Indoor Air Analysis

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# Analysis of Indoor Air Quality

library(tidyverse)

── Attaching packages ─────────────────────────────────────── tidyverse 1.3.2 ──  
✔ ggplot2 3.4.0 ✔ purrr 1.0.1  
✔ tibble 3.1.8 ✔ dplyr 1.1.0  
✔ tidyr 1.3.0 ✔ stringr 1.5.0  
✔ readr 2.1.3 ✔ forcats 1.0.0  
── Conflicts ────────────────────────────────────────── tidyverse\_conflicts() ──  
✖ dplyr::filter() masks stats::filter()  
✖ dplyr::lag() masks stats::lag()

library(kableExtra)

Attaching package: 'kableExtra'  
  
The following object is masked from 'package:dplyr':  
  
 group\_rows

library(ggplot2)  
library(tidymodels)

── Attaching packages ────────────────────────────────────── tidymodels 1.0.0 ──  
✔ broom 1.0.3 ✔ rsample 1.1.1  
✔ dials 1.1.0 ✔ tune 1.0.1  
✔ infer 1.0.4 ✔ workflows 1.1.2  
✔ modeldata 1.1.0 ✔ workflowsets 1.0.0  
✔ parsnip 1.0.3 ✔ yardstick 1.1.0  
✔ recipes 1.0.4   
── Conflicts ───────────────────────────────────────── tidymodels\_conflicts() ──  
✖ scales::discard() masks purrr::discard()  
✖ dplyr::filter() masks stats::filter()  
✖ recipes::fixed() masks stringr::fixed()  
✖ kableExtra::group\_rows() masks dplyr::group\_rows()  
✖ dplyr::lag() masks stats::lag()  
✖ yardstick::spec() masks readr::spec()  
✖ recipes::step() masks stats::step()  
• Use tidymodels\_prefer() to resolve common conflicts.

library(janitor)

Attaching package: 'janitor'  
  
The following objects are masked from 'package:stats':  
  
 chisq.test, fisher.test

library(magrittr)

Attaching package: 'magrittr'  
  
The following object is masked from 'package:purrr':  
  
 set\_names  
  
The following object is masked from 'package:tidyr':  
  
 extract

library(dplyr)  
  
indoor\_pollution <- readr::read\_csv('https://raw.githubusercontent.com/rfordatascience/tidytuesday/master/data/2022/2022-04-12/indoor\_pollution.csv') %>%  
  
clean\_names()

Rows: 8010 Columns: 4  
── Column specification ────────────────────────────────────────────────────────  
Delimiter: ","  
chr (2): Entity, Code  
dbl (2): Year, Deaths - Cause: All causes - Risk: Household air pollution fr...  
  
ℹ Use `spec()` to retrieve the full column specification for this data.  
ℹ Specify the column types or set `show\_col\_types = FALSE` to quiet this message.

iap\_splits <- initial\_split(indoor\_pollution, prop = 0.15,  
 pool = 1)   
  
exploratory\_data <- training(iap\_splits)  
test\_data <- testing(iap\_splits)  
  
head(exploratory\_data) %>%  
   
 rename(percent\_deaths\_by\_household\_pollution = deaths\_cause\_all\_causes\_risk\_household\_air\_pollution\_from\_solid\_fuels\_sex\_both\_age\_age\_standardized\_percent) %>% #shorten the long name   
   
kable() %>%  
 kable\_styling(bootstrap\_options = c("hover", "striped"))

| entity | code | year | percent\_deaths\_by\_household\_pollution |
| --- | --- | --- | --- |
| Estonia | EST | 1995 | 1.5332729 |
| Brazil | BRA | 2019 | 0.9950679 |
| Finland | FIN | 1994 | 0.0343007 |
| Slovakia | SVK | 1997 | 0.2120123 |
| Nauru | NRU | 2015 | 0.8636590 |
| Equatorial Guinea | GNQ | 2018 | 1.6571320 |

|  |
| --- |
| Note |
| **Observation:**  This data set contains variables gathered across multiple years, listing the percent of deaths caused by indoor air pollutants created from indoor combustion. Given the amount of data present in this dataset, several potential hypotheses could likely be considered.  The data, listed by country and region, are mixed in the dataset and will likely require some cleaning to separate. categorical data and contains variables that were collected over many years.   * Depending on the scope of research, it may be more useful to focus on the dataset containing regional data rather than country-specific to highlight what role climate plays in the effect of indoor air pollution.   + In temperate climates, it is more likely to use biofuels for heating as well as cooking. Alongside the availability of insulation material for homes that reduced the ability for indoor and outdoor atmosphere gas exchange, this may be an essential factor that could be compared with this data.   + Using the temporal variable that is available in this data, some conclusions could be made about the * focusing on the countries rather than regions in this data could be used to show how countries that have invested in new technologies or better homes could correlate with either improved or worsened indoor air quality. Suppose homes are made more insulated but old gas stoves and wood fires are built into them. In that case, it is possible that the data could show up to a point a worsened impact on indoor air quality is associated with a country’s growth in economic opportunity. |

exploratory\_data %>%  
   
 rename(percent\_deaths\_by\_household\_pollution = deaths\_cause\_all\_causes\_risk\_household\_air\_pollution\_from\_solid\_fuels\_sex\_both\_age\_age\_standardized\_percent) %>% #shorten the long name   
   
 kable() %>%  
 kable\_styling(bootstrap\_options = c("hover", "striped"))

