

# Social Protection Floor Index

Monitoring National Social Protection  
Policy Implementation



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Discussion Paper

# A Social Protection Floor Index: Monitoring National Social Protection Policy Implementation

*Mira Bierbaum, Annalena Oppel, Sander Tromp, Michael Cichon<sup>1</sup>  
Maastricht Graduate School of Governance / UNU-MERIT*

<sup>1</sup> The paper is the result of a team effort. The authors are listed alphabetically, thus the sequence of names does not reflect the value or size of the individual contributions to the paper. The authors would like to express their deep gratitude to Michael Cichon who set up this project on a Social Protection Floor Index and without whom this paper would not have been possible. They are also grateful for very helpful comments and suggestions by Sylvia Beales (HelpAge International), Richard Bluhm (Leibniz University Hannover), Barbara Caracciolo (SOLIDAR), Daniel Horn (HelpAge International), Charles Knox-Vydmanov (HelpAge International), Cäcilie Schildberg (Friedrich-Ebert-Stiftung), Vishal Dave, and participants of the Roundtable Discussion on Social Protection Floors and the Transition to Justice at the International Week of Justice of the Friedrich-Ebert-Stiftung, 21–23 April 2015 in Berlin.

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*At the 101<sup>st</sup> International Labour Conference in 2012, 184 members unanimously adopted the Social Protection Floors (SPFs) Recommendation No. 202, which provides guidance to members for establishing and maintaining SPFs as a core element of their national social security systems, guaranteeing access to essential health care and a basic income over the life cycle. In support of the principle of regular monitoring, the Social Protection Floor Index (SPFI) has been developed. It assesses the degree of implementation of national SPFs, by detecting protection gaps in the health and income dimension and indicating the magnitude of financial resources needed to close these gaps in relation to a country's economic capacity. The SPFI thus informs members, trade unions, civil society organizations, and other stakeholders about the need for corrective policy action, compares the implementation of SPFs across members, and, in future, monitors members' progress over time. In the long run, it is hoped that the SPFI can contribute to achieving a fairer and more inclusive globalization.*

## 1 | FROM THE SOCIAL PROTECTION FLOOR CONCEPT TO A SOCIAL PROTECTION FLOOR INDEX

In 2008, the International Labour Conference (ILC) adopted the landmark ILO Declaration on Social Justice for a Fair Globalization. The Declaration institutionalised the Decent Work concept, which has been developed by the International Labour Organisation (ILO) since 1999 to promote a fair globalisation through a global, integrated approach that recognises employment, social dialogue, rights at work, and social protection as strategic objectives, with the latter including »the extension of social security to all« (ILO 2008b: 9–10). As a follow-up to this declaration, the 100<sup>th</sup> ILC in 2011 discussed the social protection objective and mandated the ILO to develop a recommendation on national floors of social protection. The Social Protection Floors (SPFs) Recommendation No. 202 was unanimously adopted by 184 Members at the 101<sup>st</sup> ILC one year later.<sup>2</sup> The Recommendation provides guidance to members for establishing and maintaining SPFs as a core element of their national social security systems and for ensuring continuous progression towards achieving higher levels of social security, ultimately striving to protect against poverty, vulnerability, and social exclusion (ILC 2012).

An SPF consists of four nationally defined basic social security guarantees that members should establish by law, and—in accordance with their existing international obligations—provide to all residents and children. A national SPF should comprise the following **four social security guarantees**:

- ✓ access to a nationally defined set of goods and services constituting essential health care—including maternity care—which meets the criteria of availability, accessibility, acceptability, and quality
- ✓ basic income security for children at a nationally defined minimum level, which provides access to nutrition, education, care, and any other necessary goods and services
- ✓ basic income security at a nationally defined minimum level, for persons in active age who are unable to earn sufficient income, particularly in cases of sickness, unemployment, maternity, and disability

- ✓ basic income security at a nationally defined minimum level, for older persons

Recommendation No. 202 clearly formulates a protection objective: according to Article 4, »these guarantees should ensure that all in need have access to essential health care and basic income security, which together secure effective access to goods and services defined as necessary at the national level«. The Recommendation furthermore endorses a number of fundamental principles that members should apply when implementing the Recommendation—such as the universality of protection, adequate and predictable benefits, non-discrimination, and regular monitoring and periodic evaluation of the implementation (ibid.).

In support of the principle of regular monitoring, the Social Protection Floor Index (SPFI) has been developed. It is a composite indicator that captures the implementation of the four basic social security guarantees in two dimensions. On the one hand, income security means access to a basic level of income during childhood, adult life, and old age. On the other hand, health security encompasses universal access to essential health care. Rather than looking at attainments, the degree of implementation of these basic social security guarantees is assessed by detecting protection gaps in the income and health dimension respectively. These shortfalls are expressed in terms of the share of a country's Gross Domestic Product (GDP) that would be required to close these gaps, and are finally aggregated over the two dimensions. We present results for the reference year 2012—the year the Recommendation was adopted—which can then be seen as baseline for future monitoring.

The SPFI allows members and other stakeholders—e.g., trade unions or civil society organizations—to measure national SPF policy implementation by detecting current shortcomings; to use this information to initiate more in-depth analysis and corrective policy action; to compare the current implementation of SPFs across members and rank them according to the size of their gaps, possibly distinguishing between different states of economic development or geographical regions; and, in future, to monitor members' progress over time. In the long run, it is hoped that the SPFI can contribute to a fairer and more inclusive globalization.

In the next section, the construction of the SPFI and the data sources are specified. In the following two

sections, the SPFI results for 2012 are presented and its limitations and strengths are subsequently weighed. A discussion of financial resources needed for SPF policies concludes.

*2 Cichon (2013) provided a detailed review of the emergence of the social protection floor concept.*

## 2 | METHODOLOGY AND DATA

The SPFI is constructed based on the SPFs Recommendation No. 202, which serves as a conceptual framework. The origins of the principal methodology of estimating the potential costs to close social protection gaps stem from Cichon and Cichon (2015: 24).

After summarizing the quality criteria that guided the development of the index, the measurement of gaps in income and health security and the data sources are introduced. Finally, there is a discussion of how the two dimensions are aggregated into one single index, the SPFI, and how this index can be interpreted.

### 2.1 Index Criteria

A number of criteria have been taken into account in order to ensure quality of the index, both in terms of the underlying data and the construction of the composite index (cf. OECD/JRC 2008: 44–46). The first criterion is interpretability—i.e., the SPFI intends to be easily understandable and viable for a wide range of users, such as policymakers, trade unions, or civil society organizations. This is reflected, *inter alia*, by focusing on more clearly measurable protection shortfalls instead of difficult to agree on measures of attainment of income and health security, and by expressing shortfalls as a share of a country's GDP.

Second, accessibility entails the use of data that is publicly available without any restrictions, and that can be directly retrieved. This also ensures replicability of the results as the third criterion and thus transparency for all stakeholders involved. Fourth, timeliness is assured through the use of the most recent

available data, which further contributes to, fifth, the relevance of the SPFI in terms of its monitoring function. Sixth, coherence over time and countries implies that data is based on common definitions, contributing to comparability across time and space and hence a fair global ranking.

## 2.2 Measuring Shortfalls in Income Security

Recommendation No. 202 states that SPFs should guarantee basic income security over the complete life cycle. As outlined above, the aim is to detect protection shortfalls with regard to these basic social security guarantees rather than attainments. A gap exists if a person is income insecure—i.e., if his or her income falls below a defined level of minimum income. These defined levels of income are typically labelled as poverty lines representing a reference level of welfare that separates the poor from the non-poor (Ravallion 1998: 3), or the income insecure from the income secure.

