Youth Progress Index 2025

Brussels, Belgium
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Methodology Summary

european youth forum

SOCIAL PROGRESS IMPERATIVE

Acknowledgements

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About Social Progress Imperative
The Social Progress Imperative is a US-based nonprofit focused on redefining how the world measures success, putting the things that matter to people's lives at the top of the agenda. Established in 2012, the Social Progress Imperative strives to improve the lives of people around the world by fostering research and knowledge sharing on social progress and using data to catalyse action.

About the European Youth Forum
The European Youth Forum is the platform of youth organisations in Europe. We represent over 100 youth organisations, which bring together tens of millions of young people from all over Europe.

Contact
For queries regarding the Index, please contact youthprogressindex@youthforum.org or visit the website www.youthprogressindex.org.

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Structure of the Youth Progress Index

Basic Needs

Nutrition & Medical Care

- Protection from infectious diseases
- Adequate nourishment
- Maternal survival rate
- Child survival rate
- Youth survival rate
- Healthy diet coverage

Water & Sanitation

- Basic sanitation services
- Basic water services
- Satisfaction with water quality
- Safe water, sanitation and hygiene

Housing

- Access to affordable housing
- Indoor air safety
- Usage of clean fuels and technology in rural areas
- Access to electricity

Safety

- Reduction of intimate partner violence
- Feeling safe walking alone
- Reduction of money theft
- Reduction of transportation related injuries
- Reduction of interpersonal violence

Foundations of Wellbeing

Basic Education

- Secondary school attainment
- Gender parity in secondary attainment
- Equal access to quality education
- Primary school enrollment
- Reduction in women with no education
- Children grow and learn

Information & Communications

- World Press Freedom Index
- Online Service Index
- Internet users
- Mobile telephone users

Health

- Mental wellbeing
- Reduction non-communicable diseases
- Life expectancy at 30
- Equal access to quality healthcare
- Universal health coverage

Environmental Quality

- Reduction of lead exposure
- Outdoor air safety
- Waste recovery
- Air quality satisfaction
- Reduction of air pollution

Opportunity

Rights & Voice

- Young members of parliament
- Freedom of peaceful assembly
- Equality before the law and individual liberty index
- Rights equality among social groups
- Perceived corruption decline
- Political rights

Freedom & Choice

- Reduction of vulnerable employment
- Civil Society freedom
- Freedom over life choices
- Reduction of early marriage rate
- Satisfied demand for contraception

Inclusive Society

- Access to public services in urban and rural areas
- Equal access to power
- Reliance on help
- Acceptance of gays and lesbians
- Reduction in discrimination and violence against minorities
- Reduction in the rate of young people not in education, employment or training

Advanced Education

- Academic freedom
- Quality weighted universities
- Citable documents
- Women with advanced education
- Expected years of tertiary schooling

169
Countries fully ranked

61
Social and Environmental Indicators

14
Years of Youth Progress mapped

The Youth Progress Index (YPI), produced biennially by the European Youth Forum in partnership with Social Progress Imperative, is the most comprehensive measurement of young people's wellbeing around the world. It examines essential aspects of youth wellbeing, such as access to sufficient food, housing, health services, opportunities to exercise socioeconomic and political rights, sense of inclusion, freedom from discrimination and the safeguarding of their future from environmental threats.

The forth edition of the Youth Progress Index brings added value, inspiring young activists to embrace data for their advocacy. An interactive online dashboard allows for easy comparisons between countries and tracks progress over 14 years.

The Youth Progress Index fuels young people's impactful engagement.

Visit www.youthprogressindex.org

Introduction

The Youth Progress Index (YPI) measures factors that matter to and can impact the daily lives of young people, using the Social Progress Index methodology. Do young people have sufficient food to eat? Do they have access to housing, the labour market and quality jobs? Can they read and write? Can they exercise their socio-economic and political rights? Do they live in a community where they feel included and are not discriminated against? Is their future and the future of their children protected from the dangers of environmental destruction? Can they influence politics and hold their political representatives to account, and are they represented in parliament? Do they have the opportunities to live up to their potential, contribute to thriving societies, and shape their future?

The Youth Progress Index 2025 combines 61 social and environmental outcome indicators, and it covers a time series of 14 years (2011-2024). The Index fully ranks 169 countries, and it also partially covers additional 27 countries, providing component and dimension scores when enough data are available. In all, the Youth Progress Index measures at least some aspects of youth progress across more than 99.9% of the world's young population.

This report describes the methodology used to calculate the Youth Progress Index 2025. Since the YPI is intended to measure social progress of the youth population, it is heavily based on the Social Progress Index principles and calculation methodology. Therefore, we start this report by describing the principles that establish the conceptual architecture of the Social Progress Index and provide an overview of the Social Progress Index framework used in the creation of the YPI. We then detail the steps taken to select data and calculate the YPI. Finally, we discuss the methodology behind assessing countries' strengths and weaknesses, relative to their economic prosperity. We conclude the report with an evaluation of the Index's structural integrity and with limitations of YPI.

Measuring Social Progress: Definition, Framework, Principles

The Social Progress Index is a well-established, robust, and holistic measure, published annually since 2013, that is meant to catalyse improvement and drive action by presenting social outcome data in a useful and reliable way. Composed of multiple dimensions, it can be used to benchmark success and provide a transparent, outcome-based measure of a country's well being based solely on social or environmental indicators.[1] 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 Youth Progress Index is built on the framework and methodology of the Social Progress Index. The YPI can therefore be understood as a measure of social progress for young people, which is operationalised through the rigorous, multi-layered framework of the Social Progress Index, contextualised, and calibrated according to what matters to younger generations. This chapter defines social progress, and it describes the framework and principles of the Social Progress Index used also in the creation of the YPI.

A. Definition of social progress

The conceptual framework of the Social Progress Index is based on the following working definition of social progress:

> *"Social progress is 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 reflects an extensive and critical review and synthesis of both the academic literature and expert practitioner experience across a wide range of development topics. It was also influenced by prior contributions to the field by Amartya Sen and members of the Commission on the Measurement of Economic Performance and Social Progress. The Youth Progress Index uses the same definition of social progress applied to young people (see below).

1 In addition to the Global Social Progress Index comparing countries, the Index has also been applied on various sub-national levels in almost 50 countries across the world.

B. Social Progress Index Framework

The Social Progress Index framework[2] is directly derived from the above definition, as it focuses on three distinct (though related) questions:

- **Basic Needs:** Does a country provide for its people's most essential needs?
- **Foundations of Wellbeing:** Are the building blocks in place for individuals and communities to enhance and sustain wellbeing?
- **Opportunity:** Is there opportunity for all individuals to reach their full potential?

These three questions reflect the three broad dimensions of the Social Progress Index framework that is also applied in the creation of the Youth Progress Index. Each dimension is broken down further to elucidate the key elements that make up social progress in that area, forming the 12 components of the model. The concepts underlying these components, which relate to and are guided by questions we seek to answer with available data, have remained unchanged since the first publication of the Social Progress Index in 2013 (see Figure 1).

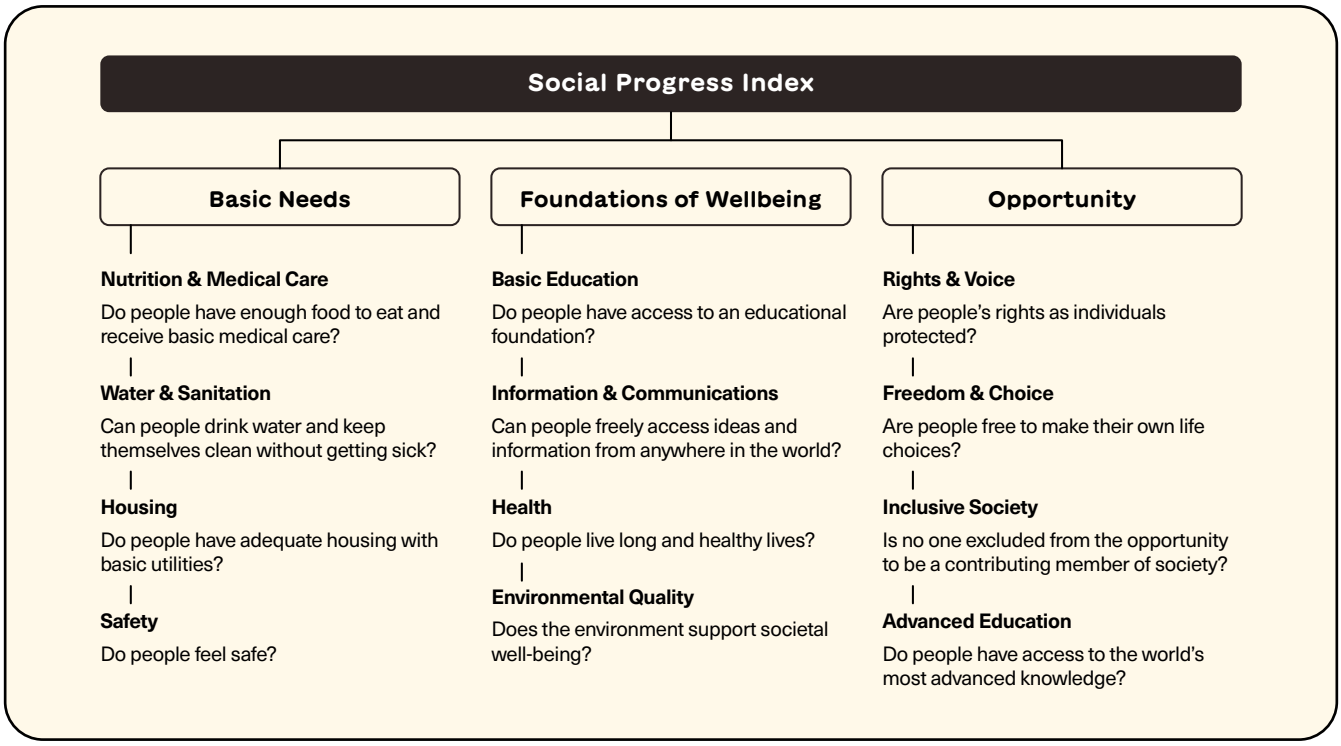

Figure 1 / Social Progress Index Component-Level Framework

Each component is further defined by a set of outcome indicators that respond to the conceptual questions posed. Together, these interrelated elements combine to produce a given level of social progress. The methodology allows measurement of each component and each dimension, yielding an overall score and ranking.