| entity | code | year | percent\_deaths\_by\_household\_pollution |
| --- | --- | --- | --- |
| Estonia | EST | 1995 | 1.5332729 |
| Brazil | BRA | 2019 | 0.9950679 |
| Finland | FIN | 1994 | 0.0343007 |
| Slovakia | SVK | 1997 | 0.2120123 |
| Nauru | NRU | 2015 | 0.8636590 |
| Equatorial Guinea | GNQ | 2018 | 1.6571320 |
| Albania | ALB | 2018 | 3.1699159 |
| New Zealand | NZL | 1998 | 0.0324117 |
| Jamaica | JAM | 2004 | 1.8212869 |
| North Africa and Middle East | NA | 1998 | 4.3593177 |
| Serbia | SRB | 2015 | 1.8118834 |
| Armenia | ARM | 2015 | 0.3634129 |
| World Bank Upper Middle Income | NA | 1994 | 9.2359180 |
| Qatar | QAT | 2015 | 0.0014198 |
| Fiji | FJI | 2000 | 7.9195138 |
| Qatar | QAT | 1995 | 0.0259629 |
| Nordic Region | NA | 2007 | 0.0083629 |
| Palau | PLW | 1998 | 0.0078553 |
| Qatar | QAT | 2007 | 0.0043172 |
| Croatia | HRV | 1993 | 1.4588077 |
| Ghana | GHA | 2019 | 6.1180871 |
| Denmark | DNK | 1991 | 0.0213333 |
| Romania | ROU | 2018 | 0.9399307 |
| Barbados | BRB | 2019 | 0.0064758 |
| Egypt | EGY | 1997 | 0.6752659 |
| Switzerland | CHE | 2000 | 0.0057632 |
| Kuwait | KWT | 2018 | 0.0061398 |
| High-income Asia Pacific | NA | 2002 | 0.0215558 |
| Argentina | ARG | 1998 | 0.8604697 |
| Armenia | ARM | 1991 | 4.0882094 |
| Georgia | GEO | 2016 | 3.5799469 |
| Suriname | SUR | 2018 | 1.1171319 |
| American Samoa | ASM | 2016 | 1.7100601 |
| East Asia | NA | 2012 | 5.5455219 |
| Philippines | PHL | 2004 | 9.3589924 |
| Madagascar | MDG | 1991 | 15.5508136 |
| Guyana | GUY | 2002 | 2.8384684 |
| Sub-Saharan Africa - World Bank region | NA | 2017 | 9.5344644 |
| Ecuador | ECU | 2012 | 0.8580190 |
| Malawi | MWI | 2015 | 11.4689883 |
| Lesotho | LSO | 2014 | 6.2920446 |
| Middle East & North Africa | NA | 2005 | 1.2389699 |
| Wales | NA | 2004 | 0.0068516 |
| North Korea | PRK | 2004 | 18.2266858 |
| North America | NA | 1992 | 0.0182887 |
| Kenya | KEN | 2007 | 8.7403164 |
| Madagascar | MDG | 2002 | 16.2399285 |
| Namibia | NAM | 2016 | 5.0355685 |
| Vanuatu | VUT | 1993 | 18.3542931 |
| Sao Tome and Principe | STP | 2016 | 10.4904230 |
| Peru | PER | 2002 | 4.4476277 |
| Bolivia | BOL | 2018 | 3.2521099 |
| Greenland | GRL | 2002 | 0.3110055 |
| Caribbean | NA | 2003 | 4.6699643 |
| North America | NA | 2019 | 0.0048903 |
| Central Latin America | NA | 1991 | 4.9610560 |
| Tonga | TON | 2019 | 4.7387509 |
| Western Europe | NA | 2009 | 0.0211374 |
| Dominican Republic | DOM | 2012 | 2.0390434 |
| Armenia | ARM | 2000 | 3.5532260 |
| Saint Kitts and Nevis | KNA | 1998 | 1.0150655 |
| El Salvador | SLV | 2004 | 5.0665782 |
| Bolivia | BOL | 2010 | 4.5945211 |
| Belarus | BLR | 1996 | 0.5738814 |
| Germany | DEU | 1991 | 0.0126224 |
| Saudi Arabia | SAU | 1994 | 3.6085930 |
| England | NA | 2011 | 0.0027964 |
| South Africa | ZAF | 2005 | 2.3600294 |
| Russia | RUS | 2019 | 0.1296415 |
| Kenya | KEN | 2006 | 8.5625091 |
| High-income Asia Pacific | NA | 2011 | 0.0090163 |
| Central African Republic | CAF | 2013 | 11.1805850 |
| Greece | GRC | 1994 | 0.2119029 |
| Mauritania | MRT | 2000 | 9.7728002 |
| United Arab Emirates | ARE | 1992 | 0.0537671 |
| Cuba | CUB | 1991 | 0.9949827 |
| Oman | OMN | 2004 | 0.5596392 |
| South-East Asia Region | NA | 1999 | 12.1530070 |
| Commonwealth Low Income | NA | 2014 | 11.7699174 |
| Norway | NOR | 1992 | 0.0198610 |
| Bhutan | BTN | 1996 | 16.8582869 |
| South-East Asia Region | NA | 2011 | 9.4372820 |
| Guam | GUM | 2001 | 0.4362919 |
| New Zealand | NZL | 2014 | 0.0095605 |
| High-income | NA | 1996 | 0.0959688 |
| Palau | PLW | 2007 | 0.0072145 |
| OECD Countries | NA | 2019 | 0.1494862 |
| Gabon | GAB | 2005 | 3.0366961 |
| Georgia | GEO | 2007 | 6.3452612 |
| Mauritania | MRT | 2010 | 8.6557928 |
| Marshall Islands | MHL | 1992 | 10.3359536 |
| Haiti | HTI | 2005 | 14.0740695 |
| Lesotho | LSO | 1992 | 11.7222435 |
| Western sub-Saharan Africa | NA | 1991 | 12.6549882 |
| Montenegro | MNE | 2014 | 2.7279958 |
| Commonwealth Middle Income | NA | 2016 | 7.3819891 |
| Southeast Asia | NA | 1996 | 10.4173542 |
| Europe & Central Asia - World Bank region | NA | 1993 | 1.3408763 |
| Oman | OMN | 2006 | 0.3952848 |
| Afghanistan | AFG | 2014 | 15.0777695 |
| Antigua and Barbuda | ATG | 2001 | 0.2640807 |
| Southern sub-Saharan Africa | NA | 1996 | 4.8597922 |
| Andorra | AND | 2003 | 0.0084011 |
| Philippines | PHL | 2005 | 9.5584503 |
| Bulgaria | BGR | 2010 | 1.8176558 |
| Saudi Arabia | SAU | 2005 | 0.3837821 |
| Namibia | NAM | 2019 | 4.5924310 |
| Guatemala | GTM | 2006 | 9.3331039 |
| North Africa and Middle East | NA | 2005 | 3.2681504 |
| Australia | AUS | 2019 | 0.0078252 |
| Djibouti | DJI | 2012 | 3.7141825 |
| North Macedonia | MKD | 2008 | 3.2646179 |
| Jordan | JOR | 2009 | 0.0138428 |
| South-East Asia Region | NA | 1995 | 12.8485279 |
| Palestine | PSE | 2016 | 0.2569663 |
| Serbia | SRB | 2012 | 2.1789931 |
| Iran | IRN | 2010 | 0.0850665 |
| OECD Countries | NA | 1995 | 0.4466980 |
| Africa | NA | 2015 | 8.0373784 |
| Gabon | GAB | 2010 | 1.9761133 |
| East Asia & Pacific - World Bank region | NA | 1992 | 13.1005312 |
| Fiji | FJI | 1994 | 9.6773613 |
| Peru | PER | 2001 | 4.4957574 |
| Cuba | CUB | 2003 | 0.5503800 |
| Central African Republic | CAF | 2005 | 11.0838476 |
| Bosnia and Herzegovina | BIH | 2016 | 3.2519569 |
| Spain | ESP | 1997 | 0.2222884 |
| Antigua and Barbuda | ATG | 2012 | 0.1374306 |
| United Kingdom | GBR | 2019 | 0.0018839 |
| Palau | PLW | 2009 | 0.0062046 |
| G20 | NA | 1994 | 7.6917018 |
| Burkina Faso | BFA | 1992 | 12.1597053 |
| Tropical Latin America | NA | 2005 | 2.6357889 |
| Northern Mariana Islands | MNP | 2016 | 1.6275371 |
| Saint Lucia | LCA | 2004 | 1.3861959 |
| Latvia | LVA | 2008 | 0.5962997 |
| Iceland | ISL | 2017 | 0.0037281 |
| Eswatini | SWZ | 1990 | 12.5965593 |
| Cuba | CUB | 2004 | 0.5163711 |
| Kazakhstan | KAZ | 1994 | 5.0699747 |
| North America | NA | 1999 | 0.0153078 |
| Uruguay | URY | 1997 | 0.6683699 |
| Laos | LAO | 2015 | 15.7598271 |
| Slovenia | SVN | 2007 | 0.4956056 |
| Paraguay | PRY | 1994 | 10.4460577 |
| Eritrea | ERI | 1990 | 10.1709253 |
| Africa | NA | 2003 | 8.8461581 |
| Jamaica | JAM | 1990 | 8.0193904 |
| Southeast Asia | NA | 2014 | 6.8172388 |
| African Union | NA | 1998 | 9.5383726 |
| Bahrain | BHR | 1999 | 0.4844744 |
| OECD Countries | NA | 1999 | 0.3305005 |
| Papua New Guinea | PNG | 1999 | 20.2700849 |
| India | IND | 2004 | 11.4046877 |
| Philippines | PHL | 2007 | 9.8717787 |
| South Asia - World Bank region | NA | 2011 | 10.1122848 |
| Tropical Latin America | NA | 2000 | 3.3783700 |
| Sierra Leone | SLE | 2002 | 13.4907070 |
| American Samoa | ASM | 1999 | 3.0234405 |
| Central sub-Saharan Africa | NA | 2005 | 12.6384396 |
| Malaysia | MYS | 1994 | 0.6707309 |
| Eritrea | ERI | 2015 | 10.9686155 |
| Tanzania | TZA | 2010 | 11.0006779 |
| United States Virgin Islands | VIR | 2015 | 0.0683821 |
| Australasia | NA | 2010 | 0.0137151 |
| Madagascar | MDG | 1996 | 16.5189092 |
| Costa Rica | CRI | 2008 | 0.8145899 |
| Germany | DEU | 2016 | 0.0034828 |
| Somalia | SOM | 2000 | 14.7660940 |
| Australia | AUS | 2005 | 0.0229579 |
| Cape Verde | CPV | 2011 | 5.2084591 |
| Wales | NA | 2016 | 0.0029297 |
| Andean Latin America | NA | 2010 | 3.0254308 |
| Eswatini | SWZ | 2009 | 5.4634166 |
| Argentina | ARG | 2013 | 0.2891292 |
| Oman | OMN | 2010 | 0.2010436 |
| United States | USA | 1998 | 0.0136096 |
| European Region | NA | 1992 | 1.4100667 |
| Central African Republic | CAF | 1997 | 11.2138393 |
| Saint Lucia | LCA | 2015 | 0.3954843 |
| Zambia | ZMB | 2004 | 7.9461389 |
| Eastern Europe | NA | 1993 | 0.9124884 |
| Benin | BEN | 1990 | 15.3552420 |
| Turkey | TUR | 1991 | 2.2829699 |
| Europe & Central Asia - World Bank region | NA | 2017 | 0.3739230 |
| Wales | NA | 1995 | 0.0136426 |
| Iran | IRN | 1997 | 0.9028869 |
| Nigeria | NGA | 2019 | 7.2842154 |
| Albania | ALB | 1994 | 11.3131865 |
| Belgium | BEL | 2014 | 0.0064835 |
| Middle East & North Africa | NA | 2003 | 1.4207044 |
| Europe & Central Asia - World Bank region | NA | 1995 | 1.2603778 |
| Eastern sub-Saharan Africa | NA | 2015 | 12.0217879 |
| Rwanda | RWA | 1998 | 11.4825911 |
| Bangladesh | BGD | 2017 | 12.0989572 |
| Taiwan | TWN | 1990 | 3.3300838 |