Due to considerations of data accessibility and coherence, it is not possible to measure income security for children, people in active age, and older people separately. Rather, the respective basic social security guarantees are subsumed under the dimension of income security, which refers to income security across the complete life cycle in an aggregated manner. Gaps in income security in a given country  $j$  are measured by the amount of financial resources that would be needed to guarantee that every individual  $i$  has access to a defined minimum level of income  $z$  (i.e., the poverty line), the so-called aggregated poverty gap ( $PG$ ):

$$PG_j = \sum_{i=1}^N (g_i) \quad (1)$$

$$\text{with } g_i = \begin{cases} z - y_i & \text{if } y_i < z \\ 0 & \text{if } y_i \geq z \end{cases}$$

The aggregated poverty gap for a country  $j$  represents the sum of all individual income shortfalls ( $N$  is the total number of individuals); this means that for all individual incomes  $y_i$  that fall below  $z$ , we calculate the respective gap  $g_i$  between income and the poverty line and add these shortfalls up over all individuals. For the sake of interpretability and later aggregation across the two dimensions, the income gap  $IG$  is defined as the poverty gap over a country's

GDP. The income gap therefore provides an estimate of the financial resources a country needs to close the aggregated poverty gap in relation to its economic capacity:

$$IG_j = \frac{PG_j}{GDP_j} * 100 \quad (2)$$

The PovcalNet database by the World Bank (2015a) meets the criteria of being a recent and accessible data source for the purpose of measuring income gaps with a wide coverage of developing and some high-income countries. Rather than aggregated poverty gaps, the poverty gap ratio  $PGR$  is reported, which is the average individual poverty gap  $g_i$  expressed as a percentage of the poverty line:

$$PGR_j = \frac{1}{N} \sum_{i=1}^N \left( \frac{g_i}{z} \right) * 100 \quad (3)$$

$$\text{with } g_i = \begin{cases} z - y_i & \text{if } y_i < z \\ 0 & \text{if } y_i \geq z \end{cases}$$

The  $IG$  for a country  $j$  is thus calculated as:

$$IG_j = \frac{PGR_j * z}{GDP_{pc_j}}, \quad (4)$$

where  $GDP_{pc_j}$  denotes GDP per capita in country  $j$ .

A supplementary database for countries of the Organisation for Economic Co-operation and Development (OECD) is the Income Distribution Database (IDD) (OECD 2015). The IDD reports the mean poverty gap ratio, which is calculated as the difference between the poverty line and the mean income of the poor ( $P$  is the number of the poor), expressed as a percentage of the poverty line:

$$RPGR_j = \frac{1}{P} \sum_{i=1}^P \left( \frac{g_i}{z} \right) \quad (5)$$

$$\text{with } g_i = \begin{cases} z - y_i & \text{if } y_i < z \\ 0 & \text{if } y_i \geq z \end{cases}$$

For OECD countries, the poverty gap ratio can therefore be calculated by the following equation:

$$PGR_j = RPGR_j * \frac{P}{N} * 100 \quad (6)$$

Importantly, what constitutes a basic level of income—i.e., which level of welfare constitutes the cut-off between being considered income secure

and insecure, or non-poor and poor—needs to be defined. Recommendation No. 202 refers to nationally defined minimum levels. For the sake of the SPFI, however, ‘coherence across countries and time’ is an essential quality criterion for assuring a fair global ranking. Moreover, national poverty lines can be influenced by political considerations and this could further limit international comparability. Hence, international rather than national poverty lines are used to establish what constitutes a minimum level of income.

A further contentious debate is whether to use absolute or relative poverty lines (cf. Chen & Ravallion 2013). Absolute poverty lines are often derived from stipulating a consumption bundle with food and non-food items that are deemed necessary for satisfying basic needs, and subsequently estimating the costs for this bundle (cf. Ravallion 1998). Hence, absolute national poverty lines can vary over countries and partly reflect what definition of basic needs a country agrees on. The intention of the widely used international, absolute poverty lines at \$1.90 a day and \$3.10 a day in 2011 Purchasing Power Parity (PPP),<sup>3</sup> in turn is that they have a fixed real value over time and space. Thus, they allow comparisons both within a country over time and across countries at the same point in time. However, because these lines were historically established based on the national poverty lines of the 15 poorest countries, they are mostly applicable to developing countries. Higher income countries have typically favoured relative poverty lines over absolute poverty lines.

Relative poverty lines are set as a constant proportion of a country’s current mean or median income. In the European Union, for instance, a household is considered at-risk-of-poverty if its equivalised disposable household income after social transfers falls below 60 per cent of the national median equivalised disposable income after social transfers (Eurostat 2015). As a result, relative poverty lines are not based on nutritional requirements or other basic needs, but take into account relative determinants of welfare that are idiosyncratic to a specific society and context, and also capture costs of social functioning or social inclusion (Atkinson & Bourguignon 2001, Chen & Ravallion 2013).

In line with this discussion and the criteria of interpretability and coherence, we applied three different

poverty lines, which allows comparing the results of the SPFI based on different conceptions of poverty and income security and enables users to choose the definition that best fits their intended use of the index. First and second, we employed the two widely used absolute, international poverty lines set at \$1.90 a day and \$3.10 a day in 2011 PPP. Because these estimates are not available for high-income countries, these poverty measures can be calculated for 127 countries. Third, we used a relative poverty line set at 50 per cent of current mean income. This acknowledges relative determinants of welfare that differ between societies and allows us to calculate the income gap for higher-income countries in a meaningful way. Importantly, however, this approach is qualified for a range of low-income countries for which a poverty line set at 50 per cent of mean income would be lower than \$1.90 a day in 2011 PPP. Considering that this line represents a globally accepted, absolute minimum income, the \$1.90 a day line in 2011 PPP is used as a floor for relative poverty and applied in 30 countries.<sup>4</sup> This approach is in line with the unifying framework for measuring poverty in developed and developing countries proposed by Atkinson and Bourguignon (2001).

As briefly mentioned above, data were taken from two international databases. For non-OECD countries, we retrieved estimates of a country’s poverty gap ratio from the World Bank’s PovcalNet (World Bank 2015a) for the reference year 2012. PovcalNet is an online tool that allows the calculation of poverty gap ratios for all poverty lines set by the user, thereby relying on the most recently available national survey data to construct poverty measures. Depending on the respective survey, either income or consumption is used to measure welfare. PovcalNet also displays the mean of the income or consumption distribution, so that a relative poverty line can be anchored to these survey means. The underlying surveys stem from various years, yet the tool ultimately allows the retrieval of estimates of the poverty gap ratio for different reference years, the most recent being 2012 (the year that we used).<sup>5</sup> In terms of cross-country comparability, the caveats and limitations outlined in Ferreira et al. (2015) apply accordingly, including the use of different welfare measures, differences in household survey questionnaires, and challenges that arise from temporal and spatial price adjustments.

For OECD countries, estimates were retrieved from the IDD for 2012. In this case, the survey data all stem from the same year. The welfare indicator is income, consistent across all OECD countries. This database does not offer the user the possibility to set own poverty lines. Comparability is therefore additionally limited by the fact that the relative poverty line is set at 50 per cent of the median income instead of 50 per cent of mean income, which should be taken into account when interpreting the results.

Finally, because the poverty lines are expressed in 2011 PPP, the estimates of GDP per capita in 2011 PPP in 2012 as provided in the World Development Indicators (WDI) Database by the World Bank (2015c) were used to calculate the income gap in developing countries. For OECD countries in which we only employed a relative poverty line, we could simply use the median disposable income in local currencies in 2012 and GDP per capita in local currencies in the same year to express the income gap as a share of GDP. All calculations are made on an annual basis.