2 As of 2024, names of some components and dimensions of the Index have been modified.

C. Principles of the Social Progress Index

The Youth Progress Index, following the Social Progress Index, is based on four key design principles.

1. **Exclusively social and environmental indicators**: The aim is to measure social progress directly, rather than use economic proxies or outcomes. By excluding economic indicators, we can rigorously and systematically analyse the relationship between economic development (measured for example by GDP per capita) and social development. Prior efforts to move "beyond GDP" have commingled social and economic indicators, making it difficult to disentangle cause and effect.

2. **Outcomes not inputs**: The purpose of the Index is to measure the outcomes that matter to the lives of real young people, not the inputs. For example, we measure the health and wellness achieved by a country's people, not how much a country spends on healthcare or the effort expended.

3. **Holistic and relevant to all countries**: The Index creates a holistic measure of social progress that encompasses a comprehensive view of the health of societies. Most previous efforts have focused on the poorest countries, for understandable reasons. But even prosperous countries face social challenges, and knowing what constitutes a successful society, including at higher income levels, is indispensable for charting a course for every country.

4. **Actionable**: The Index is a practical tool that helps leaders and practitioners in government and civil society implement policies and programmes that drive faster social progress. To do so, we measure outcomes in a granular way that focuses on specific areas that can be addressed directly.

Indicator Selection

At the most granular level of the 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.

A. General Rules for Selecting Indicators

We only include indicators that are measured with consistent methodology, by the same organisation 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 or the World Bank to non-governmental organisations such as Freedom House or academia-based institutions such as Varieties of Democracy or Institute of Health Metrics and Evaluation. We also include data collected via global surveys, such as Gallup's World Poll (a summary of indicators used in the framework and their definitions and sources are available in Appendix A).

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 2 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.

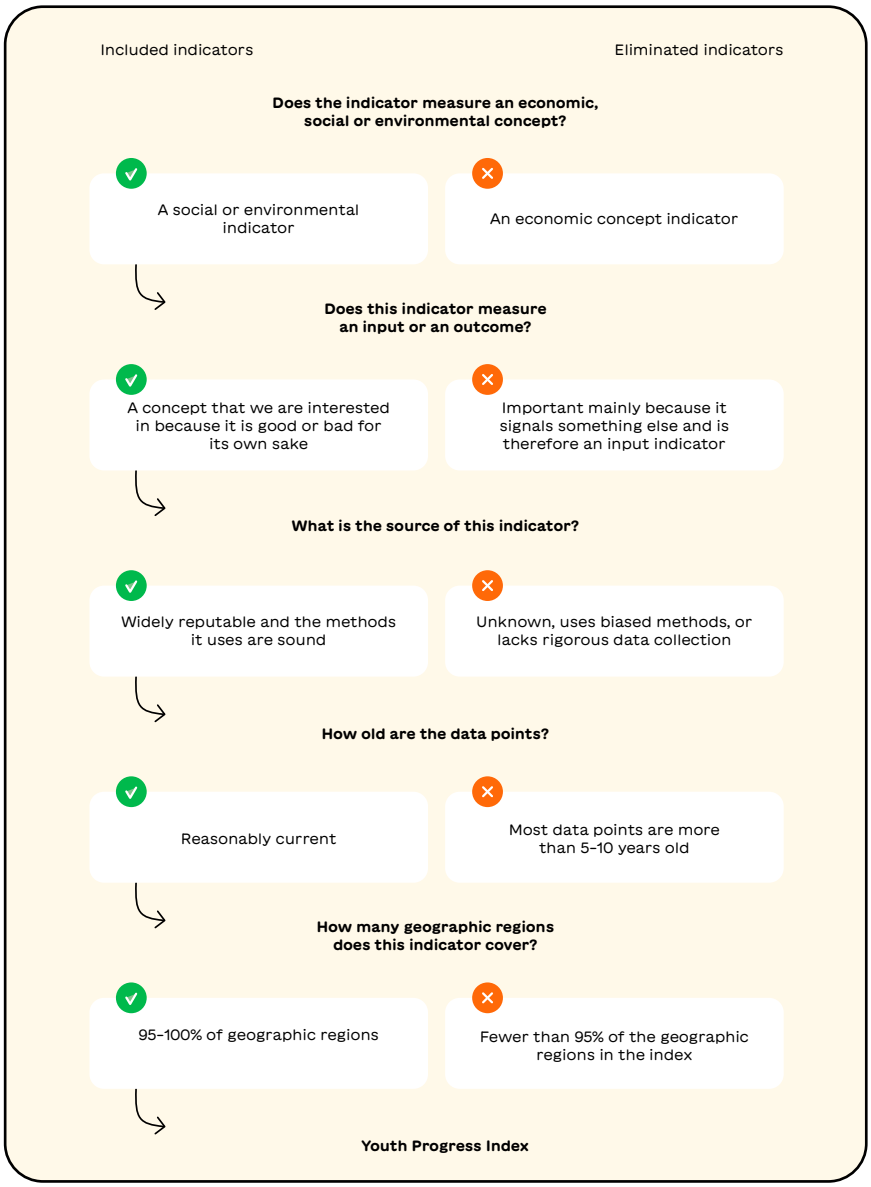

Figure 2 / Indicator Selection Tree

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 Youth Progress Index, as well as our calculation methodology. All the raw indicator data we use to calculate the Youth Progress Index can be accessed at www.youthprogressindex.org.

B. Indicators Selection for the Youth Progress Index 2025

The Youth Progress Index is the first Social Progress Index to look at a subgroup of the population defined by its age, rather than a population defined by its geographical location. It therefore asks the same universally applicable questions as the Social Progress Index, but the answers to these questions focus as much as possible on the lived experience of young people.

When building the Youth Progress Index, we therefore followed the following principles:

- When possible, indicators were disaggregated by age.
- Specific indicators relevant to youth were added.
- The remaining indicators relevant for all age groups were based on the Global Social Progress Index.

The Youth Progress Index includes 61 social and environmental indicators, with 4-6 indicators per component (see Figure 3).

Basic Needs

Nutrition & Medical Care

- Protection from infectious diseases
- Adequate nourishment
- Maternal survival rate
- Child survival rate
- Youth survival rate
- Healthy diet coverage

Water & Sanitation

- Basic sanitation services
- Basic water services
- Satisfaction with water quality
- Safe water, sanitation and hygiene

Housing

- Access to affordable housing
- Indoor air safety
- Usage of clean fuels and technology in rural areas
- Access to electricity

Safety

- Reduction of intimate partner violence
- Feeling safe walking alone
- Reduction of money theft
- Reduction of transportation related injuries
- Reduction of interpersonal violence

Foundations of Wellbeing

Basic Education

- Secondary school attainment
- Gender parity in secondary attainment
- Equal access to quality education
- Primary school enrollment
- Reduction in women with no education
- Children grow and learn

Information & Communications

- World Press Freedom Index
- Online Service Index
- Internet users
- Mobile telephone users

Health

- Mental wellbeing
- Reduction non-communicable diseases
- Life expectancy at 30
- Equal access to quality healthcare
- Universal health coverage

Environmental Quality

- Reduction of lead exposure
- Outdoor air safety
- Waste recovery
- Air quality satisfaction
- Reduction of air pollution

Opportunity

Rights & Voice

- Young members of parliament
- Freedom of peaceful assembly
- Equality before the law and individual liberty index
- Equality of rights protection across social groups
- Perceived corruption decline
- Political rights

Freedom & Choice

- Reduction of vulnerable employment
- Civil Society freedom
- Freedom over life choices
- Reduction of early marriage rate
- Satisfied demand for contraception

Inclusive Society

- Access to public services in urban and rural areas
- Equal access to power
- Reliance on help
- Acceptance of gays and lesbians
- Reduction in discrimination and violence against minorities
- Reduction in the rate of young people not in education, employment or training

Advanced Education

- Academic freedom
- Quality weighted universities
- Citable documents
- Women with advanced education
- Expected years of tertiary schooling

● youth-relevant indicators

Figure 3 shows the framework and full list of indicators of the Youth Progress Index 2025. Youth-specific or youth-relevant indicators are highlighted in blue italics.

