | 73 | 1.5 |
| Estonia | 72 | 1.8 |
| Finland | 74 | 4.5 |
| France | 78 | 1 |
| Germany | 75 | 1.5 |
| Greece | 88 | 3.1 |
| Hungary | 74 | 2.8 |
| Iceland | 78 | 3.1 |
| Ireland | 60 | 7.2 |
| Israel | 79 | 1.4 |
| Italy | 79 | 1.2 |
| Japan | 76 | 2.4 |
| Korea, Rep. | 66 | 1.2 |
| Latvia | 80 | 2 |
| Lithuania | 83 | 3 |
| Luxembourg | 51 | 3.1 |
| Mexico | 78 | 1.2 |
| Netherlands | 71 | 1.2 |
| New Zealand | 76 | 1.5 |
| Norway | 63 | 3.5 |
| Poland | 80 | 2.5 |
| Portugal | 84 | 1.4 |
| Slovak Republic | 75 | 1.7 |
| Slovenia | 73 | 2.5 |
| Spain | 76 | 1.4 |
| Sweden | 71 | 1.3 |
| Turkey | 76 | 1.6 |
| United Kingdom | 85 | 1 |
| United States | 83 | 1.3 |

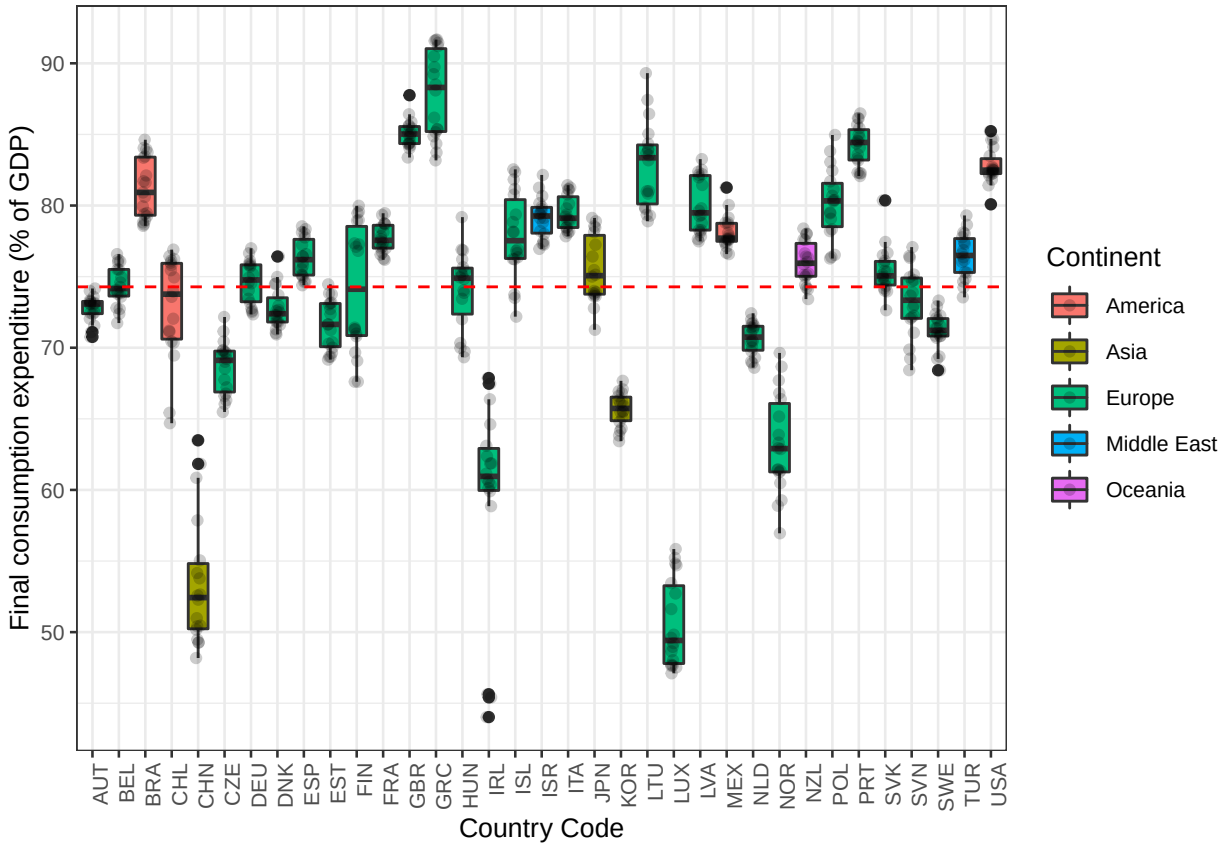



Figure 63: Boxplot Final consumption expenditure (% of GDP) 2000 - 2017

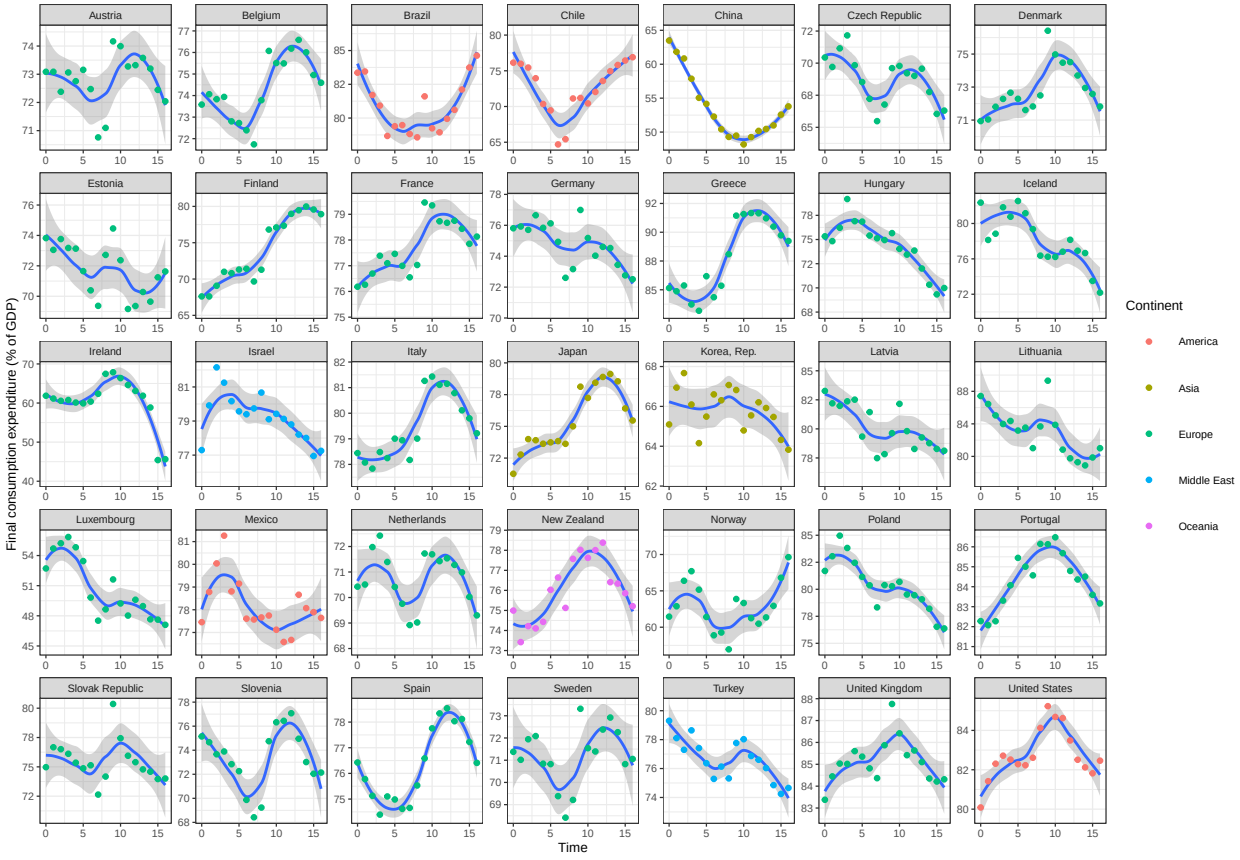



Figure 64: Trendline Final consumption expenditure (% of GDP) 2000 - 2017

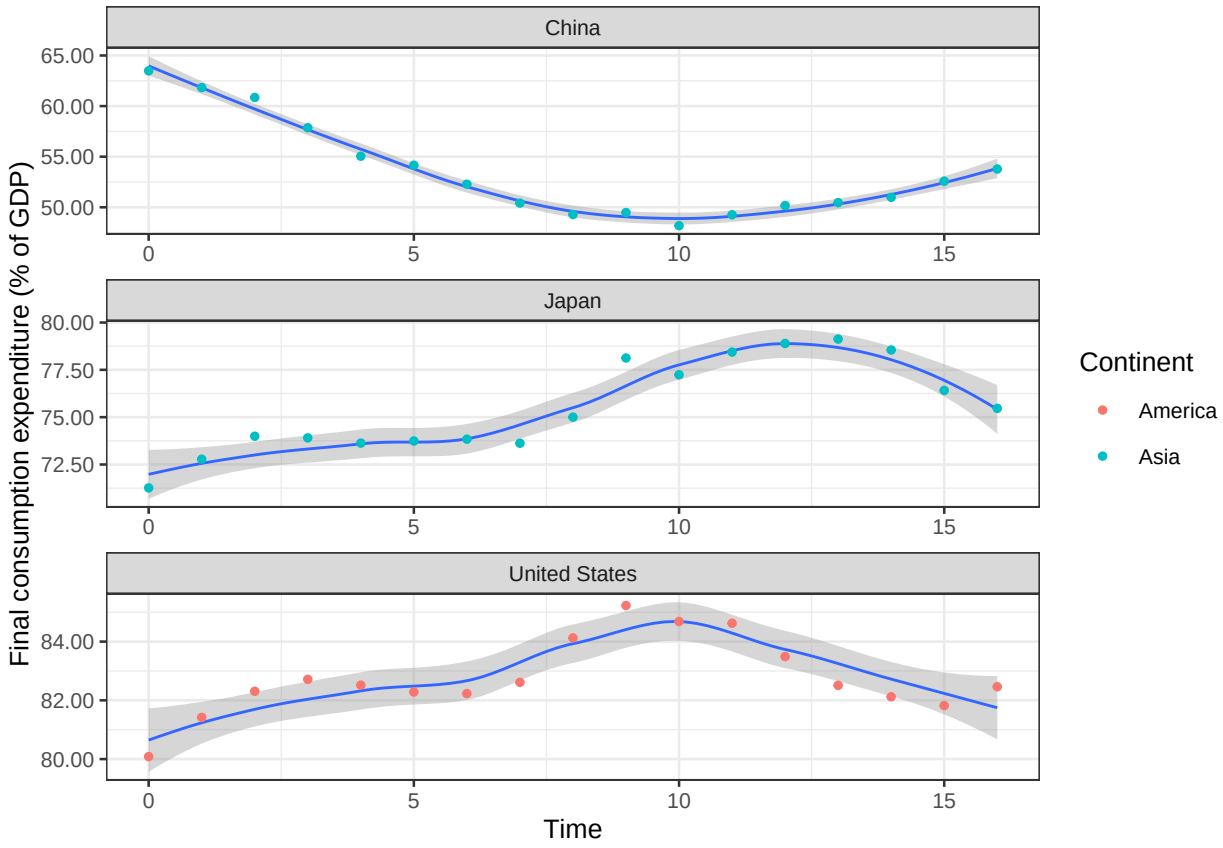



Figure 65: Trendline Final consumption expenditure (% of GDP) regions and biggest countries 2000 - 2017

## Final consumption expenditure (annual % growth)

Average annual growth of final consumption expenditure based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. Final consumption expenditure (formerly total consumption) is the sum of household final consumption expenditure (formerly private consumption) and general government final consumption expenditure (formerly general government consumption). This estimate includes any statistical discrepancy in the use of resources relative to the supply of resources.

Table 40: Final consumption expenditure (annual % growth)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 1.3 | 0.71 |
| Belgium | 1.2 | 0.65 |
| Brazil | 2.6 | 2.5 |
| Chile | 4.6 | 2.5 |
| China | 8.8 | 1.8 |
| Czech Republic | 2.1 | 1.7 |
| Denmark | 1.3 | 1.1 |
| Estonia | 3.7 | 5.2 |
| European Union | 1.4 | 1 |
| Finland | 1.8 | 1.3 |
| France | 1.5 | 0.75 |
| Germany | 1.1 | 0.72 |
| Greece | 0.37 | 4.3 |
| Hungary | 1.9 | 3.1 |
| Iceland | 2.5 | 4.1 |
| Ireland | 2.7 | 3.6 |
| Israel | 3.5 | 1.7 |
| Italy | 0.36 | 1.4 |
| Japan | 0.99 | 0.94 |
| Korea, Rep. | 3.5 | 2.2 |
| Latin America & Caribbean | 2.9 | 2 |
| Latvia | 3.4 | 6.4 |
| Lithuania | 3.8 | 5.5 |
| Luxembourg | 2.6 | 1.2 |
| Mexico | 2.3 | 2.5 |
| Middle East & North Africa | 4 | 2.3 |
| Netherlands | 1.3 | 1.3 |
| New Zealand | 3.3 | 1.5 |
| Norway | 2.8 | 0.87 |
| Poland | 3.2 | 1.5 |
| Portugal | 0.77 | 2.2 |
| Slovak Republic | 3.1 | 2.4 |
| Slovenia | 1.7 | 2.1 |
| South Asia | 5.7 | 1.5 |
| Spain | 1.7 | 2.7 |
| Sub-Saharan Africa | 4.8 | 3.9 |
| Sweden | 1.9 | 0.83 |
| Turkey | 4.7 | 3.8 |
| United Kingdom | 2 | 1.7 |
| United States | 2.1 | 1.3 |
| World | 2.7 | 0.79 |

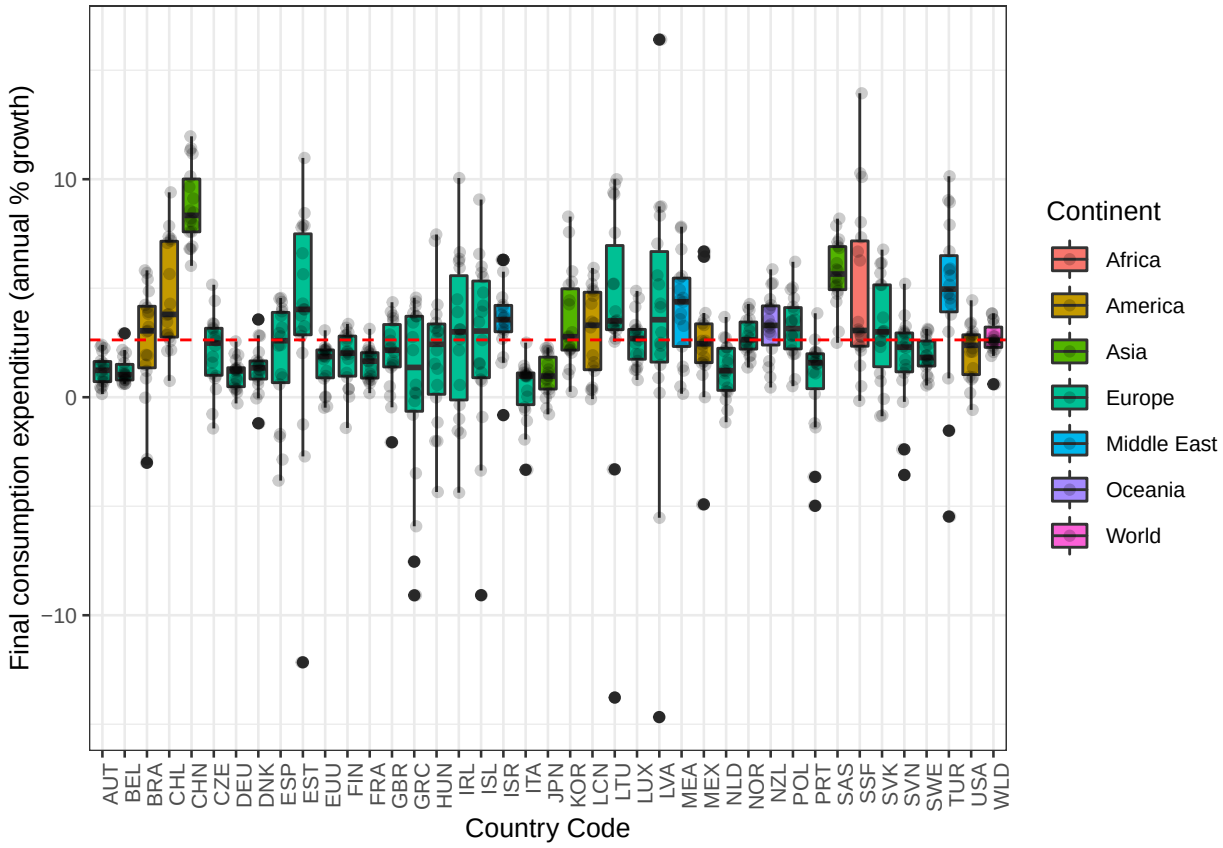



Figure 66: Boxplot Final consumption expenditure (annual % growth) 2000 - 2017

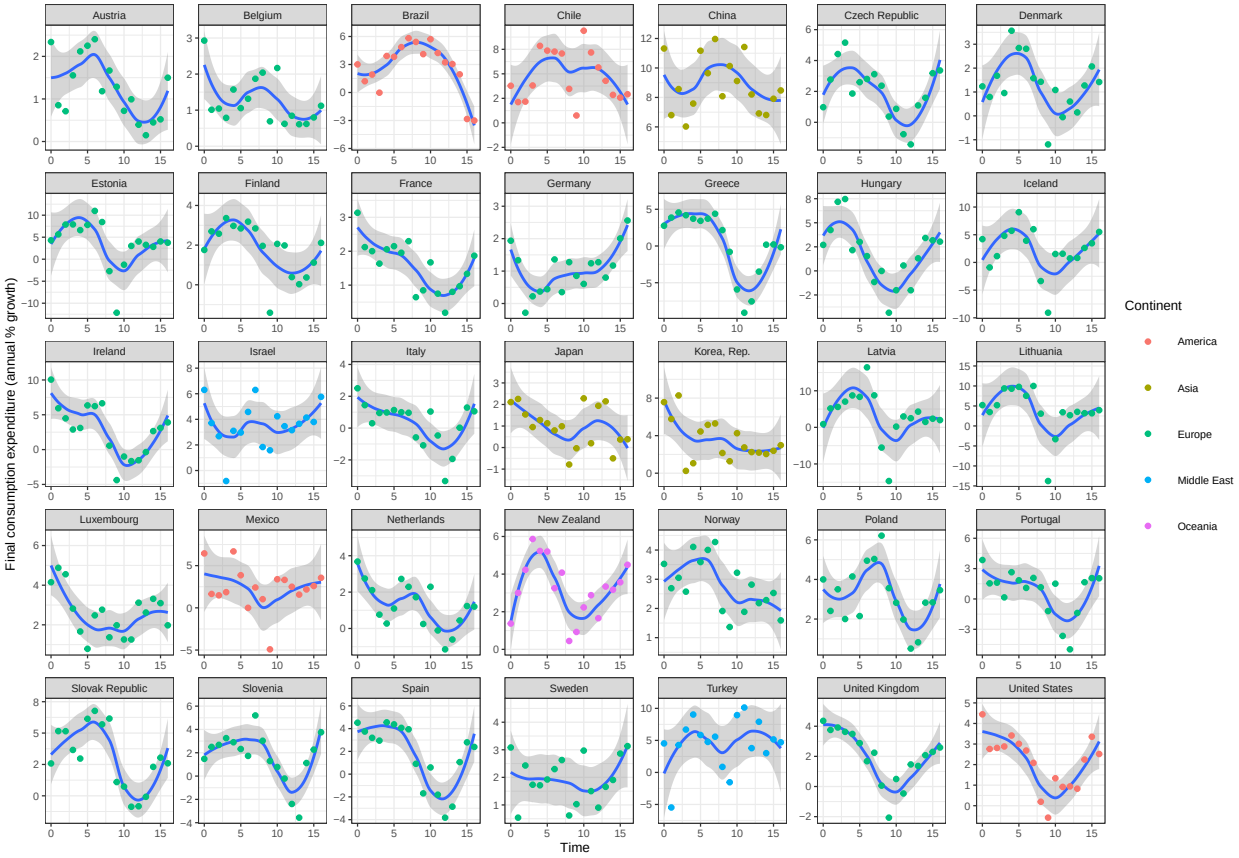



Figure 67: Trendline Final consumption expenditure (annual % growth) 2000 - 2017

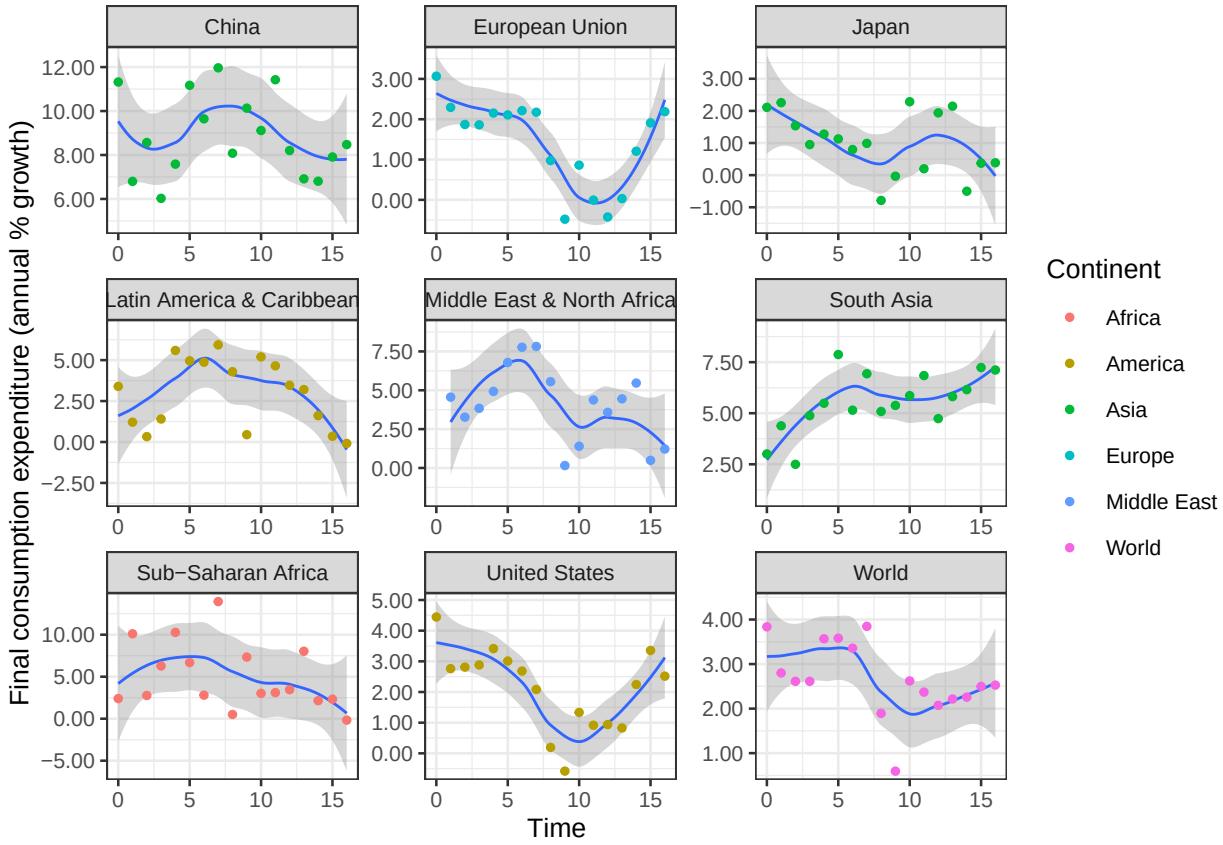



Figure 68: Trendline Final consumption expenditure (annual % growth) regions and biggest countries 2000 - 2017

## Foreign direct investment, net inflows (% of GDP)

Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors, and is divided by GDP.

Data on equity flows are based on balance of payments data reported by the International Monetary Fund (IMF). Foreign direct investment (FDI) data are supplemented by the World Bank staff estimates using data from the United Nations Conference on Trade and Development (UNCTAD) and official national sources.

The internationally accepted definition of FDI (from the sixth edition of the IMF's Balance of Payments Manual [2009]), includes the following components: equity investment, including investment associated with equity that gives rise to control or influence; investment in indirectly influenced or controlled enterprises; investment in fellow enterprises; debt (except selected debt); and reverse investment. The Framework for Direct Investment Relationships provides criteria for determining whether cross-border ownership results in a direct investment relationship, based on control and influence. Distinguished from other kinds of international investment, FDI is made to establish a lasting interest in or effective management control over an enterprise in another country. A lasting interest in an investment enterprise typically involves establishing warehouses, manufacturing facilities, and other permanent or long-term organizations abroad. Direct investments may take the form of greenfield investment, where the investor starts a new venture in a foreign country by constructing new operational facilities; joint venture, where the investor enters into a partnership agreement with a company abroad to establish a new enterprise; or merger and acquisition, where the investor acquires an existing enterprise abroad. The IMF suggests that investments should account for at least 10 percent of voting stock to be counted as FDI. In practice many countries set a higher threshold. Many countries fail to report reinvested earnings, and the definition of long-term loans differs among countries. BoP refers to Balance of Payments.

FDI data do not give a complete picture of international investment in an economy. Balance of payments data on FDI do not include capital raised locally, an important source of investment financing in some developing countries. In addition, FDI data omit nonequity cross-border transactions such as intra-unit flows of goods and services.

The volume of global private financial flows reported by the World Bank generally differs from that reported by other sources because of differences in sources, classification of economies, and method used to adjust and disaggregate reported information. In addition, particularly for debt financing, differences may also reflect how some installments of the transactions and certain offshore issuances are treated.

Data on equity flows are shown for all countries for which data are available.