*3 In October 2015, the World Bank released new poverty estimates that are based on the revised international lines, which was prompted by the release of the new 2011 PPPs by the International Comparison Program 2011 (Ferreira et al. 2015, World Bank 2015b).*

*4 These countries are Benin, Burkina Faso, Burundi, Central African Republic, Chad, Congo (Dem. Rep.), Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Nigeria, Papua New Guinea, Rwanda, Sao Tome, Senegal, Sierra Leone, Tanzania, Timor-Leste, Togo, Uganda, Uzbekistan, and Zambia.*

*5 For countries for which there is no survey available in 2012, the poverty measures are estimated by applying (adjusted) growth rates from national accounts to extrapolate consumption or income. This assumes distribution-neutral growth. Some more details and references to further background readings are provided in Ferreira et al. (2015).*

## 2.3 Measuring Shortfalls in Health Security

Recommendation No. 202 outlines that Members should provide »access to a nationally defined set of goods and services, constituting essential health care, including maternity care, that meets the criteria of availability, accessibility, acceptability, and quality« (ILC 2012: 3). There is no overall indicator available that adequately measures these criteria in a combined, internationally comparable manner. Such an indicator is highly difficult to establish for a number of reasons. For instance, while an indicator could reflect the physical availability of health infrastructure, the degree of *de facto* accessibility of these services for the population across all age groups or regions is much harder to measure. Or, a country may legally grant universal access to health care, while in practice a large share of the population may not be able to use these health services due to physical or financial barriers or discrimination in direct and indirect ways.

We therefore approximate the degree of access to essential health care and measure gaps in health security with a two-stage partial indicator. Our indicator takes into account both the adequacy of the overall amount of public resources allocated to health as well as the adequacy of the allocation of these resources within the health care delivery system. In short, expenditure adequacy is measured by comparing a country's public health expenditure as a percentage of GDP to a normative benchmark to identify whether there is a public health expenditure gap  $HG_{ej}$ . Similarly, a normative benchmark is established to investigate whether there seems to be a gap in terms of the allocation of the available resources, denoted  $HG_{aj}$ . The larger of these two gaps—if they exist at all—constitutes the health gap  $HG_j$  of a country  $j$ :

$$HG_j = \max\{HG_{ej}, HG_{aj}\} \quad (7)$$

We now turn to the measurement of expenditure adequacy and allocation adequacy and the setting of the two normative benchmarks in more detail. First, the public health expenditure gap  $HG_{ej}$  of a given country  $j$  is calculated in the following way:

$$HG_{ej} = \begin{cases} E_B - E_j, & \text{if } E_j < E_B \\ 0, & \text{if } E_j \geq E_B \end{cases} \quad (8)$$

where  $E_j$  denotes public health expenditure as percentage of GDP for an individual country  $j$ , and  $E_B$  stands for a normative benchmark. If a country's public health expenditure equals or exceeds the normative benchmark for expenditure adequacy, then the gap is zero. If it is lower, then the difference between actual public health expenditure and the benchmark is taken as the gap in health expenditure.

The normative benchmark defines which percentage of its GDP a country has to allocate to public health expenditure at the very least to be theoretically able to provide essential health care to the whole population. This benchmark was empirically derived by considering which share of GDP countries with an average medical staffing ratio spent on average on public health, based on the rationale that labour costs constitute a substantial share of public health expenditure (WHO 2006: 7). The number of physicians, nurses, and midwives per 1,000 people for each country was retrieved from the WDI database (World Bank 2015c), whereby these figures are from the Global Health Workforce Statistics of the World Health Organization (WHO), OECD, and supplementary country data. We used the most recent estimates available since 2005. The unweighted global average for the 167 countries for which data was available amounted to 5.9 physicians, nurses, and midwives per 1,000 people.

For calculating average public health expenditure, we considered all countries with a staffing ratio within 0.5 standard deviations of this average—i.e., all countries that employed between 3.2 and 8.6 physicians, nurses, and midwives per 1,000 people—and 50 countries fell within this range. Using the data on public health expenditure in 2012 provided in the WDI database, which is based on the WHO Global Health Expenditure database (World Bank 2015c), these countries spent on average (unweighted) 4.3 per cent of their GDP on public health, which is thus taken as the normative benchmark. If a country allocates less than this amount to public health, it is assumed that it is impossible—even theoretically—to guarantee access to essential health care. If the country dedicates this amount or more, the question still remains whether it allocates these resources effectively in order to guarantee universal access to essential health care services.

Subsequently, we considered in a second step whether the allocation across different types of health care

and different population groups could be considered adequate. For that purpose, we focused on a measure of health service coverage in a critical life cycle event to which Recommendation No. 202 makes explicit reference, namely maternity. The chosen indicator is births attended by skilled health personnel (given as a percentage), which is defined as »number of births attended by skilled health personnel (doctors, nurses or midwives) trained in providing life saving obstetric care« over the »total number of live births in the same period« (WHO 2015b: 24). This measure is used as a proxy indicator for maternal mortality and was an indicator for the fifth Millennium Development Goal to improve maternal health (WHO 2015b: 24), also providing information with regard to gender equality in access to care. If that measure falls below a certain threshold, then one can infer that a country might not allocate sufficient resources to primary health care or that not all parts of the population have access to it or make use of it. The birth attendance shortfall, denoted  $BAG_j$ , is calculated as follows:

$$BAG_j = \begin{cases} BA_B - BA_j, & \text{if } BA_j < BA_B \\ 0, & \text{if } BA_j \geq BA_B \end{cases} \quad (9)$$

whereby  $BA_j$  denotes the percentage of births attended by professional health care staff for an individual country  $j$  and  $BA_B$  stands for a normative benchmark. Resource allocation is assumed to be adequate if professional health care staff attended at least 95 per cent of all births, resulting in no gap in terms of allocation. If a country's birth attendance rate is lower than this benchmark, then the gap in the allocation of resources  $HG_a$  is calculated as follows:

$$HG_{aj} = BAG_j * E_B \quad (10)$$

As mentioned above, the largest gap ( $HG_{ej}$  or  $HG_{aj}$ ) is taken as final shortfall indicator for the health security dimension. Note that this means that if a country spends more resources on public health than the expenditure adequacy benchmark, but falls short in the dimension that measures allocative adequacy, this does not necessarily imply that a country needs to raise new revenue; rather, it could also consider reallocating existing health resources to close the gap in terms of allocative adequacy.

Data for global monitoring of this indicator are provided by the United Nations Children’s Fund (UNICEF) and the WHO and usually stem from household surveys, such as the Multiple Indicator Cluster Surveys or Demographic and Health Surveys (WHO 2015b: 25). The information was retrieved from the UNICEF Database on delivery care (UNICEF 2015), which offered the most recent data on this indicator. This database was compared and supplemented with data from the Global Health Observatory data repository (WHO 2015a), which is the most comprehensive database in terms of country coverage, particularly of developed countries. Thirty high-income countries were not included in either of these databases. For those countries, it was assumed that the birth attendance criterion was fulfilled, based on the observation there was no high-income country for which an estimate was available that did not meet this criterion.

We conclude this section with two examples to illustrate the calculation of the gaps in access to essential health care. First, Ghana spent 3.6 per cent of GDP on public health in 2012, thus the expenditure gap amounted to 0.7 per cent of GDP. Professional health personnel attended 68.4 per cent of births, so Ghana fell 26.6 percentage points short of the 95 per cent benchmark. This shortfall was multiplied with the benchmark for public health expenditure (26.6 percentage points \* 4.3 per cent = 1.1 per cent) to determine  $HG_a$ . Ghana would have to (re)allocate at least 1.1 per cent of its GDP to assure that 95 per cent of births are attended by skilled health personnel. Because the allocation gap was larger than the expenditure gap, the final health security gap was 1.1 per cent of GDP. Second, Armenia had a public health expenditure of 1.9 per cent of GDP in 2012. It therefore fell 2.4 percentage points short of the benchmark of 4.3 per cent of GDP. Because virtually all births in Armenia were attended by skilled health personnel, the allocation gap was zero. The final gap in the health security dimension therefore amounted to 2.4 per cent of GDP.

