Statistical Performance Indicators (SPI): Protocols for Quality Assurance

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1 Introduction

The World Bank released the Statistical Performance Indicators (SPI) alongside the World Development Report 2021: Data for Better Lives. Building on a conceptual foundation that reflects data usage and data production needs in modern economies, the SPI provide a comprehensive and coherent framework for measuring the statistical performance of national statistical systems. This can help guide country efforts to build successful national data and statistical systems (WDR 2021). The SPI can adapt to evolving needs and incorporate new data sources and improved methodologies as they become available. The original SPI launch in March 2021 included 51 indicators covering 2016-2019. The framework and data collection process for the initial release is described in detail in Dang et al. (2023) and Dang et al. (2021). The 2023 update of the SPI extends this time series to 2022 with the number of countries with sufficient data increasing from 174 to 186. Going forward the SPI will be updated annually.

This document is prepared by the SPI team at the World Bank Development Data Group. Following a brief summary of the SPI framework, methodology and data sources, the document outlines the quality assurance protocols followed to produce the SPI and establishes the rules for updating and revising the SPI in the future. This is intended to ensure the SPI's relevance, credibility and transparency as an important tool for guiding the development of national data and statistical systems in a fast-evolving world.

2 SPI Framework, Methodology, and Data Sources

National statistical and data systems are at the heart of the successful governance of nations. They provide an essential public service, helping governments to make decisions about the economy, society, and environment and enable civil society to hold governments accountable.

Assessing and improving the capacity of national statistical and data systems has long been part of the global agenda for statistics. Capacity assessment tools have been developed by organizations including PARIS21, the Food and Agriculture Organization of the United Nations (FAO), the United Nations Economic Commission for Europe (UNECE), the United

Nations Economic Commission for Africa (UNECA) and the US Census Bureau. Since 2004, the World Bank's Statistical Capacity Index (SCI) has been part of this global toolkit.

The 2030 agenda for sustainable development created a global development framework and adopted a set of ambitious Sustainable Development Goals and targets to measure progress towards them (United Nations 2022). This agenda requires national statistical systems to work together with other stakeholders within and across nations to measure the SDG targets in a consistent and relevant way. At the same time, with the digital revolution, the volume of data has grown dramatically, data are more widely accessible and used, and new sources and types of data are now available – which can be harnessed in support of the 2030 agenda in an open, transparent, and ethical manner (WDR 2021).

However, making full use of data and statistics for governance and for measuring progress towards the SDGs requires an adequate level of capacity and financial, human, and technological resources. The COVID-19 pandemic has added extra motivation and impetus for understanding and improving the performance of national statistical systems. Good data and reliable statistics have been key to countries' responses to the pandemic (Mehta & Shukla, 2022).

The SPI replace the SCI as a response to the new global landscape and the evolving data needs it entails. The indicators are designed to be used by national governments and statistical offices as well as international agencies and donors.

The development of the SPI was guided by a technical advisory group and involved broad consultation within the World Bank. The technical advisory group consisted of the former National Statistician of the Philippines and Director of the Philippine Statistics Authority, Lisa Bersales, the Director General of the National Institute of Statistics of Rwanda, Yusuf Murangwa, the former Chief Statistician of Colombia, Juan Oviedo, and the former Director General of Eurostat and Chief Statistician of the European Union, Walter Radermacher. It was chaired by the former National Statistician of the UK, John Pullinger.[1]

[1] For the list of people consulted on the SPI – both within and outside the World Bank – see Dang et al (2021).

2.1 Framework and Methodology

The SPI framework considers the performance of the entire national statistical and data system, incorporating users, producers, and partners at various levels. The indicators are designed to be dynamic and forward looking.

The impact sought from national statistical and data systems is better decisions and stronger accountability. The way in which national statistical systems contribute to better decisions and stronger accountability is by anticipating and meeting user needs for statistics. Such user needs are in turn met by the production of data and statistics and statistical indicators. The process of design and production relies on a wide range of organizations (academia, international organizations, the private sector, ministries, etc.), working in partnership with the national statistical office as part of the national statistical and data system to develop and utilize richer data sources. To be successful the whole data system needs to build its capability to adapt and thrive.

At the core of this framework are five pillars (Figure 1): data use, data services, data products, data sources, and data infrastructure.

(1) Statistics have no value unless they are used. Consequently, the first pillar of the SPI is data use. A successful statistical system is one that produces data products that are highly used.

(2) To meet user needs, the statistical system must develop a range of services that connect data users and producers and facilitate dialogue between them. The second pillar of the SPI is therefore data services that are trusted by users. A successful statistical system is one with highly valued and well used statistical services.

(3) The dialogue between users and suppliers in turn drives the design and quality of statistical products that are created to meet the country's needs. These products should incorporate accuracy, timeliness, frequency, comparability, and levels of disaggregation. The third pillar of the SPI is therefore data products.