**Note: Data starting from 2005 are based on the sixth edition of the IMF's Balance of Payments Manual (BPM6).**

Table 41: Foreign direct investment, net inflows (% of GDP)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 3.3 | 7.6 |
| Belgium | 11 | 13 |
| Brazil | 3.3 | 0.99 |
| Chile | 7 | 2.3 |
| China | 3.3 | 0.93 |
| Czech Republic | 5.1 | 2.7 |
| Denmark | 2.2 | 5.7 |
| Estonia | 8.5 | 5.4 |
| European Union | 4.7 | 2.1 |

| Country Name | Mean | SD |
|---|---|---|
| Finland | 3.8 | 3.8 |
| France | 2.1 | 1.1 |
| Germany | 2.4 | 2.7 |
| Greece | 0.8 | 0.62 |
| Hungary | 11 | 20 |
| Iceland | 5 | 12 |
| Ireland | 20 | 18 |
| Israel | 3.7 | 1.9 |
| Italy | 1.1 | 0.86 |
| Japan | 0.24 | 0.21 |
| Korea, Rep. | 1 | 0.4 |
| Latin America & Caribbean | 3.2 | 0.4 |
| Latvia | 3.6 | 2.2 |
| Lithuania | 2.9 | 1.7 |
| Luxembourg | 41 | 65 |
| Mexico | 2.7 | 0.65 |
| Middle East & North Africa | 2.6 | 1.6 |
| Netherlands | 26 | 20 |
| New Zealand | 0.92 | 2 |
| Norway | 2.3 | 2.6 |
| Poland | 3.4 | 1.6 |
| Portugal | 4.1 | 2.4 |
| Slovak Republic | 4.7 | 3.1 |
| Slovenia | 2.1 | 1.9 |
| South Asia | 1.5 | 0.69 |
| Spain | 3.2 | 1.7 |
| Sub-Saharan Africa | 2.5 | 0.63 |
| Sweden | 3.9 | 3.4 |
| Turkey | 1.6 | 0.9 |
| United Kingdom | 4.5 | 3.4 |
| United States | 1.8 | 0.66 |
| World | 3 | 0.91 |

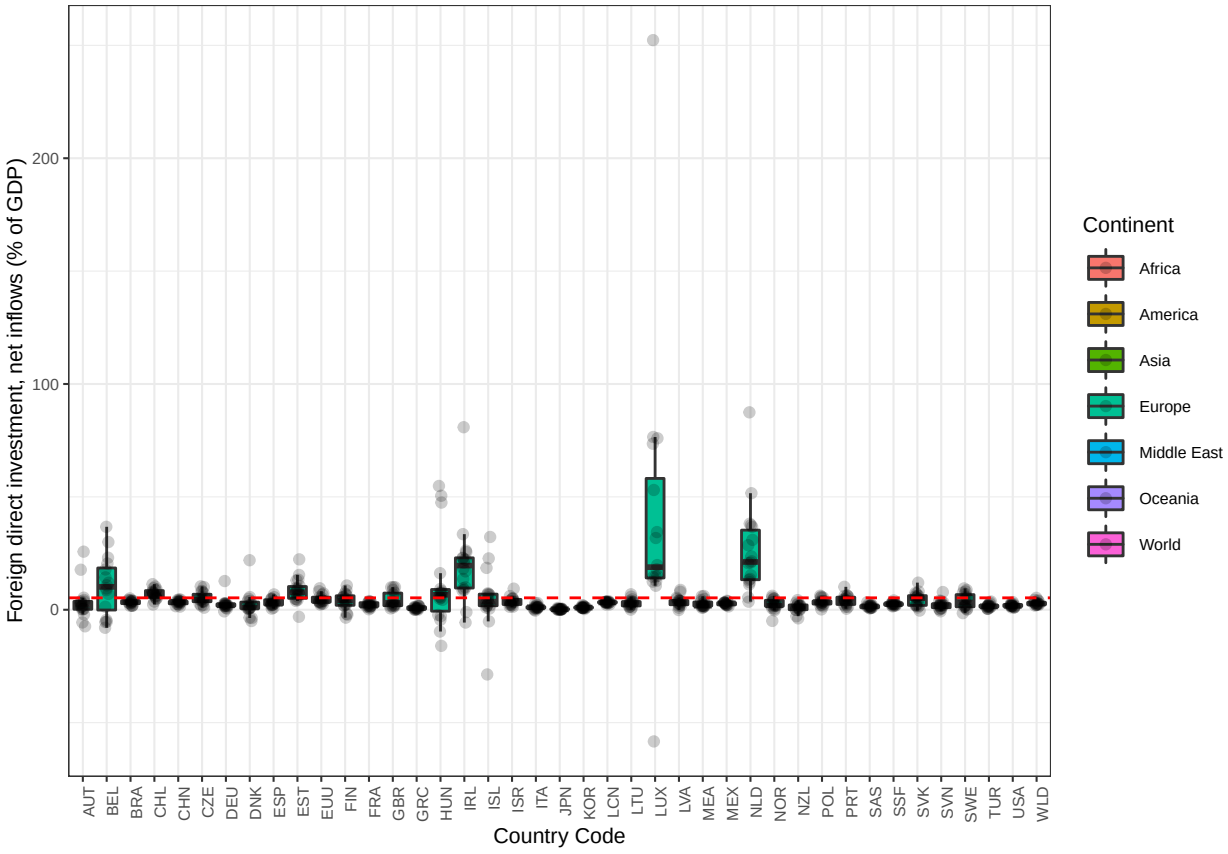



Figure 69: Boxplot Foreign direct investment, net inflows (% of GDP) 2000 - 2017

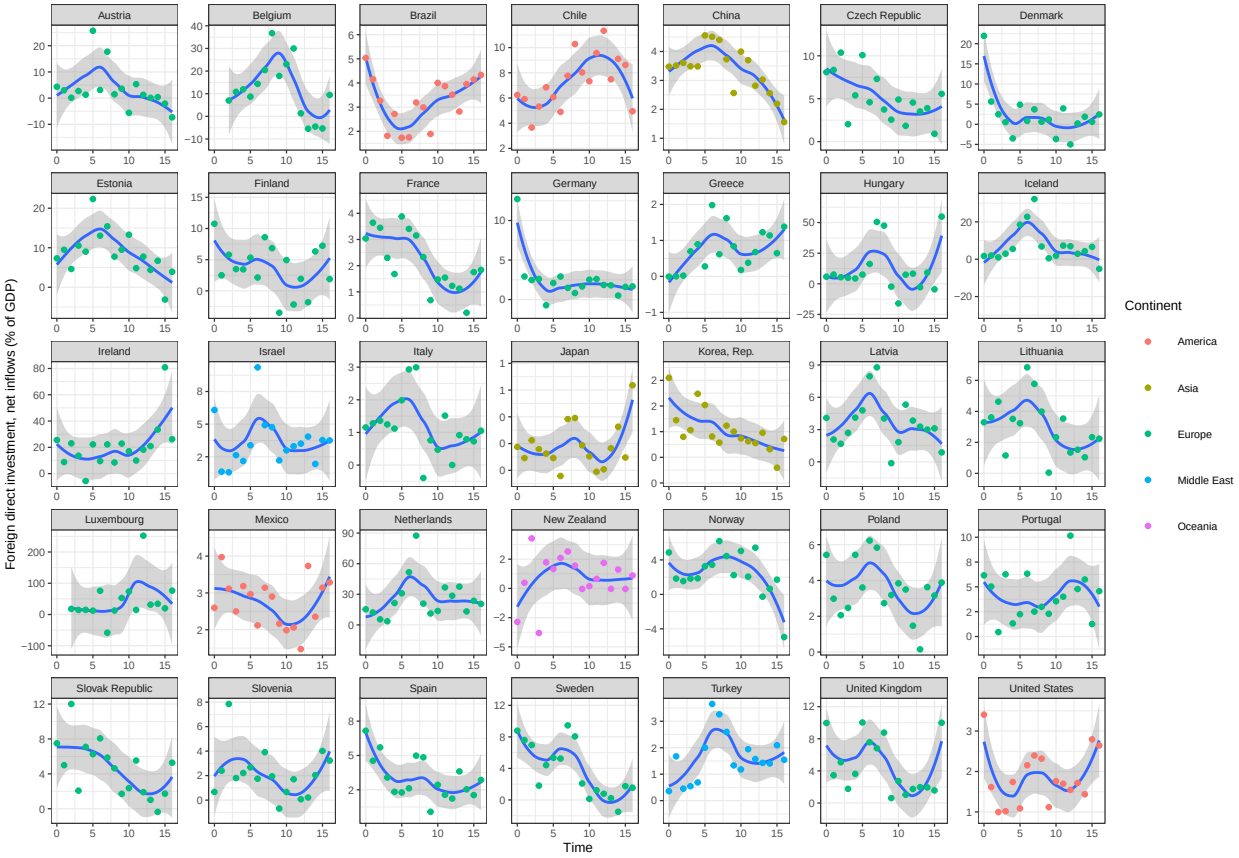



Figure 70: Trendline Foreign direct investment, net inflows (% of GDP) 2000 - 2017

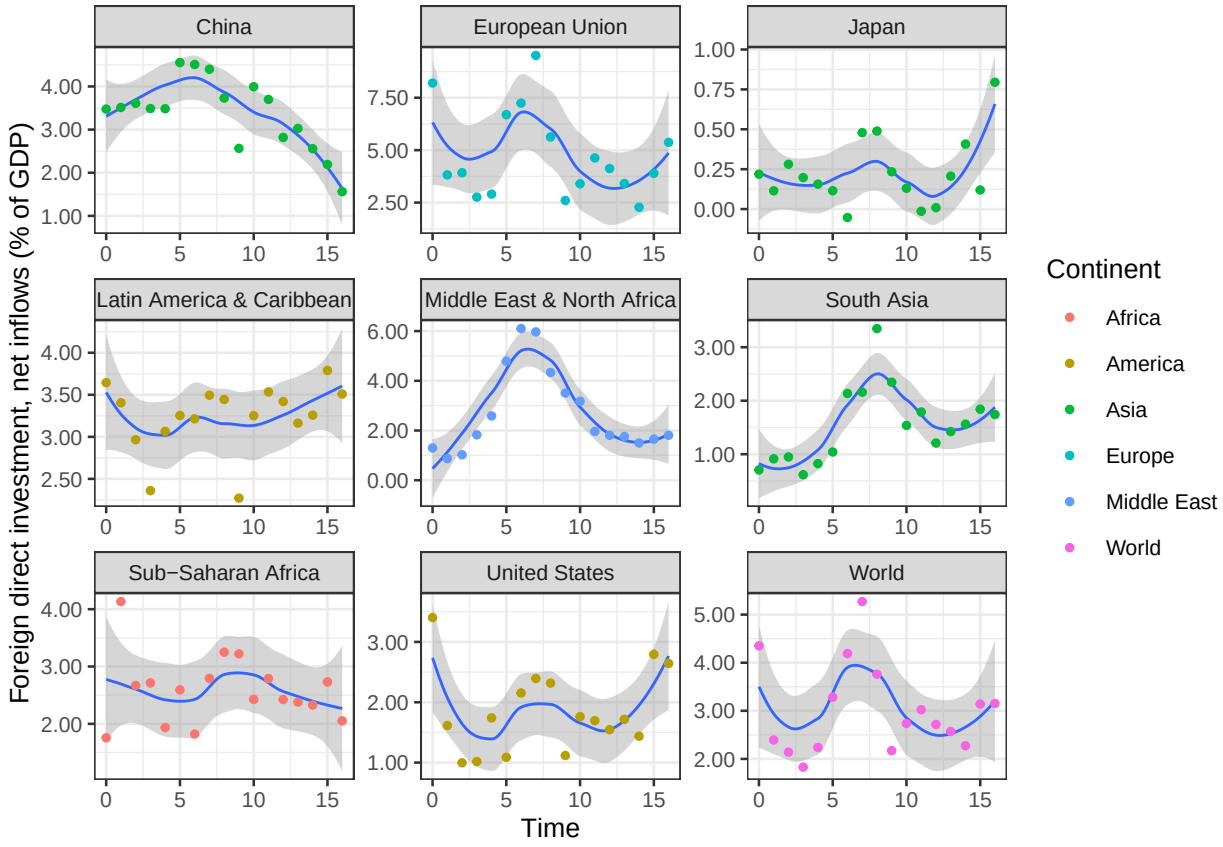



Figure 71: Trendline Foreign direct investment, net inflows (% of GDP) regions and biggest countries 2000 - 2017

# Goverment

## Expense (% of GDP)

Expense is cash payments for operating activities of the government in providing goods and services. It includes compensation of employees (such as wages and salaries), interest and subsidies, grants, social benefits, and other expenses such as rent and dividends.

## Limitations and exceptions

For most countries central government finance data have been consolidated into one account, but for others only budgetary central government accounts are available. Countries reporting budgetary data are noted in the country metadata. Because budgetary accounts may not include all central government units (such as social security funds), they usually provide an incomplete picture. In federal states the central government accounts provide an incomplete view of total public finance.

Table 42: Expense is cash payments for operating activities of the government in providing goods and services '%'

| Country Name | Mean | SD |
|---|---|---|
| Austria | 46 | 1.2 |
| Belgium | 43 | 1.8 |
| Brazil | 28 | 4.6 |
| Chile | 20 | 1.8 |
| China | 13 | 3.8 |
| Czech Republic | 35 | 1.9 |
| Denmark | 39 | 3 |
| Estonia | 33 | 3.1 |
| European Union | 37 | 1.4 |
| Finland | 37 | 2.9 |
| France | 46 | 1.8 |
| Germany | 29 | 1.4 |
| Greece | 48 | 5.3 |
| Hungary | 43 | 1.5 |
| Iceland | 32 | 3.4 |
| Ireland | 34 | 9.1 |
| Israel | 40 | 3.3 |
| Italy | 40 | 1.8 |
| Japan | 17 | 1.3 |
| Korea, Rep. | 20 | 3.6 |
| Latin America & Caribbean | 26 | 3 |
| Latvia | 43 | 4.7 |
| Lithuania | 34 | 3.3 |
| Luxembourg | 38 | 2.2 |
| Mexico | 21 | 2.7 |
| Netherlands | 39 | 1.8 |
| New Zealand | 32 | 2.4 |
| Norway | 35 | 2.6 |
| Poland | 36 | 2 |
| Portugal | 42 | 2.8 |
| Slovak Republic | 40 | 3.5 |
| Slovenia | 41 | 3.9 |

| Country Name | Mean | SD |
|---|---|---|
| Spain | 19 | 2.3 |
| Sub-Saharan Africa | 20 | 1.1 |
| Sweden | 33 | 1 |
| Turkey | 31 | 2.1 |
| United Kingdom | 38 | 3.1 |
| United States | 22 | 2.3 |
| World | 26 | 1.4 |

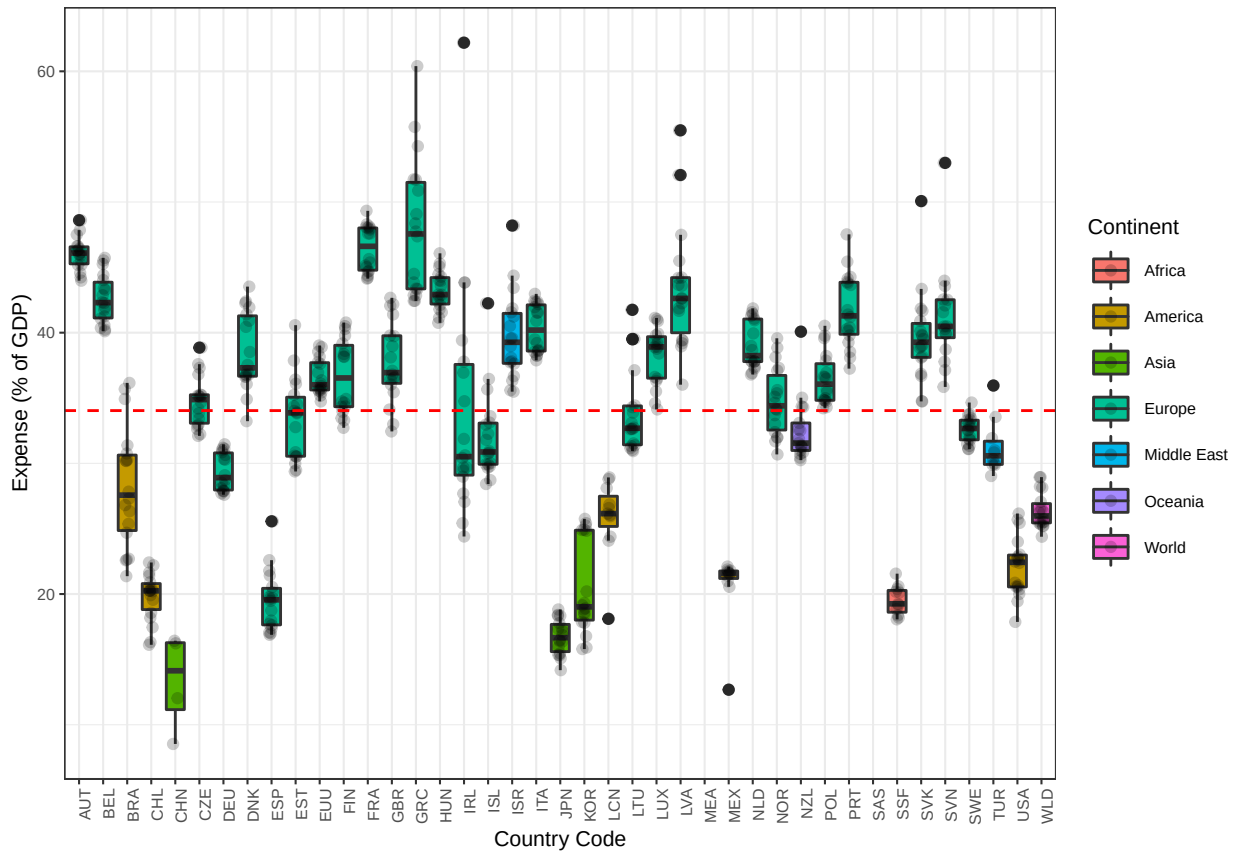



Figure 72: Boxplot Expense (% of GDP) 2000 - 2017

## Goods and services expense (% of expense)

Goods and services include all government payments in exchange for goods and services used for the production of market and nonmarket goods and services. Own-account capital formation is excluded.

Table 43: Goods and services expense (% of expense)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 5.9 | 0.83 |
| Belgium | 2.3 | 0.1 |
| Brazil | 8 | 5.6 |
| Chile | 9.7 | 0.83 |
| Czech Republic | 9.4 | 0.88 |
| Denmark | 7.9 | 0.26 |
| Estonia | 11 | 1.7 |
| European Union | 8.5 | 0.73 |
| Finland | 8 | 0.26 |
| France | 5.5 | 0.16 |
| Germany | 3.9 | 0.71 |
| Greece | 10 | 2.1 |
| Hungary | 9.6 | 2.1 |
| Iceland | 22 | 2 |
| Ireland | 9.1 | 2.2 |

| Country Name | Mean | SD |
|---|---|---|
| Israel | 20 | 0.59 |
| Italy | 3.6 | 0.38 |
| Japan | 5.3 | 0.32 |
| Korea, Rep. | 11 | 2.4 |
| Latin America & Caribbean | 14 | 1.2 |
| Latvia | 13 | 3 |
| Lithuania | 11 | 3.1 |
| Luxembourg | 6.6 | 0.25 |
| Mexico | 7.1 | 0.47 |
| Middle East & North Africa | 12 | 1.1 |
| Netherlands | 6.2 | 0.35 |
| New Zealand | 20 | 8.9 |
| Norway | 8.5 | 0.37 |
| Poland | 7 | 0.57 |
| Portugal | 12 | 3.5 |
| Slovak Republic | 9.8 | 0.81 |
| Slovenia | 11 | 0.69 |
| South Asia | 13 | 1 |
| Spain | 3.7 | 0.31 |
| Sub-Saharan Africa | 21 | 0.54 |
| Sweden | 5.7 | 0.26 |
| Turkey | 12 | 0.73 |
| United Kingdom | 13 | 0.9 |
| United States | 9 | 1.4 |
| World | 13 | 0.79 |

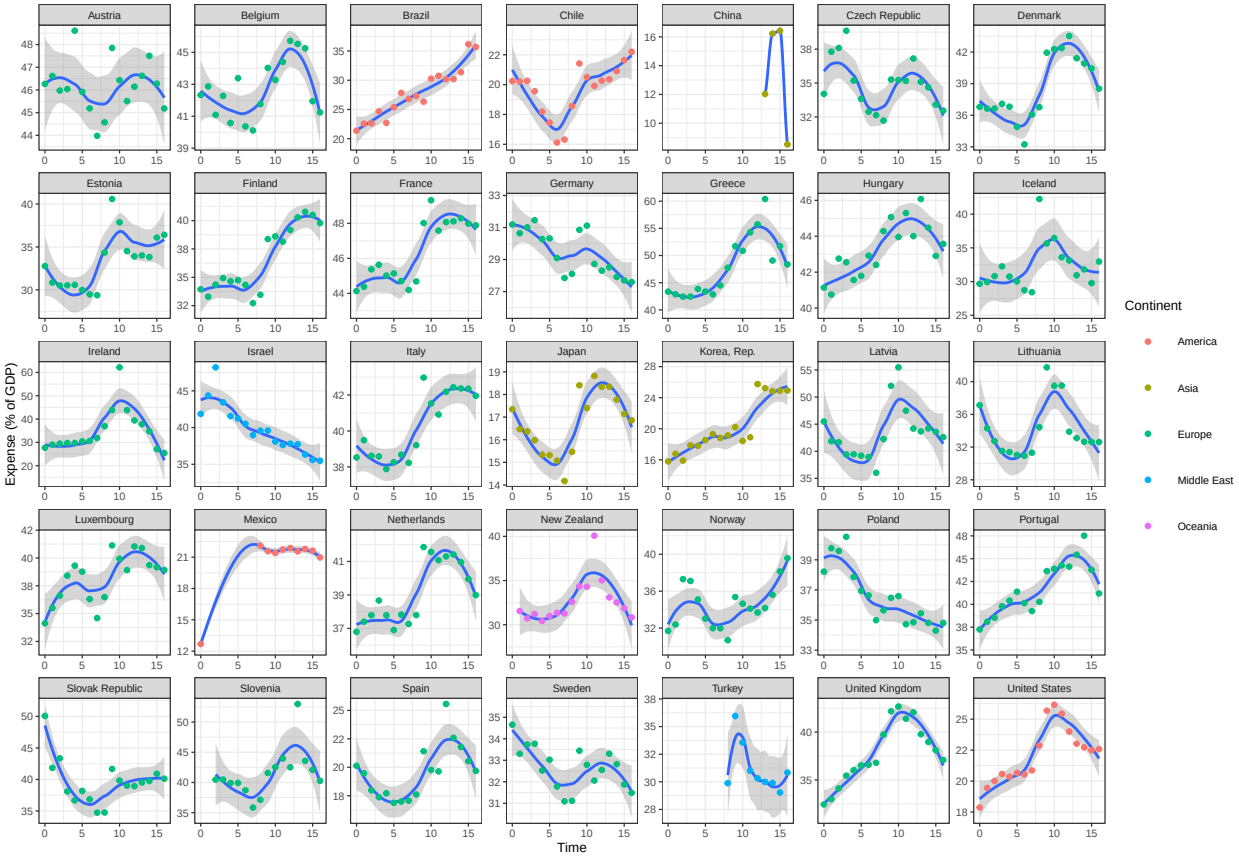



Figure 73: Trendline Expense (% of GDP) 2000 - 2017

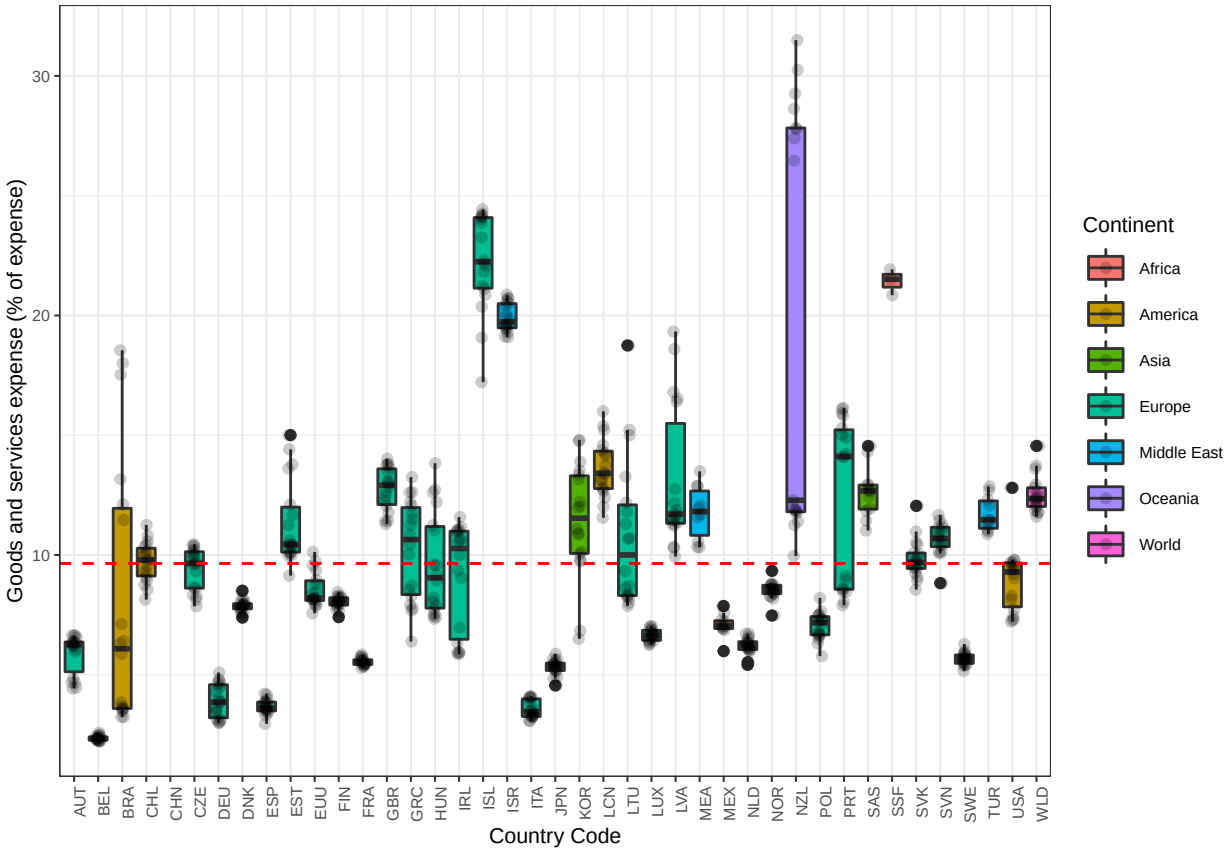



Figure 74: Boxplot Goods and services expense (% of expense) 2000 - 2017

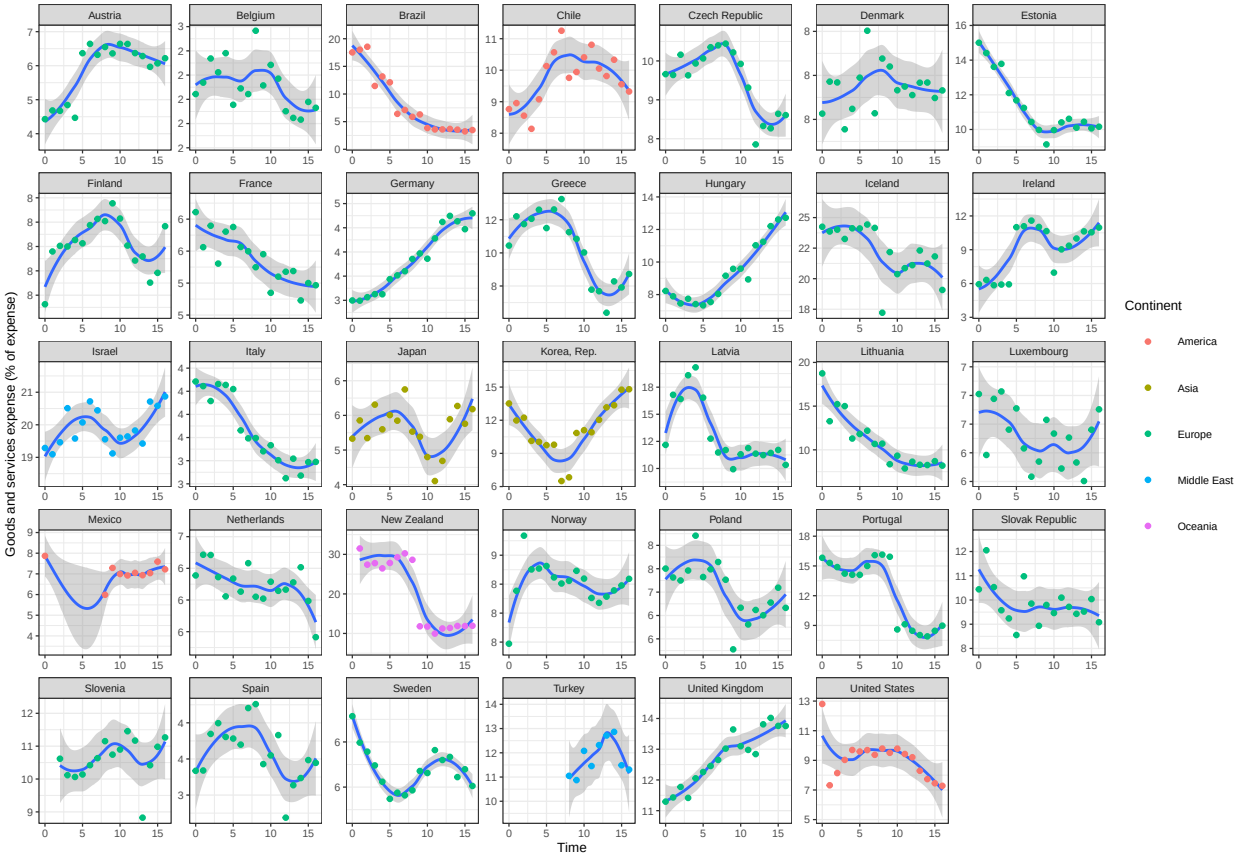



Figure 75: Trendline Goods and services expense (% of expense) 2000 - 2017

## Interest payments (% of expense)

Interest payments include interest payments on government debt–including long-term bonds, long-term loans, and other debt instruments–to domestic and foreign residents.