## 2.4 Aggregation and Interpretation

Since both dimensions of the SPFI are expressed as share of a country’s GDP, the single components are summed up to establish the composite indicator.

$$SPFI_j = IG_j + HG_j \quad (11)$$

The final index score is rounded to one decimal to avoid the illusion of a level of precision of the estimate not warranted by the underlying data. The countries are subsequently ranked based on that score. In the case that two or more countries have the same score, they are ranked in alphabetical order. One of the advantages of the SPFI is the ease of its interpretation. On the one hand, it allows us to clearly rank and compare countries. On the other hand, it has a concrete meaning—i.e., it describes the minimum share of GDP that a country needs to invest or reallocate to national SPF policies to close the existing gap, assuming a world with no administration or overhead costs as well as perfect targeting.

## 3 | RESULTS OF THE SPFI IN 2012

The SPFI was calculated for the reference year 2012 as outlined above. Indicator scores and resulting country rankings are presented for three different definitions of what constitutes a basic income. The measurement of gaps in health security is the same in all cases.

First, Table A.1 displays the indicator scores and the country ranking based on applying the international, absolute poverty line at \$1.90 a day in 2011 PPP as the minimum income criterion. This ranking includes 125 countries. The minimum amount that countries would have to theoretically allocate to assure meeting the four basic social security guarantees varies widely, from less than 0.1 per cent of GDP up to 44.9 per cent in the Democratic Republic of the Congo. The 18 countries with a gap smaller than 0.1 per cent of GDP are almost exclusively located in Europe and Central Asia, with the exception of Costa Rica, Jordan, the Maldives, and Uruguay. A further 26 countries have to invest 1.0 per cent of GDP or less to

close currently existing gaps, and for 95 out of 125 countries the amount does not exceed 5.0 per cent of GDP. To provide an example, Ecuador on rank 50 (together with Albania and Trinidad and Tobago) would have to invest or reallocate 1.5 per cent of its GDP to national SPF policies. In this case, the majority of these funds would have to go to the health system, namely 1.3 per cent of GDP, while meeting the minimum income criterion would minimally require 0.2 per cent of GDP (not shown in Table). Large gaps in the implementation of national SPFs exist in numerous low-income, Sub-Saharan countries; 12 countries from this region<sup>6</sup> face protection gaps that exceed more than 10 per cent of their own GDP. Malawi, for instance, has only a very small health security gap, but it would have to allocate at least 30 per cent of its GDP to make sure that every individual has a minimum income over the lifecycle.

Country rankings are relatively comparable when using the absolute poverty line at \$3.10 a day in 2011 PPP as minimum income criteria, shown in Table A.2. Both the top and the bottom ranks remain comparable to the results in Table A.1; 18 countries would have to invest 0.1 per cent of GDP or less to assure the four basic social security guarantees. Yet, the financial resources that countries would have to invest to close protection gaps are now obviously larger. For 72 countries, the gap does not exceed 5.0 per cent of GDP, while 17 further countries have a score between 5.0 and 10.0 per cent of GDP. Using this minimum income criterion, the bottom 12 countries now face gaps ranging between 31.0 per cent of GDP in Rwanda up to more than 100.0 per cent of GDP in the Democratic Republic of the Congo.

Finally, the application of a relative minimum income criterion that encompasses costs of social inclusion and functioning beyond the costs of basic needs allows the inclusion of additional countries, resulting in a ranking of 142 countries around the world shown in Table A.3. The ranking is topped by 26 countries that would require less than 1.0 per cent of their GDP to close existing protection gaps if one applies this minimum income criterion. These countries are mainly located in Europe and Central Asia, except for St. Lucia and New Zealand. Seventy-four countries would have to allocate between 1.0 per cent and 5.0 per cent of their GDP to policies that assure the four basic social security guarantees. Among those countries are the United States of America and Mex-

ico, which would have to reallocate 2.1 and 2.4 per cent, respectively, of their GDP; these are the largest amounts among OECD countries. Finally, except for Comoros, the 12 bottom countries are the same as above. For all of them, the income floor of \$1.90 a day in 2011 PPP instead of a relative poverty line was applied, thus resulting in the same gaps as displayed in Table A.1.

*6 Rwanda, Niger, Togo, Liberia, Haiti, Guinea-Bissau, Mozambique, Madagascar, Central African Republic, Malawi, Burundi, and the Democratic Republic of the Congo*

## 4 | LIMITATIONS AND STRENGTHS OF THE SPFI

There are a number of caveats when interpreting the results in addition to the ones outlined in the methodology section. First, using GDP as denominator can lead to misleading conclusions if results are not carefully examined. Increasing or decreasing SPF gaps and hence higher or lower scores on the SPFI are not necessarily due to increasing or decreasing shortfalls in the implementation of SPF policies, but could equally be the result of economic volatility. As the index is primarily concerned with the implementation of SPFs, one could discuss how to adjust the methodology for this in further analysis.

Second, the chosen basic income definitions imply some conceptual constraints. Using relative poverty lines and hence measuring poverty against a relative benchmark of 50 per cent of mean income does not allow for a full closure of the income gap by the indicated financial resources. If all incomes below 50 per cent of the mean were to be increased to the 50 per cent benchmark, then the country's mean income would also increase. Likewise, if the country's overall income distribution were to move upward, then the relative gap could remain constant or increase, while the income situation of the people concerned would have absolutely improved. Therefore, it is important to interpret the relative improvement of a country's income gap by analysing both the income gap as well as the changes in the shape and mean of the income distribution.

Third, there remains a considerable degree of discretion in the calculation of the health gap. Access to health care is an inherently difficult dimension to measure due to the complexity of the subject matter, including variations in terms of the population structure or geography, and wide differences in the structure of health care systems across countries. The index tries to reduce this complexity by defining two normative benchmarks on adequate spending and adequate allocation of resources. While this measurement still does not entail any information about the quality of services, it does provide an indication on whether spending and coverage are adequate at a country level. In order to detect country-specific grievances—e.g., with regard to access or quality—there is no substitute for a more detailed, country-focused study.

Furthermore, the analysis is partly constrained by the availability of recent data. Some countries are completely excluded due to unavailability of data (see detailed data description in the annex), while for others the underlying survey data are more than ten years old. In both cases, there is apparent need for regularly updated and publicly available statistics in these countries to monitor policy implementation and evaluate policy impact (cf. Scott 2005). Hence, comparisons across countries are limited by these facts and should always be cautiously made, especially if indicator scores are very close. With regard to monitoring progress over time, an update of the indicator is only meaningfully possible if new survey data are available for a country, seriously limiting a regular and comprehensive monitoring in some countries. Moreover, as a country's rank on the SPFI is not only determined by its own protection gaps, but is also derived in comparison to gaps in other countries; improvements or deteriorations in future rankings not only reflect changes in the implementation of SPF policies in a specific country, but they also show its performance in relation to other countries' progress. Finally, the SPFI focuses on shortfalls of SPFs, yet the Recommendation also urges members to go beyond SPFs as a basic starting point and seek to provide higher levels of protection. That said, the index only measures the first step of the horizontal implementation of SPFs; the second step of vertical expansion is not yet monitored by the SPFI.