| Madagascar | MDG | 2014 | 15.4199146 |
| Ukraine | UKR | 2005 | 0.7969390 |
| Palestine | PSE | 1991 | 6.1056602 |
| Botswana | BWA | 2003 | 4.4691688 |
| Mexico | MEX | 1992 | 3.7274224 |
| Mozambique | MOZ | 2019 | 11.6596677 |
| Central African Republic | CAF | 1993 | 12.4595630 |
| Grenada | GRD | 2004 | 0.7649663 |
| Sudan | SDN | 1990 | 17.3383988 |
| Bahamas | BHS | 2007 | 0.1603666 |
| Fiji | FJI | 1990 | 10.9546380 |
| Portugal | PRT | 1998 | 0.2585420 |
| Southern sub-Saharan Africa | NA | 1990 | 6.5181897 |
| Cook Islands | COK | 2007 | 0.5908856 |
| Peru | PER | 2018 | 1.7546741 |
| United States | USA | 2004 | 0.0110521 |
| Low-middle SDI | NA | 1991 | 14.8714651 |
| Guinea | GIN | 2017 | 13.6333052 |
| Dominican Republic | DOM | 2003 | 3.6443430 |
| Turkmenistan | TKM | 1992 | 0.1917983 |
| Ukraine | UKR | 2000 | 0.9798158 |
| Saint Lucia | LCA | 2001 | 1.8253406 |
| Denmark | DNK | 2009 | 0.0062327 |
| Guyana | GUY | 1992 | 4.3300854 |
| Northern Ireland | NA | 2016 | 0.0033103 |
| G20 | NA | 1999 | 6.7242919 |
| Palestine | PSE | 1990 | 6.7359912 |
| Bahamas | BHS | 2003 | 0.2140138 |
| Europe | NA | 2018 | 0.2569753 |
| Nauru | NRU | 2007 | 1.8127641 |
| Switzerland | CHE | 2008 | 0.0035367 |
| Wales | NA | 2015 | 0.0031516 |
| African Union | NA | 2012 | 8.4279202 |
| Marshall Islands | MHL | 2011 | 7.2826866 |
| Italy | ITA | 2005 | 0.0431888 |
| East Asia | NA | 1992 | 16.3433837 |
| Marshall Islands | MHL | 1995 | 9.2398082 |
| Iran | IRN | 2002 | 0.3815088 |
| Suriname | SUR | 1997 | 4.0394393 |
| Eastern sub-Saharan Africa | NA | 2012 | 12.0344647 |
| South Africa | ZAF | 2013 | 1.5466907 |
| Democratic Republic of Congo | COD | 1999 | 13.0685444 |
| Latin America & Caribbean - World Bank region | NA | 1997 | 3.7208356 |
| Honduras | HND | 2010 | 9.0201324 |
| Vanuatu | VUT | 2005 | 16.4150521 |
| Slovenia | SVN | 2008 | 0.4726912 |
| Solomon Islands | SLB | 2012 | 21.3712180 |
| Commonwealth | NA | 2003 | 9.8599566 |
| World | OWID\_WRL | 2018 | 4.3120033 |
| Tropical Latin America | NA | 2002 | 3.0691646 |
| Sao Tome and Principe | STP | 2001 | 15.0085475 |
| Cambodia | KHM | 1994 | 17.6327191 |
| Belgium | BEL | 1991 | 0.0382713 |
| Central Europe | NA | 2016 | 1.0627007 |
| Switzerland | CHE | 1992 | 0.0082737 |
| Romania | ROU | 2013 | 1.2031370 |
| Lesotho | LSO | 2002 | 6.6381476 |
| Pakistan | PAK | 2013 | 10.0094442 |
| Central sub-Saharan Africa | NA | 2012 | 12.2193871 |
| American Samoa | ASM | 2008 | 2.2973700 |
| Low SDI | NA | 2000 | 13.2746114 |
| Honduras | HND | 2003 | 9.8284761 |
| Greenland | GRL | 1995 | 0.5235664 |
| Dominica | DMA | 2002 | 1.5574578 |
| Pakistan | PAK | 1994 | 14.7978744 |
| Burkina Faso | BFA | 1996 | 11.4969711 |
| World | OWID\_WRL | 2002 | 7.0124896 |
| Peru | PER | 1998 | 4.9441675 |
| Equatorial Guinea | GNQ | 2001 | 9.7996837 |
| Sri Lanka | LKA | 1999 | 8.1907315 |
| Slovenia | SVN | 2019 | 0.2896207 |
| Dominica | DMA | 2014 | 0.6961462 |
| Venezuela | VEN | 2015 | 0.0582781 |
| Peru | PER | 1995 | 5.6786745 |
| Guam | GUM | 2017 | 0.4194018 |
| World Bank High Income | NA | 2002 | 0.1571260 |
| South Asia - World Bank region | NA | 1991 | 13.9012622 |
| Slovenia | SVN | 1996 | 1.0268288 |
| Malawi | MWI | 1992 | 11.1352863 |
| OECD Countries | NA | 2007 | 0.2339601 |
| America | NA | 2006 | 1.4595069 |
| Bahrain | BHR | 1994 | 0.9182108 |
| Guinea | GIN | 2006 | 13.8596335 |
| Caribbean | NA | 2000 | 4.8345738 |
| Burkina Faso | BFA | 2007 | 12.4072369 |
| Serbia | SRB | 2005 | 3.4641725 |
| Lebanon | LBN | 2017 | 0.0356969 |
| Comoros | COM | 1999 | 13.6044225 |
| Mexico | MEX | 2013 | 1.8827323 |
| Nepal | NPL | 2017 | 12.7481826 |
| American Samoa | ASM | 2011 | 2.2570529 |
| Dominican Republic | DOM | 2000 | 4.5384980 |
| Cuba | CUB | 1996 | 0.7815995 |
| Myanmar | MMR | 2003 | 16.4295721 |
| Nicaragua | NIC | 2013 | 7.6086633 |
| Mauritius | MUS | 2014 | 0.2091136 |
| Morocco | MAR | 1995 | 5.8927615 |
| Paraguay | PRY | 2012 | 5.5314072 |
| Libya | LBY | 2007 | 0.1098036 |
| India | IND | 2010 | 9.8106761 |
| Italy | ITA | 2017 | 0.0206421 |
| New Zealand | NZL | 2009 | 0.0131330 |
| Chad | TCD | 1992 | 14.9047169 |
| Tanzania | TZA | 1994 | 11.2666464 |
| Uganda | UGA | 2007 | 10.4723075 |
| Sub-Saharan Africa - World Bank region | NA | 2013 | 9.9115932 |
| Gambia | GMB | 2012 | 12.0493126 |
| Papua New Guinea | PNG | 2017 | 18.3131697 |
| Grenada | GRD | 2018 | 0.3135422 |
| Belgium | BEL | 2004 | 0.0143192 |
| Seychelles | SYC | 1999 | 0.2922330 |
| Angola | AGO | 2008 | 10.1372923 |
| Canada | CAN | 2002 | 0.0245068 |
| Cyprus | CYP | 1992 | 0.1224732 |
| United Arab Emirates | ARE | 2003 | 0.0046385 |
| Mozambique | MOZ | 1997 | 12.4566492 |
| Southern sub-Saharan Africa | NA | 2005 | 3.2625961 |
| World Bank High Income | NA | 2005 | 0.1319863 |
| Estonia | EST | 2014 | 0.3265481 |
| Eritrea | ERI | 1996 | 11.4518445 |
| Taiwan | TWN | 2003 | 0.7963076 |
| Latin America & Caribbean - World Bank region | NA | 2009 | 2.3541069 |
| Syria | SYR | 2019 | 0.0191769 |
| Philippines | PHL | 1990 | 9.5413690 |
| Thailand | THA | 2012 | 2.3068558 |
| Pakistan | PAK | 2017 | 8.8160133 |
| Comoros | COM | 1996 | 13.8885141 |
| Somalia | SOM | 1996 | 14.9430262 |
| Luxembourg | LUX | 2018 | 0.0050964 |
| Barbados | BRB | 1991 | 0.0344544 |
| Sao Tome and Principe | STP | 1997 | 15.8131194 |
| Asia | NA | 2009 | 7.7809526 |
| Mozambique | MOZ | 2002 | 11.3068093 |
| Tuvalu | TUV | 1996 | 8.1332313 |
| Oceania | NA | 1999 | 17.4062660 |
| England | NA | 2004 | 0.0042511 |
| Commonwealth Middle Income | NA | 2007 | 10.1184492 |
| Brazil | BRA | 2002 | 2.9700565 |
| Algeria | DZA | 2017 | 0.0430576 |
| Israel | ISR | 2014 | 0.0091873 |
| Palau | PLW | 2019 | 0.0052300 |
| Wales | NA | 2000 | 0.0092206 |
| Laos | LAO | 2011 | 16.2729534 |
| Nigeria | NGA | 2012 | 8.7608187 |
| Eswatini | SWZ | 2003 | 5.7469180 |
| Chile | CHL | 2010 | 0.5572202 |
| Democratic Republic of Congo | COD | 2018 | 13.1200952 |
| France | FRA | 1993 | 0.0316789 |
| Suriname | SUR | 2017 | 1.1786208 |
| India | IND | 2011 | 9.3898966 |
| Montenegro | MNE | 1990 | 4.5063073 |
| Solomon Islands | SLB | 1995 | 23.0412128 |
| Burundi | BDI | 2000 | 10.5143818 |
| Portugal | PRT | 2015 | 0.0404909 |
| Myanmar | MMR | 1990 | 18.3248036 |
| Sweden | SWE | 1994 | 0.0213512 |
| North Korea | PRK | 2003 | 18.5341660 |
| Serbia | SRB | 2019 | 1.5765989 |
| Tropical Latin America | NA | 2015 | 1.3654118 |
| Romania | ROU | 1995 | 4.1621970 |
| Trinidad and Tobago | TTO | 1999 | 0.0703601 |
| Cote d'Ivoire | CIV | 2005 | 9.9177577 |
| Nicaragua | NIC | 2017 | 6.7068221 |
| United States | USA | 1995 | 0.0141419 |
| Sweden | SWE | 1998 | 0.0158787 |
| Palau | PLW | 2006 | 0.0076664 |
| Cyprus | CYP | 2006 | 0.0230648 |
| Seychelles | SYC | 2017 | 0.0556333 |
| Sierra Leone | SLE | 2009 | 13.3844332 |
| American Samoa | ASM | 1991 | 4.6052226 |
| United States Virgin Islands | VIR | 1991 | 0.3919795 |
| China | CHN | 1994 | 15.4395940 |
| East Asia & Pacific - World Bank region | NA | 2006 | 7.5435541 |
| America | NA | 2019 | 0.8567641 |
| Eastern sub-Saharan Africa | NA | 1996 | 11.7895820 |
| Botswana | BWA | 2017 | 3.8874752 |
| Eastern Mediterranean Region | NA | 2015 | 4.9015451 |
| Serbia | SRB | 2001 | 4.5010029 |
| Liberia | LBR | 2019 | 10.8782800 |
| Hungary | HUN | 2019 | 1.0186766 |
| Central sub-Saharan Africa | NA | 2001 | 12.3247202 |
| Turkey | TUR | 2018 | 0.0586798 |
| Rwanda | RWA | 2003 | 11.6201334 |
| Australasia | NA | 2005 | 0.0219743 |
| Poland | POL | 2011 | 1.0207915 |
| Bahamas | BHS | 2018 | 0.0836090 |
| China | CHN | 1990 | 17.3420034 |
| East Asia | NA | 2014 | 4.8506201 |
| Western Europe | NA | 2014 | 0.0150585 |
| Eritrea | ERI | 2012 | 11.1859152 |
| Bosnia and Herzegovina | BIH | 1996 | 10.4245680 |
| Slovakia | SVK | 2019 | 0.0606278 |
| South Sudan | SSD | 2007 | 11.7118121 |
| Latin America & Caribbean - World Bank region | NA | 2018 | 1.5536347 |
| Japan | JPN | 1994 | 0.0434370 |
| Russia | RUS | 1995 | 0.6131732 |
| Mali | MLI | 2007 | 12.2309241 |
| High-income North America | NA | 2002 | 0.0131884 |
| Gambia | GMB | 2001 | 12.8027438 |
| Afghanistan | AFG | 2013 | 15.8105333 |
| Rwanda | RWA | 2012 | 12.5676761 |