Table 44: Interest payments (% of expense)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 6.1 | 0.98 |
| Belgium | 8.8 | 2.8 |
| Brazil | 24 | 4.5 |
| Chile | 3.8 | 1.3 |
| China | 3.6 | 1.3 |
| Czech Republic | 3.1 | 0.52 |
| Denmark | 5.1 | 2.1 |
| Estonia | 0.36 | 0.12 |
| European Union | 5.3 | 0.9 |
| Finland | 4.1 | 1.5 |
| France | 5.2 | 0.8 |
| Germany | 4.9 | 1.4 |
| Greece | 10 | 2.8 |
| Hungary | 9.3 | 1.3 |
| Iceland | 10 | 3.4 |
| Ireland | 6.3 | 3 |
| Israel | 11 | 3.3 |
| Italy | 11 | 1.9 |
| Japan | 10 | 0.88 |
| Korea, Rep. | 5.7 | 0.74 |
| Latin America & Caribbean | 10 | 2.3 |
| Latvia | 3.3 | 1.2 |
| Lithuania | 3.9 | 1.5 |
| Luxembourg | 0.83 | 0.26 |
| Mexico | 11 | 1.2 |
| Middle East & North Africa | 6.9 | 2.6 |
| Netherlands | 4.6 | 1.3 |
| New Zealand | 4.5 | 0.96 |
| Norway | 3.2 | 2 |
| Poland | 6.2 | 0.97 |
| Portugal | 9.9 | 1.3 |
| Slovak Republic | 4.9 | 1.8 |
| Slovenia | 4.8 | 1.6 |
| South Asia | 15 | 6 |
| Spain | 11 | 2.3 |
| Sub-Saharan Africa | 4.9 | 0.72 |
| Sweden | 3.8 | 2.3 |
| Turkey | 9.4 | 3.1 |
| United Kingdom | 6.1 | 0.96 |
| United States | 12 | 1.6 |
| World | 6.3 | 1.3 |

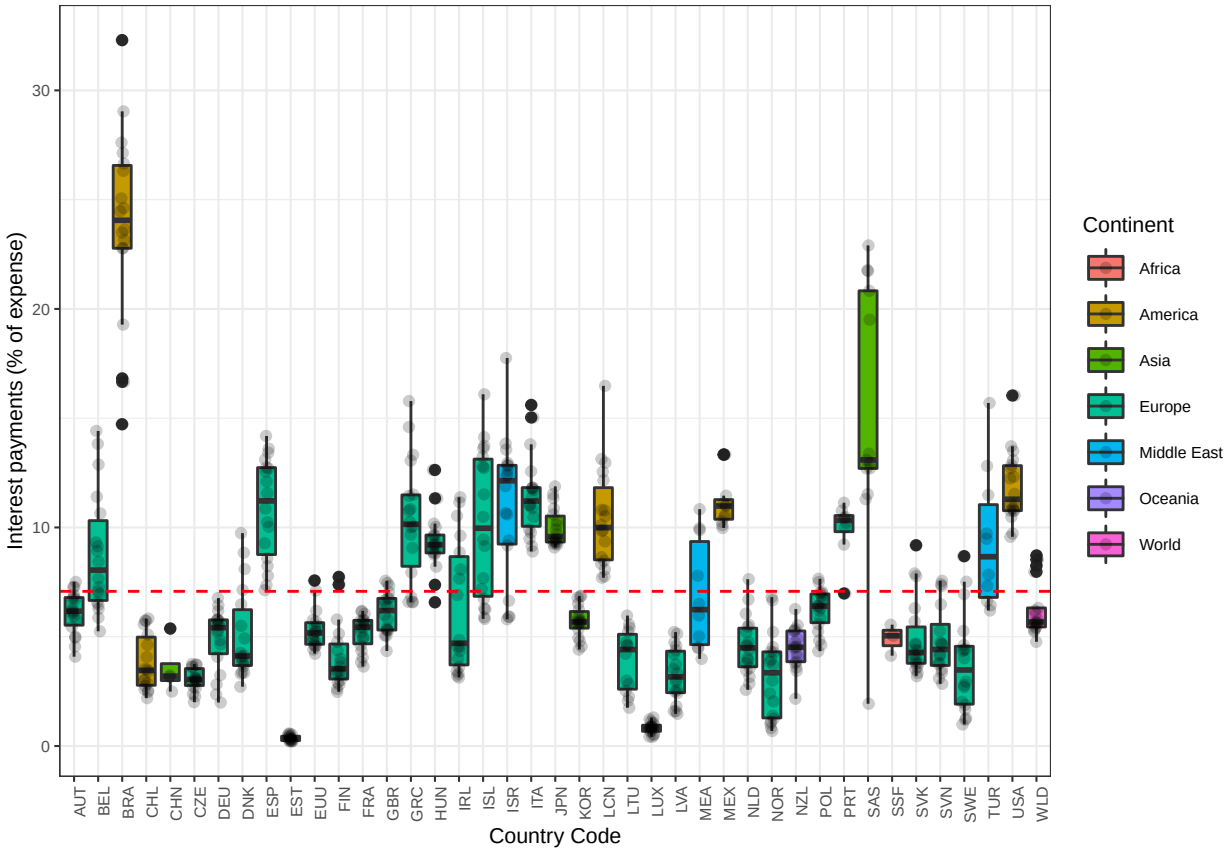



Figure 76: Boxplot Interest payments (% of expense) 2000 - 2017

## Benefit incidence of social insurance programs to poorest quintile (% of total social insurance benefits)

Benefit incidence of social insurance programs to poorest quintile shows the percentage of total social insurance benefits received by the poorest 20% of the population. Social insurance programs include old age contributory pensions (including survivors and disability) and social security and health insurance benefits (including occupational injury benefits, paid sick leave, maternity and other social insurance). Estimates include both direct and indirect beneficiaries.

When interpreting ASPIRE performance indicators based on household surveys, it is important to note that the extent to which information on specific transfers and programs is captured in the household surveys can vary a lot across countries. Moreover, household surveys do not capture the universe of social protection programs in the country, in best practice cases just the largest programs. As a consequence, ASPIRE indicators are not fully comparable across program categories and countries; however, they provide approximate measures of social protection systems performance. In addition, there may be cases where ASPIRE performance indicators differ from official WB country reports as ASPIRE indicators are based on a first level analysis of original survey data and unified methodology that does not necessarily reflect country-specific knowledge and in depth country analysis relying on administrative program level data and/or imputations.

Table 45: Benefit incidence (% of total social insurance benefits)

| Country Name | Mean | SD |
|---|---|---|
| Brazil | 1.6 | 0.18 |
| Chile | 4.9 | 0.24 |
| China | 2.2 | NA |
| Hungary | 11 | NA |
| Latvia | 15 | 1.4 |
| Lithuania | 19 | NA |
| Mexico | 1.2 | 0.17 |
| Poland | 8.2 | 0.73 |
| Slovak Republic | 6.2 | NA |
| Turkey | 4.1 | 0.93 |

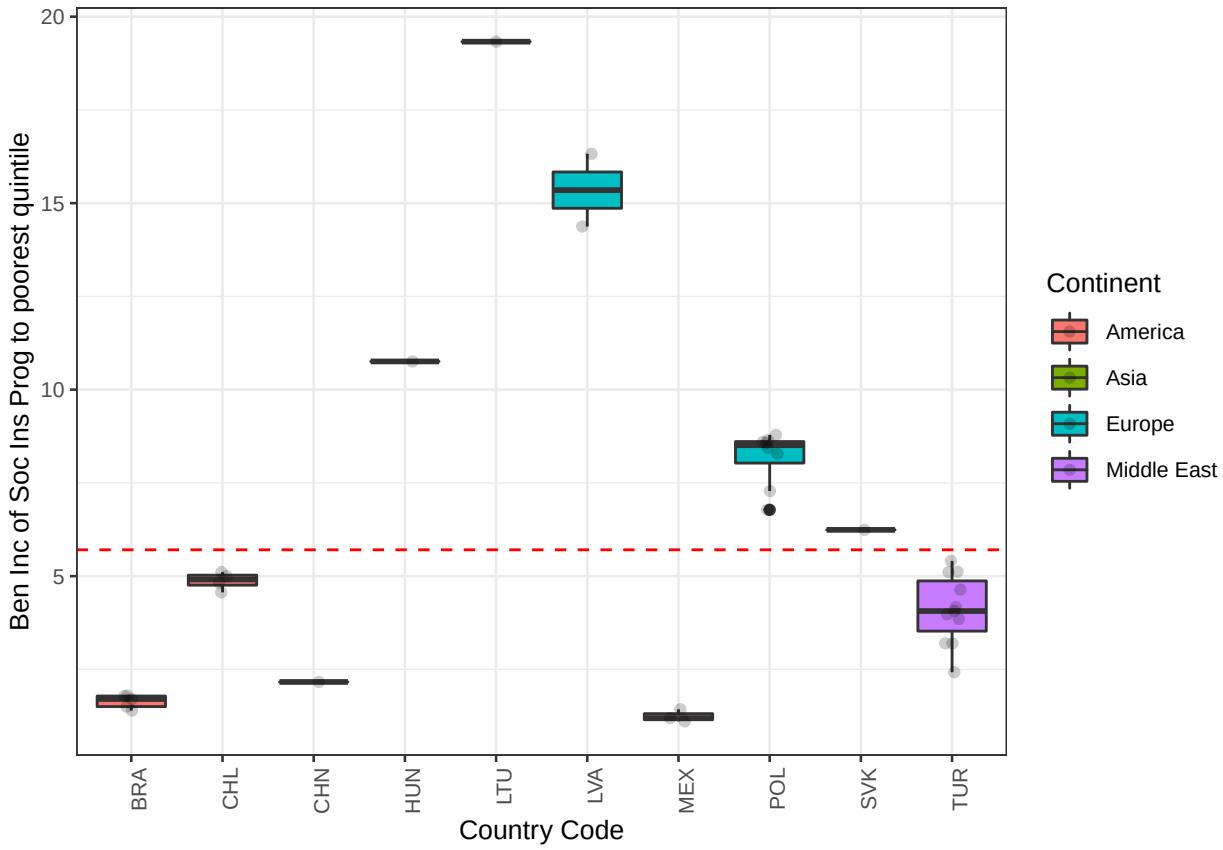



Figure 77: Boxplot Interest payments (% of expense) 2000 - 2017

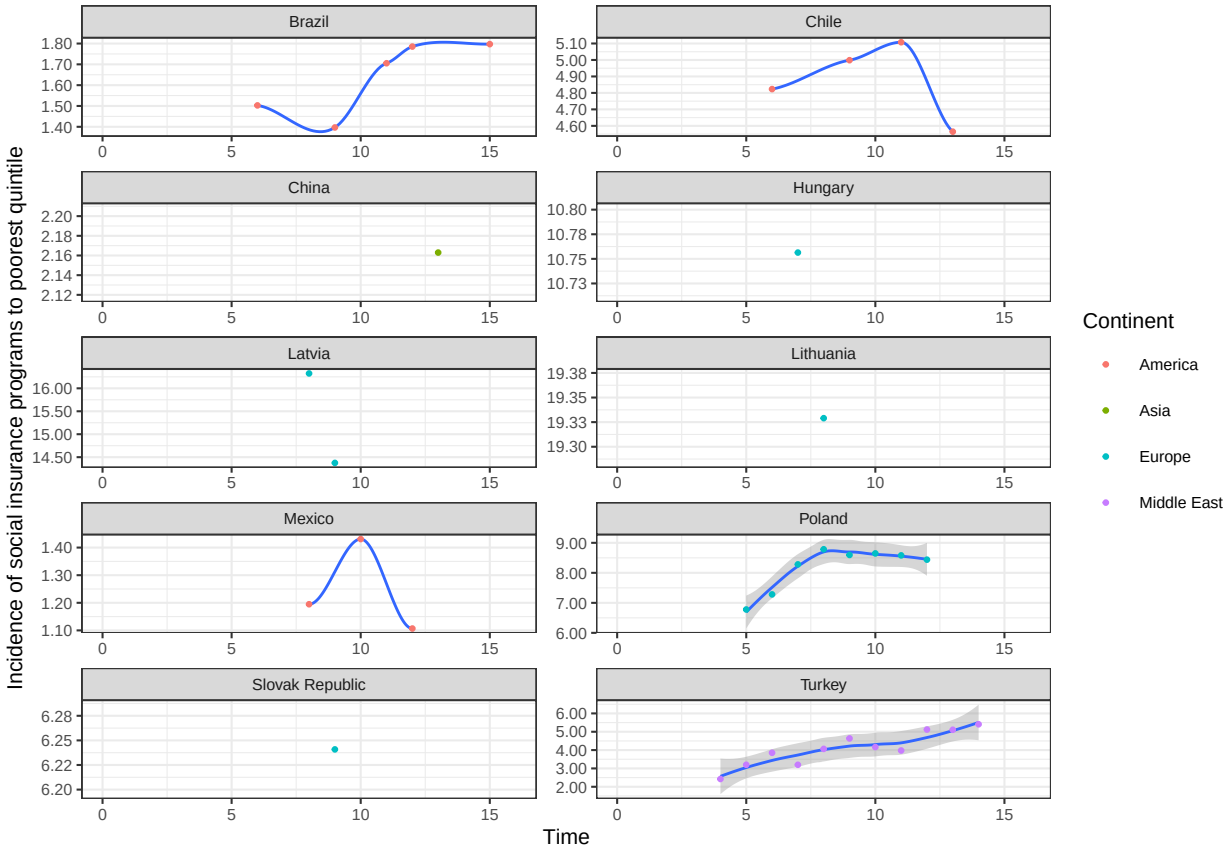



Figure 78: Trendline Interest payments (% of expense) 2000 - 2017

## Ease of doing business index (1=most business-friendly regulations)

Ease of doing business ranks economies from 1 to 190, with first place being the best. A high ranking (a low numerical rank) means that the **regulatory environment** is conducive to business operation. The index averages the country's percentile rankings on 10 topics covered in the World Bank's Doing Business. The ranking on each topic is the simple average of the percentile rankings on its component indicators.

Data are collected by the World Bank with a standardized survey that uses a simple business case to ensure comparability across economies and over time - with assumptions about the legal form of the business, its size, its location, and nature of its operation. Surveys are administered through more than 9,000 local experts, including lawyers, business consultants, accountants, freight forwarders, government officials, and other professionals who routinely administer or advise on legal and regulatory requirements.

The economic health of a country is measured not only in macroeconomic terms but also by other factors that shape daily economic activity such as laws, regulations, and institutional arrangements. The data measure business regulation, gauge regulatory outcomes, and measure the extent of legal protection of property, the flexibility of employment regulation, and the tax burden on businesses.

The fundamental premise of this data is that economic activity requires good rules and regulations that are efficient, accessible to all who need to use them, and simple to implement. Thus sometimes there is more emphasis on more regulation, such as stricter disclosure requirements in related-party transactions, and other times emphasis is on for simplified regulations, such as a one-stop shop for completing business startup formalities.

Entrepreneurs may not be aware of all required procedures or may avoid legally required procedures altogether. But where regulation is particularly onerous, levels of informality are higher, which comes at a cost: firms in the informal sector usually grow more slowly, have less access to credit, and employ fewer workers - and those workers remain outside the protections of labor law. The indicator can help policymakers understand the business environment in a country and - along with information from other sources such as the World Bank's Enterprise Surveys - provide insights into potential areas of reform. The Doing Business methodology has limitations that should be considered when interpreting the data. First, the data collected refer to businesses in the economy's largest city and may not represent regulations in other locations of the economy. To address this limitation, subnational indicators are being collected for selected economies. These subnational studies point to significant differences in the speed of reform and the ease of doing business across cities in the same economy. Second, the data often focus on a specific business form - generally a limited liability company of a specified size - and may not represent regulation for other types of businesses such as sole proprietorships. Third, transactions described in a standardized business case refer to a specific set of issues and may not represent the full set of issues a business encounters. Fourth, the time measures involve an element of judgment by the expert respondents. When sources indicate different estimates, the Doing Business time indicators represent the median values of several responses given under the assumptions of the standardized case. Fifth, the methodology assumes that a business has full information on what is required and does not waste time when completing procedures.

Data are presented for the survey year instead of publication year. Data before 2013 are not comparable with data from 2013 onward due to methodological changes.

Table 46: Ease of doing business index (1=most business-friendly regulations)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 26 | 26 |
| Belgium | 45 | 45 |
| Brazil | 109 | 109 |
| Chile | 56 | 56 |
| China | 46 | 46 |
| Czech Republic | 35 | 35 |

| Country Name | Mean | SD |
|---|---|---|
| Denmark | 3 | 3 |
| Estonia | 16 | 16 |
| Finland | 17 | 17 |
| France | 32 | 32 |
| Germany | 24 | 24 |
| Greece | 72 | 72 |
| Hungary | 53 | 53 |
| Iceland | 21 | 21 |
| Ireland | 23 | 23 |
| Israel | 49 | 49 |
| Italy | 51 | 51 |
| Japan | 39 | 39 |
| Korea, Rep. | 5 | 5 |
| Latvia | 19 | 19 |
| Lithuania | 14 | 14 |
| Luxembourg | 66 | 66 |
| Mexico | 54 | 54 |
| Netherlands | 36 | 36 |
| New Zealand | 1 | 1 |
| Norway | 7 | 7 |
| Poland | 33 | 33 |
| Portugal | 34 | 34 |
| Slovak Republic | 42 | 42 |
| Slovenia | 40 | 40 |
| Spain | 30 | 30 |
| Sweden | 12 | 12 |
| Turkey | 43 | 43 |
| United Kingdom | 9 | 9 |
| United States | 8 | 8 |

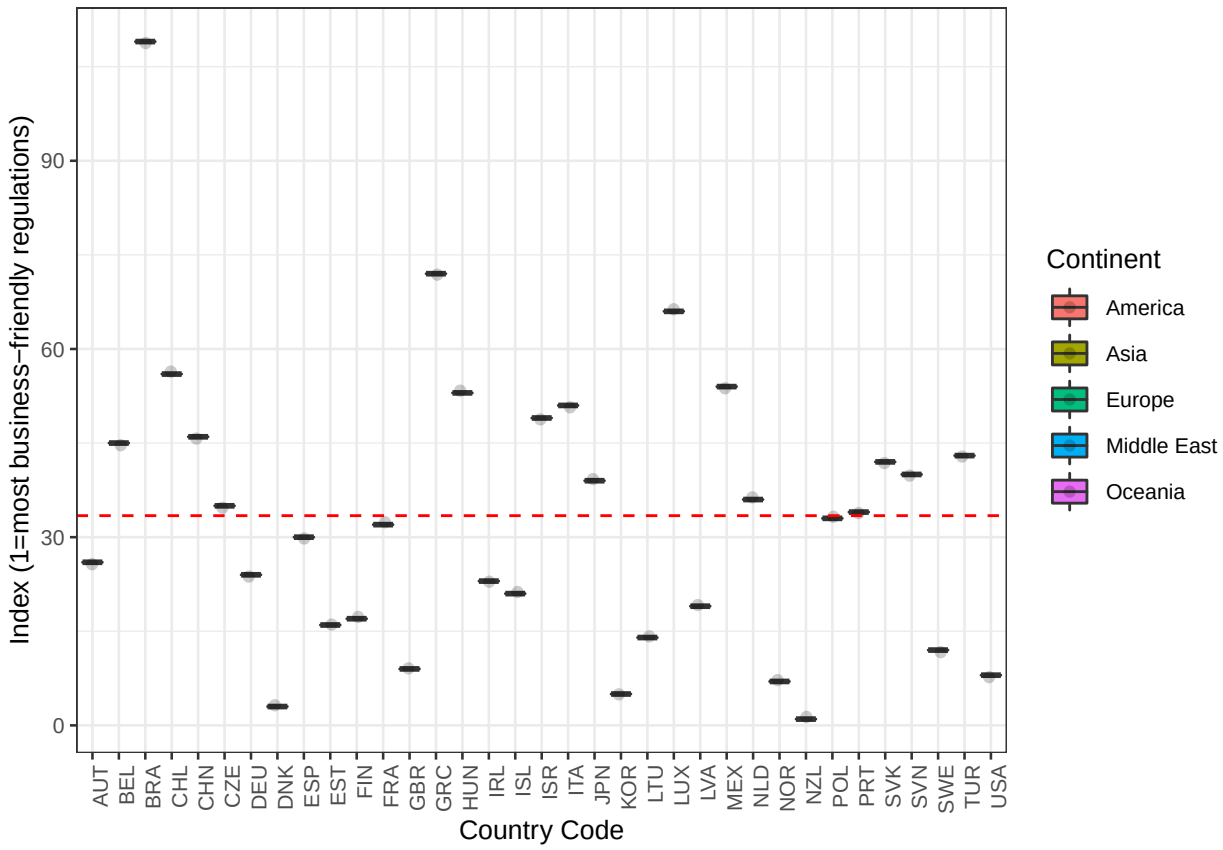



Figure 79: Boxplot Ease of doing business index (1=most business-friendly regulations) 2000 - 2017

# Health

## Domestic general government health expenditure (% of GDP)

Share of current health expenditures funded from domestic public sources for health. Domestic public sources include domestic revenue as internal transfers and grants, transfers, subsidies to voluntary health insurance beneficiaries, non-profit institutions serving households (NPISH) or enterprise financing schemes as well as compulsory prepayment and social health insurance contributions. They do not include external resources spent by governments on health.

The health expenditure estimates have been prepared by the World Health Organization under the framework of the System of Health Accounts 2011 (SHA 2011). The Health SHA 2011 tracks all health spending in a given country over a defined period of time regardless of the entity or institution that financed and managed that spending. It generates consistent and comprehensive data on health spending in a country, which in turn can contribute to evidence-based policy-making.