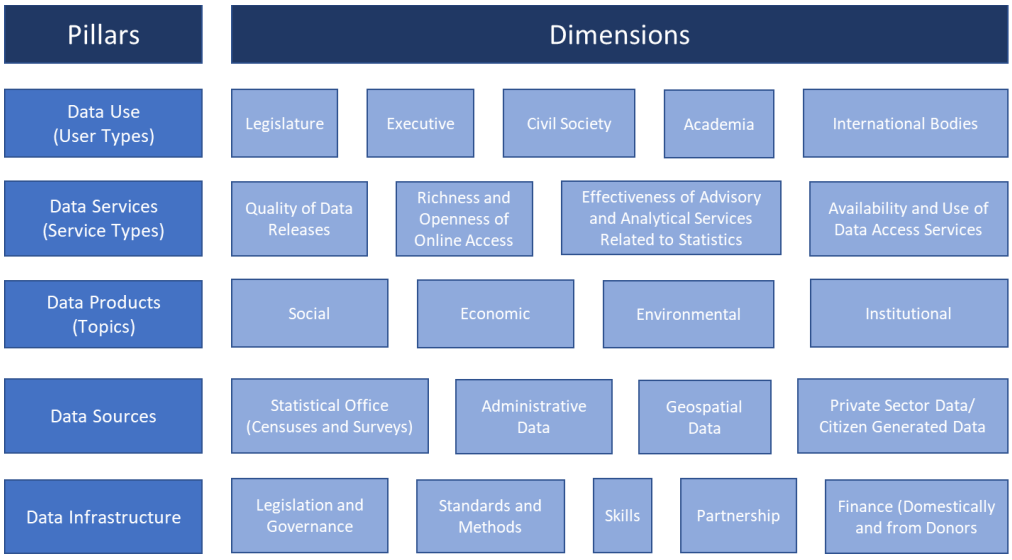
(4) A successful statistical system is one that generates high quality statistical indicators that can also track progress toward the Sustainable Development Goals (SDGs) and national priorities. In order to create the required products, the statistical system

needs to make use of a variety of sources from both within and outside the government. This will include making use of traditional data collection methods like censuses and surveys, and also administrative data, geospatial data, and data generated from the private sector and from citizens. It follows that the fourth pillar of the SPI is data sources. A successful statistical system is one which draws on all types of data sources relevant to the indicators that are to be produced.

(5) The capability of the statistical system needs to be reviewed continuously to ensure that it is strong enough to deliver the data products and services, and to promote data use. The fifth pillar of the SPI is therefore data infrastructure. A successful statistical system is one that develops both hard infrastructure (legislation, governance, standards) and soft infrastructure (skills, partnerships) and has the financial resources to deliver.

Each of the five pillars has multiple dimensions to judge a country's statistical performance. The framework offers 5 pillars and 22 associated dimensions, shown in Figure 1. These pillars and dimensions are discussed further in the SPI Technical Note (Dang et al., 2021).

Figure 1. The Pillars and Dimensions that Constitute the SPI.



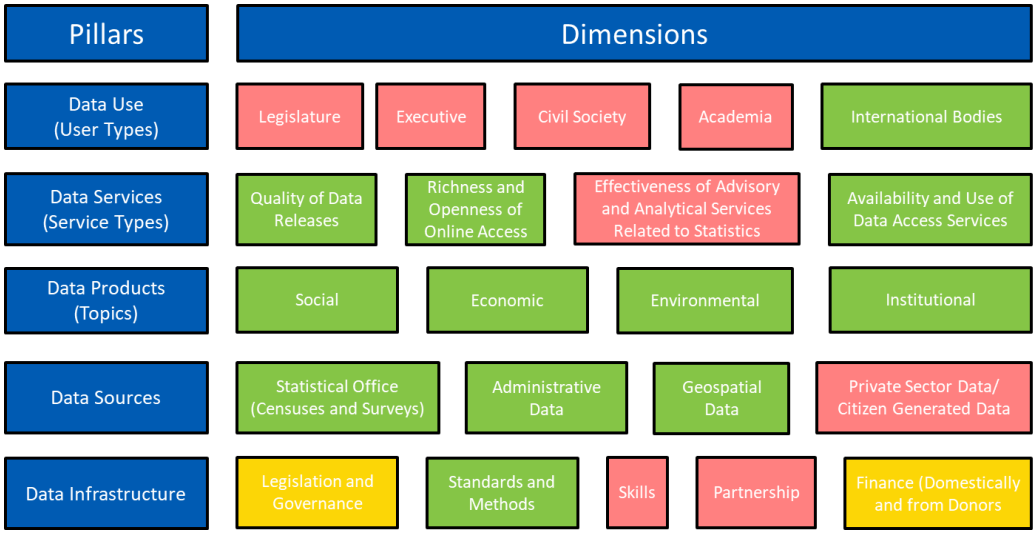
Notes: Reproduced from Dang et al. (2023) Figure 1.