Nonetheless, the SPFI has several valuable features. Considerable value is added by going beyond apply-

ing the commonly used, absolute international poverty lines at \$1.90 a day and \$3.10 a day in 2011 PPP as basic income levels. A relative poverty line—and thus a relative definition of what constitutes a minimum level of income—permits us to include high-income countries in a meaningful way and acknowledges relative determinants of welfare in a society and the costs of social inclusion. At the same time, the SPFI is also calculated for these international poverty lines, keeping in mind the usability of the SPFI for stakeholders in light of the dominance of these poverty lines in international debates.

The construction of the index was guided by the criteria of being accessible, replicable, transparent, timely, coherent, and interpretable. The use of publicly accessible international databases ensures that these criteria are met to the largest extent possible. The fact that the index score represents a number with a concrete meaning offers several advantages. It increases the ease of interpretability and makes it intuitively understandable for a wide audience that might not be familiar with more technical terms in the fields of poverty and social security. It also greatly enhances the relevance of the SPFI for stakeholders who want to use it for advocacy purposes. Moreover, the SPFI readily provides a concrete, lower-bound indication of how many resources a country has to invest in realizing national SPFs in relation to their economic capacity. We conclude this paper with some final considerations on the question of resources.

## 5 | CONCLUSION

The social protection gaps displayed by the SPFI indicate that most countries do not have to invest unreasonably large amounts to close their SPF gap in order to fully comply with Recommendation No. 202. Apart from a few exceptions, it seems that SPFs are an affordable exercise, which is in line with previous findings (ILO 2008a, 2011: 93–96). As such, trade unions, civil society, and other stakeholders can use the SPFI to convince decision-makers that, in most cases, SPFs are within reach in their country. In addition, if it can be established that the shortfall is relatively large for a country in comparison to countries with similar economic capacity and development, this benchmark can be employed to demonstrate that economic or fiscal non-affordability is not *a priori* a valid argument against the SPF, but that political will and prioritization in national spending decisions have a substantial role to play.

Looking at the bottom of the rankings, there are a few countries where the required resources would be larger than 10 per cent of GDP, which calls for the support of the international community in order to implement sound SPFs in the respective countries. A Global Fund for Social Protection could be used to finance or co-finance such investments. Already in October 2012, the United Nations rapporteurs for the Right to Food and Human Rights jointly called for a Global Fund for Social Protection (De Schutter & Sepúlveda 2012).

In short, the SPFI can be used to argue for a minimum but objective level of investments in social protection. Not all of these investments have to be made through additional »new« government resources; some can probably be achieved by reallocating other social or non-social expenditure in the country to purposes that have a higher return in terms of poverty alleviation and reductions in inequalities. Moreover, investments in social protection are a social and economic necessity, which has recently been confirmed in a joint statement by ILO Director-General Guy Ryder and World Bank Group President Jim Yong Kim. In June 2015 they stated:

*“Social protection systems that are well-designed and implemented can powerfully shape countries, enhance human capital and productivity, eradicate poverty, reduce inequalities and contribute to building social peace. They are an essential part of National Development Strategies to achieve inclusive growth and sustainable development with equitable social outcomes”*  
(ILO/World Bank 2015: 1).

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## ANNEX: RESULTS

<b>1</b>	Bosnia and Herzegovina	<b>0.0</b>		
	Costa Rica			
	Croatia			
	Czech Republic			
	Estonia			
	Hungary			
	Jordan			
	Lithuania			
	Macedonia, FYR			
	Maldives			
	Moldova			
	Montenegro			
	Poland			
	Romania			
	Serbia			
	Slovak Republic			
	Slovenia			
	Uruguay			
<b>19</b>	Brazil	<b>0.1</b>		
	Panama			
	Seychelles			
<b>22</b>	Bulgaria	<b>0.2</b>		
	Colombia			
	El Salvador			
	Tunisia			
	Turkey			
	Ukraine			
<b>28</b>	Kyrgyz Republic	<b>0.3</b>		
	Paraguay			
	South Africa			
<b>31</b>	Belarus	<b>0.4</b>		
	Mongolia			
<b>33</b>	Guyana	<b>0.5</b>		
<b>34</b>	Namibia	<b>0.7</b>		
	Thailand			
	Tonga			
<b>37</b>	Chile	<b>0.8</b>		
	Latvia			
	Nicaragua			
	St. Lucia			
<b>41</b>	Bolivia	<b>1.0</b>		
	Jamaica			
	Peru			
	Russian Federation			
<b>45</b>	Mexico	<b>1.2</b>		
<b>46</b>	Belize	<b>1.3</b>		
	Botswana			
<b>48</b>	Cabo Verde	<b>1.4</b>		
	China			
<b>50</b>	Albania	<b>1.5</b>		
	Ecuador			
	Trinidad and Tobago			
<b>53</b>	Dominican Republic	<b>1.6</b>		
	Iran, Islamic Rep.			
<b>55</b>	Bhutan	<b>1.7</b>		
	Fiji			
	Suriname			
<b>58</b>	Vietnam	<b>1.8</b>		
<b>59</b>	Kazakhstan	<b>1.9</b>		
	Ghana			
<b>61</b>	Vanuatu	<b>2.0</b>		
	Mauritius			
	Honduras			
<b>64</b>	Malaysia	<b>2.1</b>		
	Morocco			
<b>66</b>	Congo, Rep.	<b>2.3</b>		
	Djibouti			
	Kiribati			
	Uzbekistan			
<b>70</b>	Gabon	<b>2.4</b>		
<b>71</b>	Armenia	<b>2.5</b>		
	Guatemala			
<b>73</b>	Swaziland	<b>2.6</b>		
<b>74</b>	Tajikistan	<b>2.7</b>		
<b>75</b>	Venezuela, RB	<b>3.0</b>		
<b>76</b>	Angola	<b>3.1</b>		
	Azerbaijan			
	Cambodia			
	Mauritania			
	Sri Lanka			
	Turkmenistan			
<b>83</b>	Georgia	<b>3.2</b>		
	Indonesia			
<b>85</b>	Philippines	<b>3.3</b>		
<b>86</b>	Pakistan	<b>3.4</b>		

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<b>87</b>	India Sudan Sao Tome and Principe	<b>3.7</b>
<b>90</b>	Comoros	<b>3.8</b>
<b>91</b>	Solomon Islands	<b>4.4</b>
<b>92</b>	Cameroon	<b>4.6</b>
<b>93</b>	Kenya	<b>4.7</b>
<b>94</b>	Cote d'Ivoire	<b>4.8</b>
<b>95</b>	Lao PDR	<b>4.9</b>
<b>96</b>	Timor-Leste	<b>5.0</b>
<b>97</b>	Bangladesh Micronesia, Fed. Sts.	<b>5.4</b>
<b>99</b>	Papua New Guinea Uganda	<b>5.8</b>
<b>101</b>	Nigeria	<b>5.9</b>
<b>102</b>	Senegal	<b>6.2</b>
<b>103</b>	Tanzania	<b>6.3</b>
<b>104</b>	Zambia	<b>7.6</b>
<b>105</b>	Ethiopia	<b>8.0</b>
<b>106</b>	Chad Burkina Faso	<b>8.1</b>