Table 47: Domestic general government health expenditure (% of GDP)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 7.2 | 0.27 |
| Belgium | 7.7 | 0.75 |
| Brazil | 3.3 | 0.64 |
| Chile | 4 | 0.49 |
| China | 1.9 | 0.71 |
| Czech Republic | 5.7 | 0.43 |
| Denmark | 8 | 0.68 |
| Estonia | 4.2 | 0.52 |
| European Union | 7.1 | 0.64 |
| Finland | 6.5 | 0.79 |
| France | 8.3 | 0.53 |
| Germany | 8.4 | 0.77 |
| Greece | 5.3 | 0.61 |
| Hungary | 5 | 0.34 |
| Iceland | 7.2 | 0.43 |
| Ireland | 6.3 | 1.1 |
| Israel | 4.4 | 0.13 |
| Italy | 6.5 | 0.45 |
| Japan | 7.3 | 1.4 |
| Korea, Rep. | 3.3 | 0.67 |
| Latin America & Caribbean | 3.3 | 0.48 |
| Latvia | 3.3 | 0.31 |
| Lithuania | 4.2 | 0.48 |
| Luxembourg | 5.5 | 0.41 |
| Mexico | 2.6 | 0.34 |
| Middle East & North Africa | 2.6 | 0.34 |
| Netherlands | 7.3 | 1.6 |
| New Zealand | 7 | 0.72 |
| Norway | 7.4 | 0.71 |
| Poland | 4.3 | 0.3 |
| Portugal | 6.3 | 0.32 |
| Slovak Republic | 5.2 | 0.38 |
| Slovenia | 5.9 | 0.29 |
| South Asia | 0.83 | 0.062 |

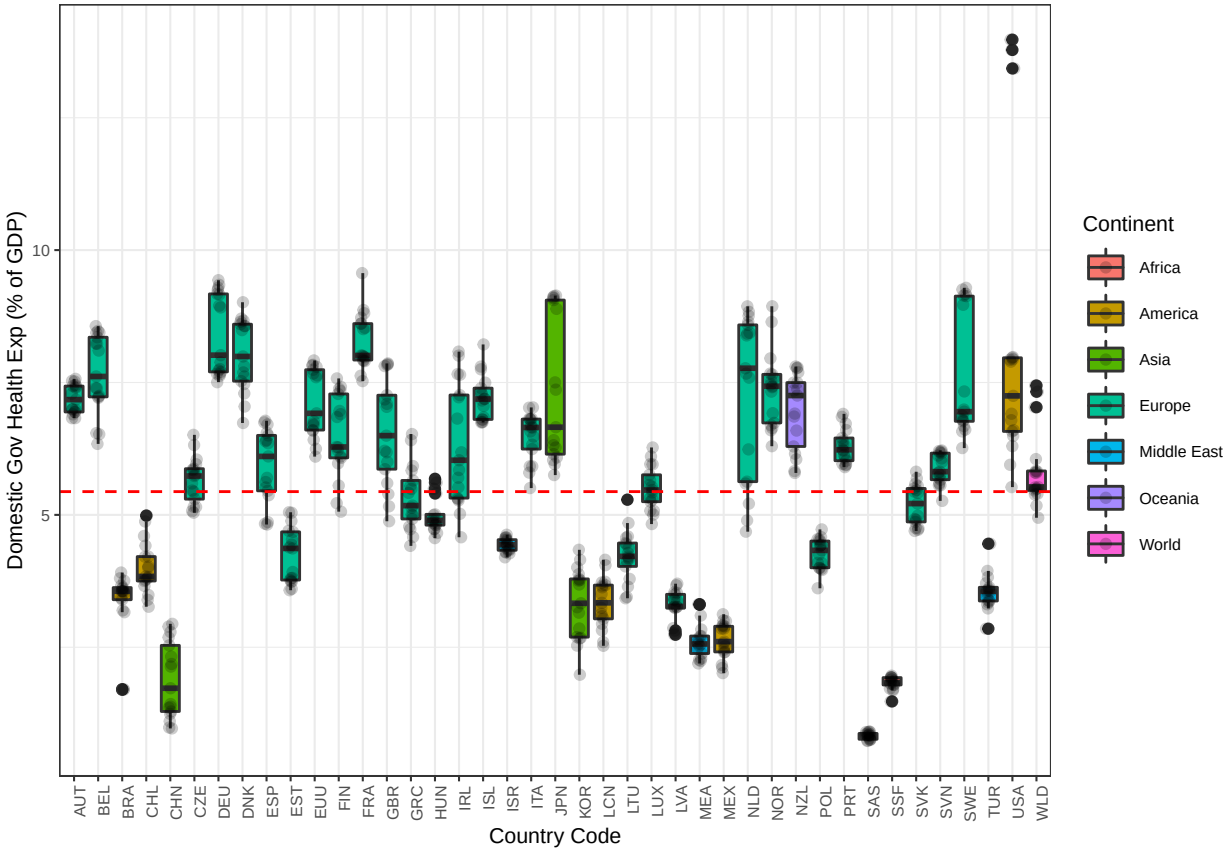



Figure 80: Boxplot Domestic general government health expenditure (% of GDP) 2000 - 2017

| Country Name | Mean | SD |
|---|---|---|
| Spain | 5.9 | 0.7 |
| Sub-Saharan Africa | 1.8 | 0.12 |
| Sweden | 7.6 | 1.2 |
| Turkey | 3.6 | 0.34 |
| United Kingdom | 6.6 | 1 |
| United States | 8.2 | 2.7 |
| World | 5.9 | 0.73 |

## Domestic general government health expenditure (% of general government expenditure)

Share of current health expenditures funded from domestic public sources for health. Domestic public sources include domestic revenue as internal transfers and grants, transfers, subsidies to voluntary health insurance beneficiaries, non-profit institutions serving households (NPISH) or enterprise financing schemes as well as compulsory prepayment and social health insurance contributions. They do not include external resources spent by governments on health.

## Statistical concept and methodology

The health expenditure estimates have been prepared by the World Health Organization under the framework of the System of Health Accounts 2011 (SHA 2011). The Health SHA 2011 tracks all health spending in a given country over a defined period of time regardless of the entity or institution that financed and managed that spending. It generates consistent and comprehensive data on health spending in a country, which in turn can contribute to evidence-based policy-making.

Table 48: Domestic general government health expenditure (% of general government expenditure)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 14 | 0.54 |
| Belgium | 15 | 0.87 |
| Brazil | 8.7 | 1.6 |
| Chile | 18 | 1.1 |
| China | 7.9 | 1.3 |
| Czech Republic | 13 | 1.1 |
| Denmark | 15 | 1 |
| Estonia | 11 | 0.65 |
| European Union | 15 | 0.91 |
| Finland | 12 | 0.77 |
| France | 15 | 0.48 |
| Germany | 19 | 1.9 |
| Greece | 11 | 1.2 |
| Hungary | 10 | 0.64 |
| Iceland | 16 | 1.6 |
| Ireland | 17 | 1.7 |
| Israel | 10 | 0.97 |
| Italy | 13 | 0.59 |
| Japan | 19 | 2.8 |
| Korea, Rep. | 11 | 1.6 |
| Latin America & Caribbean | 11 | 0.59 |
| Latvia | 8.8 | 0.74 |
| Lithuania | 11 | 0.98 |
| Luxembourg | 13 | 0.77 |
| Mexico | 11 | 0.52 |
| Middle East & North Africa | 8.2 | 0.43 |
| Netherlands | 16 | 3.1 |
| New Zealand | 20 | 1.6 |
| Norway | 17 | 0.78 |
| Poland | 9.8 | 0.77 |
| Portugal | 13 | 0.84 |
| Slovak Republic | 13 | 1.3 |

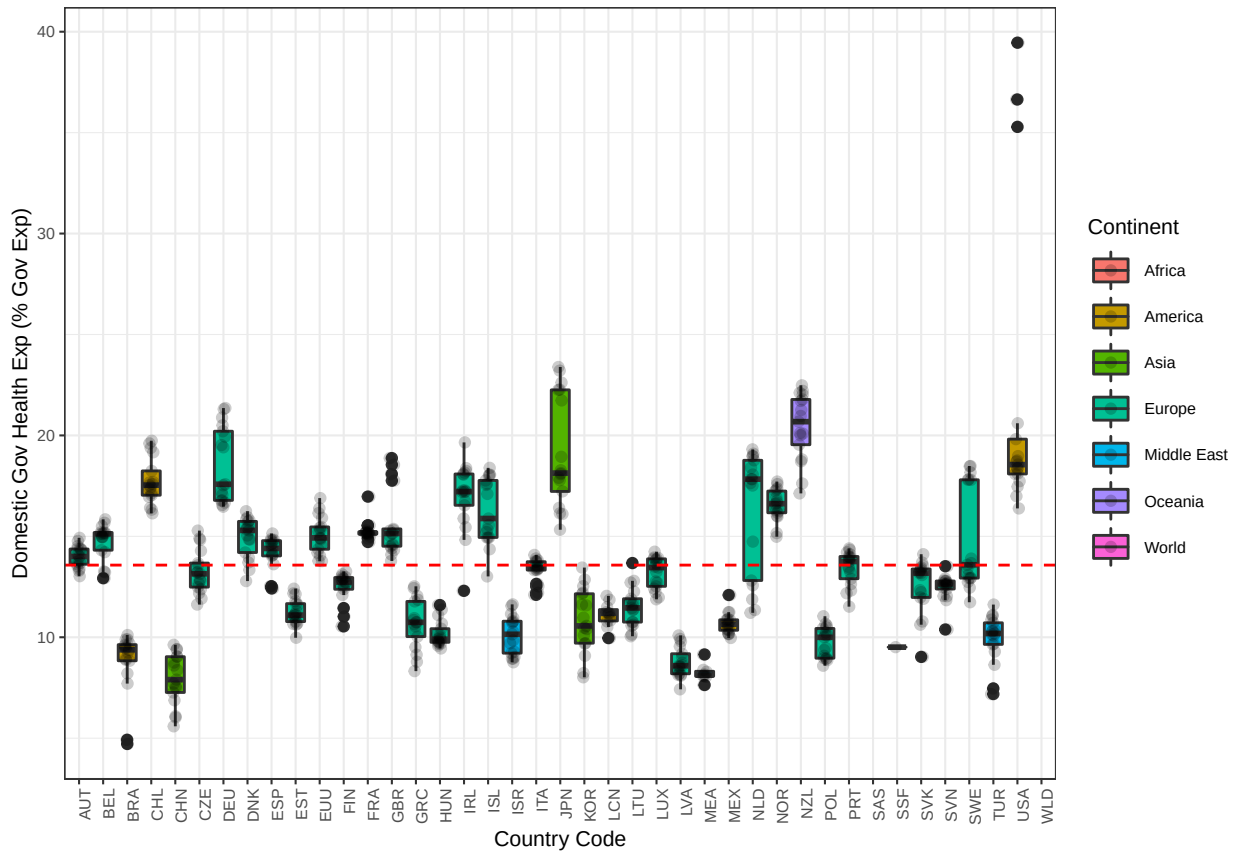



Figure 81: Boxplot Domestic general government health expenditure (% of general government expenditure) 2000 - 2017

| Country Name | Mean | SD |
|---|---|---|
| Slovenia | 12 | 0.66 |
| Spain | 14 | 0.87 |
| Sub-Saharan Africa | 9.5 | NA |
| Sweden | 15 | 2.5 |
| Turkey | 9.9 | 1.2 |
| United Kingdom | 16 | 1.6 |
| United States | 22 | 7.5 |

## Births attended by skilled health staff (% of total)

Births attended by skilled health staff are the percentage of deliveries attended by personnel trained to give the necessary supervision, care, and advice to women during pregnancy, labor, and the postpartum period; to conduct deliveries on their own; and to care for newborns.

Reproductive health is a state of physical and mental well-being in relation to the reproductive system and its functions and processes. Means of achieving reproductive health include education and services during pregnancy and childbirth, safe and effective contraception, and prevention and treatment of sexually transmitted diseases. Complications of pregnancy and childbirth are the leading cause of death and disability among women of reproductive age in developing countries.

Table 49: Births attended by skilled health staff (% of total)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 98 | 0.1 |
| Brazil | 99 | 0.52 |
| Chile | 100 | 0.55 |
| China | 98 | 1.4 |
| Czech Republic | 100 | 0.083 |
| Denmark | 98 | 1.5 |
| Estonia | 100 | 0.2 |
| European Union | 99 | 0.55 |
| Finland | 100 | 0.47 |
| France | 98 | 0.75 |
| Germany | 98 | 0.15 |
| Hungary | 99 | 0.26 |
| Iceland | 99 | 0.63 |
| Ireland | 100 | 0.093 |
| Italy | 100 | 0.11 |
| Japan | 100 | 0.026 |
| Korea, Rep. | 100 | 0.071 |
| Latin America & Caribbean | 91 | 5.3 |
| Latvia | 99 | 0.66 |
| Lithuania | 100 | 0 |
| Luxembourg | 100 | 0 |
| Mexico | 95 | 3.1 |
| Middle East & North Africa | 82 | 5.2 |
| Netherlands | 100 | NA |
| New Zealand | 97 | 1.4 |
| Norway | 99 | 0.066 |
| Poland | 100 | 0.16 |
| Portugal | 99 | 0.48 |
| Slovak Republic | 99 | 0.38 |
| Slovenia | 100 | 0.028 |
| South Asia | 56 | 28 |
| Sub-Saharan Africa | 50 | 12 |
| Turkey | 92 | 5.6 |
| United States | 99 | 0.22 |
| World | 71 | 12 |

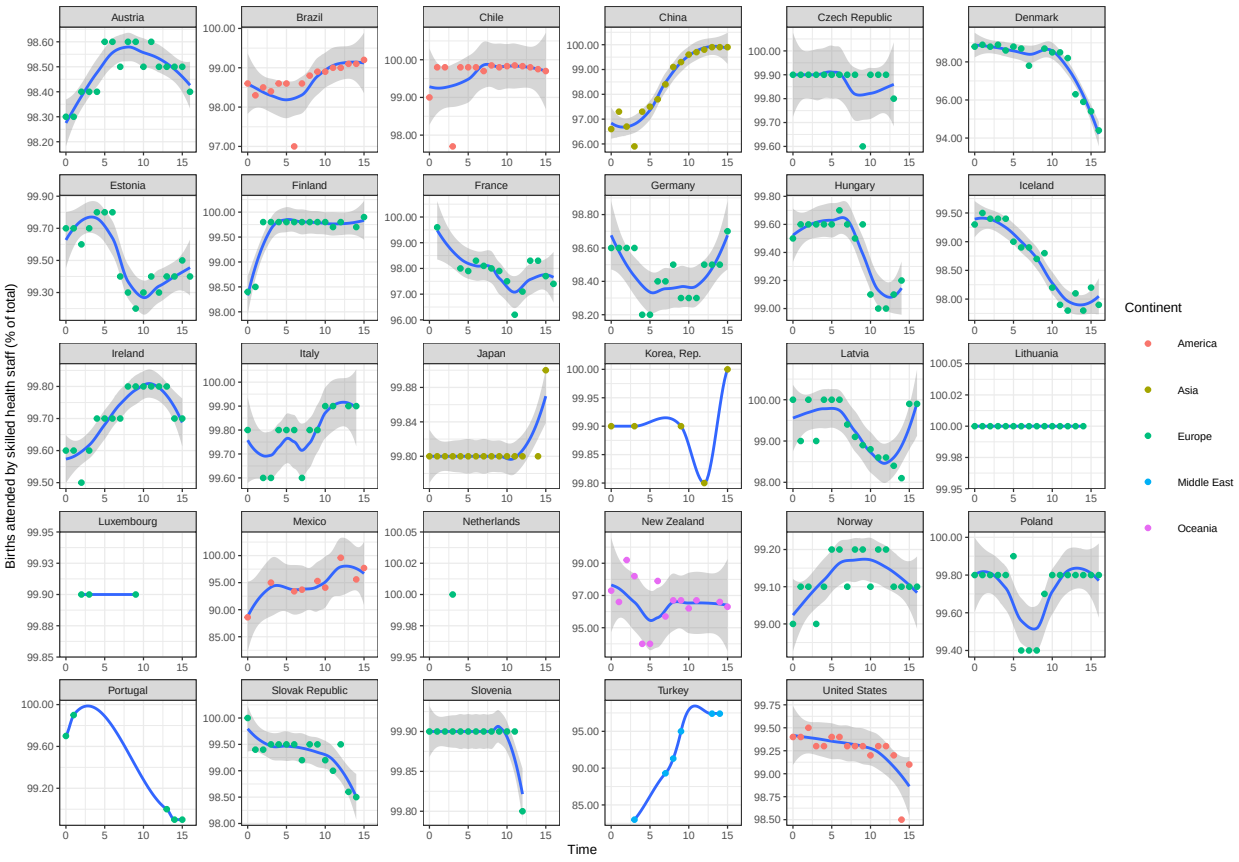



Figure 82: Trendline Births attended by skilled health staff (% of total) 2000 - 2017

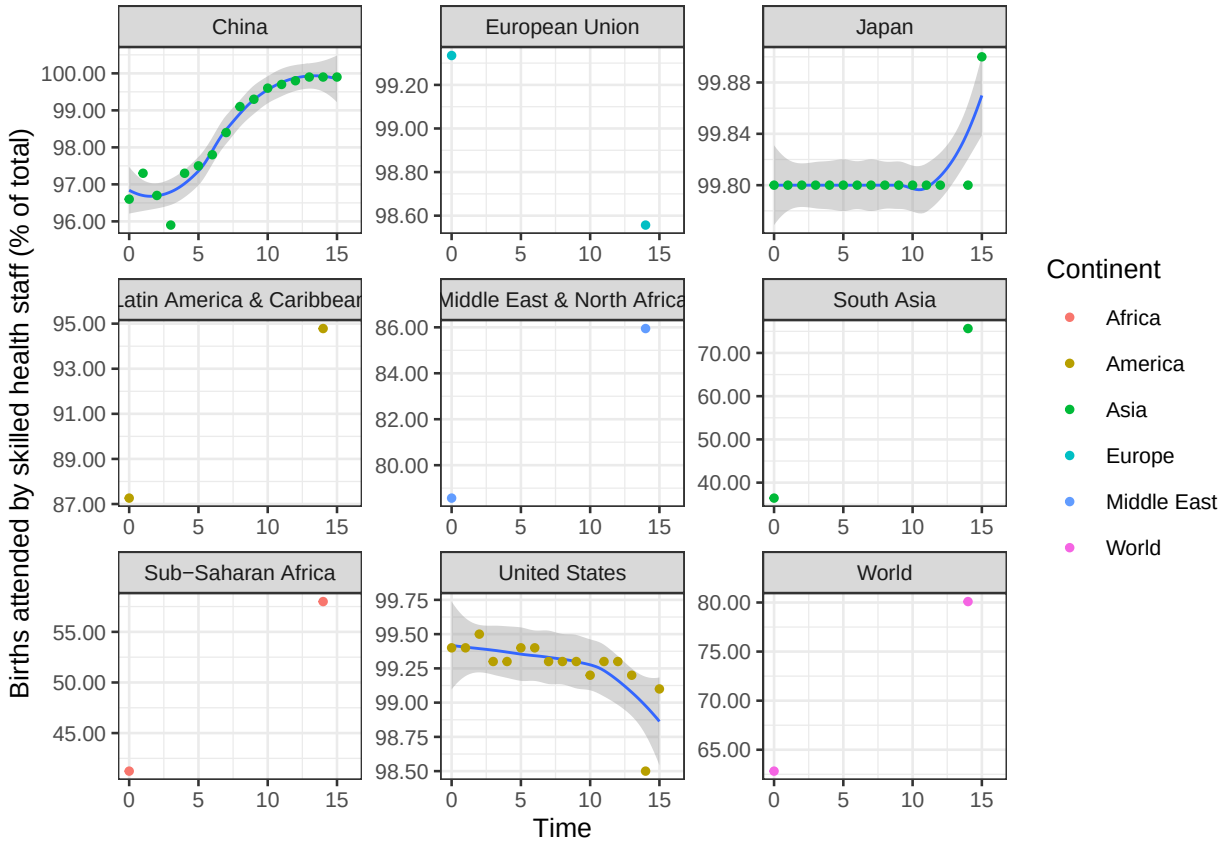



Figure 83: Trendline Births attended by skilled health staff (% of total) regions and biggest countries 2000 - 2017

## Hospital beds (per 1,000 people)

Hospital beds include inpatient beds available in public, private, general, and specialized hospitals and rehabilitation centers. In most cases beds for both acute and chronic care are included.

Table 50: Hospital beds (per 1,000 people)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 7.7 | 0.073 |
| Belgium | 6.9 | 0.59 |
| Brazil | 2.4 | 0.12 |
| Chile | 2.2 | 0.18 |
| China | 3 | 0.78 |
| Czech Republic | 7.3 | 0.47 |
| Denmark | 3.7 | 0.52 |
| Estonia | 5.6 | 0.55 |
| European Union | 5.8 | 0.33 |
| Finland | 6.4 | 1 |
| France | 7.3 | 0.61 |
| Germany | 8.5 | 0.33 |
| Greece | 4.7 | 0.16 |
| Hungary | 7.5 | 0.45 |
| Iceland | 4.1 | 1.4 |
| Ireland | 4.6 | 1.4 |
| Israel | 3.6 | 0.69 |
| Italy | 4 | 0.42 |
| Japan | 14 | 0.52 |
| Korea, Rep. | 8.8 | 2.3 |
| Latin America & Caribbean | 2.1 | 0.11 |
| Latvia | 7.3 | 1.1 |
| Lithuania | 7.5 | 0.57 |
| Luxembourg | 5.6 | 0.47 |
| Mexico | 1.4 | 0.27 |
| Middle East & North Africa | 1.6 | 0.24 |
| Netherlands | 4.6 | 0.16 |
| New Zealand | 3.8 | 2.1 |
| Norway | 4.4 | 0.67 |
| Poland | 6.4 | 0.52 |
| Portugal | 3.5 | 0.12 |
| Slovak Republic | 6.7 | 0.66 |
| Slovenia | 4.8 | 0.27 |
| South Asia | 0.76 | 0.098 |
| Spain | 3.3 | 0.21 |
| Sub-Saharan Africa | NaN | NaN |
| Sweden | 2.9 | 0.28 |
| Turkey | 2.4 | 0.19 |
| United Kingdom | 3.5 | 0.48 |
| United States | 3.2 | 0.21 |
| World | 2.9 | 0.15 |

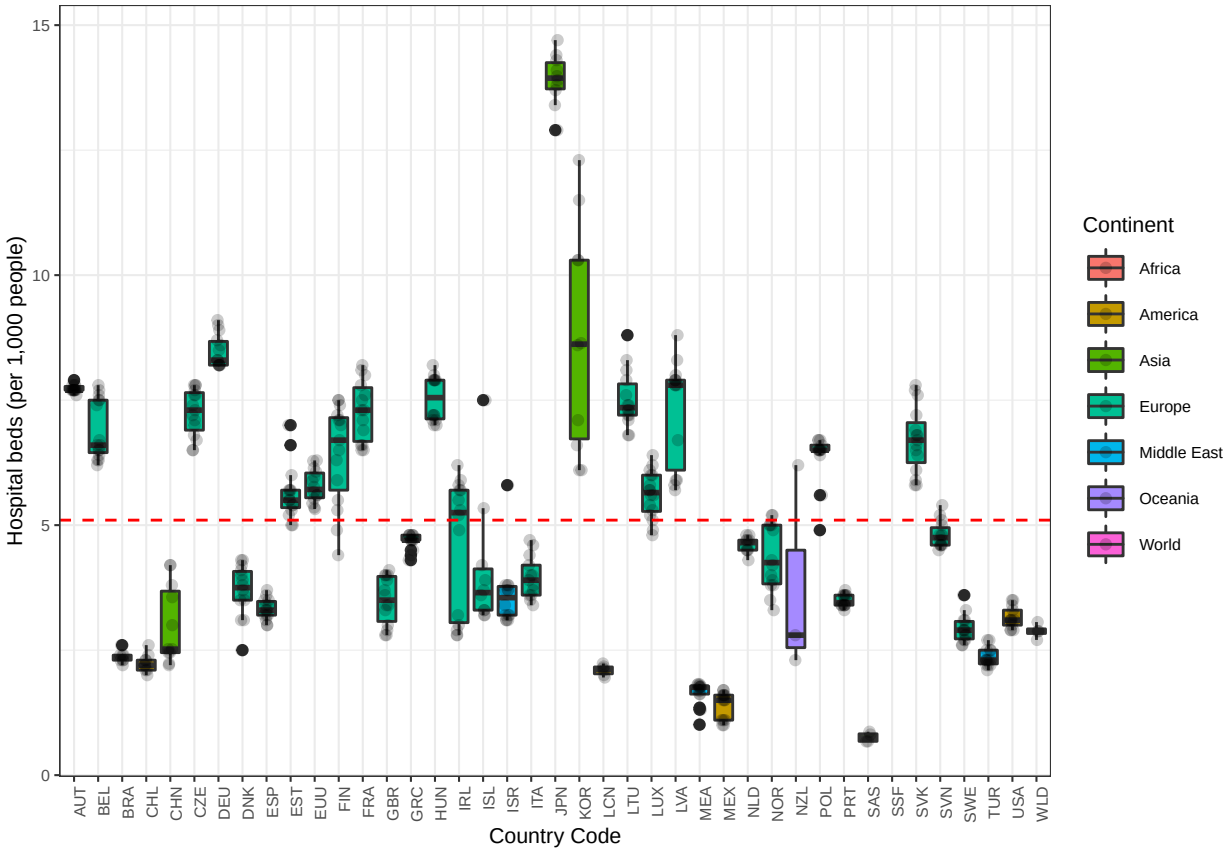



Figure 84: Boxplot Hospital beds (per 1,000 people) 2000 - 2017

# Demographics

## Population, total

Table 51: Population, total

| Country Name | Mean | SD |
|---|---|---|
| Austria | 8,348,563 | 228,752 |
| Belgium | 10,790,215 | 392,045 |
| Brazil | 193,378,349 | 10,611,493 |
| Chile | 16,711,945 | 879,690 |
| China | 1,326,576,111 | 37,679,538 |
| Czech Republic | 10,381,383 | 151,437 |
| Denmark | 5,519,388 | 131,322 |
| Estonia | 1,343,018 | 26,643 |
| European Union | 500,757,595 | 7,755,772 |
| Finland | 5,333,805 | 113,678 |
| France | 64,323,747 | 1,958,121 |
| Germany | 81,891,776 | 777,055 |
| Greece | 10,954,080 | 118,705 |
| Hungary | 10,009,199 | 130,595 |
| Iceland | 311,214 | 18,736 |
| Ireland | 4,378,747 | 327,395 |
| Israel | 7,442,750 | 752,086 |
| Italy | 58,864,560 | 1,366,414 |
| Japan | 127,546,017 | 427,203 |
| Korea, Rep. | 49,236,661 | 1,405,901 |
| Latin America & Caribbean | 585,371,161 | 37,650,858 |
| Latvia | 2,145,543 | 139,775 |
| Lithuania | 3,166,409 | 223,932 |
| Luxembourg | 502,324 | 50,941 |
| Mexico | 114,885,325 | 8,867,085 |
| Middle East & North Africa | 377,909,531 | 40,887,993 |
| Netherlands | 16,526,986 | 347,938 |
| New Zealand | 4,282,417 | 268,872 |
| Norway | 4,837,087 | 267,777 |
| Poland | 38,110,054 | 94,710 |
| Portugal | 10,455,424 | 96,104 |
| Slovak Republic | 5,394,419 | 22,313 |
| Slovenia | 2,029,455 | 30,254 |
| South Asia | 1,592,833,605 | 125,902,261 |
| Spain | 44,792,714 | 2,253,877 |
| Sub-Saharan Africa | 851,309,476 | 122,934,714 |
| Sweden | 9,324,682 | 373,596 |
| Turkey | 71,409,152 | 5,395,175 |
| United Kingdom | 62,160,366 | 2,348,606 |
| United States | 304,547,144 | 13,646,683 |
| World | 6,814,079,822 | 442,366,995 |