The conceptual development of the SPI was based on a first-best framework keeping in mind what matters for statistical performance. To Operationalize the SPI, a set of specific

indicators underpin each dimension. This operationalization resulted in a release with 51 indicators covering 14 out of the 22 dimensions of the SPI.

Some areas of the SPI are not measured at all and in other areas there could be room for improvement in the way the dimensions are measured. For 8 dimensions, data with global representation are not currently available. In figure 2, tiles colored green show areas with comparable indicators for nearly all countries. Yellow tiles show areas with internationally comparable indicators for most, but not all, countries. Red tiles show areas with no comparable data available. A clear area with room for improvement is in data use, where 4 out of the 5 dimensions lack a comparable data source. Data gaps exists in the areas of data services, data sources, and data infrastructure as well, and this is discussed in greater detail in Dang et al. (2023).

Figure 2. Missing Elements in Operationalizing the SPI.



Notes: Green tiles show dimensions with internationally comparable indicators for nearly all countries. Yellow tiles show dimensions with internationally comparable indicators for most, but not all, countries. For Legislation and Governance, data was available for 152 countries in 2019, and for Finance data was available for 147 countries. Red tiles show dimensions without comparable data. Reproduced from Dang et al. (2023) Supplementary Figure A.2.

Using the available indicators, an overall score is computed for each country and year, which allows a user to quickly compare the performance of statistical systems across countries and

time. The methodology used to build an overall score is based on the work in Cameron et al. 2021.[2] For details see Dang et al. (2023). The three-level structure is as follows:

- Indicators average to **dimension scores**

$$SPI.DIM_{ctpd} = \sum_{i=1}^{N_I} \frac{SPI.IND_{ctpdi}}{N_I} \qquad (1)$$

- Dimensions average to **pillar scores**

$$SPI.PIL_{ctp} = \sum_{d=1}^{N_d} \frac{\omega_{pd} * SPI.DIM_{ctpd}}{N_d} \qquad (2)$$

- Pillars average to **SPI overall score**

$$SPI.INDEX_{ct} = \sum_{p=1}^{N_p} \frac{\gamma_p * SPI.PIL_{ctp}}{N_p} \qquad (3)$$

Where $SPI.IND_{ctdpi}$ is an indicator score (for example, a score indicating whether a country has conducted a census over the past 10 years) in country c, in time period t, dimension d, pillar p, and and ω_{pd} and γ_p are customizable weights at the dimension and pillar level.

In total, as of the release of the 2022 SPI data, there are 186 economies with sufficient data to compute an SPI overall score. This set of countries covers more than 99 percent of the world population.

2.2 Data Sources

The SPI draws on a variety of data sources to create the indicators. A guiding principle is that the SPI relies on openly available data from credible sources, such as international organizations and national statistical office (NSO) websites. The SPI team uses web scraping, accesses publicly available databases, or in some cases visits NSO websites to acquire the information. While greater detail for each specific indicator can be found in the technical

[2] An earlier version of the journal publication was released as a World Bank Policy Research paper, Cameron et al. 2019.

documentation (Dang et al., 2021) describing each indicator, a general overview is provided here. Because much of the data collection process has been automated, creating a preliminary dataset for the annual SPI update requires 2-3 days. However, collecting data from the NSO websites and implementing various data quality checks to finalize the data takes longer. Overall, the process takes around 1 month to complete.

For pillar 1 on data use, data are collected from four distinct sources. The World Bank supplies data for indicators on availability of comparable poverty data (from the Poverty and Inequality Platform (PIP) system), and the indicator on quality of debt service data (from the World Development Indicators (WDI) metadata). Data on the availability of under-five child mortality comes from the UN Inter-agency Group for Child Mortality Estimation. The indicator on availability of safely managed drinking water data are sourced from the WHO/UNICEF Joint Monitoring Programme. The indicator on the availability of source data for measuring labor force participation comes from the International Labour Organization (ILO). Each of these sources is updated annually prior to each data release. The date the data are updated for each of these sources is available in our technical documentation.

For pillar 2 on data services, information on the data dissemination standard is collected from the International Monetary Fund (IMF)'s Dissemination Standards Bulletin Board. This source and the WDI metadata follow the same update schedule. The online access indicator is sourced from the Open Data Watch's Open Data Inventory (ODIN) openness score. The date of the data download is available in the technical description for this indicator. The indicator for data access services is based on (i) whether a portal is available, (ii) compliant with the Data Documentation Initiative (DDI) and with Dublin Core's Resource Description Framework (RDF) metadata standards, and (iii) which has a listing of surveys and microdata sets that can provide the necessary data and reference for follow-up. This information is collected manually by visiting each NSO website.