<b>108</b>	Guinea	<b>8.5</b>
<b>109</b>	Benin	<b>8.9</b>
<b>110</b>	Sierra Leone	<b>9.2</b>
<b>111</b>	Gambia, The	<b>9.3</b>
<b>112</b>	Lesotho	<b>9.4</b>
<b>113</b>	Mali	<b>9.8</b>
<b>114</b>	Rwanda	<b>10.3</b>
<b>115</b>	Niger	<b>12.1</b>
<b>116</b>	Togo	<b>13.5</b>
<b>117</b>	Liberia	<b>15.8</b>
<b>118</b>	Haiti	<b>16.1</b>
<b>119</b>	Guinea-Bissau	<b>17.0</b>
<b>120</b>	Mozambique	<b>20.2</b>
<b>121</b>	Madagascar	<b>23.2</b>
<b>122</b>	Central African Rep.	<b>24.0</b>
<b>123</b>	Malawi	<b>31.0</b>
<b>124</b>	Burundi	<b>32.9</b>
<b>125</b>	Congo, Dem. Rep.	<b>44.9</b>

**Notes:** The SPFI can be calculated for 125 countries that are included in PovcalNet and for which information on public health expenditure and births attended by skilled personnel is available. In addition to high-income countries, the following countries are not included due to the non-availability of data: Afghanistan, Algeria, American Samoa, Cuba, Dominica, Egypt (Arab Rep.), Eritrea, Grenada, Iraq, Kosovo, Korea (Dem. Rep.), Lebanon, Liechtenstein, Marshall Islands, Myanmar, Palau, San Marino, Somalia, South Sudan, St. Vincent and the Grenadines, Syrian Arab Republic, Tuvalu, West Bank and Gaza, Yemen (Rep.), Zimbabwe.

TABLE A.2: SPFI country ranking based minimum income criterion of \$3.10 a day in 2011 PPP, 2012

<b>1</b>	Bosnia and Herzegovina Croatia Czech Republic Hungary Jordan Lithuania Poland Romania Serbia Slovak Republic Slovenia Uruguay	<b>0.0</b>	<b>45</b>	Dominican Republic	<b>1.8</b>
<b>13</b>	Costa Rica Estonia Maldives Moldova Montenegro Seychelles	<b>0.1</b>	<b>46</b>	Bolivia Botswana China Ecuador Kazakhstan	<b>1.9</b>
<b>19</b>	Bulgaria Macedonia, FYR Turkey Ukraine	<b>0.2</b>	<b>51</b>	Bhutan Malaysia Mauritius	<b>2.1</b>
<b>23</b>	Brazil Panama	<b>0.3</b>	<b>54</b>	Fiji	<b>2.2</b>
<b>25</b>	Belarus Mongolia Tunisia	<b>0.3</b>	<b>55</b>	Belize Namibia Nicaragua Suriname	<b>2.3</b>
<b>28</b>	Colombia	<b>0.6</b>	<b>59</b>	Morocco	<b>2.5</b>
<b>29</b>	El Salvador Paraguay Thailand	<b>0.7</b>	<b>60</b>	St. Lucia Vietnam	<b>2.6</b>
<b>32</b>	Latvia	<b>0.8</b>	<b>62</b>	Gabon	<b>2.8</b>
<b>33</b>	Chile	<b>0.9</b>	<b>63</b>	Armenia	<b>3.0</b>
<b>34</b>	Russian Federation	<b>1.0</b>	<b>64</b>	Azerbaijan	<b>3.1</b>
<b>35</b>	Tonga	<b>1.1</b>	<b>65</b>	Cabo Verde Venezuela, RB	<b>3.2</b>
<b>36</b>	Jamaica South Africa	<b>1.2</b>	<b>67</b>	Sri Lanka Turkmenistan	<b>3.5</b>
<b>38</b>	Mexico Peru	<b>1.3</b>	<b>69</b>	Guatemala	<b>3.7</b>
<b>40</b>	Trinidad and Tobago	<b>1.5</b>	<b>70</b>	Indonesia	<b>4.5</b>
<b>41</b>	Guyana Iran, Islamic Rep.	<b>1.6</b>	<b>71</b>	Ghana	<b>4.6</b>
<b>43</b>	Albania Kyrgyz Republic	<b>1.7</b>	<b>72</b>	Georgia	<b>4.8</b>
			<b>73</b>	Honduras Tajikistan Philippines	<b>5.1</b>
			<b>76</b>	Congo, Rep.	<b>5.4</b>
			<b>77</b>	Mauritania	<b>5.6</b>
			<b>78</b>	Angola Pakistan	<b>5.8</b>
			<b>80</b>	Vanuatu	<b>6.0</b>

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<b>81</b>	Cambodia Sudan	<b>6.4</b>
<b>83</b>	Djibouti	<b>6.5</b>
<b>84</b>	Swaziland Uzbekistan	<b>6.6</b>
<b>86</b>	India	<b>7.1</b>
<b>87</b>	Kiribati	<b>8.1</b>
<b>88</b>	Nepal	<b>8.2</b>
<b>89</b>	Lao PDR	<b>9.7</b>
<b>90</b>	Kenya	<b>11.1</b>
<b>91</b>	Sao Tome and Principe Nigeria	<b>11.2</b>
<b>93</b>	Cameroon Comoros	<b>11.4</b>
<b>95</b>	Cote d'Ivoire	<b>11.5</b>
<b>96</b>	Micronesia, Fed. Sts.	<b>12.7</b>
<b>97</b>	Papua New Guinea	<b>14.0</b>
<b>98</b>	Bangladesh	<b>14.7</b>
<b>99</b>	Solomon Islands	<b>14.8</b>
<b>100</b>	Timor-Leste	<b>15.6</b>
<b>101</b>	Zambia	<b>16.5</b>
<b>102</b>	Senegal	<b>16.9</b>
<b>103</b>	Tanzania	<b>18.6</b>

<b>104</b>	Uganda	<b>18.9</b>
<b>105</b>	Chad	<b>19.1</b>
<b>106</b>	Lesotho	<b>21.8</b>
<b>107</b>	Gambia, The	<b>25.3</b>
<b>108</b>	Ethiopia	<b>25.7</b>
<b>109</b>	Benin	<b>25.8</b>
<b>110</b>	Burkina Faso	<b>26.1</b>
<b>111</b>	Sierra Leone	<b>27.9</b>
<b>112</b>	Guinea	<b>28.2</b>
<b>113</b>	Mali	<b>29.7</b>
<b>114</b>	Rwanda	<b>31.0</b>
<b>115</b>	Haiti	<b>33.5</b>
<b>116</b>	Togo	<b>35.1</b>
<b>117</b>	Guinea-Bissau	<b>41.2</b>
<b>118</b>	Niger	<b>44.7</b>
<b>119</b>	Madagascar	<b>51.5</b>
<b>120</b>	Liberia	<b>51.6</b>
<b>121</b>	Mozambique	<b>53.0</b>
<b>122</b>	Central African Rep.	<b>57.8</b>
<b>123</b>	Malawi	<b>78.3</b>
<b>124</b>	Burundi	<b>85.6</b>
<b>125</b>	Congo, Dem. Rep.	<b>103.2</b>

**Notes:** The SPFI can be calculated for 125 countries that are included in PovcalNet and for which information on public health expenditure and births attended by skilled personnel is available. In addition to high-income countries, the following countries are not included due to the non-availability of data: Afghanistan, Algeria, American Samoa, Cuba, Dominica, Egypt (Arab Rep.), Eritrea, Grenada, Iraq, Kosovo, Korea (Dem. Rep.), Lebanon, Liechtenstein, Marshall Islands, Myanmar, Palau, San Marino, Somalia, South Sudan, St. Vincent and the Grenadines, Syrian Arab Republic, Tuvalu, West Bank and Gaza, Yemen (Rep.), Zimbabwe.