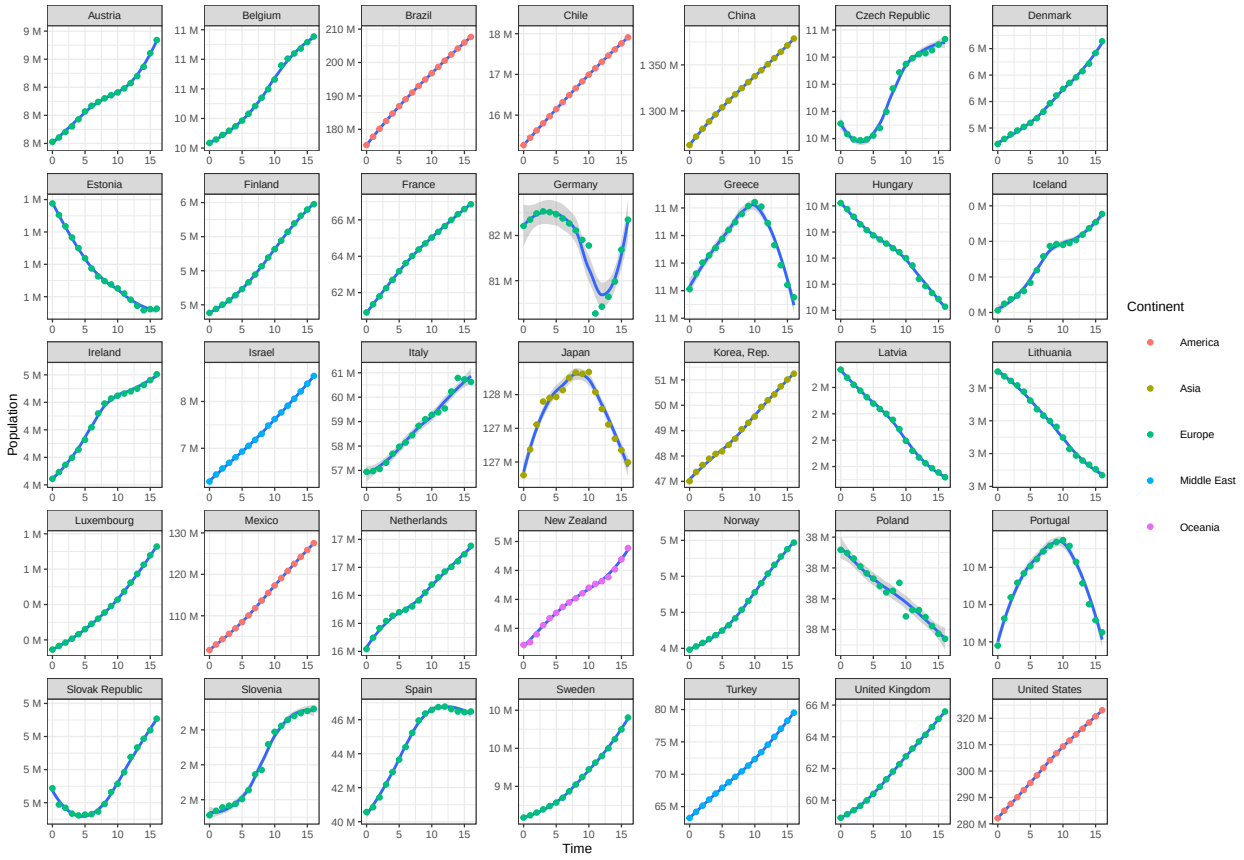



Figure 85: Trendline Population, total 2000 - 2017

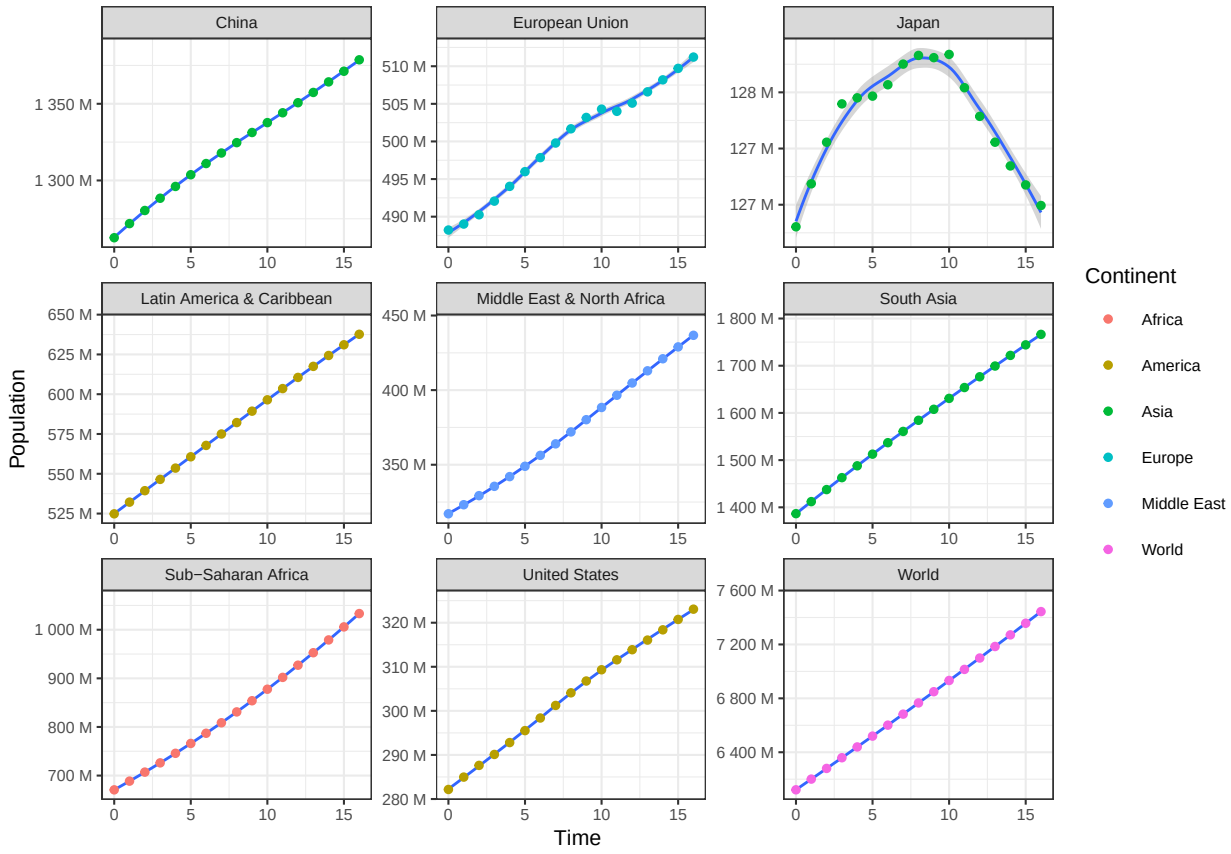



Figure 86: Trendline Population, total regions and biggest countries 2000 - 2017

Table 52: Male and Female, %

| Country Name | Male Mean | Fenale Mean |
|---|---|---|
| Austria | 49 | 51 |
| Belgium | 49 | 51 |
| Brazil | 49 | 51 |
| Chile | 49 | 51 |
| China | 51 | 49 |
| Czech Republic | 49 | 51 |
| Denmark | 50 | 50 |
| Estonia | 47 | 53 |
| European Union | 49 | 51 |
| Finland | 49 | 51 |
| France | 49 | 51 |
| Germany | 49 | 51 |
| Greece | 49 | 51 |
| Hungary | 47 | 53 |
| Iceland | 50 | 50 |
| Ireland | 50 | 50 |
| Israel | 49 | 51 |
| Italy | 49 | 51 |
| Japan | 49 | 51 |
| Korea, Rep. | 50 | 50 |
| Latin America & Caribbean | 49 | 51 |
| Latvia | 46 | 54 |
| Lithuania | 46 | 54 |
| Luxembourg | 50 | 50 |
| Mexico | 50 | 50 |
| Middle East & North Africa | 51 | 49 |
| Netherlands | 50 | 50 |
| New Zealand | 49 | 51 |
| Norway | 50 | 50 |
| Poland | 48 | 52 |
| Portugal | 48 | 52 |
| Slovak Republic | 49 | 51 |
| Slovenia | 49 | 51 |
| South Asia | 52 | 48 |
| Spain | 49 | 51 |
| Sub-Saharan Africa | 50 | 50 |
| Sweden | 50 | 50 |
| Turkey | 49 | 51 |
| United Kingdom | 49 | 51 |
| United States | 49 | 51 |
| World | 50 | 50 |

## Life expectancy at birth, total (years)

Table 53: Life expectancy at birth (years)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 80 | 1 |
| Belgium | 80 | 1 |
| Brazil | 73 | 2 |
| Chile | 78 | 1 |
| China | 75 | 1 |
| Czech Republic | 77 | 1 |
| Denmark | 79 | 2 |
| Estonia | 74 | 3 |
| European Union | 79 | 1 |
| Finland | 80 | 1 |
| France | 81 | 1 |
| Germany | 80 | 1 |
| Greece | 80 | 1 |
| Hungary | 74 | 2 |
| Iceland | 82 | 1 |
| Ireland | 80 | 2 |
| Israel | 81 | 1 |
| Italy | 82 | 1 |
| Japan | 83 | 1 |
| Korea, Rep. | 79 | 2 |
| Latin America & Caribbean | 74 | 1 |
| Latvia | 73 | 2 |
| Lithuania | 73 | 1 |
| Luxembourg | 80 | 2 |
| Mexico | 76 | 1 |
| Middle East & North Africa | 72 | 1 |
| Netherlands | 80 | 1 |
| New Zealand | 80 | 1 |
| Norway | 81 | 1 |
| Poland | 76 | 1 |
| Portugal | 79 | 2 |
| Slovak Republic | 75 | 1 |
| Slovenia | 79 | 2 |
| South Asia | 66 | 2 |
| Spain | 81 | 2 |
| Sub-Saharan Africa | 56 | 4 |
| Sweden | 81 | 1 |
| Turkey | 73 | 2 |
| United Kingdom | 80 | 1 |
| United States | 78 | 1 |
| World | 70 | 1 |

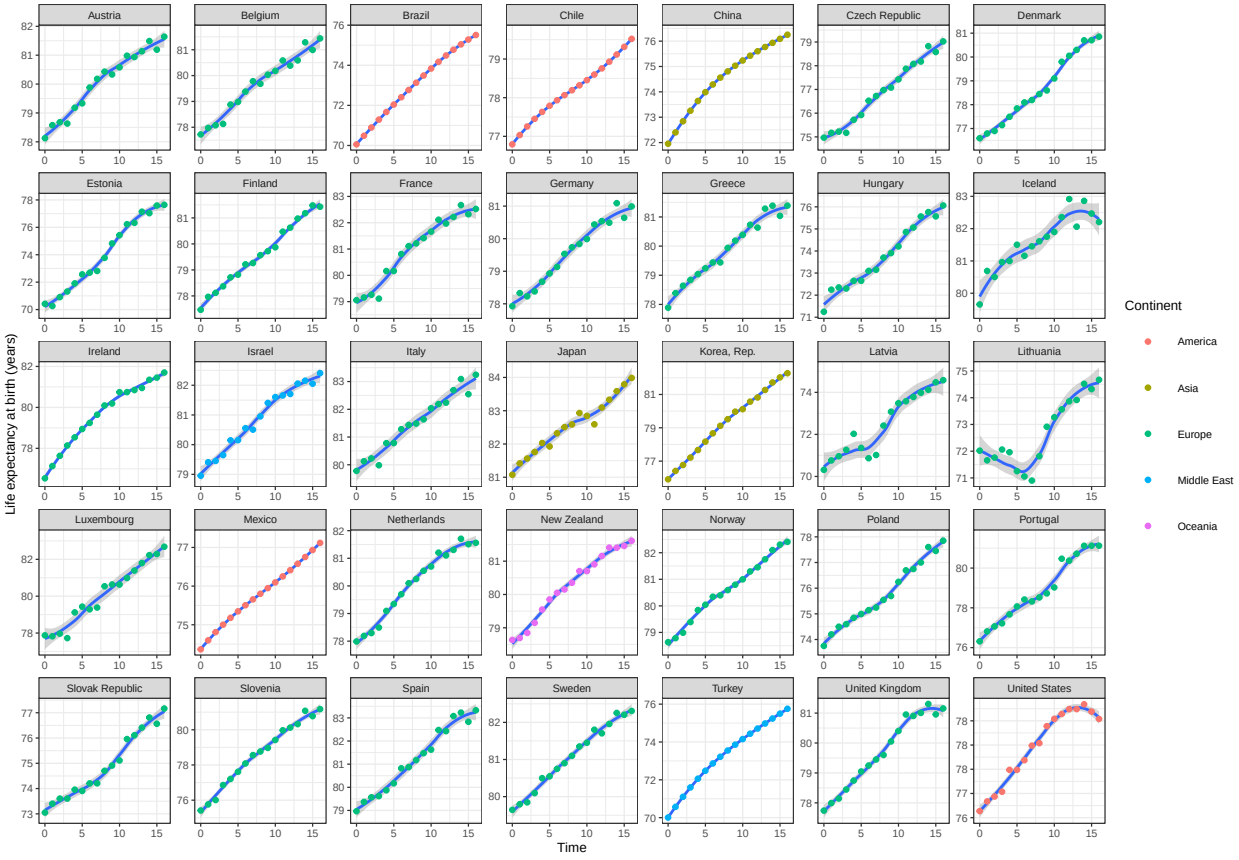



Figure 87: Trendline Life expectancy at birth, total (years) 2000 - 2017

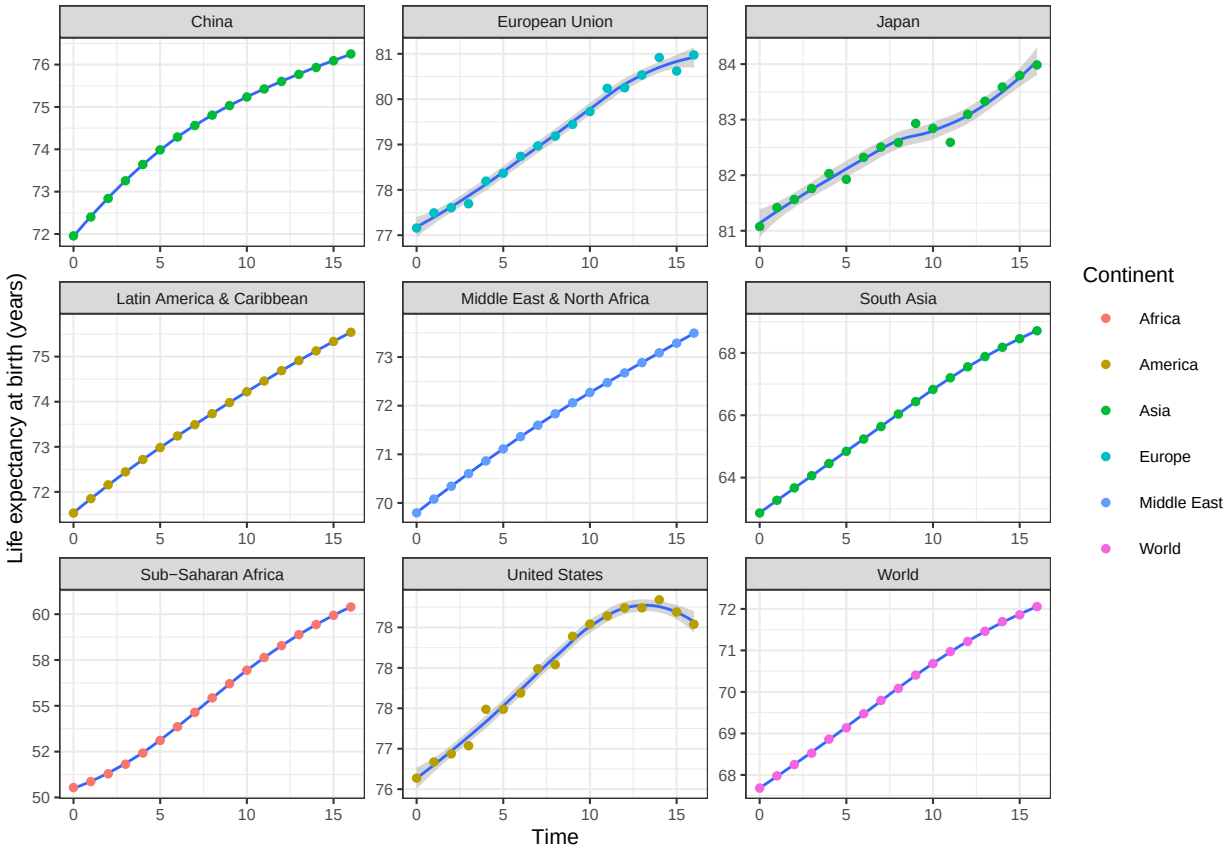



Figure 88: Trendline Life expectancy at birth, total (years) regions and biggest countries 2000 - 2017

## Fertility rate, total (births per woman)

Table 54: Fertility rate (births per woman)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 1.4 | 0.053 |
| Belgium | 1.7 | 0.071 |
| Brazil | 1.9 | 0.18 |
| Chile | 1.9 | 0.11 |
| China | 1.6 | 0.039 |
| Czech Republic | 1.4 | 0.17 |
| Denmark | 1.8 | 0.063 |
| Estonia | 1.5 | 0.13 |
| European Union | 1.5 | 0.058 |
| Finland | 1.8 | 0.091 |
| France | 2 | 0.051 |
| Germany | 1.4 | 0.078 |
| Greece | 1.4 | 0.08 |
| Hungary | 1.3 | 0.086 |
| Iceland | 2 | 0.14 |
| Ireland | 1.9 | 0.081 |
| Israel | 3 | 0.085 |
| Italy | 1.4 | 0.067 |
| Japan | 1.4 | 0.057 |
| Korea, Rep. | 1.2 | 0.093 |
| Latin America & Caribbean | 2.3 | 0.18 |
| Latvia | 1.5 | 0.17 |
| Lithuania | 1.5 | 0.16 |
| Luxembourg | 1.6 | 0.091 |
| Mexico | 2.4 | 0.17 |
| Middle East & North Africa | 2.9 | 0.11 |
| Netherlands | 1.7 | 0.04 |
| New Zealand | 2 | 0.11 |
| Norway | 1.8 | 0.086 |
| Poland | 1.3 | 0.062 |
| Portugal | 1.4 | 0.082 |
| Slovak Republic | 1.3 | 0.098 |
| Slovenia | 1.4 | 0.16 |
| South Asia | 2.9 | 0.34 |
| Spain | 1.3 | 0.057 |
| Sub-Saharan Africa | 5.3 | 0.31 |
| Sweden | 1.8 | 0.13 |
| Turkey | 2.2 | 0.14 |
| United Kingdom | 1.8 | 0.098 |
| United States | 2 | 0.11 |
| World | 2.5 | 0.072 |

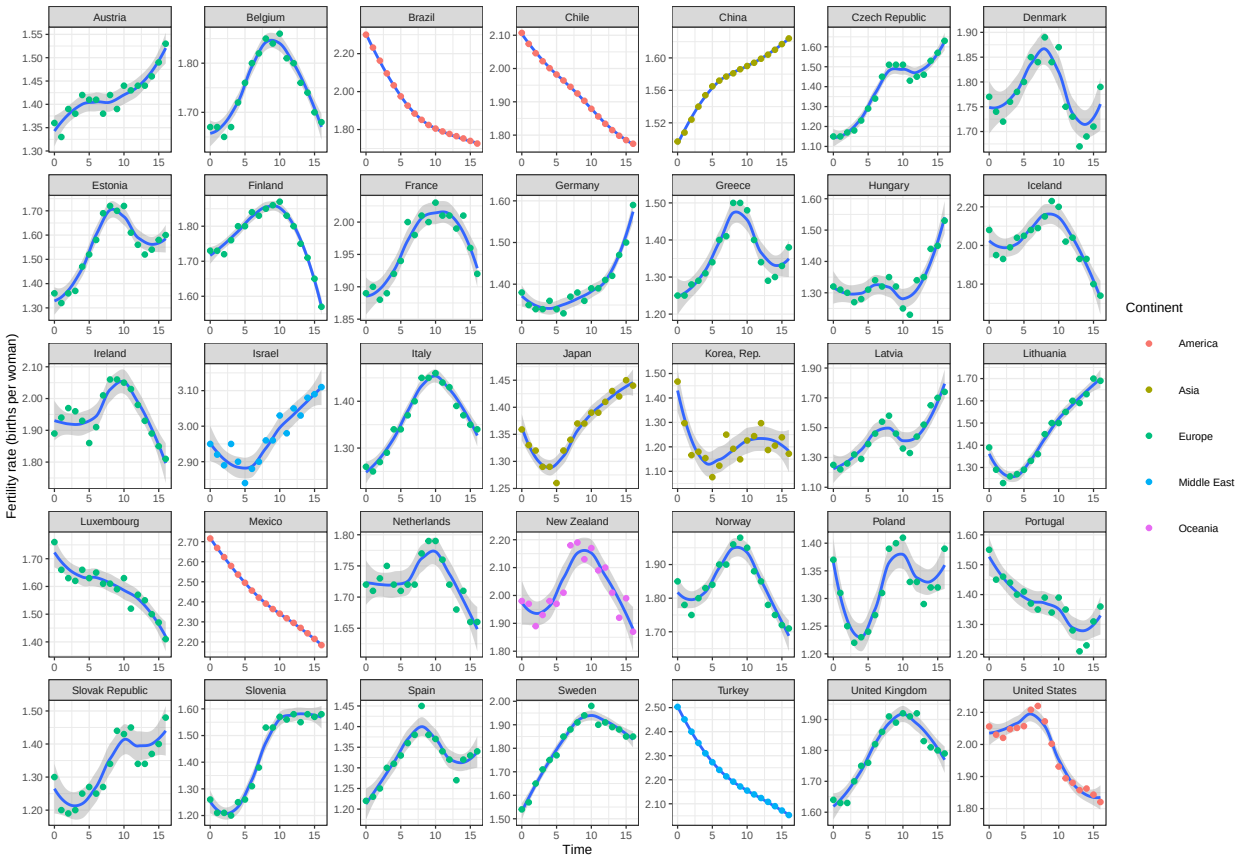



Figure 89: Trendline Fertility rate, total (births per woman) 2000 - 2017

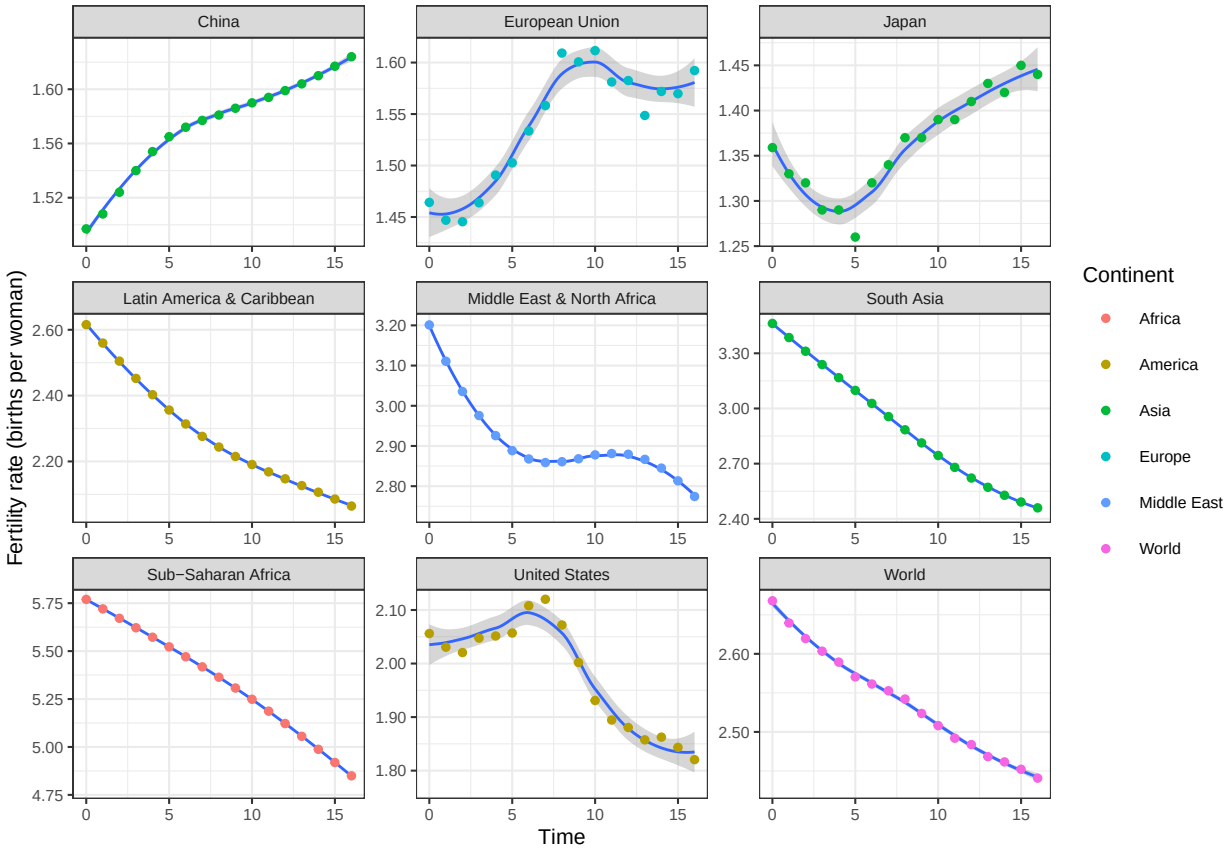



Figure 90: Trendline Fertility rate, total (births per woman) regions and biggest countries 2000 - 2017

## Age dependency ratio, old (% of working-age population)

Age dependency ratio, old, is the ratio of older dependents–people older than 64–to the working-age population–those ages 15-64. Data are shown as the proportion of dependents per 100 working-age population.

Dependency ratios capture variations in the proportions of children, elderly people, and working-age people in the population that imply the dependency burden that the working-age population bears in relation to children and the elderly. But dependency ratios show only the age composition of a population, not economic dependency. Some children and elderly people are part of the labor force, and many working-age people are not.