Data for each selected indicator are collected on the basis of the above-mentioned criteria and are aligned (i.e., the entire time series for an indicator is shifted) so that the last available year corresponds to 2024. Across the 169 ranked countries, we have a total of 9,926 available data points to calculate the Youth Progress Index for 2024,[3] most of which are reflective of 2024 (51.25%), 2021 (24.17%), and 2023 (16.13%).

C. Definition of Youth

For the purposes of the Youth Progress Index, "youth" is considered to be individuals in the transition period between childhood and adulthood. The specific age bracket might be longer or shorter depending on the specific social context.

No universal definition of "youth" exists in the international community, and various institutions, organisations, and youth practitioners define "youth" with varying parameters, such as: Under 24; 12–24; 10–29; and anything under 30 or 35. Despite the lack of a cohesive definition, it is generally acknowledged the transitional period extends until well-after an individual has achieved legal "adult" status;

3 The rest to the total of 10,309 observations (61 variables for 169 ranked countries) for the latest available year (2024), i.e., 383 observations, were imputed using regression techniques.

meaning that a society's obligation to educate and engage its young people does not end when they turn 18.

It should also be stressed that "youth" are not a coherent group, and that many subgroups of young people, such as young women, LGBTQI youth, or young people with disabilities, may face greater challenges. This transition phase between the dependency of childhood and the responsibility of adult life is crucial and often challenging. A young person may have difficulty finding a good quality job, accessing quality education or healthcare, and is at risk of multiple forms of discrimination based on different aspects of their identity.

Indicator Transformations

When comparing country-level data, we encounter issues[4] that require us to transform the data for certain indicators. Our main techniques are to either cap an indicator, setting a clear upper or lower boundary cut-off value, or to apply a square root transformation or a logarithmic transformation.

A. Capped Indicators

We impose a top and bottom boundary on a number of indicators. Child survival rate, Youth survival rate, Safe water, sanitation and hygiene, Indoor air safety, Reduction of early marriage, and Citable documents are capped at the 99th percentile (based on raw values for 2008-2024) to reduce the skew of the data and/or the influence of a higher number of significant outliers. Some other indicators are 'winsorized' (capped) where appropriate to curb the impact of a very small number of significant outliers (usually less than five). These indicators are Maternal survival rate, Adequate nourishment, Reduction of intimate partner violence, Reduction of transportation related injuries, Primary school enrollment, Life expectancy at 30, Reduction of non-communicable diseases, Outdoor air safety, Young members of parliament, and Reduction in the rate of young people not in education, employment or training.

In addition, three indicators are capped to meet the boundaries set by the indicator definitions. We set a floor at 0.03 for Gender parity in secondary attainment based on the recommendations of UNESCO, and the Expected years of tertiary schooling is capped at five years to avoid the influence of a few near-outliers, and to reflect the Bologna system of tertiary education. We also cap Access to public services in urban and rural areas at the value of 4, reflecting equality between urban and rural areas as the best scenario.

B. Transformed Indicators

Four indicators, namely Infectious diseases, Intimate partner violence, Interpersonal Violence, and Lead exposure are skewed more when compared to other similar indicators. Therefore, for these indicators, a square root transformation is applied to create a more sensible distribution.

C. Calculation of indicators

Where possible, the Youth Progress Index uses indicators that can be disaggregated by age. The following indicators are calculated as population-weighted averages of values for four age groups (15-19, 20-24, 25-29, 30-34):

- Reduction of infectious diseases
  - This indicator is created as an aggregation of five groups of infectious diseases: HIV/AIDS and sexually transmitted infections; Respiratory infections and tuberculosis; Enteric infections; Neglected tropical diseases and malaria; and Other infectious diseases.
- Safe water, sanitation and hygiene
- Indoor air safety
- Reduction of transportation-related injuries
- Reduction of interpersonal violence
- Reduction of intimate partner violence
- Reduction of non-communicable diseases
- Reduction of lead exposure
- Outdoor air safety

4 Some indicators may be highly skewed or have some significant outlying values. If left untreated, this could distort the final 0-100 scores.

Next, we also calculate the following indicators:

- Healthy diet coverage, calculated as an average of diet low in fruits and diet low in vegetables.
- Secondary school attainment, calculated as an average of females' and males' proportions of population (aged 25 and older) with at least some secondary education.
- Gender parity in secondary attainment, created from the above specified underlying indicators to reflect the absolute distance from 1, where 1 represents an equal number of girls and boys enrolled.[5]
- Mental wellbeing, created as an aggregated proportion of respondents (aged 15-29) answering "yes" to the question: "Did you experience the following feelings - anger, sadness, worry, stress - during a lot of the day yesterday?" The aggregation of these four indicators is carried out using the Principal-Component Factor (PCF).
- Citable documents, calculated as a ratio of the number of citable documents to 1,000 population.
- Quality-weighted universities, calculated in the following way: The number of universities in a country is weighted by the quality of universities, measured by university rankings on any of the three most widely used international assessments. Three categories are created: top 400 universities on any of the three lists, listed and non-listed universities. Weights for these three categories are assigned in such a way that no number of universities in the lower category can compensate for a university in the higher category. The resulting values are logarithmically transformed and scaled from 0 (worst possible value) to 100 (best possible value).

D. Limiting volatility of survey indicators

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

Determining the Country Sample

The Youth Progress Index ranks 169 countries globally, and additional 27 countries are covered partially (having from one to eleven components). 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—most notably in the Basic Education component, but also in Safety and Inclusive Society. These exceptions are discussed in the following section.

Alongside the 169 ranked countries, we also include in our sample 6 '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 Youth Progress Index score. As with ranked countries, for the nine to eleven components with sufficient data, no more than one indicator should be missing per component (exceptions are discussed in the following section).

Finally, we exclude from our original calculation sample countries with limited data, but we use the weights generated from the Principal Component Factor (PCF described below) to calculate scores for these countries when possible. These countries do not have enough data to calculate at least nine components, but they have enough data to calculate at least one component score. We include these countries in imputations prior to calculation and during calculation (see below). Raw indicator data and scores for these 21 countries are included in the published results.

The Youth Progress Index includes a full index score and rank for the Occupied Palestinian Territory (OPT). In order to do so, we implement an approach different to other countries, since some indicator sources provide data for the while Occupied Palestinian Territory (OPT), while several others provide data separately for the West Bank, and Gaza Strip. 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.

5 While in most countries, more boys are enrolled in education than girls, there are 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.

Index Calculation

The Youth Progress Index calculation procedure consists of the following core steps. We first address missing values, then invert and standardise indicators so that they are comparable in scale. We then use Principal Component Factor (PCF) to aggregate indicators into a component score. Finally, we calculate dimension and overall Youth 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 indicators included in the Youth Progress Index have as few missing values as possible to avoid jeopardising the statistical quality of the Index. Missing values can stem from the lack of coverage by the data source, as well as incomplete reporting by the country to international organisations. In cases where an indicator is missing a country data point, we assess our imputation methodology both before and during 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 of the Index when a country lacks some, not all, indicator data within the examined period under two scenarios: when a country has missing data at the beginning or at the end of the 2011-2024 period; when there are gaps between observed values within indicators. In the first case, a future or a historical value is carried back or forward if a data point is missing at the beginning, or at the end of the time series. In cases where more than five data points at the beginning or at the end of an indicator's time series are missing, we rely on regression imputations during calculation. Under the second scenario, we impute gaps between years by applying linear interpolation. We do so to ensure smooth year-to-year estimates based on current and historical observed data and by assuming linear change.

Additionally, there is an exception to the above specified two rules applied on the Young members of Parliament indicator, for which – in cases of missing data – we keep the historical observed value until it changes. This is because the values depend mostly on and change with elections, and it therefore does not make sense to assume a linear change between two observed values to apply the linear interpolation.

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's sample data of ranked and partial countries (including both current and historical Youth Progress Index years, i.e., 2011-2024) 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 PCF.

However, as much as we want to strictly adhere to only one missing indicator per component, we allow for an exception to this rule particularly within the Basic Education component where data availability poses a significant limitation. Therefore, for two indicators within this component, we apply a pre-imputation regression methodology: we use indicators not directly included in the index which have a more complete global coverage and are highly correlated with the indicators we need to predict. We use the Institute for Health Metrics and Evaluation indicators Education in years per capita (males, females) and UNDP indicator Mean years of schooling to predict males', and females' secondary attainment for approximately 15 countries with missing data. These two supporting variables are then used to calculate the Secondary school attainment, and Gender parity in secondary attainment, which are then employed as predictors in the standard regression imputations described above.

In a similar fashion, in Inclusive Society and Safety components, we use the indicators in the respective components that are not from Gallup to pre-impute the two indicators from Gallup. In Basic Education, we pre-impute Primary

school enrollment using the other indicators within that component (excluding the Gallup indicator) as predictors.

In the 2025 edition of the Youth Progress Index, we also pre-impute the Mobile telephone users indicator from Gallup which has data available only for 2016-2024. Instead of repeating the first observed value backward to fill in the missing years, we have combined the observed data with regression predictions for 2011-2015. To predict the values, we used one external variable (mobile phone subscriptions per 100 people from the International Telecommunication Union) together with Internet users and On-line Service Index indicators as predictors.

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 twelve 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 to 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 minimise 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 criminalisation laws.[6] 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 PCF, 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 PCF weights are determined.

B. Standardisation

We convert indicators to the same scale in a three-step process. First, we set best- and worst-case scenarios 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, and prior to applying PCF, we standardise all indicators into z-scores with a mean of zero and standard deviation of one so that the indicators are comparable in scale (see below).

While the best- and worst-case scenarios are defined at the indicator level, we strive to follow the same method for similar metrics. For indicators with pre-defined boundaries, we use these to establish the upper and lower scenarios. We use natural boundaries for indicators that have a natural best-case scenario. For indicators that do not have a clear worst case or where the probability of reaching the worst-case scenario is extremely unlikely, the boundary is based on the worst observed value over 2008-2024. Caps constitute the boundaries for capped indicators. Best- and worst-case data indicator values are included into the country dataset as two additional observations before the PCF is applied (see Appendix C for best- and worst-case scenarios).

Once we establish a full dataset with indicator values for 2011 through 2024 and the best- and worst-case scenario, we invert indicators for which a higher value denotes lower youth progress. In this edition we changed the indicators name to follow this logic: Reduction of infectious diseases, Adequate nourishment, Maternal survival rate, Child survival rate, Youth survival rate, Healthy diet, Basic sanitation services, Basic water services, Safe water, sanitation and hygiene, Access to affordable housing, Indoor air safety, Reduction of intimate partner violence, Reduction of money theft, Reduction of transportation-related injuries, Reduction of interpersonal violence, Gender parity in secondary attainment, Reduction in women with no education, Mental wellbeing, Reduction of non-communicable diseases, Reduction of lead exposure, Outdoor air safety, Reduction air pollution, Air quality satisfaction, Reduction of vulnerable employment, Reduction of early marriage, Freedom over life choices, Reduction in the rate of young people not in education, employment or training, and Reduction in discrimination and violence against minorities.

As a final step prior to applying PCF, we standardise 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.

6 Map of countries that criminalise LGBT people can be found here: https://www.humandignitytrust.org/lgbt-the-law/map-of-criminalisation/

C. Component Scores

To calculate component scores, we aggregate the set of indicators within each component into a factor using PCF and all 12 years of data.[7] PCF 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, PCF 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) prior to finalising our framework. However, for those cases in which indicators are less correlated with other indicators within their component, we consider PCF 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=Youth Progress Index component, w=weight, and i=indicator.

Formula 1

$$Component\ value_c = \sum_i (w_i * indicator_i)$$

Our choice of PCF as the basis for aggregation at the component level was also influenced by the quality and quantity of data available on youth progress. For PCF 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 and over time. Our design principles and the data we use fulfil 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

$$Component\ score_c = \frac{(X_j - Worst\ Case)}{(Best\ Case - Worst\ Case)} * 100$$

As noted in the previous section, only countries that are ranked or qualify as 'partial' are included in the country sample that determines PCF-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.

Formula 3

$$Dimension_d = \frac{1}{4} \sum_c Component\ score_c$$

E. Index Scores

The overall Youth 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 Youth Progress Index score. The formula for calculating a Youth Progress Index score is below, where d=dimension.

Formula 4

$$Youth\ Progress\ Index\ score = \frac{1}{3} \sum_d Dimension_d$$

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

F. World Score Calculation, Regional Aggregations

In order to provide the most accurate assessment of world performance on youth progress, we account for countries' populations as well as the statistical interaction between indicators. Therefore, to calculate the world Youth Progress Index score, we first aggregate indicators into population-weighted values using data of all ranked and partial countries. We then apply the PCF 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 Youth Progress Index scores. It is important to note that the above-described method is different from calculating population-weighted scores, and in essence treats the world as a country. The same procedure is applied for the calculation of regional scores. The Social Progress Index regional classification is shown in Figure 4.

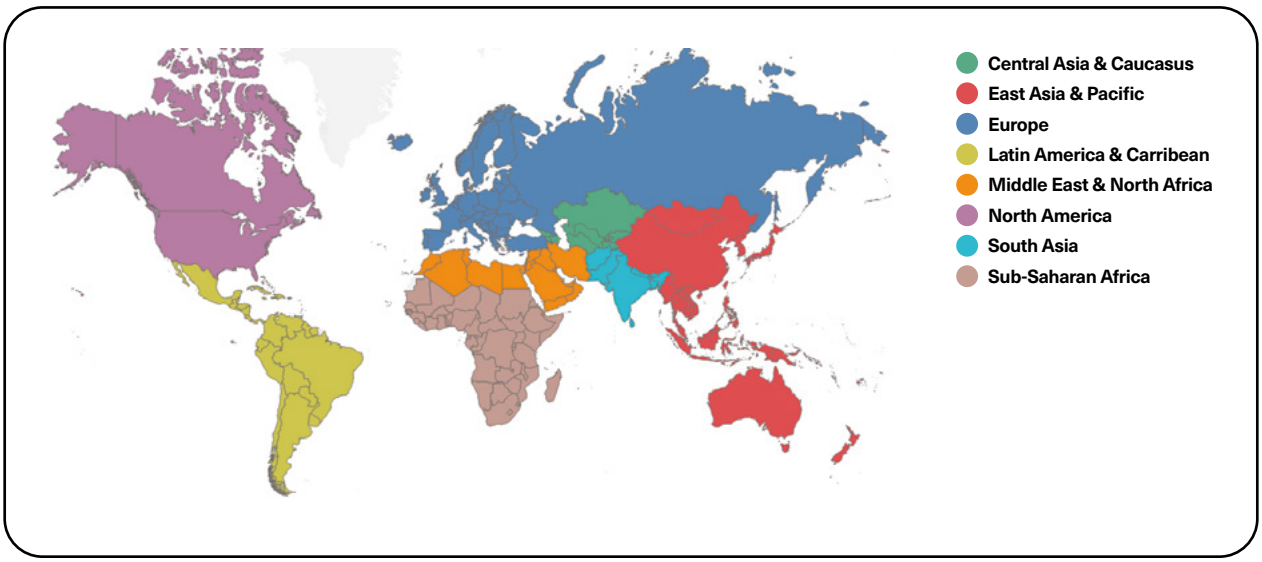

Figure 4 / Regional classification

Tiers

Unlike previous editions of the Youth Progress Index, the 2025 edition calculates performance tiers based on deciles across the entire 14-year time series 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 Youth 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 for youth 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. The results of this analysis are the basis of our country scorecards, which can be found at www.youthprogressindex.org.

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 group-

ings 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 weaknesses, while smaller groupings became too sensitive to outliers. Additionally, to reduce the influence of year-to-year fluctuations in GDP data, we use a four-year average (2020-2023).

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 minimise 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 Youth 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 cannot calculate strengths and weaknesses for countries with missing GDP data (these are Cuba, Eritrea, South Sudan, Venezuela, and Yemen).

Structural Integrity of the Index

Throughout the indicator assessment and calculation process, we conduct statistical tests to ensure the structural integrity of the Youth 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 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. For the Youth Progress Index 2025, correlation coefficients range from 0.1 to 0.9. 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 threshold safely.

		Cronbach's Alpha
Basic Needs	Nutrition and Medical Care	0.94
	Water and Sanitation	0.91
	Housing	0.79
	Safety	0.80
Foundations of Wellbeing	Basic Education	0.88
	Information and Communications	0.82
	Health	0.84
	Environmental Quality	0.73
Opportunity	Rights and Voice	0.89
	Freedom and Choice	0.75
	Inclusive Society	0.86
	Advanced Education	0.85

Figure 5 / Cronbach's Alpha for Each Component

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). Therefore, 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, as shown in Figure 6, the mean KMO score is above 0.5 for all components, suggesting that the grouping of indicators chosen for the components of the Youth Progress Index provides a good measure of the underlying construct.

		Mean KMO
Basic Needs	Nutrition and Medical Care	0.90
	Water and Sanitation	0.82
	Housing	0.71
	Safety	0.74
Foundations of Wellbeing	Basic Education	0.83
	Information and Communications	0.74
	Health	0.82
	Environmental Quality	0.72
Opportunity	Rights and Voice	0.83
	Freedom and Choice	0.74
	Inclusive Society	0.83
	Advanced Education	0.80

Figure 6 / KMO for Each Component

Limitations

The Youth 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 Index framework. It is used to compare countries and assess both absolute and relative levels of performance on social progress for youth to find best practices and to target areas that need improvement or from which other countries can learn. While the Youth Progress Index framework captures the multi-dimensional concepts underlying social progress for youth, 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 indicators used in the framework, including their sources, is available 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, there is a serious lack of data on the particular issues faced by subgroups of the young population. Data on minority groups, people with disabilities, LGBTQI, women and girls – are either non-inclusive or not collected at all, or at least not in a standardised format covering a sufficient number of countries. That is the reason why few of these indicators are present in the framework. For example, the Gallup World poll survey asks respondents whether "...the city or area where you live [is] a good place or not a good place to live for gay or lesbian people?" This question essentially omits the particular discrimination faced by young transgender and intersex people. It is however the best proxy that is available to understand the challenges faced by young LGBTQI communities. Unfortunately, there is no such proxy available for people with disabilities. This lack of data makes any intersectional analysis challenging to include within the Youth Progress Index.

We view the indicators used in the YPI framework as a starting point for measurement and conversation, and we continue to refine the Index to accommodate more recent data with greater geographic coverage that cover important aspects of social progress for youth still not captured by the current indicators available, including national environmental degradation, freshwater withdrawals, and more.

Furthermore, the Youth Progress Index provides a view into how a country performs on average, which helps inform the many policies and investments that affect social progress of youth 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.

It is also important to note that the Youth Progress Index 2025 is slightly different from the previous versions published in 2023 and 2021. This is mainly due to the fact that some new indicators have been added into (and some have been removed from) the framework, and some others have been updated with fresh data. These modifications must have been subsequently reflected also in slightly modified data treatments, and in indicator calibration (best-case and worst-case scenario). Therefore, the results of these three indexes are not directly comparable in terms of scores and rankings.

Conclusion

The Youth Progress Index provides a benchmark by which countries can compare themselves to others and can identify specific areas of current strength or weakness on social progress for young people. 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 2025 Youth Progress Index results are a starting point for many different avenues of research into the ways a country manages to achieve progress for young people.

Appendix A: Indicator Used in the Framework: Definitions and Sources

Dimension/ Component	Indicator	Unit of measurement	Definition
Basic Needs			
Nutrition and Medical Care	Child survival rate	(deaths/1,000 live births)	Original indicat years of age, ex
	Youth survival rate	(deaths aged 15-25 / 1,000 youths aged 15)	Original indicat exact age 25, ex
	Maternal survival rate	(deaths/100,000 live births)	Maternal morta late cause deat
	Adequate nourishment	(% of pop.)	Original indicat the probability t ries that is insuf cator is comput with a threshol an average indiv
	Healthy diet	(0=low risk; 100=high risk)	Original indicat of nutrition low value (SEV).
	Reduction of Infectious diseases	(DALYs/100,000 for youth aged 15-34)	Original indicat Years (DALYs) ra tions, otitis med zoster, malaria, echinococcosis nematode infec ally transmitted aged 15-34.
Water and Sanitation	Satisfaction with water quality	(proportion of youth aged 15-29)	The proportion you live, are you
	Basic sanitation service	(0=low risk; 100=high risk)	Risk-weighted p the summary ex
	Basic water service	(0=low risk; 100=high risk)	Risk-weighted p the summary ex
	Safe water, sanitation and hygiene	(DALYs/100,000 for youth aged 15-34)	Original indicat Years (DALYs) ra
Housing	Access to affordable housing	(proportion of youth aged 15-29)	Original indicat ents (aged 15-2 fied or dissatisfi
	Indoor air safety	(DALYs/100,000 for youth aged 15-34)	Original indicat rate, caused by tion includes ex solid fuels for co
	Access to electricity	(% of pop.)	The percentage
	Usage of clean fuels and technology for cooking	(% of rural pop.)	Proportion of ru and lighting (in

	Source
or's name 'Child mortality' measuring the probability of dying between birth and exactly 5 pressed per 1,000 live births.	UN Inter-agency Group for Child Mortality Estimation
or's name 'Youth mortality' measuring the probability of dying between exact age 15 and xpressed per 1,000 youths aged 15	UN Inter-agency Group for Child Mortality Estimation
lity ratio (maternal deaths among women aged 15-49 years per 100,000 live births) without ns.	Institute for Health Metrics and Evaluation, SDGs
or's name 'Undernourishment' measuring the prevalence of undernourishment expresses hat a randomly selected individual from the population consumes an amount of calo- fficient to cover her/his energy requirement for an active and healthy life. The indi- ed by comparing a probability distribution of habitual daily dietary energy consumption d level called the minimum dietary energy requirement. Both are based on the notion of vidual in the reference population.	Food and Agriculture Organization of the United Nations
or's name 'Diet low in fruits and vegetables' measuring the risk-weighted prevalence in fruits and vegetables for youth aged 15-34, as measured by the summary exposure	Institute for Health Metrics and Evaluation, GBD 2021
or's name 'Infectious diseases' measuring the age-standardized Disability-Adjusted Life te caused by HIV/AIDS, tuberculosis, diarrhea, intestinal infections, respiratory infec- lia, meningitis, encephalitis, diptheria, whooping cough, tetanus, measles, varicella, herpes Chagas disease, leishmaniasis, typanosomiasis, schistosomiasis, cysticercosis, cycstic s, lymphatic filariasis, onchocerciasis, trachoma, dengue, yellow feber, rabies, intestinal tions, food-borne trematodiases, leprosy, ebola, zika virus, guinea worm disease, sexu- diseases (excluding HIV), hepatitis, and other infectious diseases per 100,000 youth	Institute for Health Metrics and Evaluation, GBD 2021
of respondents (aged 15-29) answering 'satisfied' to the question, "In the city or area where satisfied or dissatisfied with the quality of water?"	Gallup World Poll
prevalence of unsafe basic sanitation services for youth aged 15-34, as measured by xposure value (SEV).	Institute for Health Metrics and Evaluation, GBD 2021
prevalence of unsafe basic water services for youth aged 15-34, as measured by xposure value (SEV).	Institute for Health Metrics and Evaluation, GBD 2021
or's name 'Unsafe water, sanitation and hygiene' measuring the Disability-Adjusted Life te attributable to unsafe water, sanitation, and hygiene per 100,000 youth aged 15-34.	Institute for Health Metrics and Evaluation, GBD 2021
or's name 'Dissatisfaction with housing affordability' measuring the proportion of respond- 9) answering 'dissatisfied' to the question, "In the city or area where you live, are you satis- ied with the availability of good, affordable housing?"	Gallup World Poll
or's name 'Household air pollution' measuring the Disability-Adjusted Life Years (DALYs) household air pollution from solid fuels per 100,000 youth aged 15-34. Household air pollu- posure to particulate matter less than 2.5 microns in diameter (PM2.5) due to the use of ooking, including coal, charcoal, wood, agricultural residue, and animal dung.	Institute for Health Metrics and Evaluation, GBD 2021
e of the population with access to electricity.	World Bank, World Development Indicators
ural population with primary reliance on clean fuels and technologies for cooking, heating, %).	World Health Organization

Dimension/ Component	Indicator	Unit of measurement	Definition
Safety	Feeling safe walking alone	(proportion of youth aged 15-29)	The proportion alone at night in
	Reduction of money theft	(proportion of youth aged 15-29)	Original indicato 'yes' to the ques another househ
	Reduction of intimate partner violence	(DALYs/100,000 for women aged 15-34)	Original indicato from intimate pa
	Reduction of interpersonal violence	(DALYs/100,000 for youth aged 15-34)	Original indicato rate from interp or disability fron group not inclu
	Reduction of transportation related injuries	(DALYs/100,000 for youth aged 15-34)	Original indicato (DALYs) rate due road injuries (de cycle, or other v
Foundations of Wellbeing			
Basic Education	Children grow and learn	(proportion of youth aged 15-29)	The proportion country have th
	Primary school enrollment	(% of children)	Total number of expressed as a net primary enro
	Equal access to quality education	(0=unequal; 4=equal)	Country experts guaranteed to a
	Secondary school attainment	(% of pop. aged 25+)	Population with
	Gender parity in secondary attainment	(distance from parity)	The absolute de
	Reduction in women with no education	(proportion of females aged 25-29)	Original indicato with 0 years of e
Information and Communications	Internet users	(% of pop.)	The estimated n (including mobi
	Mobile telephone users	(proportion of youth aged 15-29)	The proportion that you use to m
	Online Service Index	(0=low; 1=high)	The Index evalu naire about eac how governmen
	World Press Freedom Index	(0=low; 100=high)	Expert assessm collectives to se economic, legal The Index is sca the worst.

	Source
of respondents (aged 15-29) answering 'yes' to the question, "Do you feel safe walking the city or area where you live?"	Gallup World Poll
or's name 'Money stolen' measuring the proportion of respondents (aged 15-29) answering stion, "Within the last 12 months, have you had money or property stolen from you or nold member?"	Gallup World Poll
or's name 'Intimate partner violence 'measuring the Disability-Adjusted Life Years (DALYs) artner violence per 100,000 women aged 15-34.	Institute for Health Metrics and Evaluation, GBD 2021
or's name 'Interpersonal violence 'measuring the Disability-Adjusted Life Years (DALYs) ersonal violence per 100,000 youth aged 15-34. Interpersonal violence is defined as death m intentional use of physical force or power, threatened or actual, from another person or ding military or police forces.	Institute for Health Metrics and Evaluation, GBD 2021
or's name 'Transportation related injuries' measuring the Disability-Adjusted Life Years e to injuries related to transportation per 100,000 youth aged 15-34. These injuries include eath or disability due to unintentional interaction with an automobile, motorcycle, pedal vehicles) as well as other transport injuries.	Institute for Health Metrics and Evaluation, GBD 2021
of respondents (aged 15-29) answering 'yes' to the question, "Do most children in this e opportunity to learn and grow every day?"	Gallup World Poll
f students of official primary school age who are enrolled in any level of education, percentage of the total population of official primary school age. Statistic is termed 'total ollment rate.'	UN Educational, Scientific, and Cultural Organization Institute for Statistics
s' aggregated evaluation of the question, "To what extent is high quality basic education ll, sufficient to enable them to exercise their basic rights as adult citizens?"	Varieties of Democracy (V-Dem), Dataset Version 15
at least some secondary education (% ages 25 and older).	United Nations Development Programme (UNDP) Human Development Data
eviation from parity (=1) in secondary education attainment of women and men.	United Nations Development Programme (UNDP) Human Development Data
or's name 'Women with no education' measuring the proportion of females (aged 25-29) education.	Institute for Health Metrics and Evaluation, Education Attainment Distribution
number of Internet users out of the total population, using the Internet from any device le phones) in the last 12 months.	International Telecommunication Union
of respondents (aged 15-29) answering 'yes' to the question, "Do you have a mobile phone make and receive personal calls?"	Gallup World Poll
ates e-government services provision based on responses to a comprehensive question- h country's national government portal and key ministerial websites, this metric assesses nts leverage digital technologies to enhance e-governance and public engagement.	UN Department of Economic and Social Affairs E-Government Survey
ent of press freedom, which is defined as "the ability of journalists as individuals and elect, produce, and disseminate news in the public interest independent of political, l, and social interference and in the absence of threats to their physical and mental safety". aled from 0 to 100, with 100 representing the highest possible level of press freedom and 0	Reporters without borders