TABLE A.3: SPFI country ranking based on relative minimum income criterion and income floor, 2012

<b>1</b>	Romania	<b>0.3</b>	<b>46</b>	Macedonia, FYR	<b>2.0</b>
<b>2</b>	Croatia Czech Republic	<b>0.4</b>	<b>47</b>	Bosnia and Herzegovina El Salvador Kazakhstan Thailand United States	<b>2.1</b>
<b>4</b>	Finland Luxembourg Ukraine	<b>0.5</b>	<b>52</b>	Congo, Rep. Uzbekistan	<b>2.3</b>
<b>7</b>	Denmark Germany Iceland	<b>0.6</b>	<b>54</b>	Mexico Uruguay	<b>2.4</b>
<b>10</b>	France Ireland Kyrgyz Republic Netherlands Serbia Sweden	<b>0.7</b>	<b>56</b>	Swaziland	<b>2.6</b>
<b>16</b>	Belarus Belgium Hungary Montenegro Poland Slovak Republic Slovenia St. Lucia Switzerland	<b>0.8</b>	<b>57</b>	Mauritius	<b>2.7</b>
<b>25</b>	New Zealand Norway	<b>0.9</b>	<b>58</b>	Armenia China Russian Federation Trinidad and Tobago	<b>2.8</b>
<b>27</b>	Estonia Moldova	<b>1.0</b>	<b>62</b>	Bhutan Guyana	<b>3.0</b>
<b>29</b>	Austria Lithuania United Kingdom	<b>1.1</b>	<b>64</b>	Azerbaijan Gabon	<b>3.1</b>
<b>32</b>	Maldives Mongolia Portugal Tunisia	<b>1.2</b>	<b>66</b>	Iran, Islamic Rep. Vanuatu	<b>3.2</b>
<b>36</b>	Australia	<b>1.3</b>	<b>68</b>	Angola	<b>3.3</b>
<b>37</b>	Greece	<b>1.5</b>	<b>69</b>	Tonga	<b>3.4</b>
<b>38</b>	Bulgaria	<b>1.6</b>	<b>70</b>	Fiji Pakistan	<b>3.5</b>
<b>39</b>	Italy Seychelles Turkey	<b>1.7</b>	<b>72</b>	Chile	<b>3.6</b>
<b>42</b>	Spain	<b>1.8</b>	<b>73</b>	India Indonesia Panama Sao Tome and Principe	<b>3.7</b>
<b>43</b>	Albania Israel Latvia	<b>1.9</b>	<b>77</b>	Brazil Nepal	<b>3.8</b>
			<b>79</b>	Colombia Tajikistan Sri Lanka	<b>3.9</b>
			<b>82</b>	Morocco Peru Vietnam	<b>4.0</b>
			<b>85</b>	Ecuador	<b>4.1</b>

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<b>86</b>	Georgia Turkmenistan	<b>4.2</b>
<b>88</b>	Costa Rica Dominican Republic	<b>4.3</b>
<b>90</b>	Ghana Suriname	<b>4.4</b>
<b>92</b>	Namibia	<b>4.5</b>
<b>93</b>	Jamaica Philippines Sudan	<b>4.6</b>
<b>96</b>	Belize Botswana Nicaragua Solomon Islands	<b>4.7</b>
<b>100</b>	Djibouti Malaysia Mauritania	<b>4.8</b>
<b>103</b>	Timor-Leste Venezuela, RB	<b>5.0</b>
<b>105</b>	Kiribati	<b>5.1</b>
<b>106</b>	Cote d'Ivoire South Africa	<b>5.2</b>
<b>108</b>	Cameroon	<b>5.6</b>
<b>109</b>	Paraguay	<b>5.7</b>
<b>110</b>	Papua New Guinea Uganda	<b>5.8</b>
<b>112</b>	Guatemala Micronesia, Fed. Sts. Nigeria	<b>5.9</b>
<b>115</b>	Senegal	<b>6.2</b>
<b>116</b>	Tanzania	<b>6.3</b>
<b>117</b>	Bolivia	<b>6.6</b>

<b>118</b>	Kenya	<b>6.9</b>
<b>119</b>	Zambia	<b>7.6</b>
<b>120</b>	Honduras	<b>7.9</b>
<b>121</b>	Ethiopia	<b>8.0</b>
<b>122</b>	Burkina Faso Chad	<b>8.1</b>
<b>124</b>	Guinea	<b>8.5</b>
<b>125</b>	Benin	<b>8.9</b>
<b>126</b>	Sierra Leone	<b>9.2</b>
<b>127</b>	Gambia, The	<b>9.3</b>
<b>128</b>	Lesotho	<b>9.4</b>
<b>129</b>	Mali	<b>9.8</b>
<b>130</b>	Rwanda	<b>10.3</b>
<b>131</b>	Niger	<b>12.1</b>
<b>132</b>	Togo	<b>13.5</b>
<b>133</b>	Liberia	<b>15.8</b>
<b>134</b>	Haiti	<b>16.1</b>
<b>135</b>	Guinea-Bissau	<b>17.0</b>
<b>136</b>	Comoros	<b>19.8</b>
<b>137</b>	Mozambique	<b>20.2</b>
<b>138</b>	Madagascar	<b>23.2</b>
<b>139</b>	Central African Rep.	<b>24.0</b>
<b>140</b>	Malawi	<b>31.0</b>
<b>141</b>	Burundi	<b>32.9</b>
<b>142</b>	Congo, Dem. Rep.	<b>44.9</b>

**Notes:** For OECD countries, the poverty cut-off is defined as 50 per cent of median income. In all remaining countries, the poverty cut-off is set at 50 per cent of mean income. If this poverty line is smaller than \$1.90 a day in 2011 PPP, the international line of \$1.90 a day in 2011 PPP is applied. In the case that an OECD country is included in both PovcalNet and IDD (Czech Republic, Estonia, Hungary, Mexico, Poland, Slovak Republic, Slovenia, Turkey), the IDD estimate is applied. For the OECD member Chile, only estimates from PovcalNet are available. In addition to the countries mentioned Table A.1, the following high-income countries are not included due to the non-availability of data: Canada, Japan, Korea (Rep.). Bangladesh, Cabo Verde, Cambodia, Laos, and Jordan are excluded due to unavailability of estimates based on a relative poverty line.

## ANNEX: DATA DESCRIPTION

### Births Attended by Skilled Health Staff (given as percentages)

**Source:** Delivery care database for all indicators. Skilled attendance at birth—Percentage (UNICEF 2015) and Global Health Observatory data repository (WHO 2015a).

**Last update:** UNICEF, June 2015; WHO, unknown. Date of data retrieval: 27 November 2015.

**Definition:** »Numerator: The number of births attended by skilled health personnel (doctors, nurses or midwives) trained in providing life saving obstetric care, including giving the necessary supervision, care and advice to women during pregnancy, childbirth and the post-partum period; to conduct deliveries on their own; and to care for new-borns. Denominator: The total number of live births in the same period« (WHO 2015b: 24).

**Years:** 2005–2014.

**Notes:** Data are retrieved from UNICEF (2015). If data for 2012 are not available, the closest available estimate is taken, which refers to 2013/2014 in the following countries: Bulgaria, Congo (Dem. Rep.), Dominican Republic, Egypt (Arab Rep.), El Salvador, Estonia, Gambia, Guatemala, Guyana, Kenya, Lesotho, Liberia, Malawi, Mongolia, Montenegro, Namibia, Norway, Palau, Poland, Rwanda, Sierra Leone, Singapore, Togo, Trinidad and Tobago, Turkey, Vanuatu, Yemen (Rep.), Zambia.

