

Women + Data Hackathon 2021



Data Brief & Guide

Topic this year: **Sustainability**

Overview:

A 'global sustainability' dataset has been put together for the Hackathon. The dataset tracks the performance of **173 countries** against a range of sustainability metrics over a **19-year period**.

The dataset was generated from several merged data sources. While there **54 fields** included, participants are not expected, nor advised to analyse the whole data. On the contrary, the wide nature of the dataset should give rise to a range of analytical possibilities.

Participants should also note that the data is real. This presents all the challenges of working with data in professional world, such as missing values. For instance, a given country may not have data available for every field and every year.

Should participants wish to explore a specific area of analysis further, they are welcome to enrich the existing data source with other data.

Data Sources:

The following sources were used to produce the dataset:

1. **World Bank Data Bank** – World Development Indicators: [World Development Indicators | DataBank \(worldbank.org\)](#)
2. **United Nations** – United Nations SDG Indicators Database: [UNSDG](#)
3. **Our World in Data** – Political Regime Type: [Political Regimes, 2020 \(ourworldindata.org\)](#)

Field Taxonomy:

| Field | Description |
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| Country | Set of countries according to UN Convention |
| Country Code | ISO International Standard code |
| Year | Fields taken at yearly grain, with range from 2000-2018 |
| Access to electricity (% of population) - EG.ELC.ACCS.ZS | Percentage of population with access to electricity. Electrification data are collected from industry, national surveys, and international sources. |
| Adjusted net national income per capita (annual % growth) - NY.ADJ.NNTY.PC.KD.ZG | Percentage yearly growth of adjusted net national income divided by number of people in country |
| Adjusted net savings, excluding particulate emission damage (% of GNI) - NY.ADJ.SVNX.GN.ZS | Measure that monitors whether savings and investment in a country compensate for depreciation of natural and physical capital |
| Adjusted savings: carbon dioxide damage (% of GNI) - NY.ADJ.DCO2.GN.ZS | Measure that monitors whether savings and investment in a country compensate for depreciation of natural and physical capital |
| Adjusted savings: natural resources depletion (% of GNI) - NY.ADJ.DRES.GN.ZS | Measure that monitors whether savings and investment in a country compensate for depreciation of natural and physical capital |
| Adjusted savings: net forest depletion (% of GNI) - NY.ADJ.DFOR.GN.ZS | Measure that monitors whether savings and investment in a country compensate for depreciation of natural and physical capital |
| Adjusted savings: particulate emission damage (% of GNI) - NY.ADJ.DPEM.GN.ZS | Measure that monitors whether savings and investment in a country compensate for depreciation of natural and physical capital |
| Automated teller machines (ATMs) (per 100,000 adults) - FB.ATM.TOTL.P5 | Number of physical ATMs that allow clients to make financial transactions in a public place. |
| Broad money (% of GDP) - FM.LBL.BMNY.GD.ZS | Category for measuring the amount of money circulating in an economy. Taken as a percentage of total output. |
| Children out of school (% of primary school age) - SE.PRM.UNER.ZS | Percentage of primary-school-age children who are not enrolled in primary or secondary school. Children in the official primary age group that are in pre-primary education should be considered out of school. |
| Compulsory education, duration (years) - SE.COM.DURS | Duration of compulsory education is the number of years that children are legally obliged to attend school. |
| Cost of business start-up procedures, female (% of GNI per capita) - IC.REG.COST.PC.FE.ZS | Cost to register a business is normalized by presenting it as a percentage of the gross national income (GNI) per capita. |
| Cost of business start-up procedures, male (% of GNI per capita) - IC.REG.COST.PC.MA.ZS | Cost to register a business is normalized by presenting it as a percentage of the gross national income (GNI) per capita. |
| Exports of goods and services (% of GDP) - NE.EXP.GNFS.ZS | Exports of goods and services represent the value of all goods and other market services provided to the rest of the world |
| Final consumption expenditure (% of GDP) - NE.CON.TOTL.ZS | Sum of household final consumption expenditure (private consumption) and general government final consumption expenditure (general government consumption). |
| GDP (current US\$) - NY.GDP.MKTP.CD | Current value (in USD) of total goods and services produced within a country. |