| Togo | TGO | 2019 | 11.0940383 |
| Czechia | CZE | 2006 | 0.1169392 |
| Central African Republic | CAF | 2008 | 11.4891589 |
| Eastern Mediterranean Region | NA | 1994 | 9.6453177 |
| Philippines | PHL | 1993 | 8.7930198 |
| Bosnia and Herzegovina | BIH | 2001 | 6.8825575 |
| Kiribati | KIR | 1990 | 13.9719748 |
| Mali | MLI | 2004 | 12.1428574 |
| Cyprus | CYP | 1993 | 0.1074566 |
| Italy | ITA | 2001 | 0.0588638 |
| Western sub-Saharan Africa | NA | 2018 | 9.4268273 |
| Australia | AUS | 2016 | 0.0091758 |
| Montenegro | MNE | 2008 | 3.0032142 |
| Greece | GRC | 2003 | 0.0907921 |
| Caribbean | NA | 1991 | 6.1119564 |
| Chile | CHL | 2004 | 0.8515754 |
| Bosnia and Herzegovina | BIH | 2003 | 6.0389087 |
| Paraguay | PRY | 1990 | 11.1607777 |
| Namibia | NAM | 2012 | 5.9346397 |
| Liberia | LBR | 1999 | 12.0916274 |
| Finland | FIN | 2017 | 0.0039138 |
| Lebanon | LBN | 1990 | 1.9093006 |
| Mongolia | MNG | 2004 | 9.9330261 |
| Vietnam | VNM | 1993 | 14.5479548 |
| Ireland | IRL | 1992 | 0.0652015 |
| Commonwealth High Income | NA | 2013 | 0.0054139 |
| Thailand | THA | 2015 | 1.9160959 |
| Sub-Saharan Africa - World Bank region | NA | 1993 | 11.9133785 |
| Wales | NA | 2017 | 0.0027587 |
| Norway | NOR | 2009 | 0.0051441 |
| Norway | NOR | 2006 | 0.0061874 |
| Fiji | FJI | 2016 | 4.6242784 |
| Maldives | MDV | 1990 | 13.6378416 |
| Niger | NER | 1999 | 14.9653865 |
| Central Asia | NA | 2019 | 1.8983019 |
| Northern Ireland | NA | 2006 | 0.0071623 |
| Hungary | HUN | 2014 | 1.2605525 |
| High-income North America | NA | 1994 | 0.0171498 |
| Eswatini | SWZ | 1991 | 12.2826307 |
| World Bank Upper Middle Income | NA | 2006 | 5.1830480 |
| Burkina Faso | BFA | 2017 | 13.3026791 |
| Saint Lucia | LCA | 2011 | 0.5739066 |
| Costa Rica | CRI | 2002 | 1.3371983 |
| Europe & Central Asia - World Bank region | NA | 1991 | 1.4617087 |
| Lithuania | LTU | 2003 | 0.4827397 |
| Luxembourg | LUX | 2008 | 0.0104318 |
| Uruguay | URY | 2014 | 0.2171181 |
| Andorra | AND | 2000 | 0.0106414 |
| Liberia | LBR | 2000 | 12.1455030 |
| Benin | BEN | 2005 | 13.1772335 |
| America | NA | 1995 | 2.1358313 |
| Kyrgyzstan | KGZ | 2011 | 6.6598488 |
| France | FRA | 1998 | 0.0231619 |
| Angola | AGO | 2005 | 10.7048161 |
| Czechia | CZE | 2019 | 0.0682705 |
| Zambia | ZMB | 1990 | 10.8846051 |
| Northern Mariana Islands | MNP | 2013 | 1.6049043 |
| Ukraine | UKR | 2015 | 0.4266817 |
| Venezuela | VEN | 2003 | 0.1959267 |
| Western Europe | NA | 1990 | 0.1027249 |
| Caribbean | NA | 2019 | 3.8393876 |
| Western Pacific Region | NA | 1992 | 13.3864862 |
| North Africa and Middle East | NA | 1996 | 4.7394374 |
| Nauru | NRU | 2011 | 1.3236094 |
| Uzbekistan | UZB | 2007 | 3.7657327 |
| United Arab Emirates | ARE | 1999 | 0.0108052 |
| Jamaica | JAM | 1991 | 7.2885524 |
| Afghanistan | AFG | 1998 | 19.0267890 |
| Nigeria | NGA | 2015 | 8.0967574 |
| East Asia | NA | 2008 | 7.3376383 |
| Albania | ALB | 2017 | 3.2955449 |
| Pakistan | PAK | 2015 | 9.3109374 |
| Saint Lucia | LCA | 2003 | 1.5223194 |
| Tanzania | TZA | 2000 | 10.0495791 |
| Jordan | JOR | 2001 | 0.0488915 |
| Slovenia | SVN | 1997 | 0.9563382 |
| Lithuania | LTU | 2012 | 0.2359895 |
| Latvia | LVA | 2005 | 0.7451950 |
| Sri Lanka | LKA | 1991 | 9.9094298 |
| Puerto Rico | PRI | 2015 | 0.0024537 |
| World Bank Low Income | NA | 2002 | 12.7027147 |
| Slovakia | SVK | 1994 | 0.2636055 |
| Italy | ITA | 1996 | 0.0851093 |
| Japan | JPN | 2017 | 0.0073845 |
| Kyrgyzstan | KGZ | 2016 | 5.0326843 |
| Sierra Leone | SLE | 2001 | 13.4842975 |
| United States | USA | 2003 | 0.0116100 |
| Moldova | MDA | 1997 | 7.0256481 |
| Cote d'Ivoire | CIV | 1994 | 11.5817910 |
| Commonwealth | NA | 1996 | 10.9156240 |
| Southern sub-Saharan Africa | NA | 2013 | 3.0878660 |
| Laos | LAO | 2019 | 14.9863711 |
| Estonia | EST | 2012 | 0.4070006 |
| Bolivia | BOL | 2013 | 4.3367145 |
| North Africa and Middle East | NA | 2009 | 2.5778759 |
| OECD Countries | NA | 2001 | 0.2898721 |
| Indonesia | IDN | 2008 | 7.0407006 |
| Oman | OMN | 2017 | 0.0733006 |
| Estonia | EST | 1993 | 1.7863087 |
| Moldova | MDA | 2011 | 1.2163504 |
| Tanzania | TZA | 2001 | 9.9381207 |
| Singapore | SGP | 1993 | 0.3094763 |
| Jordan | JOR | 2003 | 0.0361624 |
| Tonga | TON | 2011 | 6.6687915 |
| Kuwait | KWT | 1994 | 0.1698439 |
| Guatemala | GTM | 1999 | 11.5501477 |
| Belgium | BEL | 1993 | 0.0321984 |
| England | NA | 2013 | 0.0023874 |
| Costa Rica | CRI | 2006 | 0.9505567 |
| South-East Asia Region | NA | 2001 | 11.8514148 |
| Iraq | IRQ | 1993 | 3.9039287 |
| Guatemala | GTM | 2001 | 10.8159063 |
| San Marino | SMR | 1996 | 0.0190154 |
| Mauritius | MUS | 2005 | 0.5101378 |
| Europe | NA | 2001 | 0.7380011 |
| Romania | ROU | 1997 | 3.8267840 |
| Cook Islands | COK | 2009 | 0.5530641 |
| Azerbaijan | AZE | 2009 | 1.8634954 |
| Norway | NOR | 1993 | 0.0182335 |
| Marshall Islands | MHL | 1993 | 9.9426165 |
| Lithuania | LTU | 1990 | 1.1830919 |
| Rwanda | RWA | 2007 | 12.7372793 |
| Kazakhstan | KAZ | 1990 | 5.6882706 |
| Brunei | BRN | 2016 | 0.0473346 |
| Malawi | MWI | 2019 | 11.7883479 |
| Andean Latin America | NA | 1999 | 4.4227579 |
| Slovakia | SVK | 1993 | 0.2863217 |
| Sub-Saharan Africa - World Bank region | NA | 2018 | 9.4959287 |
| Central sub-Saharan Africa | NA | 2002 | 12.3093438 |
| Eswatini | SWZ | 2004 | 5.5394612 |
| Chad | TCD | 2014 | 14.1679253 |
| Somalia | SOM | 2014 | 16.4871409 |
| African Union | NA | 2009 | 8.6266529 |
| South-East Asia Region | NA | 2004 | 11.1551777 |
| Monaco | MCO | 2009 | 0.0040454 |
| Cameroon | CMR | 1998 | 9.1594476 |
| Oman | OMN | 1992 | 6.2205440 |
| Samoa | WSM | 2001 | 12.7592066 |
| Greece | GRC | 2010 | 0.0513926 |
| Slovenia | SVN | 2009 | 0.4538219 |
| Mali | MLI | 2001 | 11.9292149 |
| Bermuda | BMU | 2003 | 0.4314696 |
| Equatorial Guinea | GNQ | 2013 | 2.9368687 |
| Antigua and Barbuda | ATG | 2004 | 0.2243155 |
| Madagascar | MDG | 2004 | 15.9669389 |
| Botswana | BWA | 2014 | 4.1535428 |
| Europe | NA | 2015 | 0.2945155 |
| Middle SDI | NA | 2019 | 2.8303125 |
| Tokelau | TKL | 2000 | 0.0289647 |
| Guyana | GUY | 2014 | 1.2588603 |
| Armenia | ARM | 2006 | 1.6005792 |
| Tajikistan | TJK | 1991 | 14.1109973 |
| High-middle SDI | NA | 2005 | 2.4273266 |
| Comoros | COM | 2008 | 12.6603605 |
| Guyana | GUY | 2017 | 0.9686861 |
| Tropical Latin America | NA | 2008 | 2.2028862 |
| South Korea | KOR | 2019 | 0.0046286 |
| Jamaica | JAM | 2007 | 1.6932012 |
| Angola | AGO | 2018 | 6.0186394 |
| Lebanon | LBN | 2013 | 0.0643805 |
| Cook Islands | COK | 1995 | 1.3896208 |
| Venezuela | VEN | 2006 | 0.1596374 |
| Eastern sub-Saharan Africa | NA | 2004 | 11.2360892 |
| Tokelau | TKL | 2015 | 0.0077971 |
| Sub-Saharan Africa - World Bank region | NA | 2011 | 10.0560847 |
| Ecuador | ECU | 2011 | 0.9088314 |
| Djibouti | DJI | 2001 | 6.2929158 |
| South Korea | KOR | 1990 | 0.2447635 |
| Monaco | MCO | 1999 | 0.0072246 |
| Malawi | MWI | 1994 | 10.3682611 |
| Belize | BLZ | 2016 | 1.8878915 |
| Guyana | GUY | 1990 | 4.6329525 |
| Egypt | EGY | 2000 | 0.3916921 |
| Portugal | PRT | 2002 | 0.1733543 |
| Israel | ISR | 1993 | 0.0407056 |
| Singapore | SGP | 2011 | 0.0173961 |
| Monaco | MCO | 1992 | 0.0094757 |
| Grenada | GRD | 2005 | 0.7072411 |
| Somalia | SOM | 2011 | 15.6215759 |
| Nicaragua | NIC | 2015 | 7.1273793 |
| Western Europe | NA | 1993 | 0.0763555 |
| Vanuatu | VUT | 2003 | 16.2397471 |
| Ireland | IRL | 2015 | 0.0079483 |
| Iceland | ISL | 2004 | 0.0106592 |
| Estonia | EST | 1990 | 2.2824203 |
| Yemen | YEM | 2011 | 9.0670241 |
| Israel | ISR | 1990 | 0.0505105 |
| South Korea | KOR | 2016 | 0.0057228 |
| Middle East & North Africa | NA | 1994 | 2.9178428 |
| Luxembourg | LUX | 2014 | 0.0066089 |
| Cuba | CUB | 2005 | 0.4880097 |
| Cape Verde | CPV | 1998 | 9.8333258 |
| Philippines | PHL | 1995 | 8.5092836 |
| Nicaragua | NIC | 2003 | 10.2916910 |
| Slovenia | SVN | 2012 | 0.4018370 |
| Tropical Latin America | NA | 2001 | 3.2232012 |
| South Asia - World Bank region | NA | 2005 | 11.9314648 |
| Congo | COG | 2005 | 8.3980132 |
| Micronesia (country) | FSM | 1991 | 13.1109820 |
| African Union | NA | 2013 | 8.3020943 |
| Australia | AUS | 2009 | 0.0152345 |
| Western sub-Saharan Africa | NA | 2019 | 9.2141432 |