For the following countries, the indicator is taken from WHO (2015a)—either due to unavailability of indicator in UNICEF database or availability of estimates for 2012 in WHO database—for the following countries: Angola, Australia, Austria, Azerbaijan, Bahrain, Botswana, Brunei Darussalam, Cabo Verde, Congo (Rep.), Croatia, Cyprus, Czech Republic, Denmark, El Salvador, Estonia, Finland, France, Germany, India, Ireland, Italy, Japan, Korea (Rep.), Kuwait, Latvia, Libya, Luxembourg, Mali, Malta, Marshall Islands, Mauritius, New Zealand, Norway, Oman, Palau, Papua New Guinea, Paraguay, Poland, Seychelles, Singapore, Slovenia, United Arab Emirates.

The indicator is not available for the following countries: American Samoa, Andorra, Aruba, Belgium, Bermuda, Channel Islands, Curacao, Faeroe Islands, French Polynesia, Greece, Greenland, Guam, Hong Kong SAR (China), Iceland, Isle of Man, Israel, Kosovo, Liechtenstein, Macao SAR (China), Monaco, New Caledonia, Northern Mariana Islands, Puerto Rico, San Marino, Sint Maarten (Dutch part), Spain, St. Martin (French part), Sweden, Switzerland, Turks and Caicos Islands, Virgin Islands (US), West Bank and Gaza.

### GDP Per Capita, PPP (Constant 2011 International \$)

**Source:** World Development Indicators (World Bank 2015c).

**Last update:** 12 November 2015.

**Date of data retrieval:** 19 November 2015.

**Definition:** »PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the US dollar has in the United States. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2011 international dollars« (World Bank 2015c).

**Year:** 2012.

**Notes:** This indicator is not available for the following countries: American Samoa, Andorra, Argentina, Aruba, Cayman Islands, Channel Islands, Curacao, Faeroe Islands, French Polynesia, Greenland, Guam, Isle of Man, Korea (Dem. Rep.), Liechtenstein, Monaco, Myanmar, New Caledonia, Northern Mariana Islands, San Marino, Sint Maarten (Dutch part), Somalia, St. Martin (French Part), Syrian Arab Republic, Turks and Caicos Islands, Virgin Islands (US).

## Nurses and Midwives (per 1,000 people)

**Source:** World Development Indicators (World Bank, 2015c); based on World Health Organization's Global Health Workforce Statistics, OECD, supplemented by country data.

**Last update:** 12 November 2015.  
Date of data retrieval: 19 November 2015.

**Definition:** »Nurses and midwives include professional nurses, professional midwives, auxiliary nurses, auxiliary midwives, enrolled nurses, enrolled midwives and other associated personnel, such as dental nurses and primary care nurses« (World Bank 2015c).

**Years:** 2005–2012.

**Notes:** This indicator is not available for the following countries: American Samoa, Antigua and Barbuda, Argentina, Aruba, Bermuda, Burundi, Cayman Islands, Channel Islands, Comoros, Congo (Dem. Rep.), Costa Rica, Curacao, Dominica, Equatorial Guinea, Eritrea, Faeroe Islands, French Polynesia, Gabon, Greenland, Guam, Haiti, Hong Kong SAR (China), Isle of Man, Korea (Dem. Rep.), Kosovo, Lesotho, Liechtenstein, Macao SAR (China), Madagascar, Mauritius, Nepal, New Caledonia, Nicaragua, Northern Mariana Islands, Philippines, Puerto Rico, Sao Tome and Principe, Sint Maarten (Dutch part), South Sudan, St. Kitts and Nevis, St. Martin (French part), St. Vincent and the Grenadines, Suriname, Turks and Caicos Islands, Venezuela (RB), Virgin Islands (US), West Bank and Gaza.

## Physicians (per 1,000 people)

**Source:** World Development Indicators (World Bank, 2015c); based on World Health Organization's Global Health Workforce Statistics, OECD, supplemented by country data.

**Last update:** 12 November 2015.

**Date of data retrieval:** 19 November 2015.

**Definition:** »Physicians include generalist and specialist medical practitioners« (World Bank 2015c).  
Years: 2005–2012.

**Notes:** This indicator is not available for the following countries: American Samoa, Antigua and Barbuda, Aruba, Bermuda, Burundi, Cayman Islands, Channel Islands, Comoros, Congo (Dem. Rep.), Costa Rica, Curacao, Dominica, Equatorial Guinea, Eritrea, Faeroe Islands, French Polynesia, Gabon, Greenland, Guam, Haiti, Hong Kong SAR (China), Isle of Man, Korea (Dem. Rep.), Kosovo, Lesotho, Liechtenstein, Macao SAR (China), Mauritius, Nepal, New Caledonia, Nicaragua, Northern Mariana Islands, Philippines, Puerto Rico, Sao Tome and Principe, Sint Maarten (Dutch part), South Sudan, St. Kitts and Nevis, St. Martin (French part), St. Vincent and the Grenadines, Suriname, Turks and Caicos Islands, Venezuela (RB), Virgin Islands (US), West Bank, and Gaza.

## Poverty Gap Ratio

**Source:** PovcalNet.

**Last update:** 12 November 2015.

**Date of data retrieval:** 2–4 December 2015.

**Definition:** Poverty gap is the mean shortfall in income or consumption from the poverty line (counting the non-poor as having zero shortfall), expressed as a percentage of the poverty line (World Bank 2015c)

**Year:** All poverty gaps refer to the reference year 2012. Years of underlying survey data differ.

**Notes:** Poverty gaps are not reported in PovcalNet for the following countries: Afghanistan, Algeria, American Samoa, Andorra, Antigua and Barbados, Aruba, Australia, Austria, Bahamas, Bahrain, Barbados, Belgium, Bermuda, Brunei Darussalam, Canada, Cayman Islands, Channel Islands, Cuba, Curacao, Cyprus, Denmark, Dominica, Egypt (Arab Rep.), Equatorial Guinea, Eritrea, Faeroe Islands, Finland, France, French Polynesia, Germany, Greece, Greenland, Grenada, Guam, Hong Kong SAR (China), Iceland, Iraq, Ireland, Isle of Man, Israel, Italy, Japan, Korea (Dem. Rep.), Korea (Rep.), Kuwait, Lebanon, Libya, Liechtenstein, Luxembourg, Macao SAR (China), Malta, Marshall Islands, Monaco, Myanmar, Netherlands, New Caledonia, New Zealand,

Northern Mariana, Norway, Oman, Palau, Portugal, Puerto Rico, Qatar, Samoa, San Marino, Saudi Arabia, Singapore, Sint Maarten (Dutch part), Somalia, South Sudan, Spain, St. Kitts and Nevis, St. Martin (French part), St. Vincent and the Grenadines, Sweden, Switzerland, Syrian Arab Republic, Turks and Caicos Islands, Tuvalu, United Arab Emirates, United Kingdom, United States, Virgin Islands (US), Yemen (Rep.), Zimbabwe.

Estimates are based on \$/day in 2011 PPP except for Bangladesh, Cabo Verde, Cambodia, Laos, and Jordan, which use \$/day in 2005 PPP. For these countries, the poverty gap ratio can only be retrieved for the absolute international poverty lines.

Public Health Expenditure as a Percentage of GDP  
Source: World Development Indicators (World Bank 2015c); based on World Health Organization Global

## Health Expenditure database.

**Last update:** 12 November 2015.

**Date of data retrieval:** 19 November 2015.  
Definition: »Public health expenditure consists of recurrent and capital spending from government (central and local) budgets, external borrowings and grants (including donations from international agencies and nongovernmental organizations), and social (or compulsory) health insurance funds« (World Bank 2015c).

**Year:** 2012.

**Notes:** This indicator is not available for the following countries: American Samoa, Aruba, Bermuda, Cayman Islands, Channel Islands, Curacao, Faeroe Islands, French Polynesia, Greenland, Guam, