2022 SOCIAL PROGRESS INDEX

METHODOLOGY REPORT

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2022 Social Progress Index® Methodology Report

Introduction

The Social Progress Index® is a well-established measure, published since 2013, that is meant to catalyze improvement and drive action by presenting social outcome data in a useful and reliable way. Composed of multiple dimensions, the Social Progress Index can be used to benchmark success and provide a holistic, transparent, outcome-based measure of a country's wellbeing that is independent of economic indicators. Policymakers, businesses, and countries' citizens alike can use it to compare their country against others on different facets of social progress, allowing the identification of specific areas of strength or weakness.

The 2022 Social Progress Index ranks 169 countries on social progress. We combine 60 social and environmental outcome indicators to calculate an overall score for these countries, based on tiered levels of scoring that include measures in health, safety, education, technology, rights, and more. We also consider the data of 27 additional countries, calculating component and dimension scores when enough data are available. In all, the Social Progress Index measures at least some aspects of social progress across more than 99.97% of the world's population.

This report describes the methodology used to calculate the Social Progress Index. We start by describing the principles that establish the conceptual architecture of the index and provide an overview of the index framework. We then detail the steps taken to select data and calculate the index. Finally, we discuss the methodology behind assessing countries' strengths and weaknesses, relative to their economic prosperity. We conclude the report with limitations of year-to-year comparisons and information on future directions.

Social Progress Principles

We define 'social progress' as *the capacity of a society to meet the basic human needs of its citizens, establish the building blocks that allow citizens and communities to enhance and sustain the quality of their lives, and create the conditions for all individuals to reach their full potential.* This definition, established in consultation with a group of academic and policy experts, drives the framework of the Social Progress Index. It alludes to three broad elements of social progress, which we refer to as dimensions: Basic Human Needs, Foundations of Wellbeing, and Opportunity. Under each dimension are four components whose underlying concepts relate and are guided by questions we seek to answer with available data (see Figure 1.) Each component is further defined by a set of outcome indicators that respond to the conceptual questions posed.

Figure 1 / Social Progress Index® Component-Level Framework

Together, these interrelated elements combine to produce a given level of social progress. The Social Progress Index methodology allows measurement of each component and each dimension, yielding an overall score and ranking.

Our approach builds on a long line of work constructing country indexes to measure and assess various facets of economic and social performance. However, the Social Progress Index is distinct in its core methodological choices:

- A focus on non-economic dimensions of national performance
- A measurement approach based on outcome indicators, rather than input measures
- A holistic framework consisting of three broad dimensions of social progress, each of which is the sum of four equally weighted components
- Calculation of each component as the weighted sum of a series of measures, with the weights determined through principal component analysis

The Social Progress Index is explicitly focused on non-economic aspects of national performance. Unlike most other national measurement efforts, we treat social progress as distinct though associated with more traditional economic measures such as GDP per capita. In contrast, other indices such as the Human Development Index or OECD Better Life Index combine economic and social indicators. Our objective is to utilize a clear yet rigorous methodology that isolates the non-economic dimensions of social performance.

The Social Progress Index aims to be as outcome-based as possible. Both input and outcome-based indexes can help countries benchmark their progress, but in very different ways. Input indexes measure a country's policy choices or investments believed (or known) to lead to an important outcome, while outcome indexes directly measure the outcomes of these decisions or investments. Input indexes also require a degree of consensus about how inputs lead to outcomes, as well as a process to calibrate the relative importance of different input factors against outcome measures. In the field of social progress, this would mean a clear consensus and

understanding of which inputs lead to better social outcomes—a field of research that is still growing and to which the Social Progress Index continues to contribute.

When there are multiple output measures or a lack of consensus on all the inputs that matter, or when data related to inputs are highly incomplete, an outcome-oriented index may be more appropriate (Fleurbaey and Blanchet, 2013). Following this logic, we designed the Social Progress Index as an outcome index. The Social Progress Index has been designed to aggregate and synthesize multiple outcome measures in a conceptually consistent and transparent way that will also be useful for decision-makers benchmarking progress. The Social Progress Imperative continues to explore the role of input measures and policies in determining a country's performance.

Dimensions of Social Progress

At the topmost level of the framework, we synthesize three distinct though related questions that, taken together offer insight into the level of social progress:

1) Does a country provide for its people's most essential needs?
2) Are the building blocks in place for individuals and communities to enhance and sustain wellbeing?
3) Is there opportunity for all individuals to reach their full potential?

Each of these questions describes a dimension of social progress, respectively: Basic Human Needs, Foundations of Wellbeing and Opportunity. The first dimension, Basic Human Needs, assesses a population's capacity to survive with adequate nourishment and basic medical care, clean water, sanitation, adequate shelter, and personal safety. These needs are still not met in many developing countries and are often incomplete in some more prosperous countries.

Basic needs have been the predominant focus of research in development economics, but the second dimension of social progress, Foundations of Wellbeing, deserves equal attention. It highlights the extent to which a country's residents can gain a basic education, obtain information and communicate freely, benefit from a modern healthcare system, and live in a healthy environment conducive to a long life. Nearly all countries struggle with at least one of these aspects.

Finally, any discussion of social progress must also include whether a country's population have the freedom and opportunity to make their own choices and pursue higher education. Personal rights, personal freedom and choice, inclusiveness, and access to advanced education all contribute to the level of opportunity within a given society. This dimension of the Social Progress Index is perhaps the most controversial and most difficult to measure. Nonetheless, it is important to highlight that societies, high-income or low-income, developed or developing, still struggle to meet the moral imperative to guarantee the equality of opportunity for all citizens.

The multi-dimensional construction of the Social Progress Index should not be interpreted as a step-by-step movement toward progress from one dimension to the next. Rather, the three dimensions are interrelated and, in fact, statistically correlated. While we distinguish between these three aspects of social progress, many issues they encompass interact with one another to drive more meaningful change.

Components of Social Progress

Under each dimension are four components. Components, like dimensions, are categories of outcomes, rather than specific outcomes themselves. Each component highlights a separate aspect of the overall set of outcomes that make up a dimension, building on both academic and policy literature. For example, the Opportunity dimension includes the components Personal Rights, Personal Freedom and Choice, Inclusiveness, and Access to Advanced Education. Each of these components describes a related, but distinct aspect of what it means for a society to guarantee opportunity among its population. The Personal Rights and Access to Advanced Education components describe the extent to which individuals can pursue their own objectives to the best of their ability. Personal Freedom and Choice and Inclusiveness, on the other hand, describe the extent of limits on individuals. Together, the four components offer a conceptually coherent way of capturing how societies can empower (or limit) an individual's autonomy, freedom, and ability to progress.

The twelve components represent what we believe to be the most complete set of outcome categories given our current understanding of social progress from diverse literature and given the current availability of data. The Social Progress Imperative Advisory Board provided input into selecting the dimensions and the elaboration of the components within each dimension, along with an iterative review of relevant literature.

The framework was established in 2013, and we continue to ensure its relevance each year of publication. We consult extensively with experts across disciplines on the twelve-component structure of the Social Progress Index on an ongoing basis, ensuring it continues to capture the principal aspects of human wellbeing and that the issues measured are comprehensive and apply to all societies, regardless of their country's level of economic development, political stature, or geography.

Indicator Selection

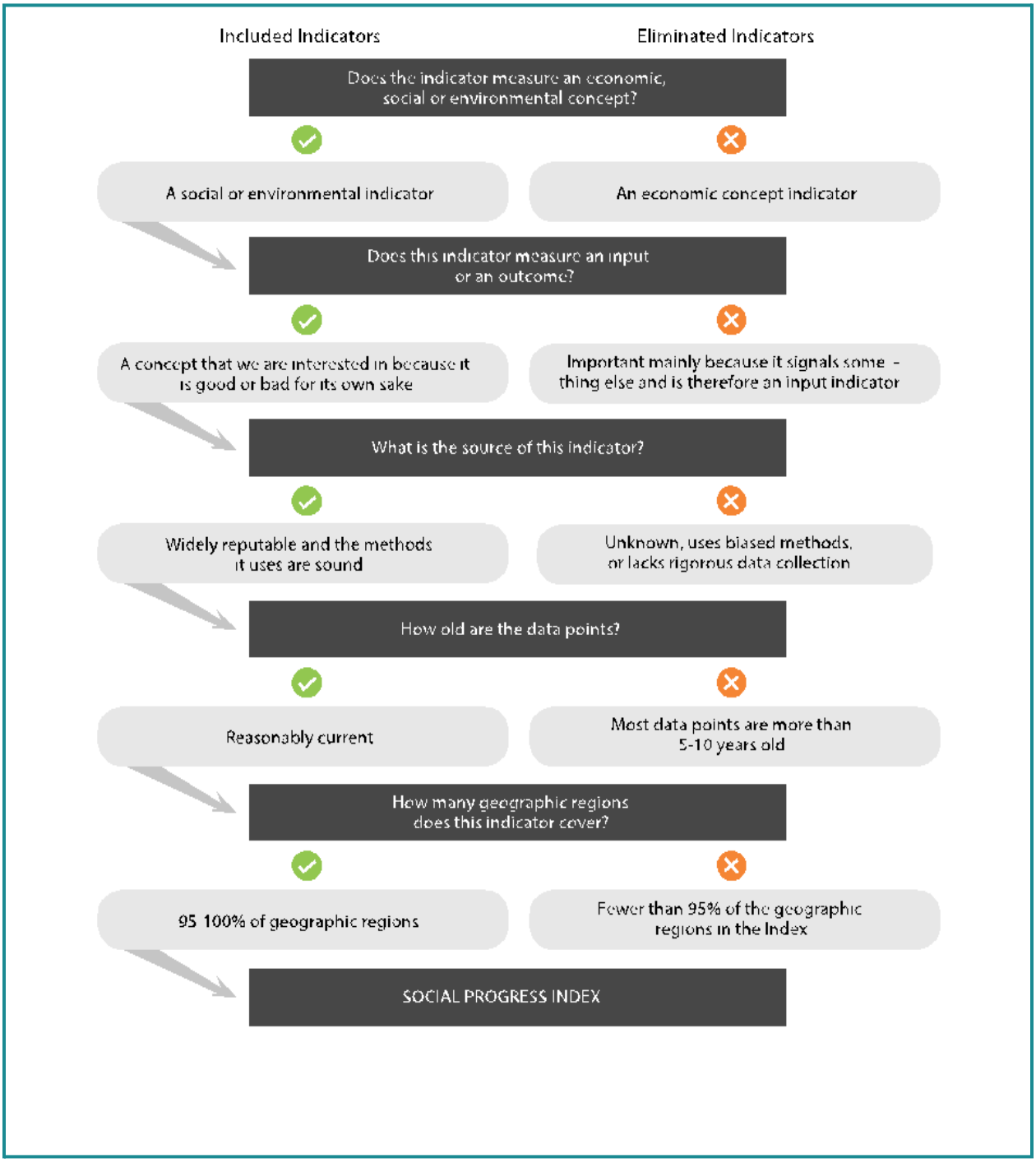
At the most granular level of the Social Progress Index framework, we identify multiple independent outcome measures – indicators – related to each component. Each set of indicators, grouped by component, defines and measures the same aspect of social progress. Depending on data availability and ongoing research into social outcomes, indicators may change with each edition of the Social Progress Index. However, the concepts captured by each set of indicators (i.e., components) remains the same. The 2022 Social Progress Index includes 60 indicators, with 4-6 indicators per component (see Figure 2.)

Figure 2 / Social Progress Index Indicator-Level Framework

We only include indicators that are measured well, with consistent methodology, by the same organization and across all (or essentially all) countries in our sample. We evaluate each indicator to ensure that the procedures used to produce the measure are sound and that it captures what it purports to capture. Data for each indicator must come from the same source to ensure consistency in measurement across countries.

Data sources range from large international institutions like the United Nations to non-governmental organizations such as Freedom House. We also include data collected via global surveys, such as Gallup's World Poll (sources are summarized in Appendix 1.) For each indicator, we evaluate the data sources available and consider tradeoffs between the quality and precision of a social indicator and the comprehensiveness of its country coverage. Figure 3 below depicts our decision tree for indicator selection. Geographic coverage tends to exclude many high-quality indicators from consideration because they only cover a subset of countries, such as OECD countries, or a particular region, such as the European Union.

Figure 3 / Indicator Selection Tree



Additionally, we factor into our decision the age of the indicators, only considering the most recent available data. Across the 169 ranked countries we have a total of 9,885 data points to calculate the Social Progress Index for 2022.[1] Most of the data are reflective of 2021 (46.78%) and 2019 (37.72%). The least recent data point is from 2013 (Acceptance of gays and lesbians for the West Bank and Gaza).

[1] The rest to the total of 10,140 observations (60 variables for 169 ranked countries) for the current year (2022), i.e. 255 observations, were imputed using regression techniques.

A final important criterion for indicator data is that they are publicly available. We strive for transparency both in terms of the data we use to inform the Social Progress Index, as well as our calculation methodology. All the raw indicator data we use to calculate the Social Progress Index are published and downloadable on our website at www.socialprogress.org.

Indicator Transformations

When comparing country-level data, we encounter issues that require us to transform the data for certain indicators. In most cases, we transform data to meet clear upper or lower boundaries set by the indicator definition. In others, we address extreme values that may skew results if left untreated. Our main two techniques are to either cap an indicator, setting a clear upper or lower boundary cut-off value, or to log an indicator. We also transform gender parity in secondary attainment to better reflect the parity between boys and girls in a more gender-neutral fashion. Lastly, we calculate a floating average for selected survey indicators to limit annual volatility.

A. Capped Indicators

We impose a top and bottom boundary on a number of indicators, listed below in Figure 4. Child mortality rate, Infectious diseases, Undernourishment, Unsafe water, sanitation and hygiene, Transportation related injuries and Premature deaths from non-communicable diseases are capped at 99th percentile (defined for 2006-2022) to limit the influence of a few significant outliers. We set a floor at 0.03 for gender parity in secondary enrollment to allow for measurement error based on the recommendations of UNESCO[2], and we impose an upper boundary on the same indicator at the observed maximum to treat regression imputations with higher values. The mobile telephone subscriptions indicator is capped at 100 subscriptions to reflect the boundary set by its unit of measurement (number of subscriptions per 100 people). The political rights indicator is set to a floor of zero in line with the indicator's definition. Similarly, discrimination against minorities is set to a floor of one. Lastly, we cap years of tertiary schooling at five years to avoid the influence of a few near-outliers on component-level performance.