Dimension/ Component	Indicator	Unit of measurement	Definition
Health	Life expectancy at 30	(years)	The average nu
	Equal access to quality healthcare	(0=unequal; 4=equal)	Country experts guaranteed to a
	Reduction of non-communicable diseases	(DALYs/100,000 for youth aged 15-34)	Original indicato (DALYs) attributa
	Universal health coverage	(0=none; 100=full coverage)	Coverage of ess tracer interventi non-communica taged populatio the geometric n organized by fou Infectious disea lated as the geo
	Mental wellbeing	(proportion of youth aged 15-29)	The aggregated ence the followi tion of these fou
Environmental Quality	Waste recovery	(0=low; 100=high)	The proportion recovers energy energy recovery
	Reduction of air pollution	(mean annual exposure, µg/m3)	Original indicato fine particulate penetrating dee
	Air quality satisfaction	(proportion of youth aged 15-29)	Original indicato answering 'diss with the quality
	Outdoor air safety	(DALYs/100,000 for youth aged 15-34)	Original indicato resulting from a holds, cars and
	Reduction of lead exposure	(DALYs/100,000 for youth aged 15-34)	Original indicato utable to lead ex ured by microgr per gram of bon
Opportunity			
Rights and Voice	Freedom of peaceful assembly	(0=no freedom; 4=full freedom)	Country experts protect the right
	Equality before the law and individual liberty index	(0=low; 1=high)	Country experts ously enforced a secure property freedom of relig
	Equality of rights protection across social groups	(0=low; 1=high)	Country experts doms across so
	Perceived corruption decline	(0=high corruption; 100=low corruption)	Original indicato tion based on ex
	Political rights	(0 and lower=no rights; 40=full rights)	An evaluation o tion, and functio countries and te
	Young members of parliament	(% of members of parliament)	The percentage the unicameral

	Source
mber of years that a person of 30 years of age could expect to live, both sexes.	United Nations Population Division
s' aggregated evaluation of the question, "To what extent is high quality basic healthcare ll, sufficient to enable them to exercise their basic political rights as adult citizens?"	Varieties of Democracy (V-Dem), Dataset Version 15
or's name 'Non-communicable diseases' measuring the Disability-Adjusted Life Years able to non-communicable diseases per 100,000 youth aged 15-34.	Institute for Health Metrics and Evaluation, GBD 2021
sential health services (defined as the average coverage of essential services based on ions that include reproductive, maternal, newborn and child health, infectious diseases, able diseases and service capacity and access, among the general and the most disadvan- n). The indicator is an index reported on a unitless scale of 0 to 100, which is computed as nean of 14 tracer indicators of health service coverage. The tracer indicators are as follows, ur components of service coverage: 1. Reproductive, maternal, newborn and child health 2. ses 3. Noncommunicable diseases 4. Service capacity and access. The indicator is calcu- ometric average of these four sub-indices.	World Health Organization
l proportion of respondents (aged 15-29) answering "yes "to the question: Did you experi- ng feelings - anger, sadness, worry, stress - during a lot of the day yesterday? The aggrega- ur indicators is based on principal-component factor (pcf) method.	Gallup World Poll
of waste that is treated in a way that not only controls for environmental risks, but also y and/or materials (i.e., recycling, composting, anaerobic digestion, or incineration with y) and thus contributes to a circular economy.	Environmental Performance Index
or's name 'Particulate matter pollution' measuring the population-weighted mean levels of matter smaller than 2.5 microns in aerodynamic diameter (PM2.5), which are capable of ep into the respiratory tract and causing severe health damage.	Institute for Health Metrics and Evaluation, GBD 2021 Covariates
or's name 'Air quality dissatisfaction' measuring the proportion of respondents (aged 15-29) atisfied' to the question, "In the city or area where you live, are you satisfied or dissatisfied of air?"	Gallup World Poll
or's name 'Outdoor air pollution' measuring the Disability-Adjusted Life Years (DALYs) rate, mbient particulate matter pollution, including emissions from industrial activity, house- trucks per 100,000 youth aged 15-34.	Institute for Health Metrics and Evaluation
or's name 'Lead exposure' measuring the Disability-Adjusted Life Years (DALYs) rate attrib- xposure per 100,000 youth aged 15-34. Lead exposure is defined as acute exposure, meas- rams of lead per decilitre of blood, and chronic exposure, measured by micrograms of lead he.	Institute for Health Metrics and Evaluation
s' aggregated evaluation of the question, "To what extent do state authorities respect and t of peaceful assembly?"	Varieties of Democracy (V-Dem), Dataset Version 15
s' aggregated evaluation of the question, "To what extent are laws transparent and rigor- and public administration impartial, and to what extent do citizens enjoy access to justice, y rights, freedom from forced labor, freedom of movement, physical integrity rights, and gion?"	Varieties of Democracy (V-Dem), Dataset Version 15
s' aggregated evaluation of the question, "How equal is the protection of rights and free- cial groups by the state?"	Varieties of Democracy (V-Dem), Dataset Version 15
or's name 'Perception of corruption' measuring the perceived level of public sector corrup- xpert opinion, measured on a scale from 0 (highly corrupt) to 100 (very clean).	Transparency International
f three subcategories of political rights: electoral process, political pluralism and participa- oning of government on a scale from 0 (no political rights) to 40 (full political rights). Some erritories score below zero on the questions used to compose the indicator.	Freedom House
e of members of parliament 30 years or younger in the lower chambers and parliaments.	Interparliamentary Union

Dimension/ Component	Indicator	Unit of measurement	Definition
Freedom and Choice	Freedom over life choices	(proportion of youth aged 15-29)	The proportion you satisfied or
	Civil Society freedom	(0=high repression; 4=no repression)	Country experts society organiza
	Reduction of vulnerable employment	(% of total employment)	Original indicat count workers a
	Reduction of early marriage	(% of married/in-union women aged 15-19)	Original indicat married or in-ur
	Satisfied demand for contraception	(% satisfied demand by modern methods)	The percentage is satisfied with
Inclusive Society	Equal access to power	(0=low; 1=high)	Country experts
	Reliance on help	(proportion of youth aged 15-29)	The proportion have relatives o
	Acceptance of gays and lesbians	(proportion of youth aged 15-29)	The proportion where you live a
	Reduction in the rate of young people not in education, employment or training	(% of youth aged 15-24)	Original indicat tion of youth wh between the ag
	Reduction in discrimination and violence against minorities	(0=low discrimination; 10=high discrimination)	Original indicat cator: discrimin gious violence.
	Access to public services in urban and rural areas	(0=extremely unequal; 4=equal)	Country experts order and secur rural areas?"
Advanced Education	Academic freedom	(0=low; 1=high)	Country experts
	Women with advanced education	(proportion of women aged 25-29)	Proportion of fe
	Quality weighted universities	(0=low; 100=high)	The number of sity rankings on created: top 400 assigned in suc the higher categ
	Academic Ranking of World Universities; UniRank;	(years)	Number of year tion. For a child enrollment rates age is divided b by the duration ment rates. The of the average n including those
	Varieties of Democracy (V-Dem), Dataset Version 15; SPI calculations"	(documents/1,000 people)	Citable docume