For pillar 3 on data products, indicators are generated using the UN Global SDG monitoring database. For each SDG indicator, the database is checked to see whether a value is available within a five-year window (e.g., for 2019 if a value is available between 2015-2019). For OECD countries, the UN SDG database is supplemented with comparable data submitted to the OECD following the methodology in "Measuring Distance to the SDG Targets 2019: An Assessment of Where OECD Countries Stand" (OECD, 2019). The decision

to supplement the UN Global SDG monitoring database using this OECD database was taken, because a clear methodology had been established to do so. The UN Global SDG monitoring database was chosen as a primary source, rather than individual NSO websites, because data submitted to the UN Global SDG monitoring database goes through a standardized process including quality control and detailed documentation.

For pillar 4, on censuses and surveys, two complementary approaches are taken to collecting data. The first is to make use of data submitted to the World Bank, the International Household Survey Network (IHSN), ILO, and FAO microdata libraries, as well as the World Bank Poverty and Inequality Platform (PIP). Only surveys that are marked as nationally representative are used, and surveys are classified (as health, agriculture, labor force surveys, etc.) using the classifications submitted to the microdata libraries. The contents of searches on these databases are available in the github repository. The second approach is a manual data collection effort, where NSO websites have been visited to be sure no surveys were missed. To be included in this search, the survey or census must be publicly available and accessible. This means at a minimum a survey report must be available detailing whether the survey was nationally representative and the start dates and completion dates of the field work. If a survey or census shows up in any of these searches, then it is counted as being present for the purposes of scoring SPI indicators. If surveys or censuses are missed in this search, the easiest way for a country to get it included would be to create an entry for the survey at one of the microdata libraries. Information on the completeness of the Civil Registry and Vital Statistics (CRVS) is sourced from the UN SDG global database. Information on whether data are available at the 1st administrative level, for the geospatial indicator, is sourced from ODW, as is the data openness score.

For pillar 5, data on the legislation indicator and finance indicators (compiled by PARIS21) are pulled from the UN SDG global monitoring database. Indicators in the standards and methods pillar are sourced primarily through the IMF. Information on the system of national accounts in use and national accounts base year are sourced through the World Bank's WDI metadata. Data for the business process indicator is sourced through the United Nations Industrial Development Organization (UNIDO) and the United Nations Economic Commission for Europe (UNECE).

While efforts are made to provide as much data comparability across countries as possible, there are several dimensions where data harmonization is still in progress. These include (i) two dimensions under pillar 5 (data infrastructure) where indicators are internationally comparable for most, but not all, countries, and (ii) eight dimensions under pillars 1, 2, 4, and 5 where no comparable data are available. These dimensions are given a more detailed discussion in the technical documentation (Dang et al., 2021).

3 Quality Assurance Protocols

To safeguard against inaccuracies or inconsistencies in SPI data, a number of quality assurance protocols are in place. This section provides an overview of these protocols, which includes (i) the data collection steps in place and the quality checks the team performs, (ii) the efforts the SPI team makes to ensure the SPI data is reproducible and transparent, (iii) the governance of the SPI in the form of oversight from a proposed SPI Working Group, and (iv) a set of rules the SPI team would follow in updating the SPI.

3.1 Production Process: Data Collection and Quality Checks

This SPI team follows a consistent data collection process and performs several quality checks when creating the indicators in the SPI. The following section provides an overview. A deeper discussion is available in Dang et al. (2023).

The final dataset currently includes 14 dimensions and 51 indicators. In general, missing data for a particular country-year observation is not imputed with one exception. Data from ODIN on data openness and geospatial data are available in 2015, 2016, 2017, 2018, 2020, and 2022, but not 2019 or 2021. For 2019 and 2021 data, the previous year's value is used (for example the 2018 value for 2019). From a set of raw data sources described in the section above, the final indicators are created by transforming the raw information, so that each row in the dataset represents a unique observation for a country and year (e.g., Uganda in 2017, Mexico in 2019).[3]

[3] The process for transforming the input information described above into a database containing all 51 indicators for each country year observation is described in detail in Figure 2 of Dang et al (2023).

The technical quality of the dataset is measured in several different ways. First, a set of automated data checks are performed, which involve comparing new values added to the dataset to the values of previous years to highlight unexpected changes or outliers and applying a set of data validation rules to check if the values of any columns are outside of expected bounds.

Before data are updated, the following validation checks are performed to highlight potential issues. First, the updated data set is compared to the original dataset. It is natural for some values to change from this vintage compared to last vintage, as the underlying data sources have been updated. However, this comparison helps to systematically monitor the differences and potentially highlight unexpected changes.

Second, the data set is compared to a set of expected values for each column. The exact expected values are listed in the appendix of Dang et al. (2023) (Supplementary Information), but the general idea is to check that the values adhere to rational min/max values and positive correlates in expected ways. For instance, the availability of SDG indicators columns is the fraction of SDG indicators in a goal with a value in the previous 5 years. Thus, they should be between 0 and 1. Additionally, the countries and dates included are matched to a pre-specified expected list to uncover the accidental inclusion/exclusion of dates or countries.