Figure 4 / Capped Indicators

Indicators	Cap
Child mortality rate	155.63
Infectious diseases	61253.96
Undernourishment	49.4
Unsafe water, sanitation, and hygiene	10850.66
Transportation related injuries	3219.5
Premature deaths from non-communicable diseases	1101.36
Gender parity in secondary enrollment	0.83
Gender parity in secondary enrollment	0.03
Mobile telephone subscriptions	100
Discrimination against minorities	1

[2] UNESCO Institute for Statistics. "Global Education Digest 2010." 2010, p. 17. http://www.ungei.org/resources/files/GED_2010_EN.pdf

Political rights	0
Years of tertiary schooling	5

B. Log-transformed Indicators

Four indicators, Interpersonal violence within Personal Safety, Lead exposure within Environmental Quality, Citable documents, and Quality weighted universities within Access to Advanced Education, contain extreme values in relation to the rest of the indicator data distribution. Based on external research, we determined that these extreme values are not erroneous and should be preserved as a distinguishing characteristic of the countries they describe. As such, we transform these indicators using natural log.[3] Logging allows us to retain the unique differences between countries in performance while creating a more sensible distribution that is less extreme.

C. Calculation of parity

We transform gender parity in secondary attainment in Access to Basic Knowledge to reflect the absolute distance from 1, where 1 represents an equal number of girls and boys enrolled. While in most countries, more boys are enrolled in secondary education than girls, there are a select number of countries in which the opposite is true. We therefore use the absolute distance from 1 to acknowledge the lack of parity for both boys and girls across countries.

D. Limiting volatility of survey indicators

We transform several indicators to limit the annual volatilities of the measures. This method was applied on all indicators from the Gallup World Poll. Indicator values are calculated as floating 3-year average.

Determining the Country Sample

The 2022 Social Progress Index ranks 169 countries[4] on social progress. We have selected these countries by collecting all data available across all indicators and determining for which countries we can impute data, and for which countries we will have incomplete information to calculate a Social Progress Index score. Generally, a country cannot have more than one missing indicator per component to be included in the final Social Progress Index score rankings. In some cases, we make exceptions to this rule, particularly it pertains to Access to Basic Knowledge and Access to Advanced Education, where data are notoriously lacking. These exceptions are discussed in the next section.

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[3] Prior to transformation, we add an alpha of 1 to interpersonal violence and lead exposure. We also add alpha of 0.1 to quality weighted universities, and 0.0001 to citable documents. This ensures we can log all values within the indicator, including zeros, while maintaining nearly the same relative differences between countries.

[4] We refer to World Population Review regarding country recognition, while also taking into account the above mentioned data availability.

Alongside the 169 ranked countries, we also include in our country sample 5 'partial' countries. These countries have enough data to calculate between nine to eleven of the twelve components, but not enough data to calculate an overall Social Progress Index score. As with ranked countries, within those nine to eleven components for which enough data are available there cannot be more than one indicator missing per component.

Finally, we exclude from our original calculation sample countries with limited data, but we use the weights generated from PCA (described below) to calculate scores for these countries when possible. These countries do not have enough data to calculate at least 9 components, but 22 of them have enough data to calculate at least one component score. We include these countries in imputations prior calculation and during calculation (see below). Raw indicator data and scores for these 22 countries are included in the published dataset on our website.

In this year's edition, the 169 ranked countries include a full index score, ranks and relative performance for the West Bank and Gaza. In order to do so, we implement an approach different to other countries, since some indicator sources provide data for the West Bank and Gaza, while several others provide data separately for the West Bank and for Gaza. In these cases, we calculate a population weighted average to obtain one data point for the whole entity, which is then used in the overall index calculation.

Index Calculation

There are five core steps for calculating the Social Progress Index. We first address missing values, then invert and standardize indicators so that they are comparable in scale. We then use Principal Component Analysis (PCA) to aggregate indicators into a component score. Finally, we calculate dimension and overall Social Progress Index scores by averaging components and dimensions, respectively. Each of these steps is described in more detail below.

A. Missing Values

We ensure that all indicators included in the Social Progress Index are missing as few observations as possible to avoid jeopardizing the statistical quality of the index. Missing values can stem from lack of coverage by the data source, incomplete reporting by the country to international organizations, or outdated data whose publication date is older than 2008. In cases where an indicator is missing a country data point, we assess our imputation methodology both before and during index calculation. Imputations used prior to calculation are included and marked in the published dataset on our website; imputations generated during calculation are not.

Imputations prior to calculation:

We impute missing data prior to calculation under two scenarii: when a country lacks some, not all, indicator data within the examined time period; and when there are gaps in the years of data for indicators. These pre-calculation imputations are imperative to be able to include key countries in Social Progress Index rankings. We mark and publish these values in our dataset available for download, as they rely either on historical data from the same source or supplemental research.

In the first case, we carry back a future value for values used to calculate the Social Progress Indexes for the years 2011-2021 in order to maintain a consistent sample. Similarly we carry forward a historical value in those cases where historical data is available. In most cases we only carry forward or back a value for the maximum of 5 consecutive years. In cases where more data points are missing, we rely on imputations during calculations (see below).

Under the second scenario of pre-calculation imputations, we impute gaps between years by applying linear interpolation. We do so to ensure smooth year-to-year estimates based on current and historical data and by assuming linear change. In cases where there were data in the examined years, but not for all years aligned with 2011 through 2022 Social Progress Indexes, we rely on data older than 2010 (if available) to create linear estimations for the years in between. This is a necessary step in order to ensure that our calculations of social progress over time do not exaggerate annual improvement or decline merely due to gaps in the data points themselves.

Imputations during calculation:

After constructing the dataset with pre-calculation imputations as noted above, we assess the number of indicators each country is missing within a component. Using regression imputation, we generally impute data only for those countries for which there is no more than one missing data point per component in each of the twelve components (considered 'ranked countries') and for countries that have no more than one missing indicator data point in nine to eleven components (considered 'partial countries'). We use our country sample data of ranked and partial countries (including both current and historical Social Progress Index years, i.e. 2011-2022) to regress each indicator on the other indicators within a component. By constraining the regression to within-component indicators, we can preserve the signal that the indicator provides to PCA.

In the past, we have strictly adhered to only one missing indicator per component and continue to stress the importance of this aspect of our methodology. However, we allowed for an exception to this rule particularly within the Access to Basic Knowledge component where data availability poses a significant limitation. Therefore, for two indicators within this component we applied a pre-imputation regression methodology: we used indicators not directly included in the index which had a more complete global coverage and were highly correlated with the indicators we needed to predict. We used the Institute for Health Metrics and Evaluation indicators *education in years per capita* (total, males, females) and UNDP indicator *mean years of schooling* (total) to predict total, males', and females' secondary attainment for approximately 20 countries with missing data. The latter two variables were then used to calculate the educational parity indicator. The two pre-imputed indicators (secondary attainment and gender parity in secondary attainment) were then used again in the standard regression imputations described above.

We review each imputation to ensure accuracy. In some cases, we combine the regression trend with observed data. For example, when the last observed value for a country is in 2012, we have ten missing values that we impute by regression predictions. If the predicted data do not match the observed values, we take the regression trend from the predictions and apply it on the observed data. If there are no observed values for a country, we apply standard regression imputations as described above. In cases where these imputations do not match expectations or qualitative research, we use regional cohort estimates or carry values consistently across time to minimize bias. For example, for many Middle Eastern countries where Gallup does not ask its survey question on gays and lesbians due to cultural sensitivities, we consider assessments of

countries set by the Human Dignity Trust based on LGBT criminalization laws.[5] If a country is not assessed by the survey and criminalization includes the death penalty, we assign the country zero value for the indicator.

The estimation of missing values is necessary prior to undertaking PCA, which requires a complete dataset for the results to be sound. We do not impute values for countries that do not meet the criteria of ranked or partial countries noted above; these countries are excluded from the main calculation process by which PCA weights are determined.

B. Standardization

We convert indicators to the same scale in a three-step process. First, we set best- and worst-case scenarii to provide concrete boundaries on both ends of the scale that are based on theoretical or historical values. We then invert indicators when increasing values reflect lower social progress. Finally, we standardize the indicators into z-scores prior to applying PCA.

While the best- and worst-case scenarii are defined at the indicator level, we strive to follow the same method for similar metrics. For indicators with pre-defined boundaries (all indicators from Varieties of Democracy, summary exposure values etc.) we use these to establish the upper and lower scenarii. We use natural boundaries for indicators that have a natural best-case scenario – such as maternal mortality, mobile phone subscriptions, primary school enrollment etc. For indicators that do not have a clear worst case or where the probability of reaching an upper boundary is extremely unlikely (e.g., child mortality, for which the theoretical worst case would be that every child dies before the age of five), we use a boundary based on the worst recorded performance five years prior to the first year of measurement (i.e., five years prior to the 2011 Social Progress Index). Best- and worst-case data values are included with the country dataset when PCA is applied. See Appendix B for the specific values used for each indicator's bounds.

Once we establish a full dataset with indicator values for 2011 through 2022 and the best- and worst-case scenarii, we invert indicators for which a higher value denotes lower social progress. There are 23 inverted indicators in the 2022 Social Progress Index. These include: Undernourishment, Maternal mortality rate, Child mortality rate, Child stunting, Diet low in fruits and vegetables, Infectious diseases, Unsafe water, sanitation and hygiene, Household air pollution, Dissatisfaction with housing affordability, Interpersonal violence, Money stolen, Transportation related injuries, Intimate partner violence, Population with no schooling, Gender parity in secondary attainment, Premature deaths from non-communicable diseases, Outdoor air pollution, Lead exposure, PM 2.5, Vulnerable employment, Early marriage, Young people not in education, employment or training, and Discrimination and violence against minorities.

As a final step prior to applying PCA, we standardize the indicators into z-scores. Doing so produces scores with a mean of 0 and standard deviation of 1, ensuring the comparability of the indicators across the dataset in measurement.

C. Component Scores

[5] Map of countries that criminalize LGBT people can be found here: https://www.humandignitytrust.org/lgbt-the-law/map-of-criminalisation/

To calculate component scores, we aggregate the set of indicators within each component into a factor using PCA and all twelve years of data.[6] PCA combines indicators in a way that captures the maximum amount of variance in the data while reducing redundancy between indicators. It essentially assigns each indicator a weight, a method we select over equal weighting to ensure that indicators are meaningfully contributing to a component score, while accounting for similarities between them.

Within many of the twelve components, PCA generates similar weights for the indicators we include because we ensure a fair level of correlation between them (e.g., not too high or low a correlation) prior to finalizing our framework. However, for those cases in which indicators are less correlated with other indicators within their component, we consider PCA a good statistical approach for determining these indicators' contribution to the component scores while remaining objective.

The formula below reflects indicator aggregation into a principal component, where c=Social Progress Index component and i=indicator.

Formula 1

Our choice of PCA as the basis for aggregation at the component level was also influenced by the quality and quantity of data available on social progress. For PCA to be valid, each indicator must be relatively free of measurement error (Dunteman, 1989). Thus, it should precisely measure what it was intended to measure and do so consistently across countries. Our design principles and the data we use fulfill this requirement.

To convert each principal component into a component score on a scale of 0 to 100, we use a simple min-max formula, where X=component value and j=country.

Formula 2

As noted in the prior section, only countries that are ranked or qualify as 'partial' are included in the country sample that determines PCA-generated weights. For countries that do not have enough data to calculate at least nine components, we use the weights generated by the original country sample to calculate component scores when possible. If a country outside the ranked and partial country sample has enough data to calculate all four components within a dimension, we proceed to calculate dimension scores as well.

D. Dimension Scores

Each dimension is the arithmetic average of the four components that make up that dimension. Countries that do not have scores in all four components of a given dimension do not have a dimension score. The formula for calculating a dimension score is below, where d=dimension and c=component.

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[6] Each statistical program has several ways to calculate PCA, leading to slight differences in estimations depending on both the command and program used. We use the following command in Stata: *factor [standardized indicator names], factor(1) pcf*

Formula 3

E. Index Scores

The overall Social Progress Index score is calculated as the arithmetic average of the three dimensions. Countries that do not have scores in all three dimensions do not have a Social Progress Index score. The formula for calculating a Social Progress Index score is below, where d=dimension.

Formula 4

We provide the mean, standard deviation, minimum, and maximum values of the calculated component, dimension, and Social Progress Index scores in Appendix D. In establishing country rankings for overall performance, we divide country scores into six tiers based on hierarchical clustering.

F. World Score Calculation

In order to provide the most accurate assessment of world performance on social progress, we account for countries' populations as well as the statistical interaction between indicators. Therefore, to calculate the world Social Progress Index score, we first aggregate indicators into population-weighted values using data of all ranked and partial countries. We then apply the PCA weights generated by the original ranked and partial country sample to derive component scores and proceed as noted above to calculate dimension and the overall Social Progress Index scores. It is important to note that this method is different than calculating population-weighted scores, and in essence treats the world as a country.

Tiers

In previous editions of the index, hierarchical cluster analysis was used to calculate the tiers (for each year separately). For the 2022 Social Progress Index we applied a slightly different approach where we define deciles in the Social Progress Index scores across the 12 years. We then assign deciles into tiers as per the following: Tier 1: first decile, Tier 2: second and third decile, Tier 3: fourth and fifth decile, Tier 4: sixth and seventh decile, Tier 5: eighth and ninth decile, Tier 6: tenth decile. This method ensures comparability of tiers across years.