Table 55: Age dependency ratio, old (% of working-age population)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 26 | 2.1 |
| Belgium | 27 | 0.89 |
| Brazil | 9.7 | 1.3 |
| Chile | 13 | 1.5 |
| China | 12 | 1.4 |
| Czech Republic | 22 | 3.2 |
| Denmark | 25 | 3 |
| Estonia | 26 | 2.3 |
| European Union | 26 | 2.2 |
| Finland | 27 | 3.8 |
| France | 27 | 2.3 |
| Germany | 30 | 2.7 |
| Greece | 28 | 2.1 |
| Hungary | 24 | 1.6 |
| Iceland | 19 | 1.4 |
| Ireland | 17 | 2.2 |
| Israel | 17 | 1.1 |
| Italy | 31 | 2.9 |
| Japan | 34 | 6.5 |
| Korea, Rep. | 14 | 2.8 |
| Latin America & Caribbean | 10 | 0.92 |
| Latvia | 26 | 2.5 |
| Lithuania | 25 | 2.3 |
| Luxembourg | 21 | 0.52 |
| Mexico | 9.1 | 0.6 |
| Middle East & North Africa | 7.2 | 0.17 |
| Netherlands | 23 | 3 |
| New Zealand | 20 | 1.9 |
| Norway | 23 | 1.1 |
| Poland | 20 | 2 |
| Portugal | 28 | 2.9 |
| Slovak Republic | 18 | 1.7 |
| Slovenia | 24 | 2.5 |
| South Asia | 7.8 | 0.45 |
| Spain | 26 | 1.8 |
| Sub-Saharan Africa | 5.7 | 0.021 |
| Sweden | 28 | 1.9 |
| Turkey | 11 | 0.75 |
| United Kingdom | 26 | 1.7 |
| United States | 20 | 1.7 |

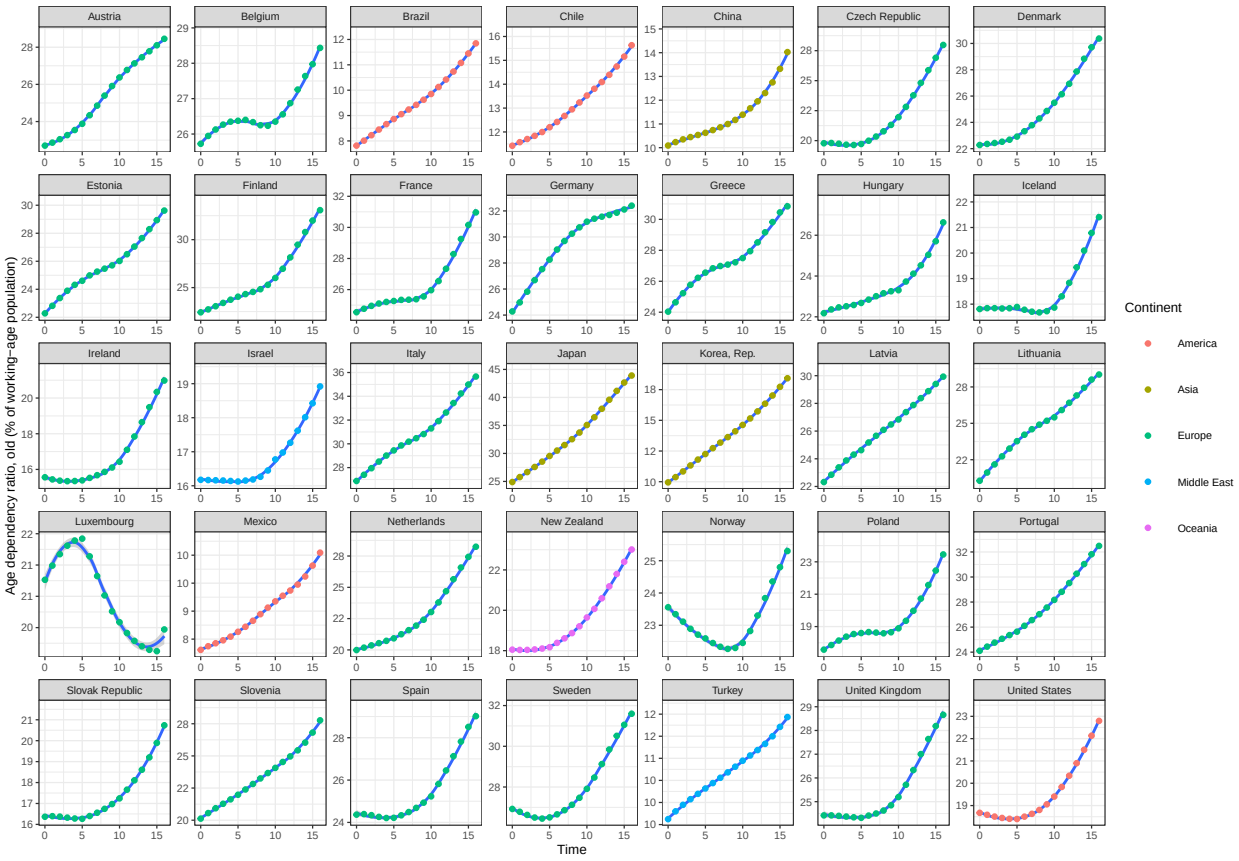



Figure 91: Trendline Age dependency ratio, old (% of working-age population) 2000 - 2017

| Country Name | Mean | SD |
|---|---|---|
| World | 12 | 0.68 |

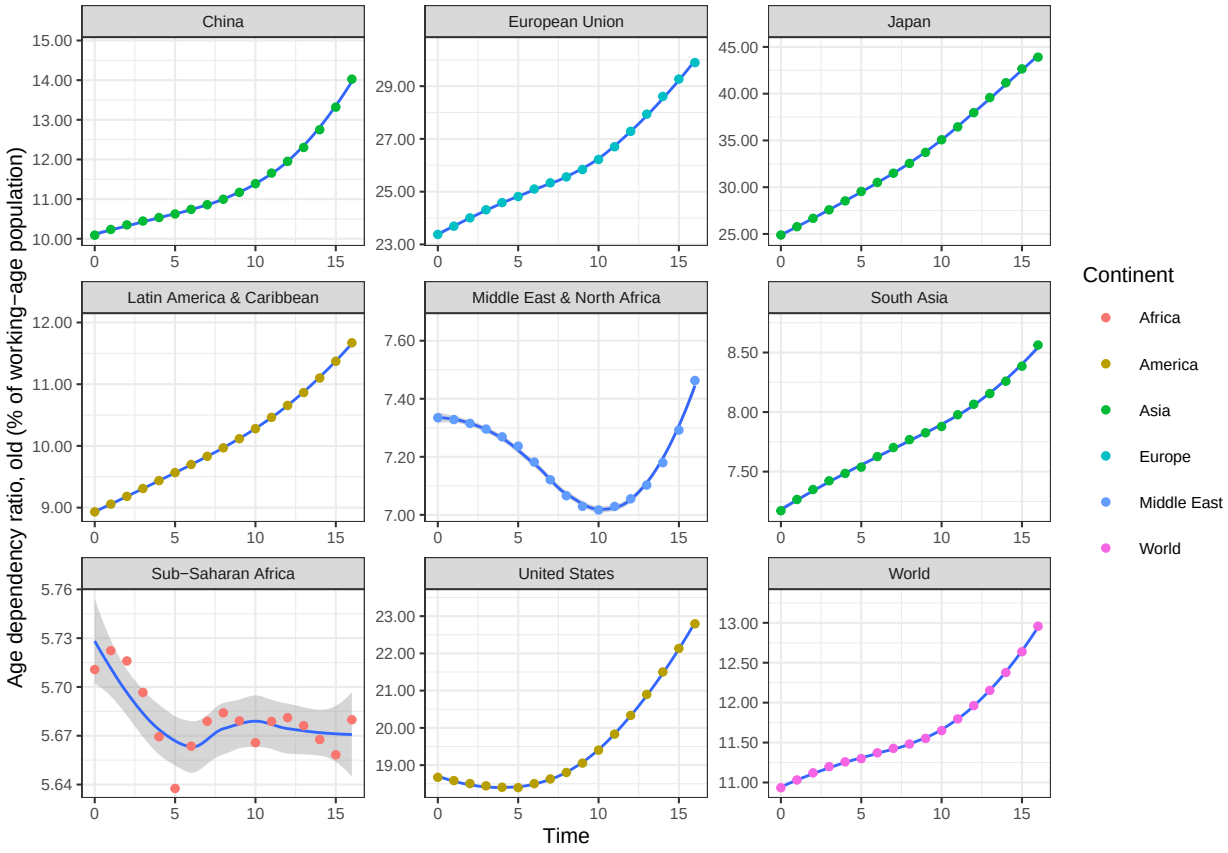



Figure 92: Trendline Age dependency ratio, old (% of working-age population) regions and biggest countries 2000 - 2017

## Age dependency ratio, young (% of working-age population)

Age dependency ratio, young, is the ratio of younger dependents–people younger than 15–to the working-age population–those ages 15-64. Data are shown as the proportion of dependents per 100 working-age population.

Table 56: Age dependency ratio, young (% of working-age population)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 23 | 1.3 |
| Belgium | 26 | 0.33 |
| Brazil | 38 | 4.9 |
| Chile | 35 | 3.8 |
| China | 27 | 3.9 |
| Czech Republic | 22 | 1.2 |
| Denmark | 27 | 0.84 |
| Estonia | 24 | 1.3 |
| European Union | 24 | 0.64 |
| Finland | 26 | 0.63 |
| France | 29 | 0.31 |
| Germany | 21 | 1.1 |
| Greece | 22 | 0.22 |
| Hungary | 22 | 1.1 |
| Iceland | 32 | 1.7 |
| Ireland | 31 | 1.6 |
| Israel | 45 | 0.71 |
| Italy | 21 | 0.12 |
| Japan | 21 | 0.3 |
| Korea, Rep. | 23 | 3.5 |
| Latin America & Caribbean | 44 | 4.6 |
| Latvia | 22 | 1.7 |
| Lithuania | 24 | 2.9 |
| Luxembourg | 26 | 1.8 |
| Mexico | 48 | 5.3 |
| Middle East & North Africa | 50 | 5.3 |
| Netherlands | 26 | 0.69 |
| New Zealand | 32 | 1.4 |
| Norway | 29 | 1.3 |
| Poland | 23 | 2.3 |
| Portugal | 23 | 0.76 |
| Slovak Republic | 23 | 2.3 |
| Slovenia | 21 | 1 |
| South Asia | 52 | 4.9 |
| Spain | 22 | 0.64 |
| Sub-Saharan Africa | 82 | 1.6 |
| Sweden | 27 | 1 |
| Turkey | 42 | 3.4 |
| United Kingdom | 27 | 0.78 |
| United States | 31 | 1.3 |
| World | 42 | 2.6 |

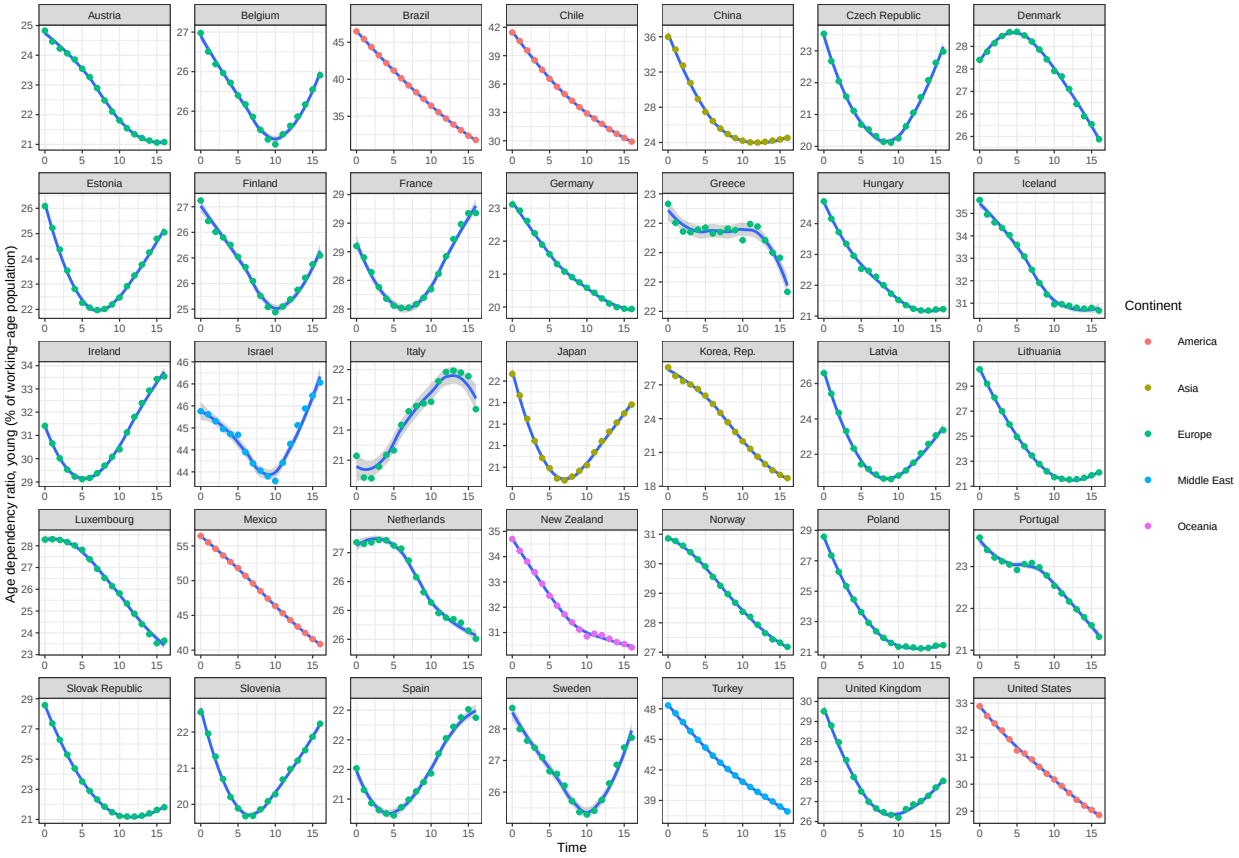



Figure 93: Trendline Age dependency ratio, young (% of working-age population) 2000 - 2017

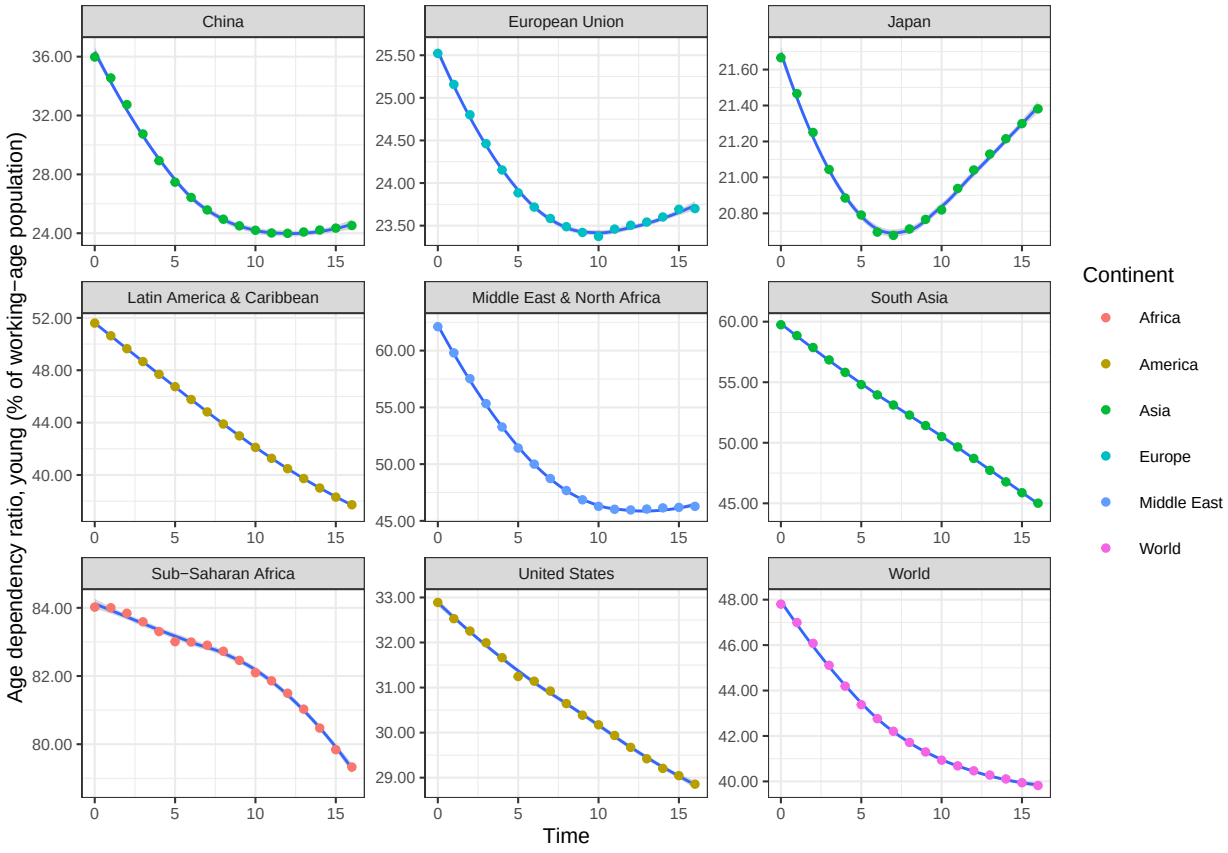



Figure 94: Trendline Age dependency ratio, young (% of working-age population) regions and biggest countries 2000 - 2017

## Poverty headcount ratio at national poverty lines (% of population)

National poverty headcount ratio is the percentage of the population living below the national poverty lines. National estimates are based on population-weighted subgroup estimates from household surveys.

Poverty headcount ratio among the population is measured based on national (i.e. country-specific) poverty lines. A country may have a unique national poverty line or separate poverty lines for rural and urban areas, or for different geographic areas to reflect differences in the cost of living or sometimes to reflect differences in diets and consumption baskets.

Poverty estimates at national poverty lines are computed from household survey data collected from nationally representative samples of households. These data must contain sufficiently detailed information to compute a comprehensive estimate of total household income or consumption (including consumption or income from own production), from which it is possible to construct a correctly weighted distribution of per capita consumption or income.

National poverty lines are the benchmark for estimating poverty indicators that are consistent with the country's specific economic and social circumstances. National poverty lines reflect local perceptions of the level and composition of consumption or income needed to be non-poor. The perceived boundary between poor and non-poor typically rises with the average income of a country and thus does not provide a uniform measure for comparing poverty rates across countries. While poverty rates at national poverty lines should not be used for comparing poverty rates across countries, they are appropriate for guiding and monitoring the results of country-specific national poverty reduction strategies.

Almost all national poverty lines are anchored to the cost of a food bundle - based on the prevailing national diet of the poor - that provides adequate nutrition for good health and normal activity, plus an allowance for nonfood spending. National poverty lines must be adjusted for inflation between survey years to remain constant in real terms and thus allow for meaningful comparisons of poverty over time. Because diets and consumption baskets change over time, countries periodically recalculate the poverty line based on new survey data. In such cases the new poverty lines should be deflated to obtain comparable poverty estimates from earlier years. The data is based on the two most recent years for which survey data are available.

Survey year is the year in which the underlying household survey data were collected or, when the data collection period bridged two calendar years, the year in which most of the data were collected.

Table 57: Poverty (% of population

| Country Name | Mean | SD |
|---|---|---|
| Brazil | 26 | 0.57 |
| Chile | 23 | 11 |
| China | 8.6 | 4.6 |
| Czech Republic | 9.4 | 0.59 |
| Estonia | 22 | NA |
| Hungary | 14 | 1.3 |
| Latvia | 22 | 2.6 |
| Lithuania | 20 | 1 |
| Mexico | 45 | 1.1 |
| Poland | 18 | 1.3 |
| Slovak Republic | 12 | 1 |
| Slovenia | 13 | 1.2 |
| Turkey | 16 | 1.4 |

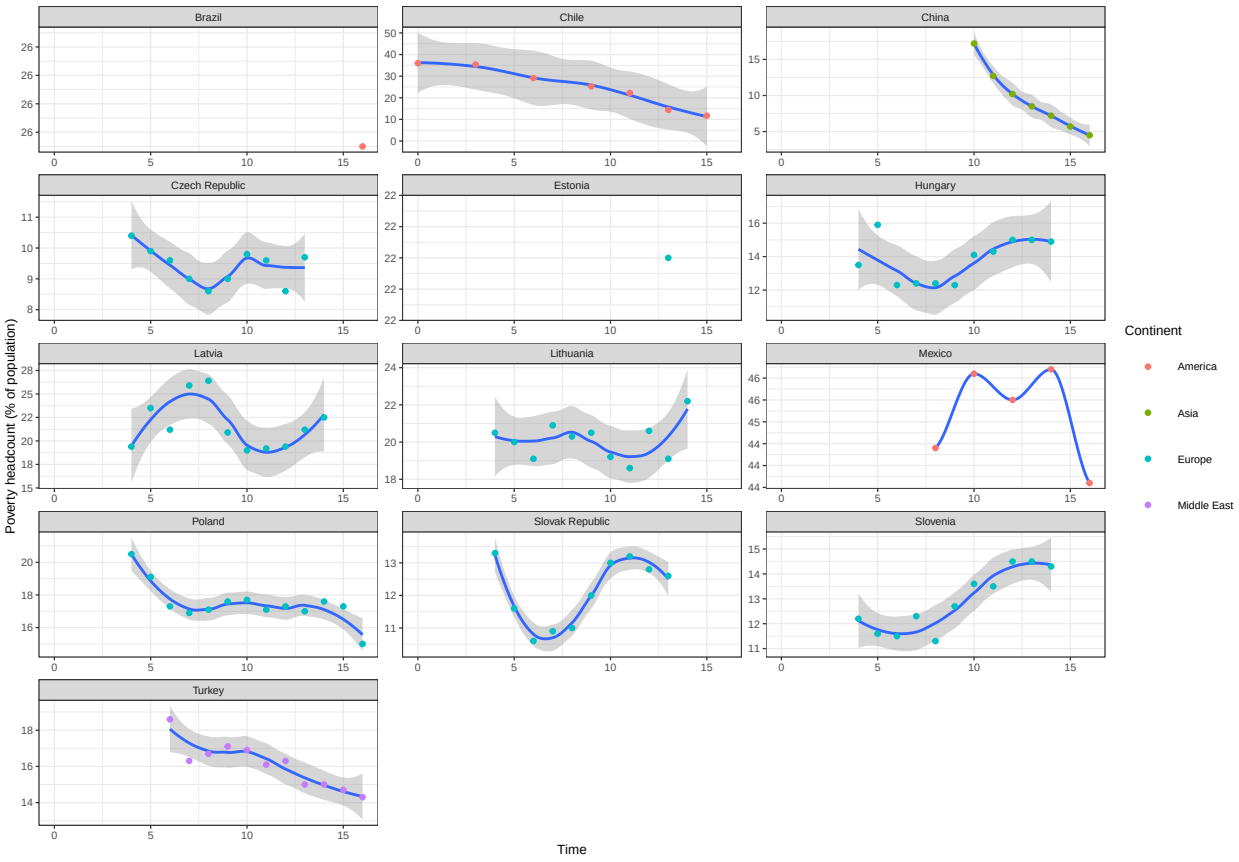



Figure 95: Trendline Poverty headcount ratio at national poverty lines (% of population) 2000 - 2017

## Access to electricity (% of population)

Table 58: Access to electricity (% of population)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 100 | 0 |
| Belgium | 100 | 0 |
| Brazil | 98 | 1.6 |
| Chile | 99 | 0.92 |
| China | 99 | 1.4 |
| Czech Republic | 100 | 0 |
| Denmark | 100 | 0 |
| Estonia | 100 | 0 |
| European Union | 100 | 0 |
| Finland | 100 | 0 |
| France | 100 | 0 |
| Germany | 100 | 0 |
| Greece | 100 | 0 |
| Hungary | 100 | 0 |
| Iceland | 100 | 0 |
| Ireland | 100 | 0 |
| Israel | 100 | 0 |
| Italy | 100 | 0 |
| Japan | 100 | 0 |
| Korea, Rep. | 100 | 0 |
| Latin America & Caribbean | 95 | 2 |
| Latvia | 100 | 0 |
| Lithuania | 100 | 0 |
| Luxembourg | 100 | 0 |
| Mexico | 99 | 0.76 |
| Middle East & North Africa | 95 | 2.1 |
| Netherlands | 100 | 0 |
| New Zealand | 100 | 0 |
| Norway | 100 | 0 |
| Poland | 100 | 0 |
| Portugal | 100 | 0 |
| Slovak Republic | 100 | 0 |
| Slovenia | 100 | 0 |
| South Asia | 71 | 9.7 |
| Spain | 100 | 0 |
| Sub-Saharan Africa | 32 | 4.8 |
| Sweden | 100 | 0 |
| Turkey | 98 | 1.9 |
| United Kingdom | 100 | 0 |
| United States | 100 | 0 |
| World | 82 | 3.1 |

## Educational attainment, at least completed primary, population 25+ years, total (%) (cumulative)

The percentage of population ages 25 and over that attained or completed primary education.

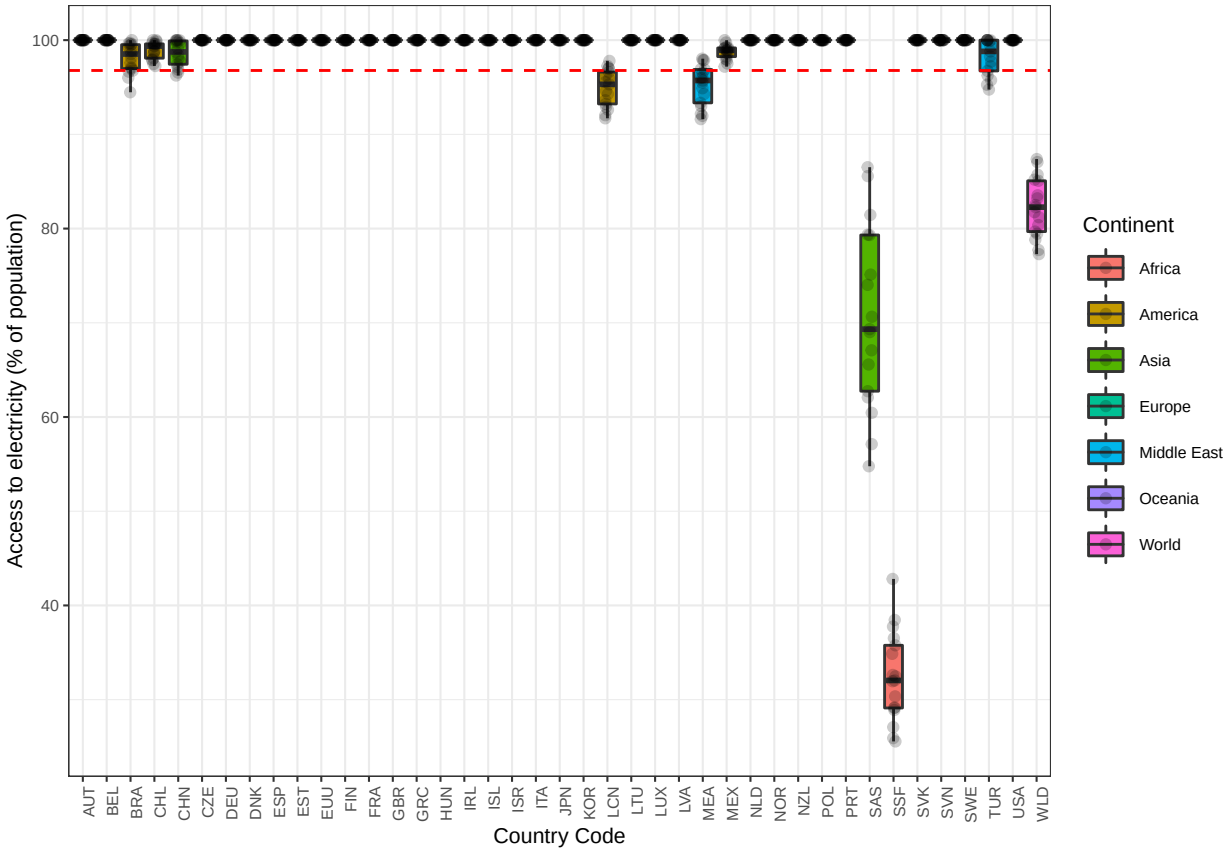



Figure 96: Boxplot Access to electricity (% of population) 2000 - 2017

It is calculated by dividing the number of population **ages 25 and older** who attained or completed primary education by the total population of the same age group and multiplying by 100. The number 0 means zero or small enough that the number would round to zero.

Data are collected by the UNESCO Institute for Statistics mainly from national population census, household survey, and labour force survey. All the data are mapped to the International Standard Classification of Education (ISCED) to ensure the comparability of education programs at the international level. The current version was formally adopted by UNESCO Member States in 2011.