Third, while not a data quality check, per se, as a robustness check we examine the index using different weighting methods to ensure that this does not change the results significantly. For example, using a weight of 1/6 for censuses and surveys (instead of ¼ in pillar 4 on data sources) provides very similar results. In particular, the correlation between the SPI overall score under the preferred approach and the alternative with 1/6 weights for censuses and surveys is 0.998.

Finally, we provide qualitative data checks by regularly consulting with colleagues who are experts at the World Bank and other international organizations (e.g., FAO, IMF, ILO) on different development subjects who may reach out to their contacts in the NSOs for data verification or clarification. Similarly, wherever data for some countries are in doubt, we also discuss with our country-based colleagues who are charged with daily monitoring of a country development. This internal validation process is based on established data quality

procedures that we implement for other databases produced by the World Bank such as the World Development Indicators.

3.2 Transparency and Reproducibility

To ensure transparency and reproducibility, the SPI Github repository contains the input data and the R code used to produce the SPI indicators and the overall scores, as well as the final SPI results available in CSV and Stata format.[4] A detailed Readme file is available detailing how to use the code. The repository is licensed under the Creative Commons Attribution 4.0 International License, which means users are free to share or adapt any of the materials available, so long as appropriate credit is given to the SPI team. The Github repository also contains the version control history, which documents every change in the data and code of the entire project dating back to July 2020.

This repository contains several files from the *R* package "*renv*". The *renv* package helps manage specific package versions used to produce the results in this repository. Because package version conflicts can make code that runs on one system not run on another system, it is important to have a list of the specific package versions used and a workflow for accessing these specific packages. The *renv* package provides this. In general, the *renv::restore()* command should install all packages found in the *renv.lock* file in this repository, so that version conflicts do not cause errors.

3.3 Governance of the SPI

A new SPI Working Group (SPIWG), headed by the Chief Statistician of the World Bank and comprised of experts at the World Bank, will be established to provide an annual review of SPI data, to provide guidance on methodology, and to ensure that the data quality assurance practices discussed in this document are followed.

The composition of the SPIWG will be as follows. The Chief Statistician of the World Bank chairs the SPIWG. Staff from the World Bank Practice Groups and Regions will participate as members on a rotating basis, as follows: Practice Group and Regional Chief Economists and Operations Directors will be invited to become members or to nominate staff to represent

[4] The vast majority of code in this repository is written in the *R* language. The *R* version used was 4.3.1 as of January 2024 .

them. Because the Poverty GP manages statistical capacity building operations at the World Bank, the Poverty Global Director or a representative designated by this Global Director will be a permanent member of SPIWG. Three external (ex officio) observers will be invited to attend SPIWG meetings as needed and appropriate, from whom advice or input may be solicited by SPIWG members. These ex officio observers may be invited, for example, from academia, other international agencies, the International Association of Official Statistics (IAOS), or a current or former chief statistician of a national statistical office.

The SPIWG's scope of responsibilities includes, but is not limited to, the following:

- Reviewing and approving SPI data and the index before each release.
- Reviewing and approving:
    - Changes to the SPI pillars and dimensions.
    - Changes to the methodology for scoring indicators.
    - The inclusion of new indicators in the SPI.
    - Updated methodologies or data sources.

The SPIWG does not address issues related to how World Bank operational teams may utilize SPI data for operational or research purposes. Rather, an SPI focal point will be named by the World Bank Chief Statistician to liaise with World Bank operational teams.

Prior to each release of the SPI, the SPI team will disseminate data to World Bank country poverty economists who will be given a window of at least 2 weeks to comment on the data before release. Following this review and at least one month prior to the annual release of SPI data and the index, the SPIWG will ensure that any concerns about the data have been satisfactorily addressed before publication. This will typically take place in March or April. At least one week before the meeting, provisional SPI data and index values along with feedback from the country economist consultation process will be circulated to SPIWG members for review. During the meeting, working group members can provide any feedback or reflections about the data and its collection process. Once the SPI team has addressed this input, the SPIWG will approve the release of the updated data. The discussions and decision process will be documented in meeting minutes. The annual review of the SPI data by these staff and the SPIWG will be done in lieu of an annual Bank wide review.

Methodological reviews may occur on an as needed basis, and may involve, for example, adjustments to SPI dimensions, scoring of indicators, inclusion of new indicators, or updated methodologies or data sources. Materials will be circulated at least one week before any methodological review meeting. SPIWG members will have an opportunity to ask questions and provide feedback related to the proposed changes. The final decision about any SPI methodological adjustments rests with the chair of the SPIWG, the World Bank Chief Statistician. The discussion and decision process will be documented in meeting minutes.

3.4 Rules of the Road for Updating the SPI

The following section will lay out a set of clear rules that will be followed by the SPI team to update the SPI over time. These rules cover the quality control of new releases, the frequency and timing of data releases, the process regarding updating and adding indicators, versions of the SPI, and countries' recourse. The rules offer transparency as to how the SPI can be expected to evolve as new data becomes available while also being sensitive to the comparability of the indices over time.

Rule 1. Data releases will follow a consistent quality control process.

SPI updates will follow a review process to ensure quality. The SPI team in DECDG will perform rigorous data quality checks that have been described earlier in this document, and in greater detail in Dang et al. (2023) and Bank country poverty economists will have an opportunity to review and comment on SPI data prior to its release. The SPI data will then be submitted to the SPIWG for review and approval prior to release.

Country scores will be sent to the regional directors and country directors for information before each release. Regional reports will be produced for each World Bank region, which include the regional aggregate scores, the scores for countries within each region, and time trends.

Rule 2. The data series and indices will be updated annually.

To enable users to use the data and indices in a predictable way, the SPI will be updated annually on a consistent timetable. As a first step in updating the indicators, the Bank team will begin collecting all input data for the SPI in January each calendar year. This includes

capturing information such as censuses and surveys that have become available since the last update, as well as all other information needed to produce indicators in the SPI. The appendix contains a table, which provides details about the source and point of contact for each of the 51 indicators in the SPI.

The input data will then be processed, the SPI Working Group will be consulted, and changes will be documented in a "What's new in the SPI" document. The publication will summarize the newly released data and contain a table showing changes between the current release and the previous release. The data release will typically be by May/June.

Rule 3. The pillars and dimensions of the SPI are expected to remain stable and only change with approval from the SPI Working Group.

There are five pillars of the SPI: data use, data services, data products, data sources, and data infrastructure. These five pillars are defining features of the SPI and are highly unlikely to change during the life of the project. Changes will only be made in coordination with the SPIWG.

Within the 5 pillars, there are 22 dimensions in the SPI. These dimensions are unlikely to change soon because the SPI was built on a forward-looking framework. When developments to statistical systems require an update to the dimensions of the SPI for it to remain relevant, such an update will be introduced with the approval of the SPI Working Group.

Rule 4. New indicators will be added after meeting quality and coverage factors.

The underlying indicators measuring the SPI dimensions are based on the information that is currently available. Currently, 8 of the 22 dimensions could not be measured. The ambition going forward is to fill these data gaps.

As such, new indicators are expected to be introduced over time. Before adding new indicators to the SPI, the methodology will be presented to the SPI Working Group for their approval. This is intended to ensure that any new indicators added to the SPI are of high quality and add value. The key criteria for inclusion will be its relevance for measuring the performance of statistical systems.

Apart from deciding whether an indicator should be included as part of the SPI, another issue is whether it should be part of the SPI index. Additional criteria will be used to judge whether an indicator will be included in the index. The indicator's country coverage and time coverage will be important factors. Complexities can arise if new indicators do not cover the same number of years or countries as the existing indicators in the index, affecting comparability. The SPI Working Group will review whether an indicator meets the bar for inclusion in the index before approval.

In circumstances where the SPI team suggests that an existing indicator should be modified or removed, it will be done in consultation with the SPIWG. The SPI expects that all indicators will be reviewed on an approximately three-year cycle. Additionally, indicators may be reviewed on an ad hoc basis. If existing indicators are modified, the changes will be applied to data points in all years of the new vintage, so that the SPI data are backwards comparable. Additionally, the SPI team continues to maintain the SPI github repository, so users can track changes to the input information collected in detail through the version control tools of Github.

Rule 5: All versions of the SPI data series will remain available to users.

The SPI is built on a dynamic framework which means that new indicators are expected to be introduced as new data sources become available. Changing the number of indicators within a dimension comes with a tradeoff between comparability with prior vintages of the SPI and improved measurement. While introducing new indicators will improve the measurement of statistical performance, the overall SPI score and dimension sub-scores can change and no longer be comparable to prior vintages.

This can have implications for users of the SPI who are tracking progress according to the initial set of indicators. Each time new indicators are introduced, older versions of the SPI index (that do not contain the new indicators) will be archived. An older vintage will be maintained by the SPI team if approved by the SPI Working Group. The archived series will be made available in the SPI github repository and in the World Bank's data catalog for the public to access. All changes to methodology will be tracked through a publicly available github repository and all code and underlying data to produce the indicators will be published. The github repository documents every change in the data and code of the entire

project dating back to July 2020. Any user can view how an indicator was constructed, and any change to the code or data that took place back to July 2020. Using the github repository, users will be able to recreate and continue an old vintage of the SPI data series into the future as their needs may require.

Rule 6: Countries will have a process for correcting/updating data.

The data for the SPI are collected from established public and open sources. The SPI team makes every effort to ensure that the data presented in the SPI are accurate, but it is possible that data from the sources for constructing the SPI are occasionally not up to date or accurate despite these efforts. Countries and all other users can inquire about the values that make up the indicators through contacting the Bank directly or via SPI@worldbank.org.

The SPI relies primarily on databases maintained by specialized international organizations. These organizations, such as the IMF, ILO, FAO, and UNSD, are in the best position to determine whether certain data methodologies are being followed, such as whether international standards of classification of employment, or if data sources are available, such as whether a country has a complete civil registration and vital statistics system (CRVS). A country or organization looking to update data used for the SPI from one of these sources are encouraged to get in touch with the respective organizations about updating the relevant information or submitting new data to their repositories. The SPI team will facilitate such communication when requested. Table A.1 in the appendix provides details about the data source and point of contact for each of the 51 indicators in the SPI.

The SPI data represents a snapshot in time of what can be found in public data sources. Data that is not updated in the databases of these public sources by the end of December, when the SPI team begins data collection for that calendar year, will not be reflected in the SPI scores for that year. Data updated after the December cut-off point will be reflected in the subsequent SPI releases.

4 Conclusion

This document provides an overview of the quality assurance and the rules for updating the Statistical Performance Indicators (SPI). The SPI were designed to measure statistical

performance of national statistical systems across the world based on a framework that is dynamic and adaptable as data needs and data types evolve. With this approach, there are necessarily data gaps in some of the dimensions of the SPI. To fill these gaps, new indicators will be added to SPI as they become available.

The approach to producing the SPI emphasizes transparency and reproducibility, as demonstrated by the open data and open code approach that has been followed from the start of the project. This document is meant to build an additional layer of transparency by providing a clear understanding of how the SPI are updated and how they will evolve with new data. By covering quality control, data release frequency, indicator updates, versioning, and countries' recourse, the rules for updating the SPI reinforce its value as a tool for monitoring and assessing statistical performance.

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Annex:

A.1 Indicator Contact Information

Table A.1: SPI Indicator Point of Contact

Dimension	Indicator Name	Source Link	Contact
Dimension 1.5	Availability of Comparable Poverty headcount ratio at $2.15 a day	https://pip.worldbank.org/	Contact World Bank PIP team here: https://pip.worldbank.org/home
Dimension 1.5	Availability of Mortality rate, under-5 (per 1,000 live births) data meeting quality standards according to UN IGME	https://childmortality.org/data/	childmortality@unicef.org
Dimension 1.5	Quality of Debt service data according to World Bank	https://data.worldbank.org	data@worldbank.org
Dimension 1.5	Safely Managed Drinking Water	https://washdata.org/	info@washdata.org
Dimension 1.5	Labor force participation rate by sex and age (%)	https://www.ilo.org	https://ilostat.ilo.org/about/contact/
Dimension 2.1	SDDS/e-GDDS subscription	https://dsbb.imf.org/	https://www.imf.org/external/np/exr/contacts/contacts.aspx
Dimension 2.2	ODIN Open Data Openness score	https://odin.opendatawatch.com/	https://odin.opendatawatch.com/Contact/index
Dimension 2.2	Machine Readability Score	https://odin.opendatawatch.com/	https://odin.opendatawatch.com/Contact/index
Dimension 2.2	Non-Proprietary format Score	https://odin.opendatawatch.com/	https://odin.opendatawatch.com/Contact/index
Dimension 2.2	Download Options Score	https://odin.opendatawatch.com/	https://odin.opendatawatch.com/Contact/index
Dimension 2.2	Metadata Available Score	https://odin.opendatawatch.com/	https://odin.opendatawatch.com/Contact/index
Dimension 2.2	Terms of Use Score	https://odin.opendatawatch.com/	https://odin.opendatawatch.com/Contact/index
Dimension 2.4	survey metadata	manual collection from NSO sites	data@worldbank.org
Dimension 3.1	GOAL 1: No Poverty	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.2	GOAL 2: Zero Hunger	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.3	GOAL 3: Good Health and Well-being	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.4	GOAL 4: Quality Education	https://unstats.un.org/sdgs/unsdg	statistics@un.org