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| GDP per capita (current US\$) - NY.GDP.PCAP.CD | GDP divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy. |
| General government final consumption expenditure (% of GDP) - NE.CON.GOV.T.ZS | Final consumption expenditure (formerly general government consumption) includes all government current expenditures for purchases of goods and services (including compensation of employees). |
| Gross national expenditure (% of GDP) - NE.DAB.TOTL.ZS | Sum of household final consumption expenditure (formerly private consumption), general government final consumption expenditure (formerly general government consumption), and gross capital formation (formerly gross domestic investment). |
| Gross savings (% of GDP) - NY.GNS.ICTR.ZS | Calculated as gross national income less total consumption, plus net transfers |
| Imports of goods and services (% of GDP) - NE.IMP.GNFS.ZS | Value of all goods and other market services received from the rest of the world |
| Inflation, consumer prices (annual %) - FP.CPI.TOTL.ZG | Rate at which prices of goods and services brought by consumers rise or fall. Estimated by using consumer price indices. |
| Primary completion rate, total (% of relevant age group) - SE.PRM.CMPT.ZS | Number of new entrants (enrollments minus repeaters) in the last grade of primary education, regardless of age, divided by the population at the entrance age for the last grade of primary education. |
| Proportion of seats held by women in national parliaments (%) - SG.GEN.PARL.ZS | Percentage of parliamentary seats in a single or lower chamber held by women. |
| Pupil-teacher ratio, primary - SE.PRM.ENRL.TC.ZS | Average number of pupils per teacher in primary school. |
| Renewable electricity output (% of total electricity output) - EG.ELC.RNEW.ZS | Share of electricity generated by renewable power plants in total electricity generated by all types of plants. |
| Renewable energy consumption (% of total final energy consumption) - EG.FEC.RNEW.ZS | Share of renewables energy in total final energy consumption. |
| School enrollment, preprimary (% gross) - SE.PRE.ENRR | Ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown |
| School enrollment, primary (% gross) - SE.PRM.ENRR | Ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown |
| School enrollment, secondary (% gross) - SE.SEC.ENRR | Ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown |
| Trade (% of GDP) - NE.TRD.GNFS.ZS | Proportion of total GDP that is comprised by Trade activity. |
| Women Business and the Law Index Score (scale 1-100) - SG.LAW.INDX | Measure that monitors whether savings and investment in a country compensate for depreciation of natural and physical capital |
| Prevalence of undernourishment (%) - SN.ITK.DEFC - 2.1.1 | Percentage of the population whose habitual food consumption is insufficient to provide the dietary energy levels that are required to maintain a normal active and healthy life. |
| Proportion of population below international poverty line (%) - SI_POV_DAY1 - 1.1.1 | Percentage of the population who have sustained access to basic water drinking services. |
| Proportion of population covered by at least a 2G mobile network (%) - IT_MOB_2GNTWK - 9.c.1 | Percentage of inhabitants living within range of a mobile-cellular signal, irrespective of whether or not they are mobile phone subscribers or users. |
| Proportion of population covered by at least a 3G mobile network (%) - IT_MOB_3GNTWK - 9.c.1 | Percentage of inhabitants living within range of a mobile-cellular signal, irrespective of whether or not they are mobile phone subscribers or users. |

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| Proportion of population using basic drinking water services (%) - SP_ACS_BSRVH2O - 1.4.1 | Percentage of the population who have sustained access to basic water drinking services. |
| Unemployment rate, male (%) - SL_TLF_UEM - 8.5.2 | Share of labour force without work but available and seeking employment (male) |
| Unemployment rate, women (%) - SL_TLF_UEM - 8.5.2 | Share of labour force without work but available and seeking employment (female) |
| Annual production-based emissions of carbon dioxide (CO2), measured in million tonnes | Measure that captures volume of CO2 emissions produced by a country. |
| Continent | Continent classification according to UN Convention |
| Gini index (World Bank estimate) - SI.POV.GINI | Score awarded based on how equitably income is dispersed within a country |
| Income Classification (World Bank Definition) | World Bank assigns the world's economies to four income groups — low, lower-middle, upper-middle, and high-income countries. |
| Individuals using the Internet (% of population) - IT.NET.USER.ZS | Individuals who have used the Internet (from any location) in the last 3 months |
| Life expectancy at birth, total (years) - SP.DYN.LE00.IN | Average life expectancy for new-born babies. |
| Population, total - SP.POP.TOTL | Total population for a given country. |
| Regime Type (RoW Measure Definition) | Regime classified considering the competitiveness of access to power as well as existence of liberal principles. Regime type is a weighted index that considers a variety of political metrics. |
| Rural population (% of total population) - SP.RUR.TOTL.ZS | Percentage of a countries total population that occupy rural areas. |
| Total natural resources rents (% of GDP) - NY.GDP.TOTL.RT.ZS | Proportion of total GDP that revenue from natural resource endowment contributes. |
| Urban population (% of total population) - SP.URB.TOTL.IN.ZS | Percentage of a countries total population that occupy urban areas. |
| World Regions (UN SDG Definition) | World Region as classified by UN. |

Data Exploration Ideas:

Here are few ideas and possible areas that participants are welcome to explore should they need a starting point.

General Approach:

“How does a countries economic development level affect performance against key SDGs?”

Specific Questions:

- ➔ Do countries with higher public spending perform better against SDGs targets?
- ➔ Do countries with more “liberal” political systems have better education outcomes?
- ➔ Is gender equality (female representation in schools, governance, and business) better in more wealthy countries/continents?

Analysis Approach:

Descriptive – What is the situation?

- ➔ Which regions of the world have developed most rapidly over the past decades?

Diagnostic – Why is the situation like it is?

- ➔ How have technological advancements impacted access to, and quality of education in developing nations?

Prescriptive – What should be done?

- ➔ What is an effective policy solution, supported by data, that can improve gender equality outcomes in a selected region?

Predictive – What will happen?

- ➔ Where should lower income countries focus their attention to meet UN development goals?