	Source
of respondents (aged 15-29) answering 'dissatisfied' to the question, “In this country, are dissatisfied with your freedom to choose what you do with your life?”	Gallup World Poll
s' aggregated evaluation of the question, "Does the government attempt to repress civil ations (CSOs)?"	Varieties of Democracy (V-Dem), Dataset Version 15
or's name ‘Vulnerable employment’ measuring the contributing family workers and own-ac- s a percentage of total employment.	World Bank, World Development Indicators
or's name ‘Early marriage’ measuring the percentage of women aged 15-19 years who are nion.	United Nations Population Division
e of total demand for family planning among married or in-union women aged 15 to 49 that modern methods.	United Nations Population Division
s' aggregated evaluation of the question, "How equal is access to power?"	Varieties of Democracy (V-Dem), Dataset Version 15
of respondents (aged 15-29) answering 'yes' to the question, “If you were in trouble, do you r friends you can count on to help you whenever you need them, or not?”	Gallup World Poll
of respondents (aged 15-29) answering a good place to the question, “Is the city or area a good place or not a good place to live for gay or lesbian people?”	Gallup World Poll
or's name ‘Young people not in education, employment or training’ measuring the propor- no are not in employment and not in education or training. Youth are defined as persons es of 15 and 24 years. The series is part of the ILO modelled estimates.	International Labor Organization
or's name ‘Discrimination and violence against minorities’ measuring Group Grievance indi- ation, powerlessness, ethnic violence, communal violence, sectarian violence, and reli-	Fund for Peace Fragile States Index
s' aggregated evaluation of the question "Is access to basic public services, such as rity, primary education, clean water, and healthcare, distributed equally across urban and	Varieties of Democracy (V-Dem), Dataset Version 15
s' aggregated evaluation of the question, "To what extent is academic freedom respected?"	Varieties of Democracy (V-Dem), Dataset Version 15
males (aged 25-29) with 12–18 years of education.	Institute for Health Metrics and Evaluation, Education Attainment Distribution
universities in a country weighted by the quality of universities, measured by univer- any of the three most widely used international assessments. Three categories were 0 universities on any of the three lists, listed and non-listed universities. Weights are h way that no number of universities in the lower category can compensate a university in gory.	Times Higher Education World University Rankings; QS World University Rankings; Academic Ranking of World Universities; UniRank; Varieties of Democracy (V-Dem), Dataset Version 15; SPI calculations
s a person of tertiary school entrance age can expect to spend within tertiary educa- of a certain age a, the school life expectancy is calculated as the sum of the age specific s for the levels of education specified. The part of the enrolment that is not distributed by y the school-age population for the level of education they are enrolled in, and multiplied of that level of education. The result is then added to the sum of the age-specific enrol- indicator seeks to show the overall level of development of an educational system in terms number of years of schooling that the education system offers to the eligible population, who never enter school.	UN Educational, Scientific, and Cultural Organization Institute for Statistics
nts - articles, reviews and conference papers - per 1,000 population.	Scimago Journal & Country Rank

Appendix B: Indicators Excluded from the Final Framework

Dimension/ Component	Indicator	Unit of measurement
Basic Needs		
Nutrition & Medical Care	Child stunting	(% prevalence among children under 5 ye
Water & Sanitation	Dissatisfaction with water quality	(proportion of youth aged 15-29)
Housing	Satisfaction with housing affordability	(proportion of youth aged 15-29)
Safety	Homicide rate	(homicides per 100,000 population)
	Assaulted/Mugged youth	(proportion of youth aged 15-29)
Foundations of Wellbeing		
Basic Education	Illiterate youth	(proportion of youth aged 15-24)
Information & Communications	Mobile phone subscriptions	(subscriptions per 100 people)
	Alternative sources of information	(0=low; 1=high)
	Government Internet filtering capacity	(0=no capacity; 3=full capacity to block al
	Government Internet shutdown capacity	(0=no capacity; 4=full capacity to shut do
	Government social media alternatives	(0=all controlled by state; 4=no one uses state-controlled platforms)
Health	Suicide rates per 100,000 population	(suicides/100,000 population)
	Satisfaction with availability of quality health services	(proportion of youth aged 15-29)
	Anxiety	(DALYs/100,000 for youth aged 15-34)
	Drug use	(DALYs/100,000 for youth aged 15-34)
	Health problems preventing from activities	(proportion of youth aged 15-29)
	Self-harm	(DALYs/100,000 for youth aged 15-34)
	Depressive disorders	(DALYs/100,000 for youth aged 15-34)
Environmental Quality	Greenhouse gas emissions	(total CO2 equivalents, MtCO2e)
	Satisfaction with environment preservation	(proportion of youth aged 15-29)
	Species protection index	(0=low; 100=high)

	Source	Reasons for exclusion
ears)	Institute for Health Metrics and Evaluation	poor conceptual fit
	Gallup World Poll	poor statistical fit
	Gallup World Poll	poor statistical fit
	United Nations Office on Drugs and Crime	poor data coverage
	Gallup World Poll	poor statistical fit, poor data coverage
	UN Educational, Scientific, and Cultural Organization Institute for Statistics	poor data coverage
	International Telecommunication Union	lower relevance compared to the selected indicators
	Varieties of Democracy (V-Dem), Dataset Version 15	poor statistical fit
l)	Varieties of Democracy (V-Dem), Dataset Version 15	poor conceptual fit
wn all)	Varieties of Democracy (V-Dem), Dataset Version 15	poor conceptual fit
	Varieties of Democracy (V-Dem), Dataset Version 15	poor statistical fit, poor conceptual fit
	World Health Organization	poor statistical fit, poor conceptual fit
	Gallup World Poll	poor statistical fit
	Institute for Health Metrics and Evaluation, Global Burden of Disease	poor statistical fit
	Institute for Health Metrics and Evaluation, Global Burden of Disease	poor statistical fit
	Gallup World Poll	poor statistical fit
	Institute for Health Metrics and Evaluation, Global Burden of Disease	poor statistical fit
	Institute for Health Metrics and Evaluation, Global Burden of Disease	poor statistical fit
	World Resource Institute	poor statistical fit
	Gallup World Poll	poor statistical fi
	Environmental Performance Index	poor statistical fit

Dimension/ Component	Indicator	Unit of measurement
Opportunity		
Rights & Voice	Property rights for women	(0=no rights; 5=full rights)
	Access to justice	(0=nonexistent; 1=observed)
	Freedom of religion	(0=no freedom; 4=full freedom)
	Use of social media to organize offline action	(0=never or almost never; 4=regularly)
	Freedom of expression	(0=low; 1=high)
Freedom & Choice	Perception of corruption	(proportion of youth aged 15-29)
	Volunteered time	(proportion of youth aged 15-29)
Inclusive Society	Equality of political power by social group	(0=unequal; 4=equal)
	Equality of political power by socioeconomic position	(0=unequal; 4=equal)
	Access to public services distributed by social group	(0=unequal; 4=equal)
	Minorities satisfied with treatment	(proportion of youth aged 15-29)
	Opportunity to make friends	(proportion of youth aged 15-29)
	Openness towards immigrants	(proportion of youth aged 15-29)
	Equality of political power by gender	(0=unequal; 4=equal)
	Power distributed by sexual orientation	(0=unequal; 3=equal)

Source	Reasons for exclusion
Varieties of Democracy (V-Dem), Dataset Version 15	lower relevance compared to the selected indicators
Varieties of Democracy (V-Dem), Dataset Version 15	conceptual overlap (similar indicator selected)
Varieties of Democracy (V-Dem), Dataset Version 15	conceptual overlap (similar indicator selected)
Varieties of Democracy (V-Dem), Dataset Version 15	poor statistical fit
Varieties of Democracy (V-Dem), Dataset Version 15	conceptual overlap (similar indicator selected)
Gallup World Poll	conceptual overlap (similar indicator selected)
Gallup World Poll	poor statistical fit
Varieties of Democracy (V-Dem), Dataset Version 15	lower relevance compared to the selected indicators
Varieties of Democracy (V-Dem), Dataset Version 15	lower relevance compared to the selected indicators
Varieties of Democracy (V-Dem), Dataset Version 15	lower relevance compared to the selected indicators
Gallup World Poll	poor statistical fit, poor data coverage
Gallup World Poll	poor statistical fit
Gallup World Poll	poor statistical fit
Varieties of Democracy (V-Dem), Dataset Version 15	lower relevance compared to the selected indicators
Varieties of Democracy (V-Dem), Dataset Version 15	lower relevance compared to the selected indicators

Appendix C: Indicator Boundaries

Indicator	Best case	Worst case
Child mortality (deaths/1,000 live births)	0	145.0231
Youth mortality (deaths aged 15-25 / 1,000 youths aged 15)	0	47.74081
Maternal mortality (deaths/100,000 live births)	0	663.93709
Undernourishment (% of pop.)	2.5	50.4
Diet low in fruits and vegetables (0=low risk; 100=high risk)	0	100
Infectious diseases (DALYs/100,000 for youth aged 15-34)	0	68699.313
Satisfaction with water quality (proportion of youth aged 15-29)	1	0.22
Basic sanitation service (0=low risk; 100=high risk)	0	100
Basic water service (0=low risk; 100=high risk)	0	100
Unsafe water, sanitation and hygiene (DALYs/100,000 for youth aged 15-34)	0	1678.652
Dissatisfaction with housing affordability (proportion of youth aged 15-29)	0	0.87
Household air pollution (DALYs/100,000 for youth aged 15-34)	0	942.0099
Access to electricity (% of pop.)	100	0.8
Usage of clean fuels and technology for cooking (% of rural pop.)	100	0
Feeling safe walking alone (proportion of youth aged 15-29)	1	0.08
Money stolen (proportion of youth aged 15-29)	0	0.61
Intimate partner violence (DALYs/100,000 for women aged 15-34)	0	12986.65
Interpersonal violence (DALYs/100,000 for youth aged 15-34)	0	15318.938
Transportation related injuries (DALYs/100,000 for youth aged 15-34)	0	5344.244
Children grow and learn (proportion of youth aged 15-29)	1	0.1
Primary school enrollment (% of children)	100	34.403481
Equal access to quality education (0=unequal; 4=equal)	4	0
Secondary school attainment (% of pop. aged 25+)	100	6.04
Gender parity in secondary attainment (distance from parity)	0.03	0.8524048
Women with no education (proportion of females aged 25-29)	0	0.849546
Internet users (% of pop.)	1	0
Mobile telephone users (proportion of youth aged 15-29)	1	0.2
Online Service Index (0=low; 1=high)	1	0
World Press Freedom Index (0=low; 100=high)	100	0
Life expectancy at 30 (years)	59.80317	22.9681
Equal access to quality healthcare (0=unequal; 4=equal)	4	0