| Antigua and Barbuda | ATG | 2018 | 0.0876611 |
| High SDI | NA | 2004 | 0.0695242 |
| Belarus | BLR | 2006 | 0.2923012 |
| Afghanistan | AFG | 1995 | 19.6025357 |
| Kuwait | KWT | 2009 | 0.0165411 |
| Comoros | COM | 1998 | 13.5707682 |
| El Salvador | SLV | 1999 | 6.6873699 |
| Andorra | AND | 2009 | 0.0056606 |
| Palau | PLW | 2013 | 0.0076840 |
| Southern Latin America | NA | 2010 | 0.3903155 |
| Nauru | NRU | 1999 | 2.7033449 |
| Angola | AGO | 2012 | 8.7988307 |
| World | OWID\_WRL | 2014 | 4.8962470 |
| East Asia & Pacific - World Bank region | NA | 2000 | 9.6260138 |
| Guam | GUM | 2013 | 0.4795508 |
| Vanuatu | VUT | 2018 | 16.5007641 |
| Saint Lucia | LCA | 2014 | 0.4247979 |
| Iraq | IRQ | 2013 | 0.1367010 |
| Nigeria | NGA | 2005 | 9.9740614 |
| Moldova | MDA | 1990 | 7.6360040 |
| Canada | CAN | 2008 | 0.0072974 |
| Belgium | BEL | 2013 | 0.0069354 |
| Belarus | BLR | 2007 | 0.2548650 |
| Albania | ALB | 1993 | 11.4847651 |
| Central Asia | NA | 2011 | 3.1346525 |
| Monaco | MCO | 2003 | 0.0059487 |
| Mauritania | MRT | 2009 | 8.9591434 |
| Zimbabwe | ZWE | 1991 | 9.9128028 |
| Ethiopia | ETH | 2019 | 13.0824327 |
| Greenland | GRL | 2011 | 0.1003583 |
| Middle East & North Africa | NA | 2008 | 1.0154166 |
| Malawi | MWI | 2012 | 11.2229099 |
| Samoa | WSM | 2016 | 11.6459726 |
| High-income Asia Pacific | NA | 2018 | 0.0066428 |
| Bangladesh | BGD | 2009 | 16.1256930 |
| Africa | NA | 2012 | 8.4279202 |
| El Salvador | SLV | 2010 | 4.0312574 |
| Taiwan | TWN | 2002 | 0.8899141 |
| Afghanistan | AFG | 2003 | 19.9211892 |
| Ecuador | ECU | 2010 | 0.9765775 |
| Lithuania | LTU | 2017 | 0.1648127 |
| Madagascar | MDG | 2013 | 15.6028482 |
| Bhutan | BTN | 2000 | 16.0166185 |
| Gambia | GMB | 1991 | 14.8819820 |
| Nicaragua | NIC | 2009 | 8.8739632 |
| Indonesia | IDN | 1996 | 8.7302517 |
| Guam | GUM | 2011 | 0.4431576 |
| Syria | SYR | 2018 | 0.0213544 |
| United Kingdom | GBR | 2004 | 0.0045996 |
| Turkmenistan | TKM | 1994 | 0.1778442 |
| Croatia | HRV | 1990 | 1.7001570 |
| Norway | NOR | 2011 | 0.0044716 |
| Afghanistan | AFG | 1999 | 19.8720013 |
| Burkina Faso | BFA | 2015 | 12.8842204 |
| Angola | AGO | 2017 | 6.3938366 |
| Pakistan | PAK | 2003 | 13.0038967 |
| Mozambique | MOZ | 1994 | 13.0921902 |
| High-income | NA | 2005 | 0.0482931 |
| Sudan | SDN | 2012 | 10.2208492 |
| Barbados | BRB | 1996 | 0.0240997 |
| Bahamas | BHS | 2005 | 0.1907230 |
| Greece | GRC | 2011 | 0.0485020 |
| Netherlands | NLD | 2014 | 0.0045415 |
| American Samoa | ASM | 2001 | 2.7770143 |
| Iraq | IRQ | 1990 | 4.5903430 |
| Peru | PER | 2005 | 4.2740728 |
| Italy | ITA | 2000 | 0.0639238 |
| High SDI | NA | 1991 | 0.2499771 |
| Djibouti | DJI | 1995 | 9.0144822 |
| Chad | TCD | 2008 | 14.4128892 |
| Mexico | MEX | 2001 | 2.5069589 |
| Equatorial Guinea | GNQ | 1993 | 13.1103741 |
| Sao Tome and Principe | STP | 2015 | 10.8134081 |
| Japan | JPN | 2012 | 0.0089109 |
| New Zealand | NZL | 2007 | 0.0149759 |
| World Bank High Income | NA | 1992 | 0.3767586 |
| Eastern Europe | NA | 2007 | 0.4267014 |
| New Zealand | NZL | 2010 | 0.0123680 |
| Liberia | LBR | 2001 | 11.8781061 |
| Marshall Islands | MHL | 2010 | 7.3257216 |
| Middle East & North Africa | NA | 2017 | 0.5493148 |
| Armenia | ARM | 2011 | 0.5956701 |
| United Kingdom | GBR | 1995 | 0.0084516 |
| Greece | GRC | 1997 | 0.1577310 |
| Taiwan | TWN | 2019 | 0.2584735 |
| Western Pacific Region | NA | 2014 | 4.3842848 |
| Saint Lucia | LCA | 2017 | 0.3573336 |
| World Bank Lower Middle Income | NA | 2014 | 7.5440436 |
| Central Latin America | NA | 1996 | 4.2729467 |
| Madagascar | MDG | 2003 | 16.1196000 |
| Malaysia | MYS | 2006 | 0.1680916 |
| Hungary | HUN | 2004 | 1.6122627 |
| Eastern sub-Saharan Africa | NA | 2001 | 11.1466403 |
| Mali | MLI | 2011 | 12.3275190 |
| Kiribati | KIR | 2006 | 13.1316427 |
| Iraq | IRQ | 2012 | 0.1888655 |
| Saint Kitts and Nevis | KNA | 2006 | 0.4878139 |
| Kazakhstan | KAZ | 2012 | 1.5862417 |
| G20 | NA | 2018 | 3.1264056 |
| Kuwait | KWT | 1993 | 0.1843833 |
| Palestine | PSE | 2019 | 0.1792879 |
| Lebanon | LBN | 2004 | 0.3010813 |
| South Sudan | SSD | 2008 | 11.7375758 |
| Benin | BEN | 2018 | 12.3010879 |
| Bermuda | BMU | 2014 | 0.1626103 |
| France | FRA | 2016 | 0.0071179 |
| Venezuela | VEN | 1990 | 0.4733514 |
| Niue | NIU | 2003 | 1.9524032 |
| Yemen | YEM | 2009 | 9.8119761 |
| Uzbekistan | UZB | 2018 | 1.6667311 |
| Saint Kitts and Nevis | KNA | 2013 | 0.2631894 |
| Croatia | HRV | 1994 | 1.4059136 |
| G20 | NA | 1990 | 8.4408020 |
| Malaysia | MYS | 2017 | 0.0745060 |
| Commonwealth Middle Income | NA | 1990 | 13.0728938 |
| Nordic Region | NA | 2011 | 0.0063458 |
| Micronesia (country) | FSM | 2006 | 8.5648816 |
| Angola | AGO | 1993 | 11.9140975 |
| Rwanda | RWA | 2005 | 12.2926149 |
| Paraguay | PRY | 2016 | 4.3344504 |
| Madagascar | MDG | 1995 | 16.4398616 |
| Benin | BEN | 2002 | 13.5195420 |
| Togo | TGO | 2018 | 11.2162507 |
| Australasia | NA | 1994 | 0.0748167 |
| Nordic Region | NA | 1992 | 0.0278325 |
| Uzbekistan | UZB | 1994 | 6.5135201 |
| Saint Kitts and Nevis | KNA | 2007 | 0.4431143 |
| Chad | TCD | 1991 | 15.0199634 |
| Puerto Rico | PRI | 1992 | 0.0079331 |
| Albania | ALB | 2019 | 3.0463064 |
| United States | USA | 2007 | 0.0094572 |
| Italy | ITA | 1992 | 0.1223881 |
| Australasia | NA | 2014 | 0.0104732 |
| Portugal | PRT | 1994 | 0.3704750 |
| Antigua and Barbuda | ATG | 1997 | 0.3356916 |
| Western sub-Saharan Africa | NA | 2003 | 10.9559341 |
| Honduras | HND | 2018 | 8.0257723 |
| Europe | NA | 1992 | 1.1367435 |
| United Kingdom | GBR | 2002 | 0.0052231 |
| Bosnia and Herzegovina | BIH | 2002 | 6.4498106 |
| Denmark | DNK | 2014 | 0.0046874 |
| Saudi Arabia | SAU | 2017 | 0.0412785 |
| Cuba | CUB | 2019 | 0.1859046 |
| Antigua and Barbuda | ATG | 1995 | 0.4163425 |
| Zambia | ZMB | 2012 | 9.0153351 |
| Mauritius | MUS | 2011 | 0.2878634 |
| World Bank High Income | NA | 2008 | 0.1101727 |
| Panama | PAN | 2011 | 1.5451266 |
| El Salvador | SLV | 2016 | 2.2087833 |
| Dominican Republic | DOM | 1996 | 5.7714368 |
| Bosnia and Herzegovina | BIH | 2000 | 7.2992129 |
| Russia | RUS | 2016 | 0.1482396 |
| High-income North America | NA | 1991 | 0.0188385 |
| Region of the Americas | NA | 2015 | 1.0449172 |
| Africa | NA | 1990 | 11.0228652 |
| Bhutan | BTN | 2006 | 13.4911195 |
| Iraq | IRQ | 1994 | 3.6190822 |
| Bermuda | BMU | 1991 | 1.1686602 |
| Latin America & Caribbean - World Bank region | NA | 2007 | 2.5351766 |
| France | FRA | 1996 | 0.0259886 |
| Saint Vincent and the Grenadines | VCT | 1996 | 2.8104418 |
| Uganda | UGA | 2000 | 9.8851006 |
| OECD Countries | NA | 2012 | 0.2031131 |
| North Africa and Middle East | NA | 1991 | 5.6111998 |
| Papua New Guinea | PNG | 1990 | 21.0369095 |
| Palestine | PSE | 2007 | 0.6959199 |
| Colombia | COL | 1992 | 5.1125355 |
| Jordan | JOR | 2013 | 0.0081336 |
| Sierra Leone | SLE | 1993 | 14.2721890 |
| Uruguay | URY | 2010 | 0.2854716 |
| Puerto Rico | PRI | 1996 | 0.0061467 |
| Tajikistan | TJK | 2008 | 9.4014500 |
| Estonia | EST | 2005 | 0.8155262 |
| Egypt | EGY | 1995 | 0.9297017 |
| Ghana | GHA | 2008 | 8.6931552 |
| World Bank Upper Middle Income | NA | 2019 | 2.1006078 |
| Romania | ROU | 2010 | 1.4409798 |
| Slovakia | SVK | 1992 | 0.3100305 |
| Slovakia | SVK | 2015 | 0.0735551 |
| Uganda | UGA | 1995 | 9.7581842 |
| Ecuador | ECU | 2006 | 1.2636529 |
| Zimbabwe | ZWE | 1996 | 6.1203568 |
| China | CHN | 1992 | 16.4626842 |
| Northern Mariana Islands | MNP | 1994 | 1.8979233 |
| Southeast Asia | NA | 2017 | 5.9754595 |
| South Sudan | SSD | 2013 | 11.1241938 |
| Taiwan | TWN | 1996 | 1.7429286 |
| East Asia & Pacific - World Bank region | NA | 2004 | 8.2694992 |
| Barbados | BRB | 1994 | 0.0270859 |
| Poland | POL | 2003 | 1.5260644 |
| El Salvador | SLV | 2003 | 5.2831212 |
| Greece | GRC | 2019 | 0.0321369 |
| Bermuda | BMU | 1990 | 1.2491140 |
| Cote d'Ivoire | CIV | 2011 | 10.3966264 |
| Luxembourg | LUX | 2010 | 0.0089100 |
| Kenya | KEN | 2015 | 8.6690874 |
| Rwanda | RWA | 2013 | 12.4897216 |
| Guam | GUM | 2000 | 0.4464930 |
| Trinidad and Tobago | TTO | 2004 | 0.0379728 |
| Serbia | SRB | 1992 | 6.4472066 |
| Venezuela | VEN | 2012 | 0.0757288 |
| Andorra | AND | 1995 | 0.0155859 |
| Greece | GRC | 2018 | 0.0338629 |
| Southern sub-Saharan Africa | NA | 1998 | 4.3709726 |
| East Asia & Pacific - World Bank region | NA | 1993 | 12.7376178 |
| Greenland | GRL | 2010 | 0.1075665 |
| Southern Latin America | NA | 2001 | 0.7559227 |
| Middle East & North Africa | NA | 2018 | 0.5202984 |
| Syria | SYR | 2011 | 0.0473155 |
| Turkey | TUR | 2009 | 0.1860187 |
| Belarus | BLR | 1999 | 0.4974654 |
| High SDI | NA | 1994 | 0.1903519 |
| Djibouti | DJI | 2005 | 4.2958428 |
| Moldova | MDA | 2000 | 6.3945032 |
| Argentina | ARG | 1991 | 1.4410787 |
| America | NA | 2001 | 1.6685200 |
| Puerto Rico | PRI | 2011 | 0.0030402 |
| Cote d'Ivoire | CIV | 2013 | 10.3248691 |
| Tropical Latin America | NA | 1997 | 3.9669160 |
| Qatar | QAT | 2018 | 0.0010865 |
| Philippines | PHL | 2014 | 8.7873633 |
| Nauru | NRU | 2016 | 0.7844455 |
| Caribbean | NA | 2010 | 2.6082082 |
| Uganda | UGA | 1994 | 9.6942785 |
| Europe | NA | 2010 | 0.3914385 |
| Guinea | GIN | 2010 | 13.8090980 |
| Monaco | MCO | 2017 | 0.0028420 |
| Commonwealth | NA | 2005 | 9.4862045 |
| El Salvador | SLV | 2008 | 4.3503099 |
| Barbados | BRB | 2018 | 0.0069034 |
| Chad | TCD | 1993 | 14.9982368 |
| North Korea | PRK | 1999 | 14.0705361 |
| Oman | OMN | 1996 | 3.2305318 |
| Central Latin America | NA | 2007 | 2.9129350 |
| Austria | AUT | 1998 | 0.0383683 |
| Australia | AUS | 1992 | 0.0992922 |
| Dominican Republic | DOM | 2014 | 1.9019971 |
| Estonia | EST | 2018 | 0.2434099 |
| Eastern sub-Saharan Africa | NA | 2002 | 11.1631160 |
| Seychelles | SYC | 2005 | 0.1543929 |
| Congo | COG | 2000 | 8.5950352 |
| Liberia | LBR | 1995 | 11.9766403 |
| Congo | COG | 2003 | 8.3671791 |
| South Africa | ZAF | 2003 | 2.6828270 |
| Argentina | ARG | 2017 | 0.2255734 |
| Southeast Asia | NA | 2004 | 8.5865602 |
| Equatorial Guinea | GNQ | 1997 | 12.0016860 |
| Comoros | COM | 1991 | 14.4199438 |
| Kenya | KEN | 2012 | 8.9649303 |
| Morocco | MAR | 2008 | 2.7287742 |
| Low-middle SDI | NA | 2010 | 10.8838201 |
| Montenegro | MNE | 2011 | 2.8587310 |
| Armenia | ARM | 1990 | 4.0661884 |
| Tanzania | TZA | 1995 | 10.9710864 |
| Somalia | SOM | 2002 | 14.9049628 |
| Greenland | GRL | 2016 | 0.0804170 |
| Romania | ROU | 1998 | 3.6587190 |
| Cote d'Ivoire | CIV | 2014 | 10.1191918 |
| El Salvador | SLV | 1992 | 9.4350013 |
| Yemen | YEM | 2003 | 11.9609212 |
| Marshall Islands | MHL | 2014 | 6.7700564 |
| Commonwealth Middle Income | NA | 1991 | 12.9604635 |
| World Bank High Income | NA | 1994 | 0.3130803 |
| Iraq | IRQ | 1999 | 2.1843656 |
| Montenegro | MNE | 1991 | 4.4457063 |
| High-middle SDI | NA | 2016 | 1.0530764 |
| France | FRA | 1990 | 0.0401628 |
| South Asia - World Bank region | NA | 2003 | 12.4937801 |
| Norway | NOR | 2018 | 0.0026485 |
| Andean Latin America | NA | 1991 | 6.1536078 |
| Lesotho | LSO | 2015 | 6.2060033 |
| Panama | PAN | 2012 | 1.4311926 |
| Cote d'Ivoire | CIV | 1996 | 10.8569786 |
| Zambia | ZMB | 1995 | 8.8637690 |
| Switzerland | CHE | 2003 | 0.0049161 |
| OECD Countries | NA | 2014 | 0.1915904 |
| Belize | BLZ | 2006 | 3.0434434 |
| Monaco | MCO | 1993 | 0.0087316 |
| Central Latin America | NA | 2015 | 2.1474833 |
| Cook Islands | COK | 2010 | 0.5416425 |
| Middle East & North Africa | NA | 2009 | 0.9404450 |
| Bolivia | BOL | 2002 | 5.6977675 |
| India | IND | 2012 | 9.0313973 |
| Panama | PAN | 2015 | 1.1221210 |
| Congo | COG | 2006 | 8.3399277 |
| North Africa and Middle East | NA | 2013 | 2.0292341 |
| Commonwealth | NA | 2001 | 10.1504786 |
| World Bank Lower Middle Income | NA | 2018 | 6.5826141 |
| World Bank Low Income | NA | 1994 | 12.8144218 |
| Samoa | WSM | 1998 | 12.7718099 |
| Niger | NER | 2004 | 15.0209832 |
| Spain | ESP | 2003 | 0.1336792 |
| Austria | AUT | 2011 | 0.0155472 |
| Mongolia | MNG | 1994 | 11.7007729 |
| Vietnam | VNM | 1998 | 12.9604696 |
| Germany | DEU | 2002 | 0.0073218 |
| World Bank Lower Middle Income | NA | 1996 | 11.3690069 |
| Yemen | YEM | 1993 | 16.3752740 |
| Israel | ISR | 2001 | 0.0223072 |
| Burundi | BDI | 2008 | 13.5929389 |
| Equatorial Guinea | GNQ | 2005 | 7.1470717 |
| Syria | SYR | 2005 | 0.1458000 |
| Lithuania | LTU | 2013 | 0.2207118 |
| World Bank Lower Middle Income | NA | 1999 | 10.8363691 |
| Mexico | MEX | 2006 | 2.2404428 |
| Sweden | SWE | 2014 | 0.0041784 |
| Croatia | HRV | 1998 | 1.1066330 |
| Western Europe | NA | 2019 | 0.0112005 |
| High-income Asia Pacific | NA | 2008 | 0.0111823 |
| East Asia | NA | 1995 | 14.5926156 |
| Chile | CHL | 2007 | 0.6850545 |
| Oceania | NA | 2019 | 15.2844364 |
| Libya | LBY | 1997 | 0.8603891 |
| High-middle SDI | NA | 2002 | 2.9084731 |
| Oman | OMN | 1999 | 1.6053418 |
| Italy | ITA | 2018 | 0.0196384 |
| Low SDI | NA | 2010 | 12.6201164 |
| Italy | ITA | 2004 | 0.0464116 |
| Bhutan | BTN | 2013 | 9.9622425 |
| Puerto Rico | PRI | 2003 | 0.0043287 |
| Eastern Mediterranean Region | NA | 2003 | 7.6397133 |
| Australasia | NA | 2007 | 0.0179335 |
| Switzerland | CHE | 2006 | 0.0040545 |
| Dominican Republic | DOM | 1995 | 6.1222107 |
| East Asia & Pacific - World Bank region | NA | 2007 | 7.1079962 |
| Central Europe | NA | 1990 | 3.7854759 |
| Japan | JPN | 2006 | 0.0129873 |
| Palestine | PSE | 1992 | 5.4816027 |
| Andorra | AND | 1993 | 0.0186330 |
| Namibia | NAM | 1997 | 8.5419094 |
| Singapore | SGP | 2003 | 0.0599166 |
| Estonia | EST | 1996 | 1.4287274 |
| Jamaica | JAM | 1996 | 4.5080322 |
| Kazakhstan | KAZ | 2009 | 1.9931850 |
| Malaysia | MYS | 2011 | 0.1175236 |
| Thailand | THA | 2010 | 2.6129519 |
| Southern Latin America | NA | 2000 | 0.8147082 |
| China | CHN | 1997 | 13.5930314 |
| Europe | NA | 1991 | 1.1920815 |
| Cyprus | CYP | 1996 | 0.0741597 |
| Oceania | NA | 2010 | 16.4665147 |
| Eastern sub-Saharan Africa | NA | 2008 | 11.8472956 |
| Uzbekistan | UZB | 2008 | 3.5587525 |
| Burundi | BDI | 1995 | 10.9270550 |
| Nordic Region | NA | 2012 | 0.0057714 |
| United Kingdom | GBR | 1992 | 0.0105332 |
| Asia | NA | 2001 | 10.2786507 |
| Russia | RUS | 2001 | 0.5077678 |
| High-income North America | NA | 2009 | 0.0081903 |
| Kiribati | KIR | 2015 | 12.2424831 |
| African Region | NA | 1994 | 10.5439739 |
| Nigeria | NGA | 2017 | 7.8136066 |
| High-income North America | NA | 2007 | 0.0094275 |
| Finland | FIN | 2015 | 0.0047693 |
| European Union | NA | 2007 | 0.3453072 |
| Oceania | NA | 2011 | 16.3937968 |
| Iran | IRN | 2014 | 0.0499539 |
| Barbados | BRB | 2008 | 0.0122337 |
| New Zealand | NZL | 2019 | 0.0075658 |
| North Korea | PRK | 1994 | 20.1267041 |
| Belgium | BEL | 2019 | 0.0050152 |
| Rwanda | RWA | 2006 | 12.5651136 |
| World Bank Lower Middle Income | NA | 2001 | 10.5621016 |
| Nigeria | NGA | 2007 | 9.6985109 |
| Papua New Guinea | PNG | 2006 | 19.5725923 |
| Guyana | GUY | 2011 | 1.6754385 |
| Romania | ROU | 1999 | 3.4931676 |
| Antigua and Barbuda | ATG | 2017 | 0.0951739 |
| Cuba | CUB | 2014 | 0.2827353 |
| Southeast Asia | NA | 1999 | 9.7084534 |
| Central sub-Saharan Africa | NA | 2007 | 12.6317010 |
| African Region | NA | 2014 | 9.2755509 |
| Solomon Islands | SLB | 2014 | 21.3418847 |
| Bulgaria | BGR | 1994 | 2.9284739 |
| Uruguay | URY | 1990 | 1.3099788 |
| Kuwait | KWT | 2011 | 0.0127325 |
| Commonwealth Low Income | NA | 2013 | 12.0050811 |
| East Asia & Pacific - World Bank region | NA | 1991 | 13.4335448 |
| Armenia | ARM | 1994 | 4.0610477 |
| Barbados | BRB | 1998 | 0.0219342 |
| Uganda | UGA | 2006 | 10.4650646 |
| Yemen | YEM | 2018 | 5.9011807 |
| Malta | MLT | 2009 | 0.0221702 |
| Central Europe | NA | 2017 | 1.0202887 |
| Palau | PLW | 2014 | 0.0083151 |
| San Marino | SMR | 2014 | 0.0063874 |
| Luxembourg | LUX | 2000 | 0.0184923 |
| Northern Ireland | NA | 2004 | 0.0083644 |
| Lebanon | LBN | 2009 | 0.1297603 |
| Tuvalu | TUV | 1995 | 8.5480982 |
| Angola | AGO | 1997 | 11.7470640 |
| Region of the Americas | NA | 2009 | 1.3394503 |
| China | CHN | 1995 | 14.8612053 |
| Equatorial Guinea | GNQ | 2017 | 1.8405095 |
| North Africa and Middle East | NA | 1999 | 4.2164791 |
| Nepal | NPL | 1996 | 19.2775016 |
| High-income Asia Pacific | NA | 2013 | 0.0084350 |
| Benin | BEN | 1998 | 14.0399735 |
| Sweden | SWE | 1995 | 0.0197399 |
| Panama | PAN | 1991 | 4.6095263 |
| Samoa | WSM | 2003 | 12.8589139 |
| Puerto Rico | PRI | 2018 | 0.0021757 |
| Switzerland | CHE | 2001 | 0.0054563 |
| Czechia | CZE | 1994 | 0.2350932 |
| Dominican Republic | DOM | 1992 | 7.2806003 |
| Albania | ALB | 1999 | 9.6431634 |
| North America | NA | 1990 | 0.0196322 |
| Central Asia | NA | 2015 | 2.3671125 |
| Norway | NOR | 2016 | 0.0029448 |
| Somalia | SOM | 1999 | 14.7840285 |
| Central sub-Saharan Africa | NA | 2003 | 12.4702691 |
| Lithuania | LTU | 2015 | 0.1921743 |
| Jordan | JOR | 2014 | 0.0072649 |
| Poland | POL | 2007 | 1.2512873 |
| Serbia | SRB | 2002 | 4.1986320 |
| Micronesia (country) | FSM | 2016 | 5.8561661 |
| World | OWID\_WRL | 2006 | 6.4065324 |
| East Asia | NA | 2007 | 7.9945058 |
| New Zealand | NZL | 2006 | 0.0160841 |
| Algeria | DZA | 2001 | 0.5419269 |
| Guyana | GUY | 2016 | 1.0558369 |
| Middle East & North Africa | NA | 2010 | 0.8722880 |
| China | CHN | 2003 | 10.1952124 |
| San Marino | SMR | 2005 | 0.0103866 |
| American Samoa | ASM | 2019 | 1.4730278 |
| Ethiopia | ETH | 1990 | 13.6790511 |
| Commonwealth Low Income | NA | 2004 | 12.7352931 |
| Greenland | GRL | 1990 | 0.5601366 |
| Caribbean | NA | 2008 | 4.4723773 |
| Chad | TCD | 2004 | 14.1867247 |
| Middle East & North Africa | NA | 2019 | 0.4929966 |
| High-income North America | NA | 2019 | 0.0048804 |
| Syria | SYR | 1995 | 0.8416113 |
| Luxembourg | LUX | 2017 | 0.0053385 |
| South Korea | KOR | 1995 | 0.0900421 |
| Andorra | AND | 1990 | 0.0246090 |
| Central sub-Saharan Africa | NA | 2000 | 12.3037391 |
| Bermuda | BMU | 2008 | 0.2690530 |
| Burkina Faso | BFA | 2012 | 12.5498274 |
| Africa | NA | 2013 | 8.3020943 |
| Maldives | MDV | 1992 | 13.2219189 |
| Croatia | HRV | 2006 | 0.6420743 |
| Sweden | SWE | 2016 | 0.0034965 |
| Iceland | ISL | 2018 | 0.0035474 |
| Bermuda | BMU | 2017 | 0.1405873 |
| Cote d'Ivoire | CIV | 2003 | 9.7556348 |
| World Bank Low Income | NA | 2001 | 12.7294103 |
| Andean Latin America | NA | 2005 | 3.6272614 |
| Lesotho | LSO | 1994 | 10.5763171 |
| Vietnam | VNM | 1995 | 13.9763326 |
| Iraq | IRQ | 2016 | 0.0596831 |
| Turkmenistan | TKM | 1995 | 0.1669222 |
| Libya | LBY | 1993 | 1.9803572 |
| Vanuatu | VUT | 2009 | 16.7155790 |
| Czechia | CZE | 2007 | 0.1118264 |
| Greece | GRC | 1998 | 0.1438124 |
| Cook Islands | COK | 2018 | 0.4507596 |
| North Korea | PRK | 1997 | 14.6616362 |
| OECD Countries | NA | 2003 | 0.2662761 |
| Algeria | DZA | 2002 | 0.4679982 |
| Sierra Leone | SLE | 2018 | 12.9267897 |
| Slovenia | SVN | 1995 | 1.0962640 |
| Central African Republic | CAF | 1991 | 13.4601364 |
| Middle SDI | NA | 2006 | 6.5485761 |
| South-East Asia Region | NA | 2012 | 9.0792500 |
| Russia | RUS | 2013 | 0.1778515 |
| African Region | NA | 2012 | 9.5384914 |
| Mexico | MEX | 2018 | 1.4537403 |
| Eswatini | SWZ | 1995 | 10.0499890 |
| Region of the Americas | NA | 2017 | 0.9501793 |
| Northern Mariana Islands | MNP | 2005 | 1.2445138 |
| Chile | CHL | 1998 | 1.4891698 |
| Monaco | MCO | 2019 | 0.0026285 |
| Bulgaria | BGR | 2012 | 1.7013950 |
| United Arab Emirates | ARE | 2001 | 0.0070218 |
| Namibia | NAM | 1998 | 8.0021120 |
| Southeast Asia | NA | 1994 | 10.8993100 |
| Cook Islands | COK | 1998 | 1.1380640 |
| Eastern Europe | NA | 2012 | 0.2791135 |
| Mauritania | MRT | 2013 | 7.9350951 |
| Ukraine | UKR | 2011 | 0.5303188 |
| United States | USA | 2017 | 0.0052448 |
| Madagascar | MDG | 1999 | 16.5434938 |
| Marshall Islands | MHL | 2006 | 7.1101675 |
| World Bank Lower Middle Income | NA | 2006 | 9.7245532 |
| Fiji | FJI | 2018 | 4.1133498 |
| Qatar | QAT | 2003 | 0.0074812 |
| Gambia | GMB | 1994 | 14.1330924 |
| Latvia | LVA | 2002 | 0.8698744 |
| Seychelles | SYC | 1998 | 0.3342432 |
| Seychelles | SYC | 2001 | 0.2317085 |
| Antigua and Barbuda | ATG | 1990 | 0.6363448 |
| France | FRA | 2004 | 0.0152314 |
| Ghana | GHA | 1992 | 11.2964006 |
| Commonwealth | NA | 1990 | 11.4226106 |
| Brunei | BRN | 1999 | 0.3105459 |
| Libya | LBY | 2011 | 0.0474830 |
| Singapore | SGP | 2008 | 0.0261968 |
| England | NA | 2009 | 0.0031759 |
| Gambia | GMB | 1999 | 13.7935851 |
| Bosnia and Herzegovina | BIH | 2004 | 5.7031104 |
| Japan | JPN | 1990 | 0.0685294 |
| Timor | TLS | 2018 | 13.8498064 |
| Tunisia | TUN | 1991 | 2.3395660 |
| Egypt | EGY | 2004 | 0.1508271 |
| Tanzania | TZA | 2018 | 11.9353355 |
| Cook Islands | COK | 2014 | 0.5173627 |
| Afghanistan | AFG | 2011 | 16.9318853 |
| Laos | LAO | 2004 | 17.4971937 |
| North America | NA | 2018 | 0.0049759 |
| Saint Lucia | LCA | 2013 | 0.4647087 |
| Montenegro | MNE | 2006 | 3.1339830 |
| Spain | ESP | 2004 | 0.1224925 |
| Paraguay | PRY | 2001 | 8.1523830 |
| Bosnia and Herzegovina | BIH | 2010 | 4.1440357 |
| Latin America & Caribbean - World Bank region | NA | 2010 | 2.1434940 |
| G20 | NA | 2019 | 2.9033795 |
| Central Europe | NA | 2012 | 1.2607515 |
| Saint Vincent and the Grenadines | VCT | 1999 | 2.0072928 |
| Mexico | MEX | 2011 | 2.0073315 |
| South Africa | ZAF | 1994 | 4.1788923 |
| Colombia | COL | 2018 | 1.0737497 |
| Argentina | ARG | 2005 | 0.5168382 |
| Niue | NIU | 2016 | 0.5566651 |
| Austria | AUT | 2013 | 0.0141525 |
| Lesotho | LSO | 2007 | 6.5778506 |
| Burundi | BDI | 2014 | 14.1828181 |
| Ghana | GHA | 2006 | 9.0151621 |
| American Samoa | ASM | 1993 | 3.9010772 |
| High-income | NA | 2013 | 0.0278387 |
| Cook Islands | COK | 2001 | 0.9131933 |
| America | NA | 2000 | 1.7255631 |
| Fiji | FJI | 2007 | 6.6826468 |
| Mauritius | MUS | 2007 | 0.4197364 |
| Tuvalu | TUV | 1991 | 10.2791005 |
| East Asia | NA | 2004 | 9.7064106 |
| Cape Verde | CPV | 1995 | 10.6916498 |
| Tonga | TON | 2005 | 7.1650950 |
| G20 | NA | 1993 | 7.9046336 |
| Bolivia | BOL | 2017 | 3.4625731 |
| Lebanon | LBN | 1995 | 1.0617776 |
| Marshall Islands | MHL | 2003 | 7.2681305 |
| Bangladesh | BGD | 2019 | 11.0848694 |
| Canada | CAN | 2004 | 0.0159761 |
| Sao Tome and Principe | STP | 1999 | 15.5932452 |
| Tropical Latin America | NA | 2013 | 1.5798798 |
| Lesotho | LSO | 1997 | 8.4922225 |
| South-East Asia Region | NA | 2017 | 7.4369286 |
| African Union | NA | 1991 | 10.8784369 |
| Central Europe, Eastern Europe, and Central Asia | NA | 2003 | 1.5339738 |
| Namibia | NAM | 2013 | 5.7212322 |
| North Macedonia | MKD | 1993 | 5.9580562 |
| El Salvador | SLV | 2018 | 1.7238211 |
| Singapore | SGP | 2019 | 0.0092563 |
| Cape Verde | CPV | 1994 | 11.4083531 |
| Slovakia | SVK | 2010 | 0.0959929 |
| Turkmenistan | TKM | 2004 | 0.0861465 |
| Cape Verde | CPV | 2018 | 3.1550697 |
| Azerbaijan | AZE | 1996 | 6.6188795 |
| Central Europe, Eastern Europe, and Central Asia | NA | 2015 | 0.7652715 |
| Eswatini | SWZ | 2010 | 5.4908490 |
| Latin America & Caribbean - World Bank region | NA | 2005 | 2.7361119 |
| England | NA | 2006 | 0.0037574 |
| Malawi | MWI | 2011 | 10.8993611 |
| Guam | GUM | 2007 | 0.3976821 |
| High-income Asia Pacific | NA | 1991 | 0.0940270 |
| Trinidad and Tobago | TTO | 2012 | 0.0166784 |
| South Korea | KOR | 2013 | 0.0071911 |
| El Salvador | SLV | 2013 | 2.9854236 |
| Moldova | MDA | 2019 | 0.6698829 |
| Nepal | NPL | 2007 | 17.2179634 |
| Saint Lucia | LCA | 1997 | 2.6960222 |
| Andorra | AND | 2018 | 0.0039268 |
| Thailand | THA | 2001 | 4.0017328 |
| Suriname | SUR | 2007 | 2.1755475 |
| Mauritius | MUS | 1996 | 1.2861462 |
| Caribbean | NA | 2007 | 4.5534112 |
| Mauritius | MUS | 2015 | 0.1875371 |
| Egypt | EGY | 1996 | 0.7953692 |
| Latin America & Caribbean - World Bank region | NA | 2002 | 3.0027584 |
| Azerbaijan | AZE | 2012 | 1.3475110 |
| Chile | CHL | 1997 | 1.6375498 |
| Austria | AUT | 2010 | 0.0164151 |
| Caribbean | NA | 2013 | 4.2263219 |
| United States | USA | 2002 | 0.0121211 |
| Eritrea | ERI | 2001 | 10.7164052 |
| Lesotho | LSO | 1990 | 12.5526558 |
| Asia | NA | 2000 | 10.5238974 |
| Lithuania | LTU | 1991 | 1.0936610 |
| Kyrgyzstan | KGZ | 2001 | 9.3971976 |
| Tanzania | TZA | 2019 | 11.8964828 |
| Burundi | BDI | 2017 | 14.2043686 |
| Australasia | NA | 2008 | 0.0163034 |
| Kuwait | KWT | 2015 | 0.0080734 |
| Moldova | MDA | 1993 | 7.4542645 |
| Brazil | BRA | 1998 | 3.6569369 |
| Dominica | DMA | 2019 | 0.5643195 |
| Dominica | DMA | 1996 | 2.8894356 |
| Suriname | SUR | 1995 | 4.4447494 |
| Tajikistan | TJK | 2004 | 10.7598057 |
| San Marino | SMR | 1993 | 0.0237417 |
| Syria | SYR | 1996 | 0.7142010 |

exploratory\_data %>%   
   
 summarize(  
 "Lowest percentage of deaths" = min(deaths\_cause\_all\_causes\_risk\_household\_air\_pollution\_from\_solid\_fuels\_sex\_both\_age\_age\_standardized\_percent),  
   
 "Highest percentage of deaths"= max(deaths\_cause\_all\_causes\_risk\_household\_air\_pollution\_from\_solid\_fuels\_sex\_both\_age\_age\_standardized\_percent),  
 "average percentage of deaths" =mean(deaths\_cause\_all\_causes\_risk\_household\_air\_pollution\_from\_solid\_fuels\_sex\_both\_age\_age\_standardized\_percent),  
 "Standard deviation" = sd(deaths\_cause\_all\_causes\_risk\_household\_air\_pollution\_from\_solid\_fuels\_sex\_both\_age\_age\_standardized\_percent)  
) %>%  
 pivot\_longer(cols = 1:4) %>%  
   
 kable() %>%  
 kable\_styling(bootstrap\_options = c("hover", "striped"))

| name | value |
| --- | --- |
| Lowest percentage of deaths | 0.0010865 |
| Highest percentage of deaths | 23.0412128 |
| average percentage of deaths | 5.0257574 |
| Standard deviation | 5.4515393 |

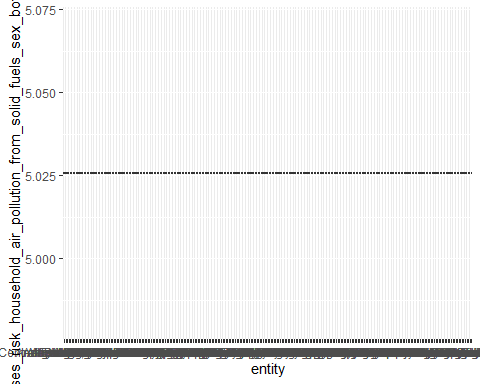
|  |
| --- |
| Note |
| **Observations:**   * 0.0016 % deaths is extremely low, especially compared to the maximum at 23%, and even the average of 5.57 shows a significant spread across datapoints this broad range suggests   + This data does not provide particularly useful information since the data is not group by year. Potentially plotting the mean percentage across time could provide a useful visual to see how this data changes. * the maximum deaths at 23.04% is extremely high, and I am very curious at which country/region was measured this high– potentially an outlier? * 5.77 standard deviation seems very large for the size of the data set being considered. This will be interesting to reference when seperating by country, region or year. |

library(lubridate)

Attaching package: 'lubridate'

The following objects are masked from 'package:base':  
  
 date, intersect, setdiff, union

exploratory\_data %>%  
   
ggplot() +  
 geom\_boxplot(mapping = aes(x = entity,  
 y = mean(deaths\_cause\_all\_causes\_risk\_household\_air\_pollution\_from\_solid\_fuels\_sex\_both\_age\_age\_standardized\_percent)))



## Background: **Fuel combustion and Indoor Air Pollution**