A relative high concentration of the adult population in a given level of education reflects the capacity of the educational system in the corresponding level of education. Educational attainment is closely related to the skills and competencies of a country's population, and could be seen as a proxy of both the quantitative and qualitative aspects of the stock of human capital.

Caution is required when using this indicator for cross-country comparison, since the countries do not always classify degrees and qualifications at the same International Standard Classification of Education (ISCED) levels, even if they are received at roughly the same age or after a similar number of years of schooling. Also, certain educational programmes and study courses cannot be easily classified according to ISCED. This indicator only measures educational attainment in terms of level of education attained, i.e. years of schooling, and do not necessarily reveal the quality of the education (learning achievement and other impacts).

Data retrieved via API in March 2019. For detailed information on the observation level (e.g. National Estimation, UIS Estimation, or Category not applicable), please visit UIS.Stat (http://data.uis.unesco.org/).

Table 59: Educational attainment, at least completed primary, population 25+ years, total (%) (cumulative)

| Country Name | Mean | SD |
|---|---|---|
| Belgium | 93 | 1.1 |
| Brazil | 75 | 2.7 |
| Chile | 85 | 2.7 |
| Czech Republic | 100 | 0.014 |
| Denmark | 100 | 0 |
| France | 98 | 0.6 |
| Germany | 100 | 0 |
| Greece | 93 | 1.5 |
| Hungary | 99 | 0.47 |
| Israel | 91 | 11 |
| Italy | 93 | 1.1 |
| Japan | 100 | NA |
| Korea, Rep. | 93 | 1.9 |
| Latvia | 100 | 0.23 |
| Lithuania | 98 | 0.36 |
| Luxembourg | 98 | 2.9 |
| Mexico | 74 | 4.8 |
| Netherlands | 98 | 0.11 |
| New Zealand | 100 | NA |
| Norway | 100 | 0.17 |
| Poland | 99 | 0.64 |
| Portugal | 86 | 3.9 |
| Slovak Republic | 100 | 0.073 |
| Slovenia | 99 | 0.42 |
| Spain | 88 | 1.7 |
| Sweden | 100 | 0 |
| Turkey | 83 | 3.6 |
| United Kingdom | 100 | 0.034 |
| United States | 99 | 0.15 |

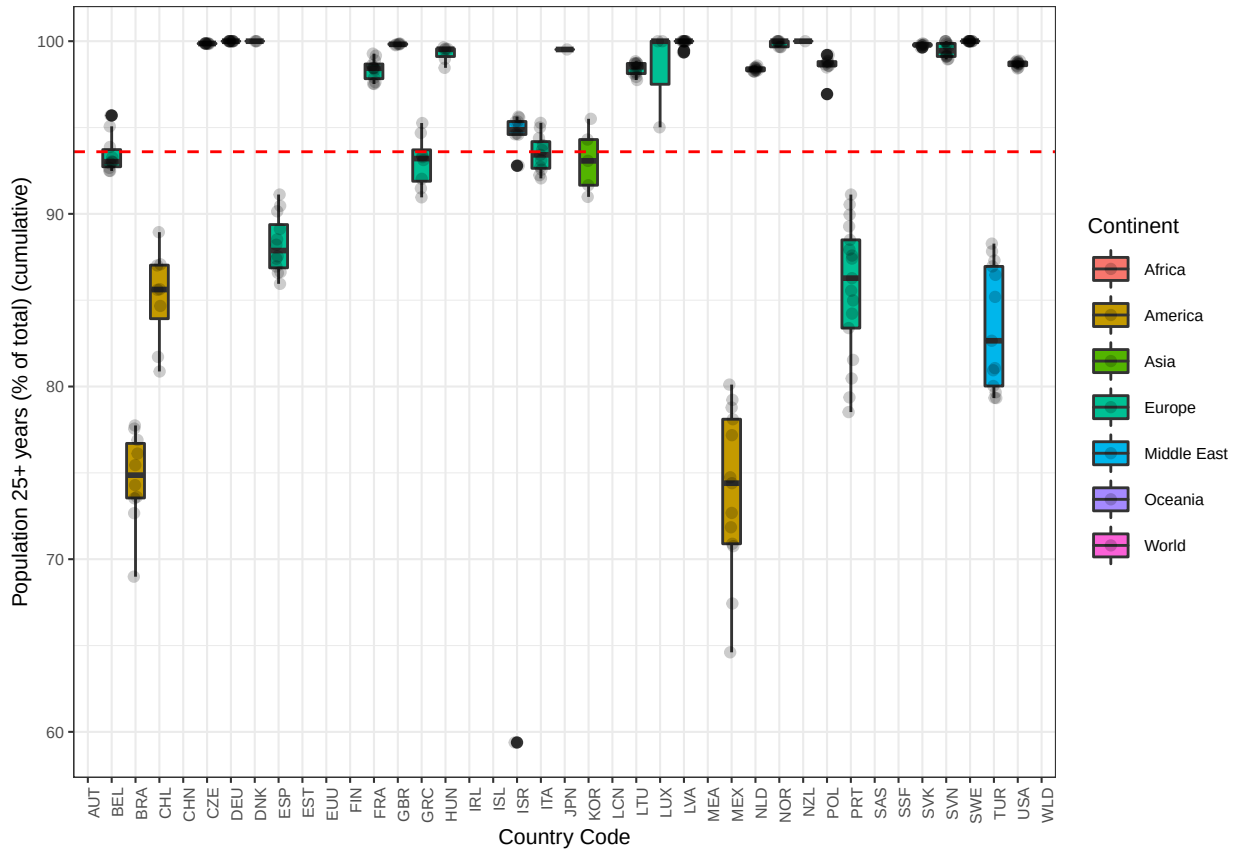



Figure 97: Boxplot Educational attainment, at least completed primary, population 25+ years, total (%) (cumulative)

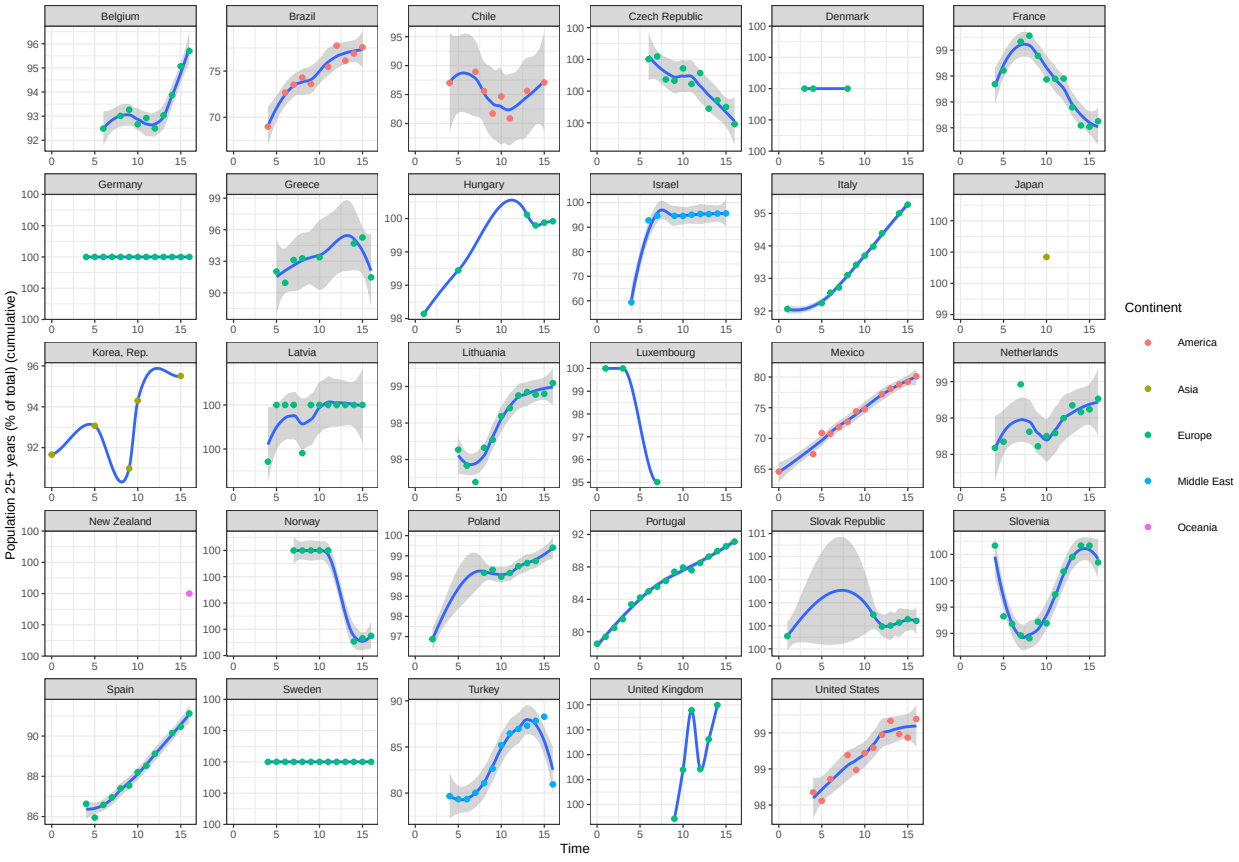



Figure 98: Trendline Educational attainment, at least completed primary, population 25+ years, total (%) (cumulative) 2000 - 2017

## Educational attainment, at least completed lower secondary, population 25+, total (%) (cumulative)

The percentage of population ages 25 and over that attained or completed lower secondary education.

It is calculated by dividing the number of population **ages 25 and older** who attained or completed lower secondary education by the total population of the same age group and multiplying by 100. The number 0 means zero or small enough that the number would round to zero.

Data are collected by the UNESCO Institute for Statistics mainly from national population census, household survey, and labour force survey. All the data are mapped to the International Standard Classification of Education (ISCED) to ensure the comparability of education programs at the international level. The current version was formally adopted by UNESCO Member States in 2011.

Table 60: Educational attainment, at least completed lower secondary, population 25+ years, total (%) (cumulative)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 99 | NA |
| Belgium | 81 | 2.5 |
| Brazil | 51 | 4.8 |
| Chile | 76 | 1.9 |
| China | 59 | 9.2 |
| Czech Republic | 100 | 0.014 |
| Denmark | 97 | 4 |
| Estonia | 89 | NA |
| France | 79 | 3.1 |
| Germany | 97 | 0.32 |
| Greece | 62 | 5 |
| Hungary | 96 | 3.8 |
| Iceland | 96 | NA |
| Ireland | 82 | 3.9 |
| Israel | 82 | 11 |
| Italy | 73 | 4.1 |
| Korea, Rep. | 81 | 3.6 |
| Latvia | 99 | 0.84 |
| Lithuania | 91 | 2.4 |
| Luxembourg | 79 | 15 |
| Mexico | 53 | 5.5 |
| Netherlands | 90 | 0.32 |
| New Zealand | 100 | NA |
| Norway | 100 | 0.25 |
| Poland | 82 | 2.1 |
| Portugal | 39 | 9.6 |
| Slovak Republic | 99 | 0.14 |
| Slovenia | 96 | 1.6 |
| Spain | 68 | 5.1 |
| Sweden | 89 | 1.5 |
| Turkey | 43 | 11 |
| United Kingdom | 100 | 0.034 |
| United States | 95 | 0.62 |

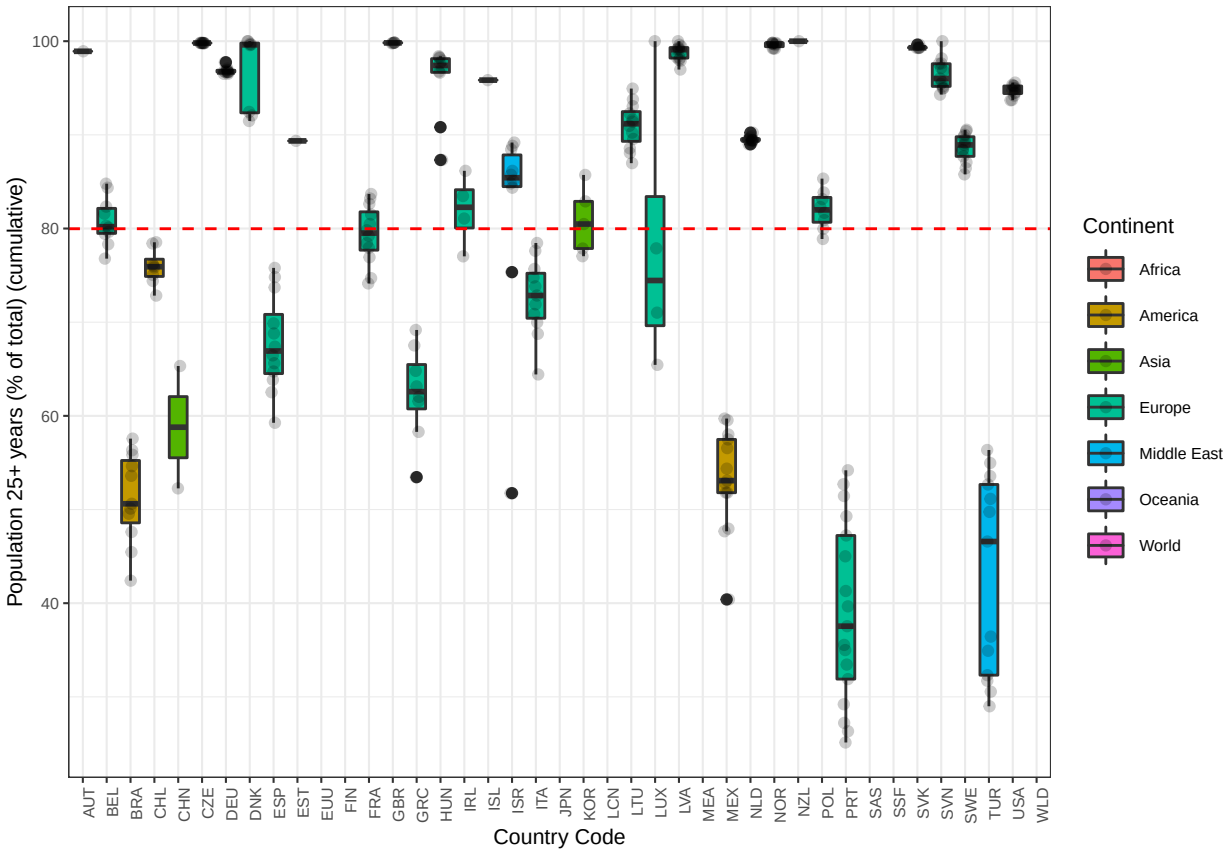



Figure 99: Boxplot Educational attainment, at least completed lower secondary, population 25+, total (%) (cumulative)

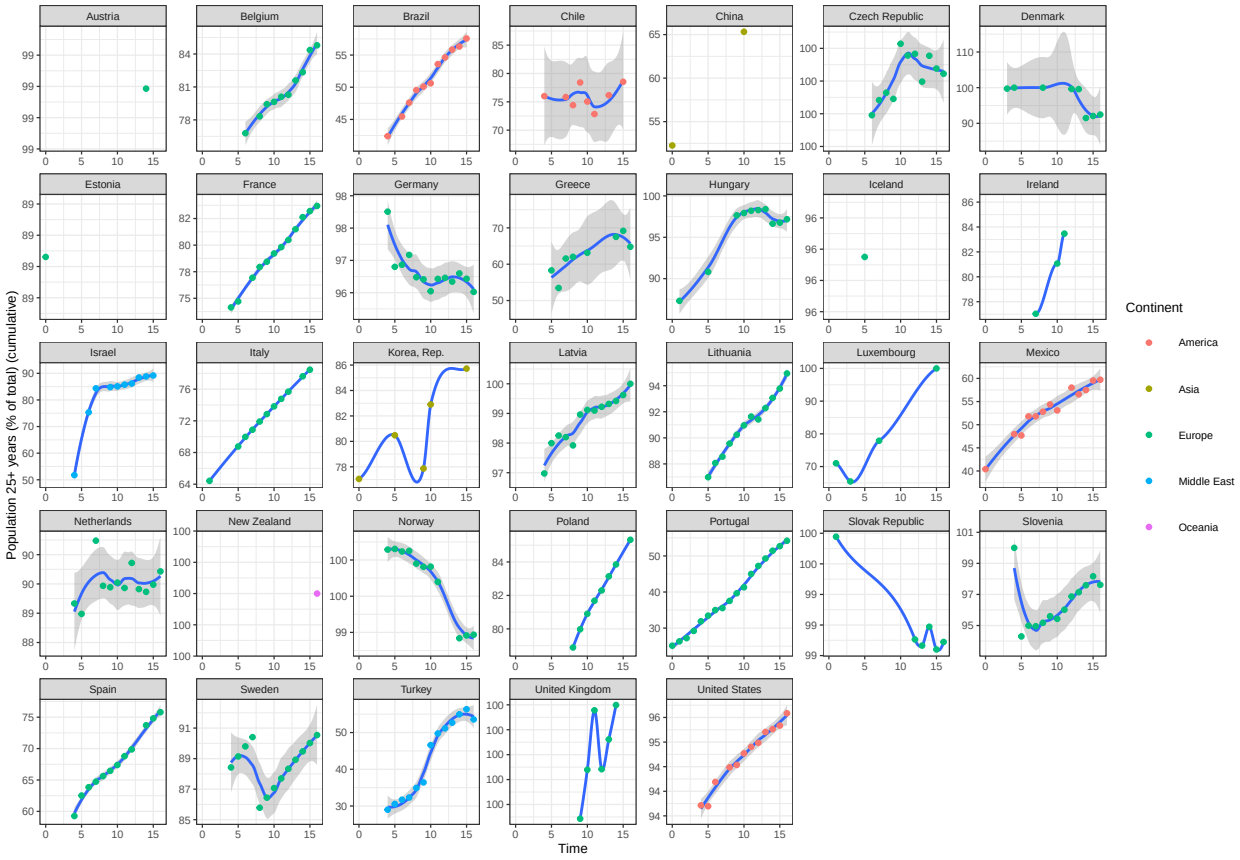



Figure 100: Trendline Educational attainment, at least completed lower secondary, population 25+, total (%) (cumulative) 2000 - 2017

## Educational attainment, at least completed post-secondary, population 25+, total (%) (cumulative)

The percentage of population ages 25 and over that attained or completed post-secondary non-tertiary education.

It is calculated by dividing the number of population **ages 25 and older** who attained or completed post-secondary non-tertiary education by the total population of the same age group and multiplying by 100. The number 0 means zero or small enough that the number would round to zero.

Data are collected by the UNESCO Institute for Statistics mainly from national population census, household survey, and labour force survey. All the data are mapped to the International Standard Classification of Education (ISCED) to ensure the comparability of education programs at the international level. The current version was formally adopted by UNESCO Member States in 2011.

Table 61: Educational attainment, at least completed post-secondary secondary, population 25+ years, total (%) (cumulative)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 26 | 2.1 |
| Belgium | 32 | 1.8 |
| Brazil | 11 | 1.8 |
| Chile | 18 | 4.1 |
| China | 4.3 | NA |
| Czech Republic | 17 | 2.4 |
| Denmark | 34 | 1.4 |
| Estonia | 31 | NA |
| Finland | 35 | 0.38 |
| France | 25 | 3.4 |
| Germany | 31 | 2.7 |
| Greece | 26 | 3.9 |
| Hungary | 23 | 5.7 |
| Iceland | 31 | NA |
| Ireland | 41 | 3.3 |
| Israel | 43 | 5.4 |
| Italy | 12 | 1.6 |
| Japan | 34 | NA |
| Korea, Rep. | 34 | 5.3 |
| Latvia | 34 | 3.7 |
| Lithuania | 49 | 2.2 |
| Luxembourg | 42 | 23 |
| Mexico | 14 | 2 |
| Netherlands | 31 | 0.86 |
| New Zealand | 45 | 1.9 |
| Norway | 34 | 3.2 |
| Poland | 24 | 3.7 |
| Portugal | 13 | 3.9 |
| Slovak Republic | 18 | 2.9 |
| Slovenia | 22 | 3.1 |
| Spain | 26 | 2.6 |
| Sweden | 35 | 1.9 |
| Turkey | 12 | 3.4 |
| United Kingdom | 35 | 3 |
| United States | 40 | 2.4 |

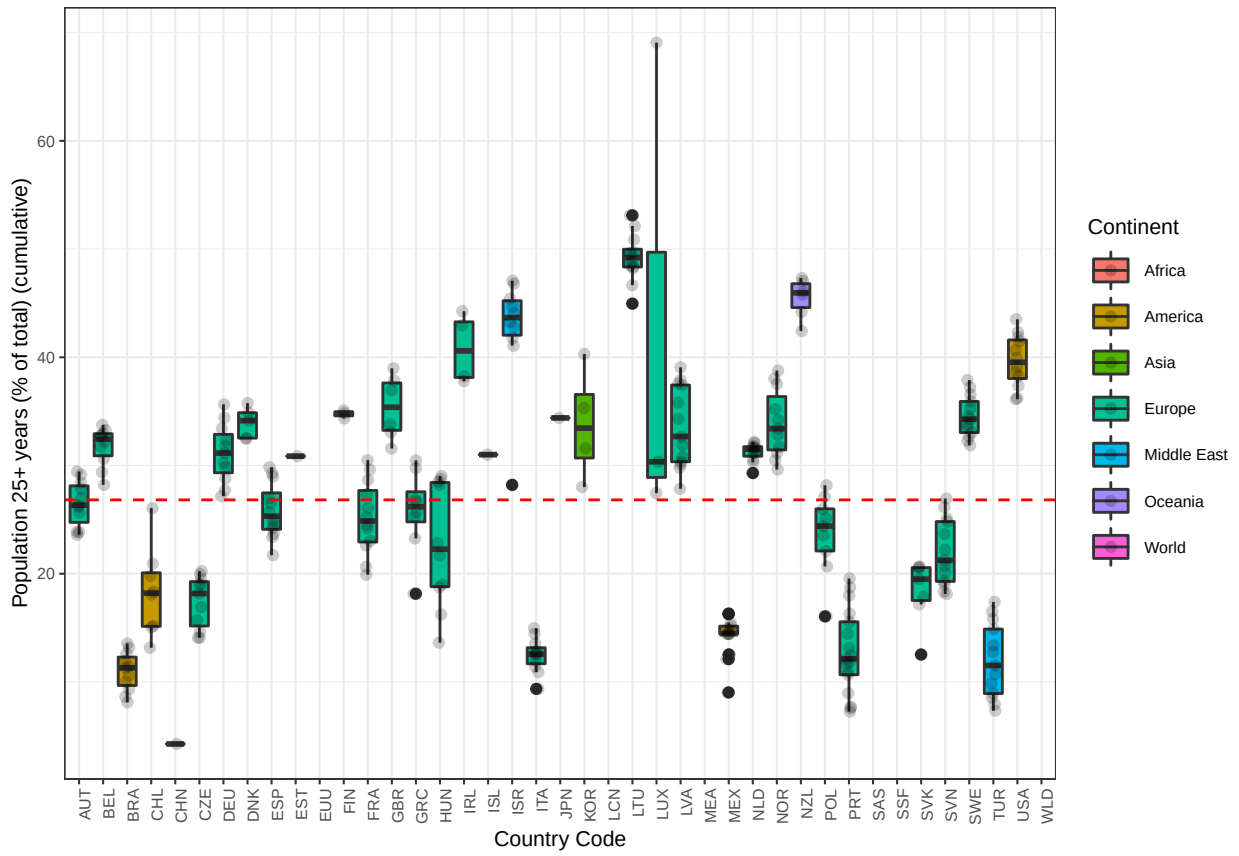



Figure 101: Boxplot Educational attainment, at least completed post-secondary, population 25+, total (%) (cumulative)

## Educational attainment, at least Bachelor's or equivalent, population 25+, total (%) (cumulative)

The percentage of population ages 25 and over that attained or completed Bachelor's or equivalent.

It is calculated by dividing the number of population **ages 25 and older** who attained or completed Bachelor's or equivalent by the total population of the same age group and multiplying by 100. The number 0 means zero or small enough that the number would round to zero.

Data are collected by the UNESCO Institute for Statistics mainly from national population census, household survey, and labour force survey. All the data are mapped to the International Standard Classification of Education (ISCED) to ensure the comparability of education programs at the international level. The current version was formally adopted by UNESCO Member States in 2011.