Indicator	Best case	Worst case
Non-communicable diseases (DALYs/100,000 for youth aged 15-34)	0	125.1645
Universal health coverage (0=none; 100=full coverage)	100	0
Mental wellbeing (proportion of youth aged 15-29)	0	1
Waste recovery (0=low; 100=high)	100	0
Air quality dissatisfaction (proportion of youth aged 15-29)	0	0.64
Particulate matter pollution (mean annual exposure, µg/m3)	0	95.242645
Outdoor air pollution (DALYs/100,000 for youth aged 15-34)	0	425.5907
Lead exposure (DALYs/100,000 for youth aged 15-34)	0	259.53586
Freedom of peaceful assembly (0=no freedom; 4=full freedom)	4	0
Equality before the law and individual liberty index (0=low; 1=high)	1	0
Rights equality among social groups (0=low; 1=high)	1	0
Perception of corruption (0=high corruption; 100=low corruption)	100	0
Political rights (0 and lower=no rights; 40=full rights)	40	0
Young members of parliament (% of members of parliament)	15	0
Freedom over life choices (proportion of youth aged 15-29)	0	0.75
CSOs repressions (0=high repression; 4=no repression)	4	0
Vulnerable employment (% of total employment)	0	93.991173
Early marriage (% of married/in-union women aged 15-19)	0	40.94302
Satisfied demand for contraception (% satisfied demand by modern methods)	100	0.9
Equal access index (0=low; 1=high)	1	0
Count on help (proportion of youth aged 15-29)	1	0.21
Acceptance of gays and lesbians (proportion of youth aged 15-29)	1	0
Young people not in education, employment or training (% of youth aged 15-24)	0	47.532
Discrimination and violence against minorities (0=low discrimination; 10=high discrimination)	1	10
Access to public services in urban and rural areas (0=extremely unequal; 4=equal)	4	0
Academic freedom (0=low; 1=high)	1	0
Women with advanced education (proportion of women aged 25-29)	1	0.01
Quality weighted universities (0=low; 100=high)	100	0
Expected years of tertiary schooling (years)	5	0
Citable documents (documents/1,000 people)	4.838273	0

Appendix D: PCA-Derived Indicator Weights

Indicator	Unscaled	Scaled
Infectious diseases (DALYs/100,000 for youth aged 15-34)	0.1904	0.1683
Diet low in fruits and vegetables (0=low risk; 100=high risk)	0.1771	0.1565
Undernourishment (% of pop.)	0.1761	0.1556
Maternal mortality (deaths/100,000 live births)	0.198	0.175
Youth mortality (deaths aged 15-25 / 1,000 youths aged 15)	0.1941	0.1716
Child mortality (deaths/1,000 live births)	0.1957	0.173
Unsafe water, sanitation and hygiene (DALYs/100,000 for youth aged 15-34)	0.2804	0.2496
Basic water service (0=low risk; 100=high risk)	0.2986	0.2657
Basic sanitation service (0=low risk; 100=high risk)	0.3002	0.2672
Satisfaction with water quality (proportion of youth aged 15-29)	0.2444	0.2175
Usage of clean fuels and technology for cooking (% of rural pop.)	0.3475	0.3004
Access to electricity (% of pop.)	0.3533	0.3055
Household air pollution (DALYs/100,000 for youth aged 15-34)	0.3435	0.2969
Dissatisfaction with housing affordability (proportion of youth aged 15-29)	0.1124	0.0972
Feeling safe walking alone (proportion of youth aged 15-29)	0.2896	0.2177
Money stolen (proportion of youth aged 15-29)	0.2639	0.1984
Intimate partner violence (DALYs/100,000 for women aged 15-34)	0.2817	0.2118
Interpersonal violence (DALYs/100,000 for youth aged 15-34)	0.2514	0.1891
Transportation related injuries (DALYs/100,000 for youth aged 15-34)	0.2433	0.183
Children grow and learn (proportion of youth aged 15-29)	0.1647	0.131
Primary school enrollment (% of children)	0.1955	0.1555
Equal access to quality education (0=unequal; 4=equal)	0.2038	0.1621
Secondary school attainment (% of pop. aged 25+)	0.2366	0.1882
Gender parity in secondary attainment (distance from parity)	0.2319	0.1844
Women with no education (proportion of females aged 25-29)	0.2248	0.1788
Internet users (% of pop.)	0.3461	0.2926
Mobile telephone users (proportion of youth aged 15-29)	0.3358	0.2839
Online Service Index (0=low; 1=high)	0.3275	0.2769
World Press Freedom Index (0=low; 100=high)	0.1734	0.1466
Mental wellbeing (proportion of youth aged 15-29)	0.0969	0.0811
Universal health coverage (0=none; 100=full coverage)	0.2834	0.2372
Non-communicable diseases (DALYs/100,000 for youth aged 15-34)	0.2588	0.2166

Indicator	Unscaled	Scaled
Equal access to quality healthcare (0=unequal; 4=equal)	0.2702	0.2261
Life expectancy at 30 (years)	0.2855	0.2389
Lead exposure (DALYs/100,000 for youth aged 15-34)	0.3298	0.2378
Outdoor air pollution (DALYs/100,000 for youth aged 15-34)	0.2793	0.2014
Particulate matter pollution (mean annual exposure, µg/m3)	0.3168	0.2284
Air quality dissatisfaction (proportion of youth aged 15-29)	0.1598	0.1152
Waste recovery (0=low; 100=high)	0.3014	0.2173
Young members of parliament (% of members of parliament)	0.0894	0.0757
Political rights (0 and lower=no rights; 40=full rights)	0.2297	0.1946
Perception of corruption (0=high corruption; 100=low corruption)	0.1985	0.1681
Rights equality among social groups (0=low; 1=high)	0.2095	0.1775
Equality before the law and individual liberty index (0=low; 1=high)	0.2362	0.2001
Freedom of peaceful assembly (0=no freedom; 4=full freedom)	0.2171	0.1839
Satisfied demand for contraception (% satisfied demand by modern methods)	0.2932	0.2129
Early marriage (% of married/in-union women aged 15-19)	0.3122	0.2267
Vulnerable employment (% of total employment)	0.3262	0.2369
CSOs repressions (0=high repression; 4=no repression)	0.195	0.1416
Freedom over life choices (proportion of youth aged 15-29)	0.2504	0.1818
Equal access index (0=low; 1=high)	0.206	0.1583
Count on help (proportion of youth aged 15-29)	0.2174	0.167
Acceptance of gays and lesbians (proportion of youth aged 15-29)	0.2246	0.1725
Young people not in education, employment or training (% of youth aged 15-24)	0.2084	0.1601
Discrimination and violence against minorities (0=low discrimination; 10=high discrimination)	0.2034	0.1563
Access to public services in urban and rural areas (0=extremely unequal; 4=equal)	0.242	0.1859
Citable documents (documents/1,000 people)	0.2656	0.2161
Expected years of tertiary schooling (years)	0.2841	0.2311
Women with advanced education (proportion of women aged 25-29)	0.2699	0.2196
Academic freedom (0=low; 1=high)	0.1487	0.121
Quality weighted universities (0=low; 100=high)	0.2609	0.2122

Appendix E: Descriptive Statistics of 2024 Scores

The following descriptive statistics are based on the sample of 170 countries for which we can calculate at least 9 components for the most recent year (2024) of the Youth Progress Index 2025.

Index / Dimension / Component	Obs.	Mean	Standard Deviation	Min	Max
Youth Progress Index	169	66	15	30.01	91.67
Basic Needs	192	75.19	14.99	35.48	93.59
Foundations of Wellbeing	173	67.85	13.89	32.01	92.52
Opportunity	171	55.23	17.73	15.63	90.72
Nutrition & Medical Care	192	77.38	14.26	25.17	94.48
Water & Sanitation	194	71.31	20.56	10.48	99.7
Housing	193	75.74	20.27	23.05	97.81
Safety	194	76.73	9.34	44.7	92.79
Basic Education	174	75.44	16.56	24.02	98.2
Information & Communications	194	68.31	18.02	13.84	97.76
Health	175	63.9	13.81	33.39	87.45
Environmental Quality	190	64.35	12.09	25.65	92.35
Rights & Voice	174	51.87	21.95	5.45	91.11
Freedom & Choice	175	68.71	15.24	22.3	92.47
Inclusive Society	172	57.96	17.81	10.78	92.69
Advanced Education	178	42.4	22.39	5.77	90.37

Appendix F: Bibliography and Further Reading

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