Dimension 3.5	GOAL 5: Gender Equality	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.6	GOAL 6: Clean Water and Sanitation	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.7	GOAL 7: Affordable and Clean Energy	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.8	GOAL 8: Decent Work and Economic Growth	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.9	GOAL 9: Industry, Innovation and Infrastructure	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.10	GOAL 10: Reduced Inequality	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.11	GOAL 11: Sustainable Cities and Communities	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.12	GOAL 12: Responsible Consumption and Production	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.13	GOAL 13: Climate Action	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.15	GOAL 15: Life on Land	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.16	GOAL 16: Peace and Justice Strong Institutions	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 3.17	GOAL 17: Partnerships to achieve the Goal	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 4.1	Population & Housing census	https://unstats.un.org/unsd/demographic/sources/census/censusdates.htm#ASIA	statistics@un.org
Dimension 4.1	Agriculture census	http://www.fao.org/world-census-agriculture/countries/en/	FAO-HQ@fao.org
Dimension 4.1	Business/establishment census	http://microdata.worldbank.org/index.php/home http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx http://catalog.ihsn.org/index.php/catalog http://datanavigator.ihsn.org/ https://surveyscorecardqa.worldbank.org/index.php/	data@worldbank.org

Dimension 4.1	Household Survey on income, etc	http://microdata.worldbank.org/index.php/home http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx http://catalog.ihsn.org/index.php/catalog http://datanavigator.ihsn.org/ https://surveyscorecardqa.worldbank.org/index.php/	data@worldbank.org
Dimension 4.1	Agriculture survey	http://microdata.worldbank.org/index.php/home http://catalog.ihsn.org/index.php/catalog http://datanavigator.ihsn.org/ http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx	data@worldbank.org
Dimension 4.1	Labor Force Survey	http://www.ilo.org/ http://www.ilo.org/dyn/lfsurvey/lfsurvey.list?p_lang=en http://microdata.worldbank.org/index.php/home http://catalog.ihsn.org/index.php/catalog http://datanavigator.ihsn.org/ http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx	https://ilostat.ilo.org/about/contact/
Dimension 4.1	Health/Demographic survey	https://dhsprogram.com/What-We-Do/survey-search.cfm?pgType=main&SrvyTp=type http://mics.unicef.org/surveys http://microdata.worlbank.org	info@dhsprogram.com; https://mics.unicef.org/contact-us

Dimension 4.1	Business/establishment survey	http://microdata.worldbank.org/index.php/home http://catalog.ihsn.org/index.php/catalog http://datanavigator.ihsn.org/	data@worldbank.org
Dimension 4.2	CRVS (WDI)	http://api.worldbank.org/v2/sources/2/country/all/metadata	data@worldbank.org
Dimension 4.3	Geospatial data available at 1st Admin Level	https://odin.opendatawatch.com/	https://odin.opendatawatch.com/Contact/index
Dimension 5.1	Legislation Indicator based on PARIS21 indicators on SDG 17.18.2	https://unstats.un.org/sdgs/unsdg	statistics@un.org
Dimension 5.2	System of national accounts in use	http://data.worldbank.org/products/wdi	data@worldbank.org
Dimension 5.2	National Accounts base year	http://data.worldbank.org/products/wdi	data@worldbank.org
Dimension 5.2	Classification of national industry	https://unstats.un.org/UNSD/mbs/app/DataSearchTable.aspx http://dsbb.imf.org/Default.aspx	statistics@un.org
Dimension 5.2	CPI base year	http://www.elibrary.imf.org/browse?freeFilter=false&pageSize=10&sort=datedescending&t_7=urn%3ASeries%2F041 http://dsbb.imf.org/Default.aspx	https://www.imf.org/external/np/exr/contacts/contacts.aspx
Dimension 5.2	Classification of household consumption	http://dsbb.imf.org/Default.aspx	https://www.imf.org/external/np/exr/contacts/contacts.aspx
Dimension 5.2	Classification of status of employment	http://dsbb.imf.org/Default.aspx	https://www.imf.org/external/np/exr/contacts/contacts.aspx
Dimension 5.2	Central government accounting status	http://www.elibrary.imf.org/browse?freeFilter=false&pageSize=10&sort=datedescending&t_7=urn%3ASeries%2F043 http://www.elibrary.imf.org/browse?freeFilter=false&pageSize=10&sort=datedescending&t_7=urn%3ASeries%2F043	https://www.imf.org/external/np/exr/contacts/contacts.aspx
Dimension 5.2	Compilation of government finance statistics	http://dsbb.imf.org/Default.aspx	https://www.imf.org/external/np/exr/contacts/contacts.aspx

Dimension 5.2	Compilation of monetary and financial statistics	http://www.elibrary.imf.org/browse?freeFilter=false&pageSize=10&sort=datedescending&t_7=urn%3ASeries%2F043	https://www.imf.org/external/np/exr/contacts/contacts.aspx
Dimension 5.2	Business process	https://statswiki.unece.org/display/GSBPM/United+Nations+Industrial+Development+Organization+(UNIDO):+use+of+GSBPM https://statswiki.unece.org/display/GSBPM/Case+Studies+of+Metadata+use+with+GSBPM+and+GSIM	https://unece.org/statistics/contact-us-form
Dimension 5.5	Finance Indicator based on PARIS21 indicators on SDG 17.18.3 & SDG 17.19.1	https://unstats.un.org/sdgs/unsdg	statistics@un.org