Table 62: Educational attainment, at least Bachelor's or equivalent, population 25+, total (%) (cumulative)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 13 | 0.45 |
| Belgium | 31 | 0.82 |
| Chile | 12 | 1.4 |
| China | 3.6 | NA |
| Czech Republic | 19 | 0.63 |

| Country Name | Mean | SD |
|---|---|---|
| Denmark | 30 | 1 |
| Finland | 22 | 0.82 |
| France | 17 | 0.67 |
| Germany | 25 | 0.7 |
| Greece | 22 | 1.4 |
| Hungary | 20 | 0.55 |
| Ireland | 29 | 3.1 |
| Israel | 32 | 0.95 |
| Japan | 20 | NA |
| Korea, Rep. | 27 | 3.1 |
| Latvia | 28 | 1.1 |
| Lithuania | 31 | 3.4 |
| Mexico | 14 | 0.82 |
| Netherlands | 28 | 0.96 |
| New Zealand | 27 | 1.2 |
| Norway | 27 | 0.8 |
| Poland | 24 | 1.2 |
| Portugal | 12 | 3.7 |
| Slovak Republic | 19 | 0.36 |
| Slovenia | 19 | 0.72 |
| Spain | 21 | NA |
| Sweden | 23 | 0.62 |
| United Kingdom | 29 | 0.67 |
| United States | 32 | 0.78 |

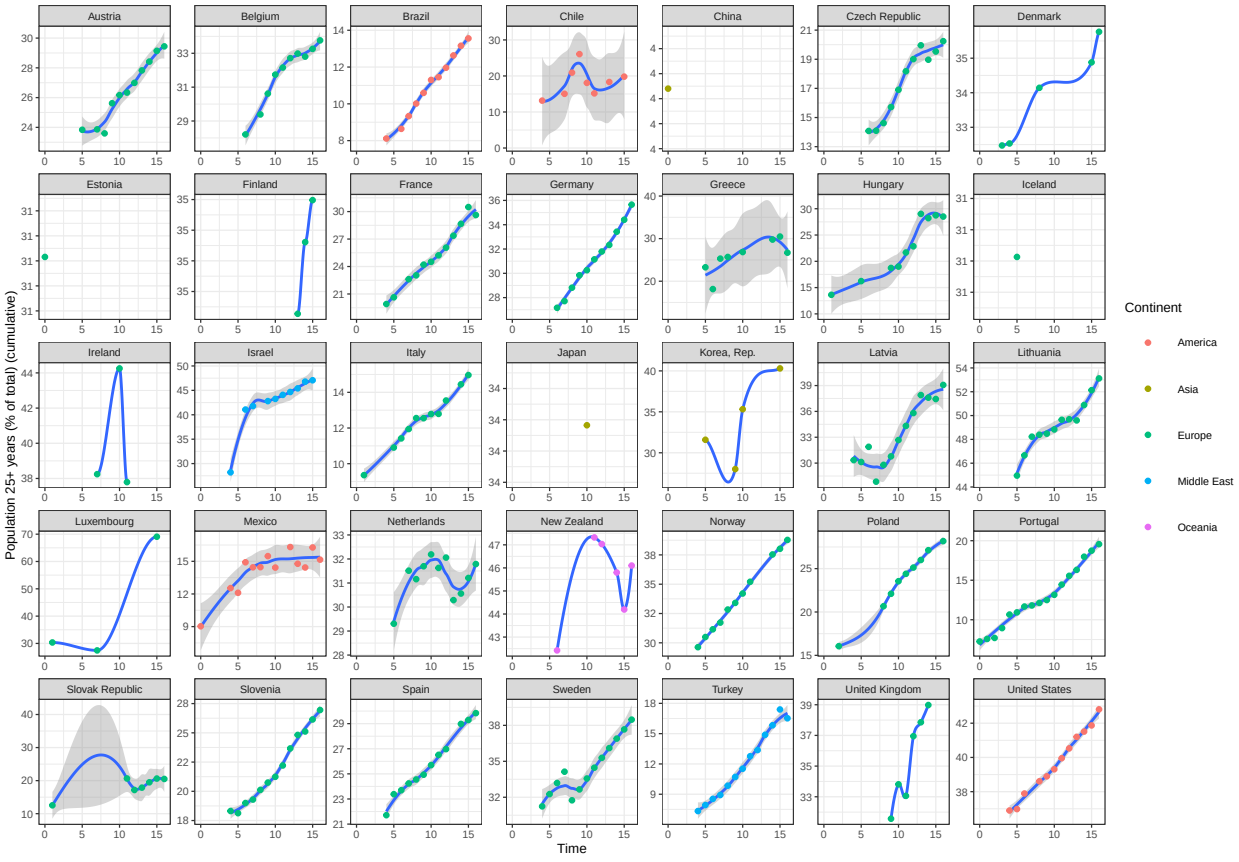



Figure 102: Trendline Educational attainment, at least completed post-secondary, population 25+, total (%) (cumulative) 2000 - 2017

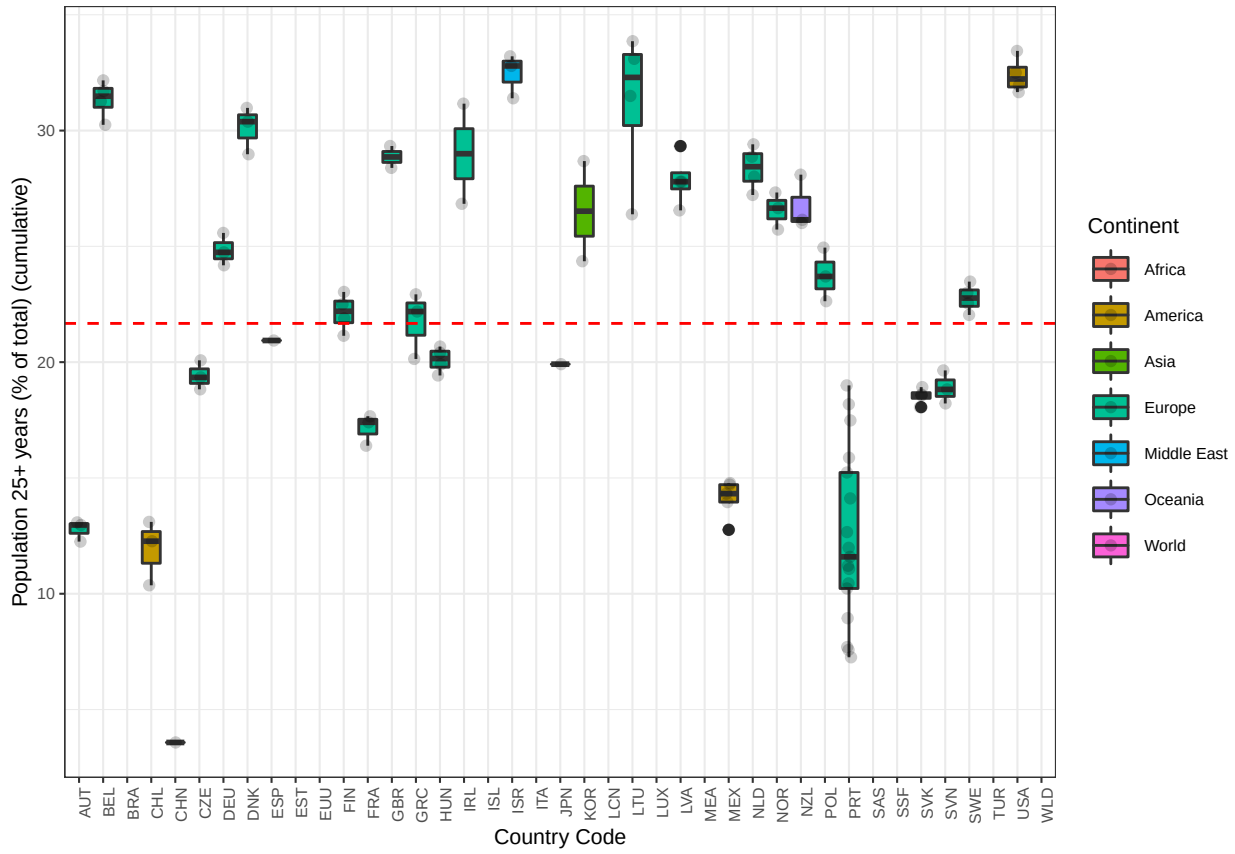



Figure 103: Boxplot Educational attainment, at least Bachelor's or equivalent, population 25+, total (%) (cumulative)

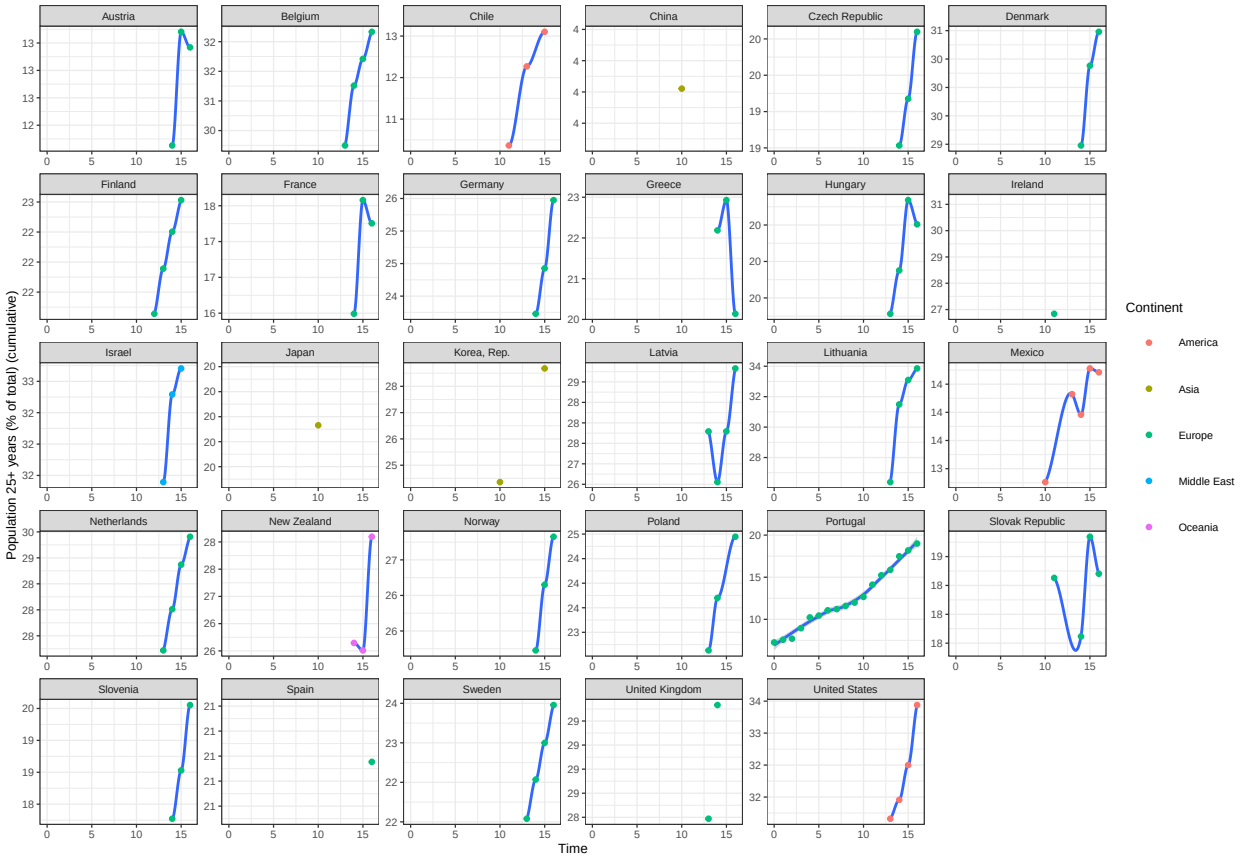



Figure 104: Trendline Educational attainment, at least Bachelor's or equivalent, population 25+, total (%) (cumulative) 2000 - 2017

## Educational attainment, at least Master's or equivalent, population 25+, total (%) (cumulative)

The percentage of population ages 25 and over that attained or completed Master's or equivalent.

It is calculated by dividing the number of population **ages 25 and older** who attained or completed Master's or equivalent by the total population of the same age group and multiplying by 100. The number 0 means zero or small enough that the number would round to zero.

Data are collected by the UNESCO Institute for Statistics mainly from national population census, household survey, and labour force survey. All the data are mapped to the International Standard Classification of Education (ISCED) to ensure the comparability of education programs at the international level. The current version was formally adopted by UNESCO Member States in 2011.

Table 63: Educational attainment, at least Master's or equivalent, population 25+, total (%) (cumulative)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 11 | 0.13 |
| Belgium | 13 | 0.6 |
| Chile | 0.89 | 0.36 |
| China | 0.38 | NA |
| Czech Republic | 15 | 0.55 |
| Denmark | 11 | 0.7 |
| Finland | 11 | 0.37 |
| France | 8.7 | 0.38 |
| Germany | 11 | 0.38 |
| Greece | 2.3 | 0.15 |
| Hungary | 8.4 | 0.59 |
| Ireland | 10 | 1.5 |
| Israel | 12 | 0.35 |
| Korea, Rep. | 4 | 0.64 |
| Latvia | 11 | 0.58 |
| Lithuania | 14 | 0.42 |
| Mexico | 1.5 | 0.35 |
| Netherlands | 11 | 0.4 |
| New Zealand | 4.5 | 0.31 |
| Norway | 10 | 0.4 |
| Poland | 19 | 0.68 |
| Portugal | 14 | 0.39 |
| Slovak Republic | 17 | 1 |
| Slovenia | 14 | 0.74 |
| Spain | 13 | NA |
| Sweden | 11 | 0.31 |
| Turkey | 1.6 | 0.084 |
| United Kingdom | 8.7 | 0.15 |
| United States | 12 | 0.45 |

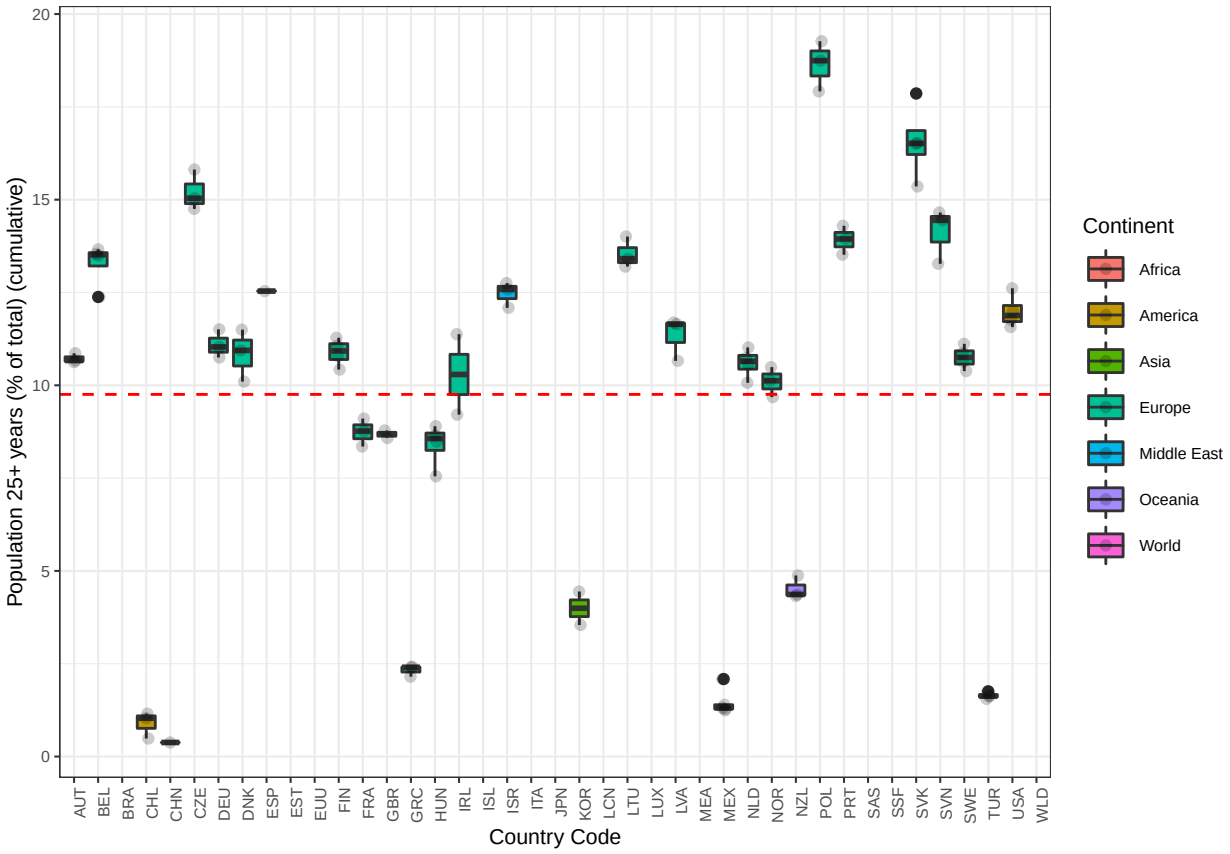



Figure 105: Boxplot Educational attainment, at least Master's or equivalent, population 25+, total (%) (cumulative)

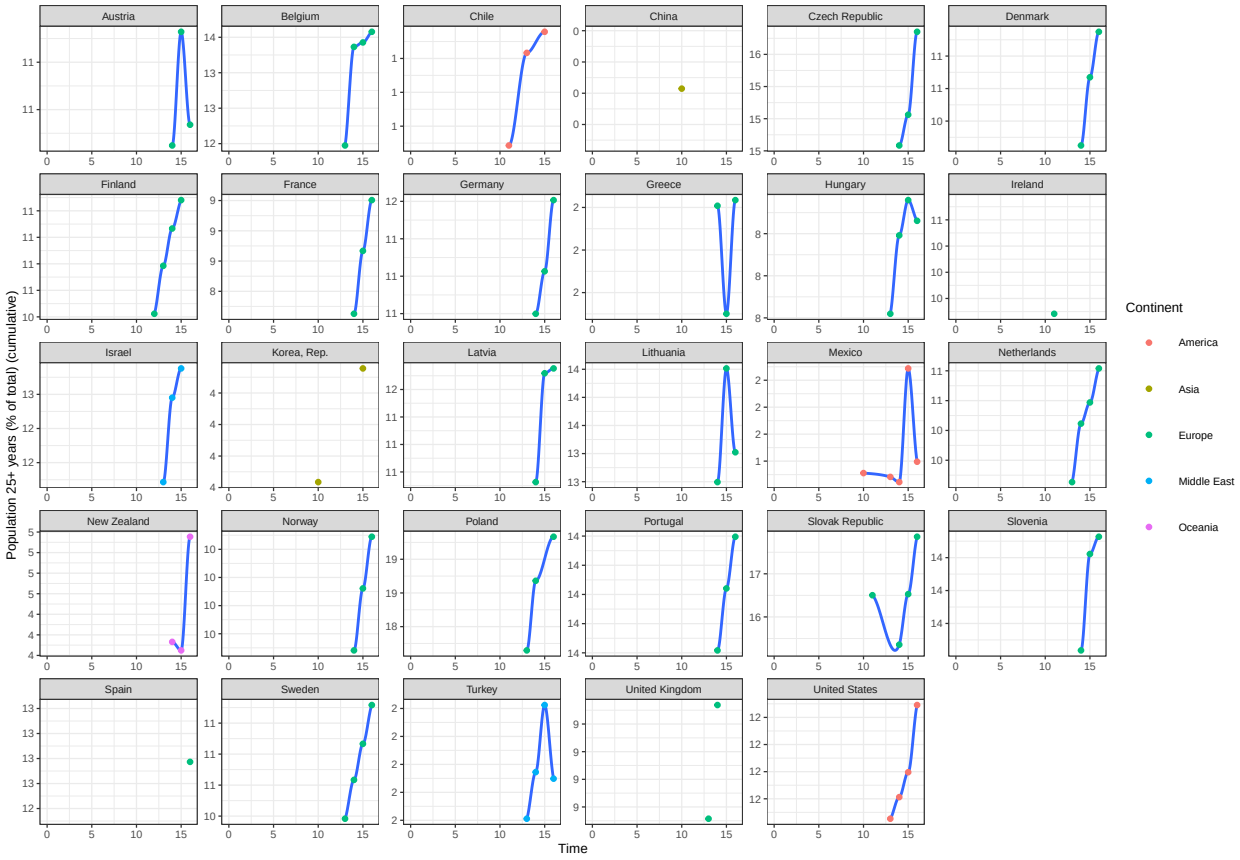



Figure 106: Trendline Educational attainment, at least Master's or equivalent, population 25+, total (%) (cumulative) 2000 - 2017

## Educational attainment, Doctoral or equivalent, population 25+, total (%) (cumulative)

The percentage of population ages 25 and over that attained or completed Doctoral or equivalent. It is calculated by dividing the number of population **ages 25 and older** who attained or completed Doctoral or equivalent by the total population of the same age group and multiplying by 100. The number 0 means zero or small enough that the number would round to zero.

Data are collected by the UNESCO Institute for Statistics mainly from national population census, household survey, and labour force survey. All the data are mapped to the International Standard Classification of Education (ISCED) to ensure the comparability of education programs at the international level. The current version was formally adopted by UNESCO Member States in 2011.

Table 64: Educational attainment, Doctoral or equivalent, population 25+, total (%) (cumulative)

| Country Name | Mean | SD |
|---|---|---|
| Austria | 0.79 | 0.31 |
| Belgium | 0.56 | 0.057 |
| Czech Republic | 0.59 | 0.075 |
| Denmark | 0.49 | 0.44 |
| Finland | 1 | 0.036 |
| France | 0.76 | 0.046 |
| Germany | 1.3 | 0.031 |
| Greece | 0.51 | 0.027 |
| Hungary | 0.66 | 0.11 |
| Ireland | 0.89 | 0.14 |
| Israel | 1.4 | 0.018 |
| Korea, Rep. | 0.68 | 0.14 |
| Latvia | 0.48 | 0.053 |
| Lithuania | 0.53 | 0.083 |
| Mexico | 0.12 | 0.063 |
| Netherlands | 0.57 | 0.011 |
| New Zealand | 0.86 | 0.073 |
| Norway | 0.94 | 0.057 |
| Poland | 0.51 | 0.067 |
| Portugal | 0.48 | 0.023 |
| Slovak Republic | 0.47 | 0.41 |
| Slovenia | 1.9 | 0.36 |
| Spain | 0.69 | NA |
| Sweden | 1.2 | 0.027 |
| Turkey | 0.34 | 0.01 |
| United Kingdom | 0.9 | 0.023 |
| United States | 1.8 | 0.079 |

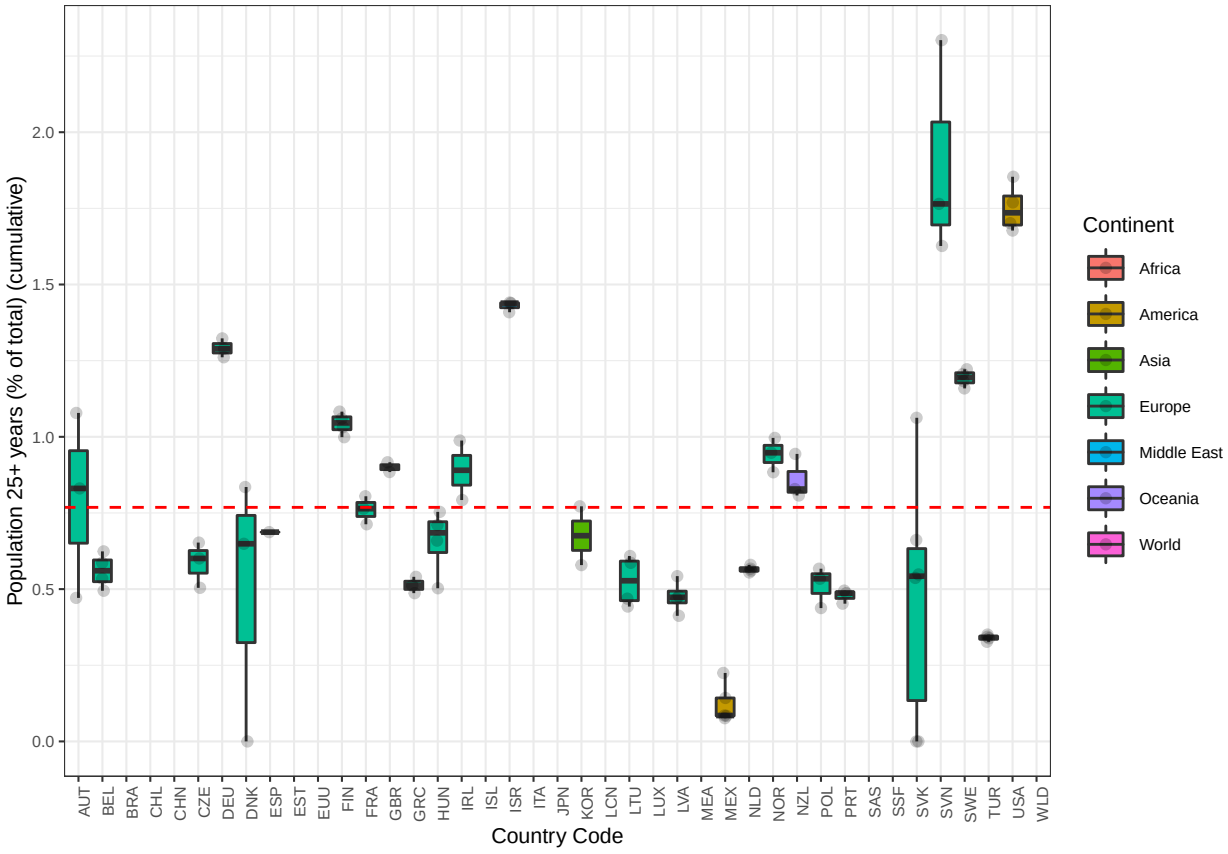



Figure 107: Boxplot Educational attainment, Doctoral or equivalent, population 25+, total (%) (cumulative)

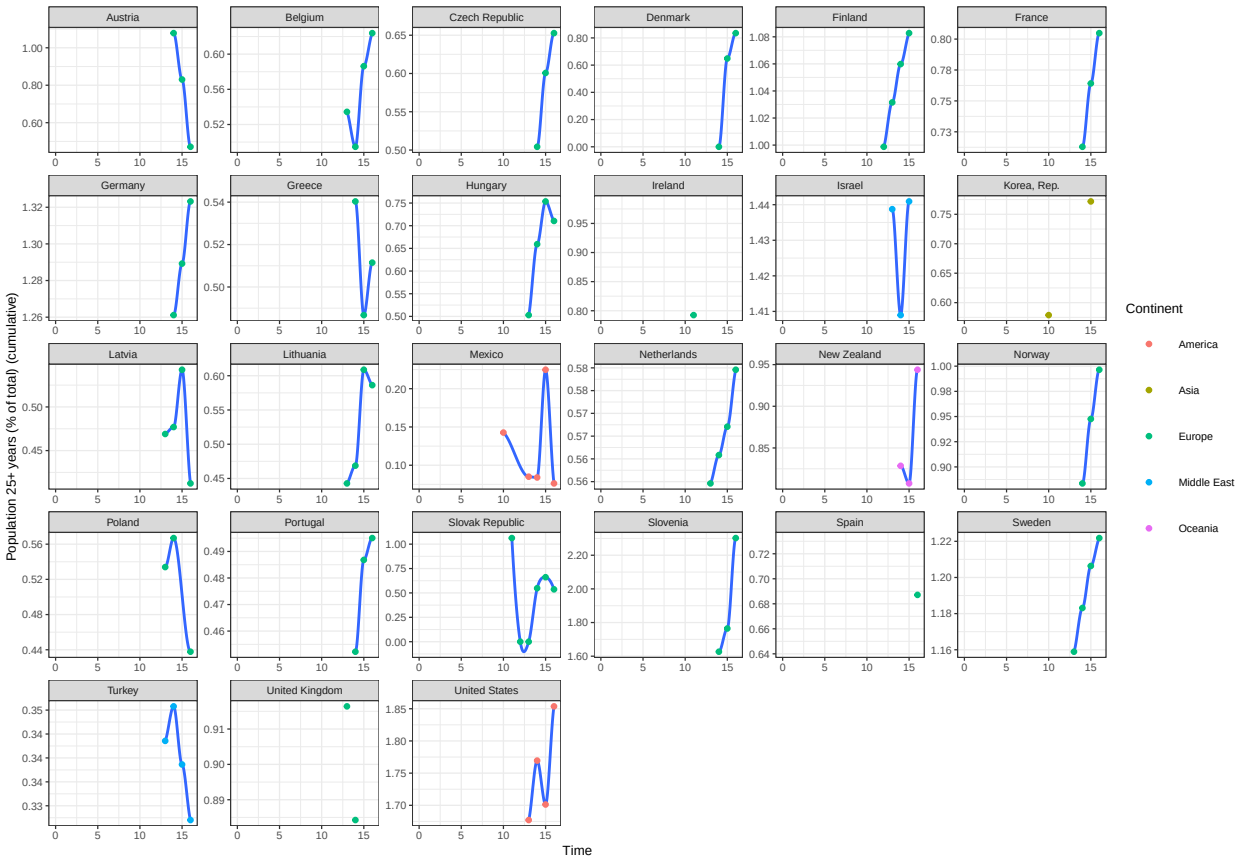



Figure 108: Trendline Educational attainment, Doctoral or equivalent, population 25+, total (%) (cumulative) 2000 - 2017