Assessing Countries' Relative Strengths and Weaknesses

The component, dimension, and overall Social Progress Index scores are scaled from 0 to 100 to provide an intuitive scale for the interpretation of absolute performance, benchmarking a country against the best and worst-possible scenarios in terms of social progress performance. However, it is also useful to consider relative performance, comparing the level of social progress among countries of similar levels of economic development. For example, a lower-income country may have a low score on a certain component but could greatly exceed typical scores for countries with similar GDP per capita incomes. Conversely, a high-income country may have a high absolute score on a component, but still fall short of what is typical for comparably wealthy countries. For this reason, we have developed a methodology to present a country's strengths

and weaknesses on a relative basis, comparing a country's performance to that of its economic peers. Results of this analysis are the basis of our country scorecards, which can be found on our website.

We define the group of a country's economic peers as the 15 countries closest in GDP PPP per capita. Standard groupings of countries, such as the World Bank's country income classifications, are not appropriate for relative comparison of countries for two reasons. First, the groupings are too large, representing excessively wide ranges of social performance and therefore few relative strengths and weaknesses. Second, using these groups, countries at the top or bottom of a group may appear to have a misleadingly large number of strengths or weaknesses simply because the group the country is being compared to is at a much lower or higher level of economic development.

Each country's GDP per capita is compared to every other country for which there is full Index data, and the 15 countries with the smallest difference on an absolute value basis are selected for the comparator group. We have found that groupings larger than 15 resulted in a wider range of typical scores and showed too few relative strengths and weakness, while smaller groupings become too sensitive to outliers. Additionally, to reduce the influence of year-to-year fluctuations in GDP data, we use a four-year average (2018-2021).

Once the group of comparator countries is established, the country's performance is compared to the median performance of countries in the group. The median is used rather than the mean to minimize the influence of outliers. If the country's score is greater than (or less than) the average absolute deviation from the median of the comparator group, it is considered a strength (or weakness). Scores that are within one average absolute deviation are within the range of expected scores and are considered neither strengths nor weaknesses. A floor is established so the thresholds are no less than those for poorer countries and the minimum distance from median to strength or median to weakness is 1 point.

We define comparator groups for all countries, regardless of whether they have complete Social Progress Index data or sufficient data for only some indicators, components, and dimensions. However, to maintain stability in comparisons, only countries with full data across all components of the index are included in comparator groups for other countries. Among ranked and partial countries, we do not calculate strengths and weaknesses for Cuba, Eritrea, North Korea, South Sudan, Syria, Taiwan, Venezuela, and Yemen due to missing GDP data.

Structural Integrity of the Social Progress Index

Throughout the indicator assessment and calculation process, we conduct statistical tests to ensure the structural integrity of the Social Progress Index. Our goal is that no single indicator majorly affects a country's component, dimension, or overall score, and that the indicators within each component are statistically related and compatible. To achieve this, we look at correlations between indicators and between indicators and aggregated scores, Cronbach's alpha, and the Kaiser-Meyer-Olkin measure of sampling adequacy.

In understanding the correlations between indicators, we strive for indicators within components to show correlations of between r=0.25 to r=0.92 (absolute values). Indicators with correlations below 0.25 generally show little conceptual and statistical relation to other indicators. Likewise, if two indicators are too highly correlated (i.e., r>0.92), we find that the indicators overlap too much

in concept and become statistically redundant, which would place too much weight on the concepts they are capturing within the component; we generally remove one of these indicators as well. In the 2022 SPI framework, correlation coefficients range from 0.17 to 0.88. However, all correlations are statistically significant at the 1% level.

To evaluate the fit between indicators within each component, we calculate Cronbach's alpha after we transform the indicators and impute missing values. Cronbach's alpha provides a measure of internal consistency across indicators. An applied practitioner's rule of thumb is that the alpha value should be above 0.7 for any valid grouping of variables (Bland and Altman, 1997). As shown in Figure 5, all twelve components meet the 0.7.

Figure 5 / Cronbach's Alpha for Each Component

		Cronbach's Alpha
Basic Human Needs	Nutrition and Basic Medical Care	0.94
	Water and Sanitation	0.90
	Shelter	0.83
	Personal Safety	0.76
Foundations of Wellbeing	Access to Basic Knowledge	0.90
	Access to Information and Communications	0.75
	Health and Wellness	0.90
	Environmental Quality	0.76
Opportunity	Personal Rights	0.94
	Personal Freedom and Choice	0.82
	Inclusiveness	0.89
	Access to Advanced Education	0.86

Cronbach's alpha is a good preliminary screen for conceptual fit; however, it does not provide a direct measure of the goodness of fit of a factor analysis (Manly, 2004.) Rather, we assess goodness of fit using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. Generally, KMO scores should be above 0.5. In our data, the mean KMO score is above 0.5 for all components, suggesting that the grouping of indicators chosen for the components of the Social Progress Index provides a good measure of the underlying construct.

Figure 6 / KMO for Each Component

		Mean KMO
Basic Human Needs	Nutrition and Basic Medical Care	0.89
	Water and Sanitation	0.83
	Shelter	0.74
	Personal Safety	0.72
Foundations of Wellbeing	Access to Basic Knowledge	0.84
	Access to Information and Communications	0.69
	Health and Wellness	0.78
	Environmental Quality	0.74
Opportunity	Personal Rights	0.90
	Personal Freedom and Choice	0.77
	Inclusiveness	0.83

	Access to Advanced Education	0.82

Year-to-Year Results Comparison

Each year we conduct a comprehensive review of all indicators included in the Social Progress Index framework to check data updates (which frequently include retroactive revisions) and whether new indicators have been published that are well-suited to describing social progress concepts. Many data sources that we use revise their data collection or estimation methods, which impacts not just newly published data but also previously published data. The Social Progress Index undergoes the same process for the sake of comparability. Using the 2022 Social Progress Index framework and methodology, we provide comparable historical data for eleven additional years of the Social Progress Index, from 2011 to 2021. Results for the years 2011 to 2021 are therefore different from results that we have previously published.

It is important to note that while we establish a twelve-year time-series of social progress from 2011 to 2022, not all indicator data are updated on an annual basis. Therefore, change over time is best interpreted over the entire span of these eleven years rather than focusing on annual change.

The underlying framework (components and dimensions) of the Social Progress Index has remained the same as in 2021. However, we added several new indicators and removed a few due to their discontinuation or the lack of updated data. We also changed the sources and the measurement of a handful of indicators. Additionally, of the 60 indicators, majority were retroactively revised by the data sources. We list indicator changes by component below.

For several indicators we have changed the metric of measurement from deaths to Disability-adjusted life years (DALYs). DALYs represent the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs). DALYs are also defined as years of healthy life lost. It is a universal metric that allows researchers and policymakers to compare very different populations and health conditions across time. One DALY equals one lost year of healthy life. DALYs allow us to estimate the total number of years lost due to specific causes and risk factors at the country, regional, and global levels. This change was applied on the following indicators:

- Infectious diseases
- Unsafe water, sanitation and hygiene
- Household air pollution
- Interpersonal violence
- Transportation related injuries
- Outdoor air pollution
- Lead exposure

Nutrition and Basic Medical Care: The composition of the component remained mostly unchanged, with one new indicator on measuring Diet low in fruits and vegetables from the Institute of Health Metrics and Evaluation. The measurement of Infectious diseases indicator now uses the metric of Disability-adjusted life years instead of deaths.

Water and Sanitation: The composition of the component remained mostly unchanged with one new indicator on measuring the Satisfaction with water quality from the Gallup World Poll. The

measurement of Unsafe water, sanitation, and hygiene indicator now uses the metric of Disability-adjusted life years instead of deaths.

Shelter: The composition of the component remained unchanged. The measurement of Household air pollution indicator now uses the metric of Disability-adjusted life years instead of deaths.

Personal Safety: The composition of the component changed with two new indicators on Intimate partner violence from the Institute of Health Metrics and Evaluation and Money stolen from the Gallup World Poll. The measurement of Interpersonal violence and Transportation related injuries indicators now uses the metric of Disability-adjusted life years instead of deaths.

Access to Basic Knowledge: The composition of the component remained unchanged. The indicator on No schooling now refers to the whole population, while in previous editions it was only relating to women.

Access to Information and Communications:
The composition of the component changed with one new indicator on Alternative sources of information from the Varieties of Democracy while the Media censorship indicator was removed to eliminate duplicities.

Health and Wellness: The composition of the component remained mostly unchanged with one new indicator on measuring the Satisfaction with availability of quality healthcare from the Gallup World Poll.

Environmental Quality: The composition of the component remained unchanged. The measurement of Lead exposure and Outdoor air pollution indicators now uses the metric of Disability-adjusted life years instead of deaths.

Personal Rights: The composition of the component changed with two new indicators on Freedom of peaceful assembly and Freedom of discussion from the Varieties of Democracy while the Freedom of expression indicator was removed to eliminate duplicities.

Personal Freedom and Choice: The composition of the component remained mostly unchanged with one new indicator on measuring the Freedom of domestic movement from the Varieties of Democracy.

Inclusiveness: The composition of the component changed with four new indicators – Equal protection index, Equal access index, Power distributed by sexual orientation and Access to public services distributed by social group from the Varieties of Democracy. Three indicators – Equality of political power by gender, Equality of political power by socioeconomic position and Equality of political power by social group – were removed to eliminate duplicities.

Access to Advanced Education: The composition of the component remained unchanged.

Limitations

The Social Progress Index measures how countries at the national level perform on a certain set of indicators that meet the standards and concepts represented by the Social Progress Index

framework. It is an important tool that is used to compare countries and assess both absolute and relative levels of performance on social progress to find best practices and to target areas which need improvement or from which other countries can learn. While the Social Progress Index framework captures the multi-dimensional concepts underlying social progress, we are limited in how we measure these concepts by the data available from public sources. Country performance is dependent upon the data published by other sources, and we defer to these sources to respond to country inquiries about the different aspects of social progress (a full list of sources is included in Appendix A).

We also recognize that the indicators in many of the topics we measure are not perfect. We strive to ensure each indicator meets our standards of quality; however, some issues are much more complex than the numbers we use to communicate them. For example, equality of political power by gender (in Inclusiveness) must consider laws that are in place that require female representation in government, as well as account for places where women might not necessarily have the voice they are supposedly provided under these laws. We view these indicators as a starting point for measurement and conversation, and we continue to refine the index each year to accommodate more recent data with greater geographic coverage that cover important aspects of social progress still not captured by the current indicators available, including violence against women, national environmental degradation, freshwater withdrawals, and more.

Furthermore, the Social Progress Index provides a view into how a country performs on average, which helps inform the many policies and investments that affect social progress at the national level. However, it is only a starting point: aggregate data can obscure substantial regional and state differences in performance that are equally important to a country's policy considerations, especially in geographically large regions. For this reason, we have established several initiatives across Latin America, Europe, South Asia, and North America to explore social progress at a disaggregated regional level. We apply the same Social Progress Index framework to more localized geographic regions, contextualizing indicators and concepts with the input of local stakeholders. These initiatives help further drive action from the broader issues highlighted in the global Social Progress Index.

Conclusion

The Social Progress Index provides a benchmark by which countries can compare themselves to others, and can identify specific areas of current strength or weakness. Additionally, scoring on a 0–100 scale gives countries a realistic benchmark rather than an abstract measure. This scale allows us to track absolute, not just relative, performance of countries over time on each component, dimension, and the overall model.

The 2022 Social Progress Index results are a starting point for many different avenues of research into the ways a country is successful or not and whether conclusions can be drawn about the overall effect of social progress on economic growth. Furthermore, while disaggregated scores provide insight into the behavior of the different components that contribute to a country's performance, we believe disaggregation within a country (e.g., regional or state) also provides important insight and actionable information to those seeking to increase social progress. We continue to test our process and methodology at the regional and city level, replicating the steps outlined in this report to produce meaningful results in different areas of the world.

Appendix A: Indicator Definitions and Sources

All data used to calculate the 2022 Social Progress Index and relevant analyses are the most recent available as of July 1, 2022.

Component	Indicator name	Definition	Source	Link
BASIC HUMAN NEEDS				
Nutrition and Basic Medical Care	Infectious diseases	Age-standardized Disability-Adjusted Life Years (DALYs) rate caused by HIV/AIDS, tuberculosis, diarrhea, intestinal infections, respiratory infections, otitis media, meningitis, encephalitis, diptheria, whooping cough, tetanus, measles, varicella, herpes zoster, malaria, Chagas disease, leishmaniasis, typanosomiasis, schistosomiasis, cysticercosis, cycstic echinococcosis, lymphatic filariasis, onchocerciasis, trachoma, dengue, yellow feber, rabies, intestinal nematode infections, food-borne trematodiases, leprosy, ebola, zika virus, guinea worm disease, sexually transmitted diseases (excluding HIV), hepatitis, and other infectious diseases per 100,000 people.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/gbd-results-tool
	Child mortality rate	Probability of dying between birth and exactly 5 years of age, expressed per 1,000 live births.	UN Inter-agency Group for Child Mortality Estimation	http://www.childmortality.org
	Child stunting	Risk-weighted prevalence of stunting in children under 5 as measured by the summary exposure value (SEV) for child stunting.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/gbd-results-tool
	Maternal mortality rate	Maternal deaths per 100,000 livebirths in women aged 10-54 years.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/record/ihme-data/gbd-2017-health-related-sdgs-1990-2030
	Undernourishment	The prevalence of undernourishment expresses the probability that a randomly selected individual from the population consumes an amount of calories that is insufficient to cover her/his energy requirement for an active and healthy life. The indicator is computed by comparing a probability distribution of habitual daily dietary energy consumption with a threshold level called the minimum dietary energy requirement. Both are based on the notion of an average individual in the reference population.	Food and Agriculture Organization of the United Nations	http://www.fao.org/economic/ess/ess-fs/ess-fadata/en/
	Diet low in fruits and vegetables	Risk-weighted, age-standardized prevalence of nutrition low in fruits and vegetables as measured by the summary exposure value (SEV).	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/gbd-results-tool

Component	Indicator name	Definition	Source	Link
Water and Sanitation	Access to improved sanitation	Proportion of population with access to improved toilet types as defined by the Joint Monitoring Program (JMP).	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/record/global-burden-disease-study-2019-gbd-2019-covariates-1980-2019
	Access to improved water source	Proportion of population with access to improved water sources as defined by the Joint Monitoring Program (JMP).	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/record/global-burden-disease-study-2019-gbd-2019-covariates-1980-2019
	Unsafe water, sanitation and hygiene	Age-standardized Disability-Adjusted Life Years (DALYs) rate attributable to unsafe water, sanitation and hygiene per 100,000 people.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/gbd-results-tool
	Satisfaction with water quality	The proportion of respondents answering 'satisfied' to the question, "In the city or area where you live, are you satisfied or dissatisfied with the quality of water?"	Gallup World Poll	https://ga.gallup.com/
Shelter	Household air pollution	Age-standardized Disability-Adjusted Life Years (DALYs) rate caused by household air pollution from solid fuels per 100,000 people. Household air pollution includes exposure to particulate matter less than 2.5 microns in diameter (PM2.5) due to the use of solid fuels for cooking, including coal, charcoal, wood, agricultural residue, and animal dung.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/gbd-results-tool
	Dissatisfaction with housing affordability	The proportion of respondents answering 'dissatisfied' to the question, “In the city or area where you live, are you satisfied or dissatisfied with the availability of good, affordable housing?”	Gallup World Poll	https://ga.gallup.com/
	Access to electricity	The percentage of the population with access to electricity.	SE4ALL Global Tracking Framework (World Bank, International Energy Agency, and the Energy Sector Management Assistance Program)	https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS
	Usage of clean fuels and technology for cooking	The proportion of population primarily using clean cooking fuels and technologies for cooking.	World Health Organization	https://apps.who.int/gho/data/node.main.SDGFUELS712?lang=en
Personal Safety	Interpersonal violence	Age-standardized Disability-Adjusted Life Years (DALYs) per 100,000 people from interpersonal violence. Interpersonal violence is defined as death or disability from intentional use of physical force or power,	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/gbd-results-tool

Component	Indicator name	Definition	Source	Link
		threatened or actual, from another person or group not including military or police forces.		
	Transportation related injuries	Age-standardized Disability-Adjusted Life Years (DALYs) per 100,000 people due to injuries related to transportation. These injuries include road injuries (death or disability due to unintentional interaction with an automobile, motorcycle, pedal cycle, or other vehicles) as well as other transport injuries.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/gbd-results-tool
	Political killings and torture	Physical violence index is based on indicators that reflect violence committed by government agents and that are not directly referring to elections.	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html
	Intimate partner violence	Age-standardized prevalence of ever-partnered women aged 15 years and older who experienced physical or sexual violence by a current or former intimate partner in the last 12 months (%).	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/record/ihme-data/gbd-2017-health-related-sdgs-1990-2030
	Money stolen	The proportion of respondents answering 'yes' to the question, "Within the last 12 months, have you had money or property stolen from you or another household member?"	Gallup World Poll	https://ga.gallup.com/
FOUNDATIONS OF WELLBEING				
Access to Basic Knowledge	Population with no schooling	Proportion of population (age-standardized) with no schooling.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/record/global-burden-disease-study-2019-gbd-2019-covariates-1980-2019
	Equal access to quality education	Country experts' aggregated evaluation of the question, "To what extent is high quality basic education guaranteed to all, sufficient to enable them to exercise their basic rights as adult citizens?"	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html
	Primary school enrollment	Total number of students of official primary school age who are enrolled in any level of education, expressed as a percentage of the total population of official primary school age. Statistic is termed 'total net primary enrollment rate.'	UN Educational, Scientific, and Cultural Organization Institute for Statistics	http://data.uis.unesco.org/
	Secondary school attainment	Population with at least some secondary education (% ages 25 and older)	United Nations Development Programme (UNDP) Human Development Data	http://hdr.undp.org/en/data
	Gender parity in secondary attainment	The absolute deviation from parity (=1) in secondary education attainment of women and men.	United Nations Development Programme	http://hdr.undp.org/en/data

Component	Indicator name	Definition	Source	Link
Access to Information and Communications	Access to online governance	The availability of e-participation tools on national government portal for of the following uses: e-information – provision of information on the Internet; e-consultation – organizing public consultations online; and e-decision-making – involving citizens directly in decision processes. E-participation is defined as the process of engaging citizens through ICTs in policy, decision-making, and service design and delivery in order to make it participatory, inclusive, and deliberative.	(UNDP) Human Development Data UN Department of Economic and Social Affairs E-Government Survey	https://publicadministration.un.org/egovkb/en-us/Data-Center
	Internet users	The estimated number of Internet users out of the total population, using the Internet from any device (including mobile phones) in the last 12 months.	International Telecommunications Union	http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx
	Mobile telephone subscriptions	Subscriptions to a public mobile telephone service using cellular technology, including the number of pre-paid SIM cards active during the past three months, expressed as the number of mobile telephone subscriptions per 100 inhabitants.	International Telecommunications Union	http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx
	Alternative sources of information index	Country experts' aggregated evaluation of the questions: To what extent is the media (a) un-biased in their coverage or lack of coverage of the opposition, (b) allowed to be critical of the regime, and (c) representative of a wide array of political perspectives?	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html
Health and Wellness	Life expectancy at 60	The average number of years that a person of 60 to 64 years of age could expect to live, if he or she were to pass through life exposed to the sex- and age-specific death rates prevailing at the time of his or her 60 years, for a specific year, in a given country, territory, or geographic area.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/gbd-results-tool
	Premature deaths from non-communicable diseases	Mortality rate due to cardiovascular diseases, cancers, diabetes, and chronic respiratory diseases among populations aged 30–70 years.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/record/ihme-data/gbd-2017-health-related-sdgs-1990-2030
	Equal access to quality healthcare	Country experts' aggregated evaluation of the question, "To what extent is high quality basic healthcare guaranteed to all, sufficient to enable them to exercise their basic political rights as adult citizens?"	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html

Component	Indicator name	Definition	Source	Link
	Access to essential health services	The universal health coverage (UHC) measures the coverage of 9 tracer interventions and risk-standardized death rates from 32 causes amenable to personal healthcare, including vaccine-preventable diseases (e.g., diphtheria, tetanus, measles), respiratory infections, cancer (breast, cervical, uterine, testicular), heart diseases, diabetes, kidney disease), and the adverse effects of medical treatment.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/record/global-burden-disease-study-2019-gbd-2019-covariates-1980-2019
	Satisfaction with availability of quality healthcare	The proportion of respondents answering 'satisfied' to the question, In the city or area where you live, are you satisfied or dissatisfied with the availability of quality healthcare?	Gallup World Poll	https://ga.gallup.com/
Environmental Quality	Outdoor air pollution	Age-standardized Disability-Adjusted Life Years (DALYs) per 100,000 people resulting from ambient particulate matter pollution, including emissions from industrial activity, households, cars and trucks.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/gbd-results-tool
	Lead exposure	Age-standardized Disability-Adjusted Life Years (DALYs) per 100,000 people attributable to lead exposure. Lead exposure is defined as acute exposure, measured by micrograms of lead per decilitre of blood, and chronic exposure, measured by micrograms of lead per gram of bone.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/gbd-results-tool
	Particulate matter pollution	Population-weighted mean levels of annual exposure to suspended particles smaller than 2.5 microns in aerodynamic diameter (PM2.5), which are capable of penetrating deep into the respiratory tract and causing severe health damage.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/record/global-burden-disease-study-2019-gbd-2019-covariates-1980-2019
	Species protection	An index of how well a country's terrestrial protected areas overlap with the ranges of its vertebrate, invertebrate, and plant species. The Species Protection Index is calculated using remote sensing data, global biodiversity informatics, and integrative models to map suitable habitat for over 30,000 terrestrial species at high resolutions. A score of 100 indicates full coverage of all species' ranges by a country's protected areas, and a score of 0 indicates no overlap.	Environmental Performance Index Map of Life	https://epi.yale.edu/ https://mol.org/indicators/
OPPORTUNITY				

Component	Indicator name	Definition	Source	Link
Personal Rights	Access to justice	Country experts' aggregated evaluation of the question, "Do citizens enjoy secure and effective access to justice?"	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html
	Freedom of religion	Country experts' aggregated evaluation of the question, "Is there freedom of religion?"	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html
	Political rights	An evaluation of three subcategories of political rights: electoral process, political pluralism and participation, and functioning of government on a scale from 0 (no political rights) to 40 (full political rights). Some countries and territories score below zero on the questions used to compose the indicator.	Freedom House	https://freedomhouse.org/report-types/freedom-world
	Property rights for women	Country experts' aggregated evaluation of the question, "Do women enjoy the right to private property?"	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html
	Freedom of peaceful assembly	Country experts' aggregated evaluation of the question, "To what extent do state authorities respect and protect the right of peaceful assembly?"	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html
	Freedom of discussion	Country experts' aggregated evaluation of the question, "Are citizens able to openly discuss political issues in private homes and in public spaces?"	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html
Personal Freedom and Choice	Satisfied demand for contraception	The percentage of total demand for family planning among married or in-union women aged 15 to 49 that is satisfied with modern methods.	United Nations Population Division	http://www.un.org/en/development/desa/population/theme/family-planning/cp_model.shtml
	Perception of corruption	The perceived level of public sector corruption based on expert opinion, measured on a scale from 0 (highly corrupt) to 100 (very clean).	Transparency International	www.transparency.org/cpi
	Early marriage	The percentage of women aged 15-19 years who are married or in-union.	United Nations Population Division	https://www.un.org/en/development/desa/population/theme/marriage-unions/marriage_estimates.asp
	Young people not in education, employment or training	The proportion of youth who are not in employment and not in education or training. Youth are defined as persons between the ages of 15 and 24 years. The series is part of the ILO modelled estimates.	International Labor Organization	https://ilostat.ilo.org/data/
	Vulnerable employment	Contributing family workers and own-account workers as a percentage of total employment.	International Labor Organization/World Bank	https://data.worldbank.org/indicator/SL.EMP.VULN.ZS
	Freedom of domestic movement	Country experts' aggregated evaluation of the question, "Do citizens enjoy freedom of movement and residence?"	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html

Component	Indicator name	Definition	Source	Link
Inclusiveness	Equal protection index	Country experts' aggregated evaluation of the question, "How equal is the protection of rights and freedoms across social groups by the state?"	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html
	Equal access index	Country experts' aggregated evaluation of the question, "How equal is access to power?"	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html
	Power distributed by sexual orientation	Country experts' aggregated evaluation of the question, "To what extent is political power distributed according to sexual orientation?"	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html
	Access to public services distributed by social group	Country experts' aggregated evaluation of the question, "Are basic public services, such as order and security, primary education, clean water, and healthcare, distributed equally across social groups?"	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html
	Discrimination and violence against minorities	Group Grievance indicator: discrimination, powerlessness, ethnic violence, communal violence, sectarian violence, and religious violence.	Fund for Peace Fragile States Index	https://fragilestatesindex.org/
	Acceptance of gays and lesbians	The proportion of respondents answering yes to the question, “Is the city or area where you live a good place or not a good place to live for gay or lesbian people?”	Gallup World Poll	https://ga.gallup.com/
Access to Advanced Education	Citable documents	Citable documents - articles, reviews and conference papers - per 1,000 population.	Scimago Journal & Country Rank	https://www.scimagojr.com/countryrank.php
	Academic freedom	Country experts' aggregated evaluation of the question, "To what extent is academic freedom respected?"	Varieties of Democracy (V-Dem), Dataset Version 12	https://v-dem.net/vdemds.html
	Women with advanced education	Proportion of females (age-standardized) with 12–18 years of education.	Institute for Health Metrics and Evaluation	http://ghdx.healthdata.org/record/global-burden-disease-study-2019-gbd-2019-covariates-1980-2019
	Expected years of tertiary schooling	Number of years a person of tertiary school entrance age can expect to spend within tertiary education. For a child of a certain age a, the school life expectancy is calculated as the sum of the age specific enrollment rates for the levels of education specified. The part of the enrolment that is not distributed by age is divided by the school-age population for the level of education they are enrolled in, and multiplied by the duration of that level of education. The result is then added to the sum of the age-specific enrolment rates. The indicator seeks to show the overall level of development of an educational system in terms of the average number of	UN Educational, Scientific, and Cultural Organization Institute for Statistics	http://data.uis.unesco.org/

Component	Indicator name	Definition	Source	Link
		years of schooling that the education system offers to the eligible population, including those who never enter school.		
	Quality weighted universities	The number of universities in a country weighted by the quality of universities, measured by university rankings on any of the three most widely used international assessments. Universities in the top 400 on any list are given double weight. Not ranked universities are given 5% weight of the top ranked universities.	Times Higher Education World University Rankings, QS World University Rankings, and Academic Ranking of World Universities; Varieties of Democracy (V-Dem), Dataset Version 12; SPI calculations	https://www.timeshighereducation.com/world-university-rankings/2022 https://www.topuniversities.com/university-rankings/world-university-rankings/2023 https://www.shanghairanking.com/rankings/arwu/2020 https://v-dem.net/vdemds.html
	GDP per capita, PPP (constant 2017 international $)	GDP per capita based on purchasing power parity (PPP). PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. 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 2017 international dollars.	World Bank	http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD

Appendix B: Indicator Boundaries

Indicator	Best case	Worst case
Child mortality rate (deaths/1,000 live births)	0	155.6328
Undernourishment (% of pop.)	2.5	49.4
Child stunting (0=low risk; 100=high risk)	0	100
Maternal mortality rate (deaths/100,000 live births)	0	746.19
Diet low in fruits and vegetables (0=low risk; 100=high risk)	0	100
Infectious diseases (DALYs/100,000)	0	61253.96
Unsafe water, sanitation and hygiene (DALYs/100,000)	0	10850.66
Access to improved water source (proportion of pop.)	1	0.263106
Satisfaction with water quality (proportion of pop.)	1	0.2475
Access to improved sanitation (proportion of pop.)	1	0.091353
Household air pollution (DALYs/100,000)	0	13107.33
Usage of clean fuels and technology for cooking (% of pop.)	100	0
Access to electricity (% of pop.)	100	0.643132
Dissatisfaction with housing affordability (proportion of pop.)	0	0.82
Intimate partner violence (% of women aged 15+)	0	51.15
Transportation related injuries (DALYs/100,000)	0	3219.5
Interpersonal violence (DALYs/100,000)	0	5827.237
Money stolen (proportion of pop.)	0	0.505
Political killings and torture (0=low freedom; 1=high freedom)	1	0
Population with no schooling (proportion of pop.)	0	0.876141
Primary school enrollment (% of children)	100	35.30679
Equal access to quality education (0=unequal; 4=equal)	4	0
Secondary school attainment (% of pop. aged 25+)	100	3.2
Gender parity in secondary attainment (distance from parity)	0.03	0.838095
Access to online governance (0=low; 1=high)	1	0
Internet users (% of pop.)	100	0
Alternative sources of information index (0=low; 1=high)	1	0
Mobile telephone subscriptions (subscriptions/100 people)	100	0
Access to essential health services (0=none; 100=full coverage)	100	0
Life expectancy at 60 (years)	28.36	11.40923
Premature deaths from non-communicable diseases (deaths/100,000)	0	1101.368
Satisfaction with availability of quality healthcare (proportion of pop.)	1	0.135834
Equal access to quality healthcare (0=unequal; 4=equal)	4	0
Particulate matter pollution (mean annual exposure, µg/m3)	0	98.22298
Outdoor air pollution (DALYs/100,000)	0	4837.824
Species protection (0=low; 100=high)	100	0
Lead exposure (DALYs/100,000)	0	2474.773
Access to justice (0=nonexistent; 1=observed)	1	0
Freedom of peaceful assembly (0=no freedom; 4=full freedom)	4	0
Freedom of discussion (0=low; 1=high)	1	0
Freedom of religion (0=no freedom; 4=full freedom)	4	0

Property rights for women (0=no rights; 5=full rights)	5	0
Political rights (0 and lower=no rights; 40=full rights)	40	0
Vulnerable employment (% of total employment)	0	94.4
Young people not in education, employment or training (% of youth)	0	53.76
Early marriage (% of married women aged 15-19)	0	62.99182
Freedom of domestic movement (0=low; 1=high)	1	0
Satisfied demand for contraception (% satisfied demand)	100	4.3
Perception of corruption (0=high corruption; 100=low corruption)	100	0
Equal protection index (0=low; 1=high)	1	0
Acceptance of gays and lesbians (proportion of pop.)	1	0
Equal access index (0=low; 1=high)	1	0
Power distributed by sexual orientation (0=extremely unequal; 3=equal)	3	0
Access to public services distributed by social group (0=extremely unequal; 4=equal)	4	0
Discrimination and violence against minorities (0=low; 10=high)	1	10
Citable documents (documents/1,000 people)	6.503036	0
Women with advanced education (proportion of females)	1	0.006506
Expected years of tertiary schooling (years)	5	0.0112
Quality weighted universities (points)	1043.4	0
Academic freedom (0=low; 1=high)	1	0

Appendix C: PCA-Derived Indicator Weights

Indicator	Unscaled	Scaled
Child stunting (0=low risk; 100=high risk)	0.19	0.17
Infectious diseases (DALYs/100,000)	0.19	0.17
Maternal mortality rate (deaths/100,000 live births)	0.20	0.18
Child mortality rate (deaths/1,000 live births)	0.20	0.18
Undernourishment (% of pop.)	0.18	0.16
Diet low in fruits and vegetables (0=low risk; 100=high risk)	0.17	0.15
Unsafe water, sanitation and hygiene (DALYs/100,000)	0.29	0.26
Access to improved sanitation (proportion of pop.)	0.30	0.26
Access to improved water source (proportion of pop.)	0.29	0.26
Satisfaction with water quality (proportion of pop.)	0.25	0.22
Household air pollution (DALYs/100,000)	0.33	0.29
Access to electricity (% of pop.)	0.34	0.30
Usage of clean fuels and technology for cooking (% of pop.)	0.33	0.29
Dissatisfaction with housing affordability (proportion of pop.)	0.13	0.11
Transportation related injuries (DALYs/100,000)	0.29	0.21
Interpersonal violence (DALYs/100,000)	0.23	0.17
Political killings and torture (0=low freedom; 1=high freedom)	0.25	0.18
Intimate partner violence (% of women aged 15+)	0.33	0.24
Money stolen (proportion of pop.)	0.28	0.20
Equal access to quality education (0=unequal; 4=equal)	0.21	0.18
Population with no schooling (proportion of pop.)	0.25	0.22
Secondary school attainment (% of pop. aged 25+)	0.25	0.21
Primary school enrollment (% of children)	0.21	0.18
Gender parity in secondary attainment (distance from parity)	0.24	0.21
Alternative sources of information index (0=low; 1=high)	0.16	0.13
Mobile telephone subscriptions (subscriptions/100 people)	0.34	0.28
Internet users (% of pop.)	0.38	0.31
Access to online governance (0=low; 1=high)	0.36	0.29
Equal access to quality healthcare (0=unequal; 4=equal)	0.23	0.20
Life expectancy at 60 (years)	0.25	0.21
Premature deaths from non-communicable diseases (deaths/100,000)	0.23	0.20
Access to essential health services (0=none; 100=full coverage)	0.26	0.22
Satisfaction with availability of quality healthcare (proportion of pop.)	0.21	0.18
Lead exposure (DALYs/100,000)	0.34	0.26
Particulate matter pollution (mean annual exposure, µg/m3)	0.35	0.27
Outdoor air pollution (DALYs/100,000)	0.35	0.27
Species protection (0=low; 100=high)	0.25	0.19
Freedom of religion (0=no freedom; 4=full freedom)	0.17	0.15

Property rights for women (0=no rights; 5=full rights)	0.18	0.16
Freedom of peaceful assembly (0=no freedom; 4=full freedom)	0.20	0.17
Access to justice (0=nonexistent; 1=observed)	0.19	0.17
Freedom of discussion (0=low; 1=high)	0.20	0.18
Political rights (0 and lower=no rights; 40=full rights)	0.20	0.18
Early marriage (% of married women aged 15-19)	0.24	0.17
Satisfied demand for contraception (% satisfied demand)	0.23	0.17
Young people not in education, employment or training (% of youth)	0.18	0.13
Vulnerable employment (% of total employment)	0.26	0.19
Perception of corruption (0=high corruption; 100=low corruption)	0.27	0.20
Freedom of domestic movement (0=low; 1=high)	0.18	0.13
Equal protection index (0=low; 1=high)	0.21	0.17
Equal access index (0=low; 1=high)	0.22	0.18
Power distributed by sexual orientation (0=extremely unequal; 3=equal)	0.22	0.18
Access to public services distributed by social group (0=extremely unequal; 4=equal)	0.20	0.16
Acceptance of gays and lesbians (proportion of pop.)	0.20	0.16
Discrimination and violence against minorities (0=low; 10=high)	0.18	0.15
Academic freedom (0=low; 1=high)	0.15	0.13
Women with advanced education (proportion of females)	0.27	0.23
Expected years of tertiary schooling (years)	0.27	0.23
Citable documents (documents/1,000 people)	0.27	0.23
Quality weighted universities (points)	0.23	0.19

Appendix D: Descriptive Statistics for 2022 Social Progress Index, Component, and Dimension Scores

The following descriptive statistics are based on the sample of 174 countries for which we can calculate at least 9 components for the 2022 Social Progress Index.

	Mean	Standard Deviation	Minimum	Maximum
Social Progress Index	63.95	15.53	27.50	90.85
Basic Human Needs	72.38	16.33	25.40	93.35
Foundations of Wellbeing	61.88	15.76	25.56	91.26
Opportunity	57.44	17.36	17.52	90.42
Nutrition and Basic Medical Care	80.00	15.14	30.44	97.91
Water and Sanitation	75.82	19.90	14.32	99.26
Shelter	72.73	21.98	14.96	97.05
Personal Safety	61.33	11.88	29.05	83.54
Access to Basic Knowledge	73.63	20.32	15.62	99.53
Access to Information and Communications	59.41	22.52	0.31	98.87
Health and Wellness	56.60	17.15	16.83	90.84
Environmental Quality	57.85	12.59	17.36	85.14
Personal Rights	70.18	22.74	2.98	98.57
Personal Freedom and Choice	62.95	14.93	25.27	91.97
Inclusiveness	48.66	20.03	4.38	92.29
Access to Advanced Education	48.10	19.18	10.46	88.41

Appendix E: Bibliography and Further Reading

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Appendix F: Indicators Information Sheets

Component: Nutrition and Basic Medical Care

Indicator Name: Infectious diseases

SPI 2022 Data Reference Year: 2019

Definition: Age-standardized Disability-Adjusted Life Years (DALYs) rate caused by HIV/AIDS, tuberculosis, diarrhea, intestinal infections, respiratory infections, otitis media, meningitis, encephalitis, diptheria, whooping cough, tetanus, measles, varicella, herpes zoster, malaria, Chagas disease, leishmaniasis, typanosomiasis, schistosomiasis, cysticercosis, cycstic echinococcosis, lymphatic filariasis, onchocerciasis, trachoma, dengue, yellow feber, rabies, intestinal nematode infections, food-borne trematodiases, leprosy, ebola, zika virus, guinea worm disease, sexually transmitted diseases (excluding HIV), hepatitis, and other infectious diseases per 100,000 people.

Notes: Age-standardized Disability-Adjusted Life Years (DALYs) represent the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs). DALYs are also defined as years of healthy life lost. It is a universal metric that allows researchers and policymakers to compare very different populations and health conditions across time. One DALY equals one lost year of healthy life. DALYs allow us to estimate the total number of years lost due to specific causes and risk factors at the country, regional, and global levels.

In the SPI calculations the indicator is capped at the upper boundary at 61253.96.

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/gbd-results-tool

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Finland	Guinea
Austria	South Sudan
Italy	Sierra Leone
Australia	Niger
Switzerland	Somalia
Cyprus	Chad
Germany	Lesotho

Component: Nutrition and Basic Medical Care

Indicator Name: Child mortality rate

SPI 2022 Data Reference Year: 2020

Definition: Probability of dying between birth and exactly 5 years of age, expressed per 1,000 live births.

Notes: In the SPI calculations the indicator is capped at the upper boundary at 155.6328 deaths per 1,000 live births.

Source: UN Inter-agency Group for Child Mortality Estimation

Link: http://www.childmortality.org

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
San Marino	Benin
Iceland	Lesotho
Estonia	Mali
Slovenia	Guinea
Norway	South Sudan
Singapore	Central African Republic
Andorra	Somalia

Component: Nutrition and Basic Medical Care

Indicator Name: Child stunting

SPI 2022 Data Reference Year: 2019

Definition: Risk-weighted prevalence of stunting in children under 5 as measured by the summary exposure value (SEV) for child stunting.

Notes: Summary Exposure Value is a measure of a population's exposure to a risk factor that takes into account the extent of exposure by risk level and the severity of that risk's contribution to disease burden. SEV takes the value zero when no excess risk for a population exists and the value one when the population is at the highest level of risk; we report SEV on a scale from 0% to 100% to emphasize that it is risk-weighted prevalence.

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/gbd-results-tool

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Germany	Benin
Monaco	Guatemala
Andorra	Pakistan
Ireland	Yemen
Switzerland	Papua New Guinea
Belgium	Niger
Netherlands	Burundi

Component: Nutrition and Basic Medical Care

Indicator Name: Maternal mortality rate

SPI 2022 Data Reference Year: 2021

Definition: Maternal deaths per 100,000 livebirths in women aged 10-54 years.

Notes:

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/record/ihme-data/gbd-2017-health-related-sdgs-1990-2030

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Iceland	Djibouti
Sweden	Republic of the Congo
Norway	Mauritania
Ireland	Guinea
Denmark	The Gambia
Italy	Sierra Leone
Finland	Liberia

Component: Nutrition and Basic Medical Care

Indicator Name: Undernourishment

SPI 2022 Data Reference Year: 2019

Definition: The prevalence of undernourishment expresses the probability that a randomly selected individual from the population consumes an amount of calories that is insufficient to cover her/his energy requirement for an active and healthy life. The indicator is computed by comparing a probability distribution of habitual daily dietary energy consumption with a threshold level called the minimum dietary energy requirement. Both are based on the notion of an average individual in the reference population.

Notes: In the SPI calculations the indicator is capped at the upper boundary at 49.4.

Source: Food and Agriculture Organization of the United Nations

Link: http://www.fao.org/economic/ess/ess-fs/ess-fadata/en/

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
51 countries with only 2.5% of undernourished population	Iraq
	Republic of the Congo
	Liberia
	Democratic Republic of the Congo
	North Korea
	Madagascar
	Yemen

Component: Nutrition and Basic Medical Care

Indicator Name: Diet low in fruits and vegetables

SPI 2022 Data Reference Year: 2019

Definition: Risk-weighted, age-standardized prevalence of nutrition low in fruits and vegetables as measured by the summary exposure value (SEV).

Notes: Summary Exposure Value is a measure of a population's exposure to a risk factor that takes into account the extent of exposure by risk level and the severity of that risk's contribution to disease burden. SEV takes the value zero when no excess risk for a population exists and the value one when the population is at the highest level of risk; we report SEV on a scale from 0% to 100% to emphasize that it is risk-weighted prevalence.

Diet low in fruits and vegetables is defined as consumption of less than 3 servings (11 ounces total) of fruits per day (includes fresh, frozen, cooked, canned, or dried fruit but excludes fruit juices and salted or pickled fruits) and onsumption of less than 4 servings (14 ounces total) of vegetables per day (includes fresh, frozen, cooked, canned, or dried vegetables including legumes but excluding salted or pickled, juices, nuts and seeds, and starchy vegetables such as potatoes or corn).

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/gbd-results-tool

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Turkey	Lesotho
Qatar	Mauritania
Monaco	Somalia
Lebanon	Ethiopia
Greece	Zambia
Montenegro	The Gambia
Albania	Togo

Component: Water and Sanitation

Indicator Name: Access to improved sanitation

SPI 2022 Data Reference Year: 2019

Definition: Proportion of population with access to improved toilet types as defined by the Joint Monitoring Program (JMP).

Notes:

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/record/global-burden-disease-study-2019-gbd-2019-covariates-1980-2019

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Egypt	Benin
Bahrain	Somalia
Iran	Central African Republic
Algeria	Eritrea
Turkey	Niger
Saudi Arabia	Chad
Sao Tome and Principe	Madagascar

Component: Water and Sanitation

Indicator Name: Access to improved water source

SPI 2022 Data Reference Year: 2019

Definition: Proportion of population with access to improved water sources as defined by the Joint Monitoring Program (JMP).

Notes:

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/record/global-burden-disease-study-2019-gbd-2019-covariates-1980-2019

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
China	Chad
Bahrain	Papua New Guinea
Iran	Ethiopia
Bhutan	Yemen
Saudi Arabia	Democratic Republic of the Congo
Sao Tome and Principe	Haiti
Monaco	Mozambique

Component: Water and Sanitation

Indicator Name: Unsafe water, sanitation and hygiene

SPI 2022 Data Reference Year: 2019

Definition: Age-standardized Disability-Adjusted Life Years (DALYs) rate attributable to unsafe water, sanitation and hygiene per 100,000 people.

Notes: Age-standardized Disability-Adjusted Life Years (DALYs) represent the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs). DALYs are also defined as years of healthy life lost. It is a universal metric that allows researchers and policymakers to compare very different populations and health conditions across time. One DALY equals one lost year of healthy life. DALYs allow us to estimate the total number of years lost due to specific causes and risk factors at the country, regional, and global levels.

In the SPI calculations the indicator is capped at the upper boundary at 10850.66.

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/gbd-results-tool

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
San Marino	Lesotho
Finland	Eritrea
Switzerland	Burundi
Andorra	South Sudan
Monaco	Togo
Netherlands	Nigeria
Italy	Somalia

Component: Water and Sanitation

Indicator Name: Satisfaction with water quality

SPI 2022 Data Reference Year: 2021

Definition: The proportion of respondents answering 'satisfied' to the question, "In the city or area where you live, are you satisfied or dissatisfied with the quality of water?"

Notes: In the SPI calculations the indicator is calculated as floating 3-year average to limit volatility.

Source: Gallup World Poll

Link: https://ga.gallup.com/

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Singapore	Liberia, Cameroon
Iceland	Lesotho
Norway	Congo, Democratic Republic of
Sweden	Sierra Leone
Finland	Venezuela
Switzerland	South Sudan
Australia	Haiti

Component: Shelter

Indicator Name: Household air pollution

SPI 2022 Data Reference Year: 2019

Definition: Age-standardized Disability-Adjusted Life Years (DALYs) rate caused by household air pollution from solid fuels per 100,000 people. Household air pollution includes exposure to particulate matter less than 2.5 microns in diameter (PM2.5) due to the use of solid fuels for cooking, including coal, charcoal, wood, agricultural residue, and animal dung.

Notes: Age-standardized Disability-Adjusted Life Years (DALYs) represent the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs). DALYs are also defined as years of healthy life lost. It is a universal metric that allows researchers and policymakers to compare very different populations and health conditions across time. One DALY equals one lost year of healthy life. DALYs allow us to estimate the total number of years lost due to specific causes and risk factors at the country, regional, and global levels.

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/gbd-results-tool

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
United Arab Emirates	Guinea-Bissau
Switzerland	Burkina Faso
Qatar	Guinea
United Kingdom	Vanuatu
Norway	Niger
Canada	Chad
Monaco	Papua New Guinea

Component: Shelter

Indicator Name: Dissatisfaction with housing affordability

SPI 2022 Data Reference Year: 2021

Definition: The proportion of respondents answering 'dissatisfied' to the question, “In the city or area where you live, are you satisfied or dissatisfied with the availability of good, affordable housing?”

Notes: In the SPI calculations the indicator is calculated as floating 3-year average to limit volatility.

Source: Gallup World Poll

Link: https://ga.gallup.com/

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Thailand	Algeria
Vietnam	Chile, Mongolia, Namibia, New Zealand
Tajikistan	Gabon
United Arab Emirates	Turkey
Japan	Haiti
Laos	Central African Republic
Kosovo	Tunisia

Component: Shelter

Indicator Name: Access to electricity

SPI 2022 Data Reference Year: 2020

Definition: The percentage of the population with access to electricity.

Notes:

Source: SE4ALL Global Tracking Framework (World Bank, International Energy Agency, and the Energy Sector Management Assistance Program)

Link: https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
105 countries achieve 100% access	Liberia
	Sierra Leone
	Niger
	Democratic Republic of the Congo
	Burkina Faso
	Central African Republic
	Malawi

Component: Shelter

Indicator Name: Usage of clean fuels and technology for cooking

SPI 2022 Data Reference Year: 2019

Definition: The proportion of population primarily using clean cooking fuels and technologies for cooking.

Notes:

Source: World Health Organization

Link: https://apps.who.int/gho/data/node.main.SDGFUELS712?lang=en

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
60 countries use 100% clean fuels for cooking	The Gambia
	Guinea-Bissau
	Mali
	Madagascar
	Sierra Leone
	Uganda
	Central African Republic

Component: Personal Safety

Indicator Name: Interpersonal violence

SPI 2022 Data Reference Year: 2019

Definition: Age-standardized Disability-Adjusted Life Years (DALYs) per 100,000 people from interpersonal violence. Interpersonal violence is defined as death or disability from intentional use of physical force or power, threatened or actual, from another person or group not including military or police forces.

Notes: Age-standardized Disability-Adjusted Life Years (DALYs) represent the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs). DALYs are also defined as years of healthy life lost. It is a universal metric that allows researchers and policymakers to compare very different populations and health conditions across time. One DALY equals one lost year of healthy life. DALYs allow us to estimate the total number of years lost due to specific causes and risk factors at the country, regional, and global levels.

In the SPI calculations the indicator is logarithmically transformed.

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/gbd-results-tool

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Singapore	Bahamas
Japan	Haiti
Monaco	Brazil
San Marino	South Africa
Andorra	Guatemala
United Kingdom	Lesotho
Spain	Honduras

Component: Personal Safety

Indicator Name: Transportation related injuries

SPI 2022 Data Reference Year: 2019

Definition: Age-standardized Disability-Adjusted Life Years (DALYs) per 100,000 people due to injuries related to transportation. These injuries include road injuries (death or disability due to unintentional interaction with an automobile, motorcycle, pedal cycle, or other vehicles) as well as other transport injuries.

Notes: Age-standardized Disability-Adjusted Life Years (DALYs) represent the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs). DALYs are also defined as years of healthy life lost. It is a universal metric that allows researchers and policymakers to compare very different populations and health conditions across time. One DALY equals one lost year of healthy life. DALYs allow us to estimate the total number of years lost due to specific causes and risk factors at the country, regional, and global levels.

In the SPI calculations the indicator is capped at the upper boundary at 3219.5.

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/gbd-results-tool

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Singapore	Guinea-Bissau
Ireland	Nauru
Japan	Angola
Sweden	Eswatini
Netherlands	Democratic Republic of the Congo
United Kingdom	Yemen
Norway	Oman

Component: Personal Safety

Indicator Name: Political killings and torture

SPI 2022 Data Reference Year: 2021

Definition: Physical violence index is based on indicators that reflect violence committed by government agents and that are not directly referring to elections.

Notes: The indicator measures physical integrity which is understood as freedom from political killings and torture by the government. Among the set of civil liberties, these liberal rights are the most relevant for political competition and accountability.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Sweden	Afghanistan
Iceland	Belarus
Finland	Nicaragua
Norway	Rwanda
New Zealand	Zimbabwe
Switzerland	Burma/Myanmar
Belgium	Burundi

Component: Personal Safety

Indicator Name: Intimate partner violence

SPI 2022 Data Reference Year: 2021

Definition: Age-standardised prevalence of ever-partnered women aged 15 years and older who experienced physical or sexual violence by a current or former intimate partner in the last 12 months (%).

Notes:

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/record/ihme-data/gbd-2017-health-related-sdgs-1990-2030

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
United States of America	Gabon
Slovenia	Somalia
Poland	Angola
Australia	Liberia
Spain	Iraq
Croatia	Ethiopia
Luxembourg	South Sudan

Component: Personal Safety

Indicator Name: Money stolen

SPI 2022 Data Reference Year: 2021

Definition: The proportion of respondents answering 'yes' to the question, "Within the last 12 months, have you had money or property stolen from you or another household member?"

Notes: In the SPI calculations the indicator is calculated as floating 3-year average to limit volatility.

Source: Gallup World Poll

Link: https://ga.gallup.com/

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Taiwan	Kenya
Uzbekistan	Botswana
Singapore	Gambia, The
Azerbaijan	Zambia
Korea, Republic of	Uganda
Malta	Malawi
Lithuania	Gabon

Component: Access to Basic Knowledge

Indicator Name: Population with no schooling

SPI 2022 Data Reference Year: 2019

Definition: Proportion of population (age-standardized) with no schooling.

Notes:

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/record/global-burden-disease-study-2019-gbd-2019-covariates-1980-2019

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Austria	Sierra Leone
Ukraine	Senegal
Japan	Bhutan
Russia	Guinea
Slovakia	Afghanistan
Czech Republic	South Sudan
Germany	Chad

Component: Access to Basic Knowledge

Indicator Name: Equal access to quality education

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the question, "To what extent is high quality basic education guaranteed to all, sufficient to enable them to exercise their basic rights as adult citizens?"

Notes: This indicator measures the extent to which high quality basic education is guaranteed to all and is sufficient to enable them to exercise their basic rights as adult citizens. Basic education refers to ages typically between 6 and 16 years of age but this varies slightly among countries. It is measured on an ordinal scale from 0 to 4.

0: Extreme. Provision of high quality basic education is extremely unequal and at least 75 percent (%) of children receive such low-quality education that undermines their ability to exercise their basic rights as adult citizens.

1: Unequal. Provision of high quality basic education is extremely unequal and at least 25 percent (%) of children receive such low-quality education that undermines their ability to exercise their basic rights as adult citizens.

2: Somewhat equal. Basic education is relatively equal in quality but ten to 25 percent (%) of children receive such low-quality education that undermines their ability to exercise their basic rights as adult citizens.

3: Relatively equal. Basic education is overall equal in quality but five to ten percent (%) of children receive such low-quality education that probably undermines their ability to exercise their basic rights as adult citizens.

4: Equal. Basic education is equal in quality and less than five percent (%) of children receive such low-quality education that probably undermines their ability to exercise their basic rights as adult citizens.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Norway	Haiti
Japan	Venezuela
Iceland	Mauritania
Switzerland	Burundi
Malta	Honduras
Luxembourg	Pakistan
Denmark	Madagascar

Component: Access to Basic Knowledge

Indicator Name: Primary school enrollment

SPI 2022 Data Reference Year: 2020

Definition: Total number of students of official primary school age who are enrolled in any level of education, expressed as a percentage of the total population of official primary school age. Statistic is termed 'total net primary enrollment rate.'

Notes:

Source: UN Educational, Scientific, and Cultural Organization Institute for Statistics

Link: http://data.uis.unesco.org/

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Montenegro	Honduras
Costa Rica	Tanzania
Kyrgyzstan	Micronesia (Federated States of)
Belize	Tuvalu
Algeria	Paraguay
Cuba	Jordan
United Arab Emirates	Burkina Faso

Component: Access to Basic Knowledge

Indicator Name: Secondary school attainment

SPI 2022 Data Reference Year: 2019

Definition: Population with at least some secondary education (% ages 25 and older)

Notes:

Source: United Nations Development Programme (UNDP) Human Development Data

Link: http://hdr.undp.org/en/data

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Iceland	Burundi
Luxembourg	Burkina Faso
Estonia	Niger
Czech Republic	Chad
Canada	Kiribati
Austria	Vanuatu
Finland	Micronesia (Federated States of)

Component: Access to Basic Knowledge

Indicator Name: Gender parity in secondary attainment

SPI 2022 Data Reference Year: 2019

Definition: The absolute deviation from parity (=1) in secondary education attainment of women and men.

Notes: In the SPI calculations, an absolute deviation from parity lower than 0.03 is treated as parity.

Source: United Nations Development Programme (UNDP) Human Development Data

Link: http://hdr.undp.org/en/data

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Iceland	Mauritania
Luxembourg	Togo
Estonia	Burkina Faso
Canada	Liberia
Finland	Mali
Latvia	Libya
Uzbekistan	Central African Republic

Component: Access to Information and Communications

Indicator Name: Access to online governance

SPI 2022 Data Reference Year: 2020

Definition: The availability of e-participation tools on national government portal for of the following uses: e-information – provision of information on the Internet; e-consultation – organizing public consultations online; and e-decision-making – involving citizens directly in decision processes. E-participation is defined as the process of engaging citizens through ICTs in policy, decision-making, and service design and delivery in order to make it participatory, inclusive, and deliberative.

Notes:

Source: UN Department of Economic and Social Affairs E-Government Survey

Link: https://publicadministration.un.org/egovkb/en-us/Data-Center

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Estonia	Central African Republic
United States of America	Comoros
South Korea	Mauritania
New Zealand	Guinea-Bissau
Japan	Equatorial Guinea
Austria	The Gambia
United Kingdom	Libya

Component: Access to Information and Communications

Indicator Name: Internet users

SPI 2022 Data Reference Year: 2020

Definition: The estimated number of Internet users out of the total population, using the Internet from any device (including mobile phones) in the last 12 months.

Notes:

Source: International Telecommunications Union

Link: http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
United Arab Emirates	Uganda
Bahrain	Zambia
Qatar	Afghanistan
Kuwait	Sierra Leone
Iceland	Mozambique
Luxembourg	Democratic Republic of the Congo
Saudi Arabia	Chad

Component: Access to Information and Communications

Indicator Name: Mobile telephone subscriptions

SPI 2022 Data Reference Year: 2020

Definition: Subscriptions to a public mobile telephone service using cellular technology, including the number of pre-paid SIM cards active during the past three months, expressed as the number of mobile telephone subscriptions per 100 inhabitants.

Notes: In the SPI calculations the indicator is capped at the upper boundary at 100 mobile telephones per 100 people.

Source: International Telecommunications Union

Link: http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Antigua and Barbuda	Djibouti
Seychelles	Libya
United Arab Emirates	Ethiopia
Montenegro	Central African Republic
Thailand	Samoa
Russia	Liberia
Botswana	Marshall Islands

Component: Access to Information and Communications

Indicator Name: Alternative sources of information index

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the questions: To what extent is the media (a) un-biased in their coverage or lack of coverage of the opposition, (b) allowed to be critical of the regime, and (c) representative of a wide array of political perspectives?

Notes: This indicator measures the extent to which the media is (a) un-biased in their coverage or lack of coverage of the opposition, (b) allowed to be critical of the regime, and (c) representative of a wide array of political perspectives.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Denmark	China
South Korea	Azerbaijan
Norway	Syria
Sweden	Cuba
Estonia	Qatar
Ireland	Laos
Belgium	Turkmenistan

Component: Health and Wellness

Indicator Name: Life expectancy at 60

SPI 2022 Data Reference Year: 2019

Definition: The average number of years that a person of 60 to 64 years of age could expect to live, if he or she were to pass through life exposed to the sex- and age-specific death rates prevailing at the time of his or her 60 years, for a specific year, in a given country, territory, or geographic area.

Notes:

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/gbd-results-tool

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Japan	Eswatini
Singapore	Afghanistan
Iceland	Uzbekistan
Switzerland	Somalia
France	Nauru
Australia	Micronesia (Federated States of)
Spain	Kiribati

Component: Health and Wellness

Indicator Name: Premature deaths from non-communicable diseases

SPI 2022 Data Reference Year: 2021

Definition: Mortality rate due to cardiovascular diseases, cancers, diabetes, and chronic respiratory diseases among populations aged 30–70 years.

Notes: In the SPI calculations the indicator is capped at the upper boundary at 1101.368.

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/record/ihme-data/gbd-2017-health-related-sdgs-1990-2030

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Switzerland	Lesotho
Singapore	Central African Republic
South Korea	Micronesia (Federated States of)
Japan	Solomon Islands
Israel	Fiji
Sweden	Vanuatu
Italy	Afghanistan

Component: Health and Wellness

Indicator Name: Equal access to quality healthcare

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the question, "To what extent is high quality basic healthcare guaranteed to all, sufficient to enable them to exercise their basic political rights as adult citizens?"

Notes: This indicator measures the extent to which high quality basic healthcare is guaranteed to all and sufficient to enable them to exercise their basic political rights as adult citizens. It is measured on an ordinal scale from 0 to 4.

0: Extreme. Because of poor-quality healthcare, at least 75 percent (%) of citizens' ability to exercise their political rights as adult citizens is undermined.

1: Unequal. Because of poor-quality healthcare, at least 25 percent (%) of citizens' ability to exercise their political rights as adult citizens is undermined.

2: Somewhat equal. Because of poor-quality healthcare, ten to 25 percent (%) of citizens' ability to exercise their political rights as adult citizens is undermined.

3: Relatively equal. Basic health care is overall equal in quality but because of poor-quality healthcare, five to ten percent (%) of citizens' ability to exercise their political rights as adult

citizens is undermined.

4: Equal. Basic health care is equal in quality and less than five percent (%) of citizens cannot exercise their basic political rights as adult citizens.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Switzerland	Yemen
Singapore	Peru
Belgium	Togo
United Arab Emirates	Gabon
Netherlands	Afghanistan
Norway	Mauritania
Malaysia	South Sudan

Component: Health and Wellness

Indicator Name: Access to essential health services

SPI 2022 Data Reference Year: 2019

Definition: The universal health coverage (UHC) measures the coverage of 9 tracer interventions and risk-standardized death rates from 32 causes amenable to personal healthcare, including vaccine-preventable diseases (e.g., diphteria, tetanus, measles), respitory infections, cancer (breast, cervical, uterine, testicular), heart diseases, diabetes, kidney disease), and the adverse effects of medical treatment.

Notes:

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/record/global-burden-disease-study-2019-gbd-2019-covariates-1980-2019

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Netherlands	Kiribati
Norway	Madagascar
Switzerland	Eritrea
Iceland	Guinea-Bissau
Ireland	Afghanistan
Sweden	Guinea
Andorra	Chad

Component: Health and Wellness

Indicator Name: Satisfaction with availability of quality healthcare

SPI 2022 Data Reference Year: 2021

Definition: The proportion of respondents answering 'satisfied' to the question, In the city or area where you live, are you satisfied or dissatisfied with the availability of quality healthcare?

Notes: In the SPI calculations the indicator is calculated as floating 3-year average to limit volatility.

Source: Gallup World Poll

Link: https://ga.gallup.com/

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Switzerland	Mali, Peru
Singapore	Tunisia
United Arab Emirates	Morocco
Belgium	Mongolia
Saudi Arabia	Lebanon
Netherlands	Gabon
Norway	Togo

Component: Environmental Quality

Indicator Name: Outdoor air pollution

SPI 2022 Data Reference Year: 2019

Definition: Age-standardized Disability-Adjusted Life Years (DALYs) per 100,000 people resulting from ambient particulate matter pollution, including emissions from industrial activity, households, cars and trucks.

Notes: Age-standardized Disability-Adjusted Life Years (DALYs) represent the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs). DALYs are also defined as years of healthy life lost. It is a universal metric that allows researchers and policymakers to compare very different populations and health conditions across time. One DALY equals one lost year of healthy life. DALYs allow us to estimate the total number of years lost due to specific causes and risk factors at the country, regional, and global levels.

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/gbd-results-tool

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Iceland	Oman
Sweden	Turkmenistan
Finland	Mongolia
New Zealand	India
Norway	Tajikistan
Australia	Saudi Arabia
Estonia	Pakistan

Component: Environmental Quality

Indicator Name: Lead exposure

SPI 2022 Data Reference Year: 2019

Definition: Age-standardized Disability-Adjusted Life Years (DALYs) per 100,000 people attributable to lead exposure. Lead exposure is defined as acute exposure, measured by micrograms of lead per decilitre of blood, and chronic exposure, measured by micrograms of lead per gram of bone.

Notes: Age-standardized Disability-Adjusted Life Years (DALYs) represent the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs). DALYs are also defined as years of healthy life lost. It is a universal metric that allows researchers and policymakers to compare very different populations and health conditions across time. One DALY equals one lost year of healthy life. DALYs allow us to estimate the total number of years lost due to specific causes and risk factors at the country, regional, and global levels.

In the SPI calculations the indicator is logarithmically transformed.

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/gbd-results-tool

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Finland	Syria
Japan	India
Denmark	Honduras
Palau	Somalia
Sweden	Tajikistan
Chile	Egypt
Canada	Haiti

Component: Environmental Quality

Indicator Name: Particulate matter pollution

SPI 2022 Data Reference Year: 2019

Definition: Population-weighted mean levels of annual exposure to suspended particles smaller than 2.5 microns in aerodynamic diameter (PM2.5), which are capable of penetrating deep into the respiratory tract and causing severe health damage.

Notes:

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/record/global-burden-disease-study-2019-gbd-2019-covariates-1980-2019

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Brunei Darussalam	Chad
Finland	Bahrain
New Zealand	Nigeria
Sweden	Cameroon
Canada	Saudi Arabia
Iceland	Egypt
Estonia	India

Component: Environmental Quality

Indicator Name: Species protection

SPI 2022 Data Reference Year: 2020

Definition: An index of how well a country's terrestrial protected areas overlap with the ranges of its vertebrate, invertebrate, and plant species. The Species Protection Index is calculated using remote sensing data, global biodiversity informatics, and integrative models to map suitable habitat for over 30,000 terrestrial species at high resolutions. A score of 100 indicates full coverage of all species' ranges by a country's protected areas, and a score of 0 indicates no overlap.

Notes:

Source: Environmental Performance Index

Map of Life

Link: https://epi.yale.edu/

https://mol.org/indicators/

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Estonia	Vanuatu
Denmark	Fiji
United Kingdom	Afghanistan
Belgium	China
Slovenia	Montenegro
Slovakia	Turkey
Hungary	Qatar

Component: Personal Rights

Indicator Name: Access to justice

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the question, "Do citizens enjoy secure and effective access to justice?"

Notes: This indicator measures the extent to which citizens enjoy secure and effective access to justice.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Denmark	Burma/Myanmar
Germany	Turkmenistan
Belgium	Yemen
Switzerland	Democratic Republic of the Congo
Luxembourg	Tajikistan
Czech Republic	Libya
Finland	Eritrea

Component: Personal Rights

Indicator Name: Freedom of religion

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the question, "Is there freedom of religion?"

Notes: This indicator specifies the extent to which individuals and groups have the right to choose a religion, change their religion, and practice that religion in private or in public as well as to proselytize peacefully without being subject to restrictions by public authorities. It is measured on an ordinal scale from 0 to 4.

0: Not respected by public authorities. Hardly any freedom of religion exists. Any kind of religious practice is outlawed or at least controlled by the government to the extent that religious leaders are appointed by and subjected to public authorities, who control the activities of religious communities in some detail.

1: Weakly respected by public authorities. Some elements of autonomous organized religious practices exist and are officially recognized. But significant religious communities are repressed, prohibited, or systematically disabled, voluntary conversions are restricted, and instances of discrimination or intimidation of individuals or groups due to their religion are common.

2: Somewhat respected by public authorities. Autonomous organized religious practices exist and are officially recognized. Yet, minor religious communities are repressed, prohibited, or systematically disabled, and/or instances of discrimination or intimidation of individuals or groups due to their religion occur occasionally.

3: Mostly respected by public authorities. There are minor restrictions on the freedom of religion, predominantly limited to a few isolated cases. Minority religions face denial of registration, hindrance of foreign missionaries from entering the country, restrictions against proselytizing, or hindrance to access to or construction of places of worship.

4: Fully respected by public authorities. The population enjoys the right to practice any religious belief they choose. Religious groups may organize, select, and train personnel; solicit and receive contributions; publish; and engage in consultations without undue interference. If religious communities have to register, public authorities do not abuse the process to discriminate against a religion and do not constrain the right to worship before registration.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
New Zealand	Turkmenistan
Norway	Eritrea
Sweden	Maldives
South Korea	Mauritania
Taiwan	Somalia
Japan	China
Finland	Tajikistan

Component: Personal Rights

Indicator Name: Political rights

SPI 2022 Data Reference Year: 2022

Definition: An evaluation of three subcategories of political rights: electoral process, political pluralism and participation, and functioning of government on a scale from 0 (no political rights) to 40 (full political rights). Some countries and territories score below zero on the questions used to compose the indicator.

Notes: In the SPI calculations data below zero are treated as zero.

Source: Freedom House

Link: https://freedomhouse.org/report-types/freedom-world

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Canada, Denmark, Finland, Japan, New Zealand, Norway, Sweden and Uruguay have full political rights	Burma/Myanmar, China, Equatorial Guinea, North Korea, South Sudan, Sudan, Syria, Tajikistan and Turkmenistan have no political rights

Component: Personal Rights

Indicator Name: Property rights for women

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the question, "Do women enjoy the right to private property?"

Notes: This indicator measures the extent to which women enjoy the right to private property. Private property includes the right to acquire, possess, inherit, and sell private property, including land. Limits on property rights may come from the state (which may legally limit rights or fail to enforce them); customary laws and practices; or religious or social norms. This indicator concerns the right to private property, not actual ownership of property. It does not ask you to assess the relative rights of men and women. Thus, it is possible to assign the lowest possible score to a country even if men and women enjoy equal — and very minimal — property rights. It is measured on an ordinal scale from 0 to 5.

0: Virtually no women enjoy private property rights of any kind.

1: Some women enjoy some private property rights, but most have none.

2: Many women enjoy many private property rights, but a smaller proportion enjoys few or none.

3: More than half of women enjoy most private property rights, yet a smaller share of women have much more restricted rights.

4: Most women enjoy most private property rights but a small minority does not.

5: Virtually all women enjoy all, or almost all, property rights.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Germany	Guinea
Iceland	Somalia
Spain	South Sudan
Belgium	Burundi
Ukraine	Turkmenistan
Lithuania	Afghanistan
Slovenia	Democratic Republic of the Congo

Component: Personal Rights

Indicator Name: Freedom of peaceful assembly

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the question, "To what extent do state authorities respect and protect the right of peaceful assembly?"

Notes: This indicator measures the extent to which state authorities respect and protect the right of peaceful assembly. It focuses on the ability to assemble publicly in practice. An assembly is “an intentional and temporary presence of a number of individuals in a public place, for a common expressive purpose” (ODIHR and Venice Commission of the Council of Europe 2010). Authorities may limit the right to assembly only if limitations are necessary in the interests of national security or public safety, public order, the protection of public health or morals, or the protection of the rights and freedoms of others, and are lawful, necessary, and proportionate to the aim pursued. Such reasonable and legal restrictions should not be considered when answering. However, if there is evidence that restrictions are used as a pretext for political reasons, this evidence should be considered. The indicator is measured on an ordinal scale from 0 to 4.

Responses:

0: Never. State authorities do not allow peaceful assemblies and are willing to use lethal force to prevent them.

1: Rarely. State authorities rarely allow peaceful assemblies, but generally avoid using lethal force to prevent them.

2: Sometimes. State authorities sometimes allow peaceful assemblies, but often arbitrarily deny citizens the right to assemble peacefully.

3: Mostly. State authorities generally allow peaceful assemblies, but in rare cases arbitrarily deny citizens the right to assemble peacefully.

4: Almost always. State authorities almost always allow and actively protect peaceful assemblies except in rare cases of lawful, necessary, and proportionate limitations.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Czech Republic	Tajikistan
Austria	Turkmenistan
Italy	Burma/Myanmar
Luxembourg	Saudi Arabia
Finland	Eswatini
South Korea	Laos
Norway	Eritrea

Component: Personal Rights
Indicator Name: Freedom of discussion

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the question, "Are citizens able to openly discuss political issues in private homes and in public spaces?"

Notes: This indicator specifies the extent to which citizens are able to engage in private discussions, particularly on political issues, in private homes and public spaces restaurants, public transportation, sports events, work etc. without fear of harassment by other members of the polity or the public authorities. We are interested in restrictions by the government and its agents but also cultural restrictions or customary laws that are enforced by other members of the polity, sometimes in informal ways.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Denmark	Qatar
New Zealand	Cuba
Austria	Nicaragua
Ireland	Laos
Germany	Republic of the Congo
Chile	Burma/Myanmar
Mongolia	Syria

Component: Personal Freedom and Choice

Indicator Name: Satisfied demand for contraception

SPI 2022 Data Reference Year: 2021

Definition: The percentage of total demand for family planning among married or in-union women aged 15 to 49 that is satisfied with modern methods.

Notes:

Source: United Nations Population Division

Link: http://www.un.org/en/development/desa/population/theme/family-planning/cp_model.shtml

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
China	Benin
Germany	Guinea
France	Maldives
Canada	Eritrea
Thailand	Azerbaijan
Finland	Democratic Republic of the Congo
Belgium	Chad

Component: Personal Freedom and Choice

Indicator Name: Perception of corruption

SPI 2022 Data Reference Year: 2021

Definition: The perceived level of public sector corruption based on expert opinion, measured on a scale from 0 (highly corrupt) to 100 (very clean).

Notes:

Source: Transparency International

Link: www.transparency.org/cpi

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Denmark, Finland, New Zealand	Burundi, Democratic Republic of the Congo, Turkmenistan
Norway, Singapore, Sweden	Libya
Switzerland	Equatorial Guinea
Netherlands	North Korea
Luxembourg	Yemen
Germany	Afghanistan
United Kingdom	Venezuela

Component: Personal Freedom and Choice

Indicator Name: Early marriage

SPI 2022 Data Reference Year: 2021

Definition: The percentage of women aged 15-19 years who are married or in-union.

Notes:

Source: United Nations Population Division

Link: https://www.un.org/en/development/desa/population/theme/marriage-unions/marriage_estimates.asp

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
North Korea	Nepal
Singapore	Guinea
Slovenia	Madagascar
South Korea	Burkina Faso
Switzerland	Bangladesh
Iceland	Chad
Malta	Mozambique

Component: Personal Freedom and Choice

Indicator Name: Young people not in education, employment or training

SPI 2022 Data Reference Year: 2020

Definition: The proportion of youth who are not in employment and not in education or training. Youth are defined as persons between the ages of 15 and 24 years. The series is part of the ILO modelled estimates.

Notes:

Source: International Labor Organization

Link: https://ilostat.ilo.org/data/

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Japan	Dominican Republic
Singapore	Tajikistan
Netherlands	Samoa
Norway	Guyana
Iceland	Chad
Rwanda	Botswana
Switzerland	Lesotho

Component: Personal Freedom and Choice

Indicator Name: Vulnerable employment

SPI 2022 Data Reference Year: 2019

Definition: Contributing family workers and own-account workers as a percentage of total employment.

Notes:

Source: International Labor Organization/World Bank

Link: https://data.worldbank.org/indicator/SL.EMP.VULN.ZS

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Qatar	Burkina Faso
Bahrain	North Korea
Kuwait	Benin
United Arab Emirates	Sierra Leone
Oman	South Sudan
Saudi Arabia	Somalia
Belarus	Guinea

Component: Personal Freedom and Choice

Indicator Name: Freedom of domestic movement

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the question, "Do citizens enjoy freedom of movement and residence?"

Notes: This indicator specifies the extent to which citizens are able to move freely, in daytime and nighttime, in public thoroughfares, across regions within a country, and to establish permanent residency where they wish. Note that restrictions in movement might be imposed by the state and/or by informal norms and practices. Such restrictions sometimes fall on rural residents, on specific social groups, or on dissidents. Do not consider restrictions in movement that are placed on ordinary non-political criminals. Do not consider restrictions in movement that result from crime or unrest.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
New Zealand	Republic of the Congo
Iceland	Qatar
Finland	Palestine/Gaza
Belgium	Equatorial Guinea
Ghana	Afghanistan
Germany	Syria
Taiwan	Burma/Myanmar

Component: Inclusiveness

Indicator Name: Equal protection index

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the question, "How equal is the protection of rights and freedoms across social groups by the state?"

Notes: This indicator measures how equal is the protection of rights and freedoms across social groups by the state. Equal protection means that the state grants and protects rights and freedoms evenly across social groups. To achieve equal protection of rights and freedoms, the state itself must not interfere in the ability of groups to participate and it must also take action to ensure that rights and freedoms of one social group are not threatened by the actions of another group or individual.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Luxembourg	Pakistan
Denmark	Tajikistan
Finland	Qatar
Austria	Cambodia
Japan	Angola
Norway	Haiti
Germany	North Korea

Component: Inclusiveness

Indicator Name: Equal access index

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the question, "How equal is access to power?"

Notes: This indicator measures how equal is access to power. The Equal Access subcomponent is based on the idea that neither the protections of rights and freedoms nor the equal distribution of resources is sufficient to ensure adequate representation. Ideally, all groups should enjoy equal de facto capabilities to participate, to serve in positions of political power, to put issues on the agenda, and to influence policymaking.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Denmark	Equatorial Guinea
Norway	Chad
Germany	Yemen
Jamaica	Saudi Arabia
Italy	Qatar
Canada	Tajikistan
Netherlands	Bahrain

Component: Inclusiveness

Indicator Name: Power distributed by sexual orientation

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the question, "To what extent is political power distributed according to sexual orientation?"

Notes: This indicator measures the extent to which political power is distributed according to sexual orientation. It contrasts (A) the political power of heterosexuals and lesbian, gay, bisexual, and transgender (LGBT) members of the polity who are not open about their sexuality with (B) the political power of lesbian, gay, bisexual, and transgender (LGBT) members of the polity who are open about their sexuality. Note that in comparing the political power of these two groups, their power per person is being compared. So, when it is said that LGBT have less, equal, or more power than heterosexuals it means relative to their share of the population (as near as this can be estimated). The indicator is measured on an ordinal scale from 0 to 4.

0: LGBTs are entirely excluded from the public sphere and thus deprived of any real political power (even though they may possess formal powers such as the ballot).

1: LGBTs have much less political power than heterosexuals. LGBTs enjoy formal rights to participate in politics but are subject to informal norms that often serve to exclude them from the halls of power.

2: LGBTs have somewhat less political power than heterosexual citizens.

3: LGBTs have about the same political power as heterosexuals. Each group enjoys a degree of political power that is roughly proportional to their population.

4: LGBTs enjoy somewhat more political power than heterosexuals by virtue of greater wealth, education, and high level of organization and mobilization.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Norway	Qatar
Gabon	Turkmenistan
Netherlands	United Arab Emirates
Denmark	Zambia
Ireland	Uganda
Luxembourg	Lebanon
Malta	Saudi Arabia

Component: Inclusiveness

Indicator Name: Access to public services distributed by social group

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the question, "Are basic public services, such as order and security, primary education, clean water, and healthcare, distributed equally across social groups?"

Notes: This indicator measures the extent to which social group is an important cleavage in society for the distribution of public services. It is measured on an ordinal scale from 0 to 4. Thus, if there are inequalities in access to public services, but these are not mainly due to differentiation between particular social groups, the code should be “4” (equal).

0: Extreme. Because of their social group, 75 percent (%) or more of the population lack access to basic public services of good quality.

1: Unequal. Because of their social group, 25 percent (%) or more of the population lack access to basic public services of good quality.

2: Somewhat Equal. Because of their social group, 10 to 25 percent (%) of the population lack access to basic public services of good quality.

3: Relatively Equal. Because of their social group, only 5 to 10 percent (%) of the population lack access to basic public services of good quality.

4: Equal. Because of their social group, less than 5 percent (%) of the population lack access to basic public services of good quality.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Norway	Equatorial Guinea
Czech Republic	Haiti
Germany	Guatemala
Sweden	Republic of the Congo
Iceland	Paraguay
Ireland	Democratic Republic of the Congo
Italy	Liberia

Component: Inclusiveness

Indicator Name: Discrimination and violence against minorities

SPI 2022 Data Reference Year: 2021

Definition: Group Grievance indicator: discrimination, powerlessness, ethnic violence, communal violence, sectarian violence, and religious violence.

Notes: The indicator is measured on a scale from 0 (low pressures) to 10 (very high pressures). In the SPI calculations data below one are treated as one.

Source: Fund for Peace Fragile States Index

Link: https://fragilestatesindex.org/

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Iceland	Guatemala, Nepal
Ireland	Democratic Republic of the Congo
Finland	Yemen
Portugal	Ethiopia
Sweden	Sudan
Luxembourg	Bahrain
Canada, Eswatini, Jamaica, Singapore	Rwanda

Component: Inclusiveness

Indicator Name: Acceptance of gays and lesbians

SPI 2022 Data Reference Year: 2021

Definition: The proportion of respondents answering yes to the question, “Is the city or area where you live a good place or not a good place to live for gay or lesbian people?”

Notes: In the SPI calculations the indicator is calculated as floating 3-year average to limit volatility.

Source: Gallup World Poll

Link: https://ga.gallup.com/

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Norway	Central African Republic, Ethiopia, Kyrgyzstan
Netherlands	West Bank and Gaza
Sweden	Kazakhstan
Iceland	South Sudan
Canada	Armenia
Spain	Mauritania
Nepal	Malawi

Component: Access to Advanced Education

Indicator Name: Citable documents

SPI 2022 Data Reference Year: 2021

Definition: Citable documents - articles, reviews and conference papers - per 1,000 population.

Notes: In the SPI calculations the indicator is logarithmically transformed.

Source: Scimago Journal & Country Rank

Link: https://www.scimagojr.com/countryrank.php

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Monaco	Afghanistan
Switzerland	Burundi
Denmark	Niger
Iceland	Somalia
Norway	Democratic Republic of the Congo
Sweden	South Sudan
Singapore	Chad

Component: Access to Advanced Education

Indicator Name: Academic freedom

SPI 2022 Data Reference Year: 2021

Definition: Country experts' aggregated evaluation of the question, "To what extent is academic freedom respected?"

Notes: This indicator measures the extent academic freedom is respected. Academic freedom is understood as the right of academics, without constriction by prescribed doctrine, to freedom of teaching and discussion, freedom in carrying out research and disseminating and publishing the results thereof, freedom to express freely their opinion about the institution or system in which they work, freedom from institutional censorship and freedom to participate in professional or representative academic bodies (UNESCO 1997 Recommendation concerning the Status of Higher-Education Teaching Personnel). The Academic Freedom indicator is designed to provide an aggregated measure that captures the de facto realization of academic freedom, including the degree to which higher-education institutions are autonomous.

Source: Varieties of Democracy (V-Dem), Dataset Version 12

Link: https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Germany	Laos
Italy	United Arab Emirates
Latvia	Belarus
Slovakia	South Sudan
Sweden	Bahrain
Switzerland	Burma/Myanmar
Estonia	Syria

Component: Access to Advanced Education

Indicator Name: Women with advanced education

SPI 2022 Data Reference Year: 2019

Definition: Proportion of females (age-standardized) with 12–18 years of education.

Notes:

Source: Institute for Health Metrics and Evaluation

Link: http://ghdx.healthdata.org/record/global-burden-disease-study-2019-gbd-2019-covariates-1980-2019

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Lithuania	Mozambique
Canada	Guinea-Bissau
Switzerland	Ethiopia
Norway	Burundi
United States of America	Papua New Guinea
Germany	Mali
Monaco	South Sudan

Component: Access to Advanced Education

Indicator Name: Expected years of tertiary schooling

SPI 2022 Data Reference Year: 2020

Definition: Number of years a person of tertiary school entrance age can expect to spend within tertiary education. For a child of a certain age a, the school life expectancy is calculated as the sum of the age specific enrolment rates for the levels of education specified. The part of the enrolment that is not distributed by age is divided by the school-age population for the level of education they are enrolled in, and multiplied by the duration of that level of education. The result is then added to the sum of the age-specific enrolment rates. The indicator seeks to show the overall level of development of an educational system in terms of the average number of years of schooling that the education system offers to the eligible population, including those who never enter school.

Notes: In the SPI calculations the indicator is capped at 5 years of expected tertiary schooling.

Source: UN Educational, Scientific, and Cultural Organization Institute for Statistics

Link: http://data.uis.unesco.org/

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
Belarus	Turkmenistan
Kazakhstan	Senegal
Saudi Arabia	Seychelles
Georgia	Laos
Serbia	Nepal
Kuwait	Afghanistan
China	Burkina Faso

Component: Access to Advanced Education

Indicator Name: Quality weighted universities

SPI 2022 Data Reference Year: 2021

Definition: The number of universities in a country weighted by the quality of universities, measured by university rankings on any of the three most widely used international assessments. Universities in the top 400 on any list are given double weight. Not ranked universities are given 5% weight of the top ranked universities.

Notes: The total number of universities founded in or before the given year. Universities are considered to be degree-granting institutions of higher education that grant at least one bachelor's degree or its equivalent, corresponding to International Standard Classification of Education (ISCED) levels 6-8.

In the SPI calculations the indicator is logarithmically transformed.

Source: Times Higher Education World University Rankings, QS World University Rankings, and Academic Ranking of World Universities; Varieties of Democracy (V-Dem), Dataset Version 12 ; SPI calculations

Link: https://www.timeshighereducation.com/world-university-rankings/2022

https://www.topuniversities.com/university-rankings/world-university-rankings/2023

https://www.shanghairanking.com/rankings/arwu/2020

https://v-dem.net/vdemds.html

Top and bottom 10 performing countries in 2022

Top 10	Bottom 10
United States of America	16 countries have a value of 0.2
China	
Japan	
United Kingdom	
Germany	
India	
France	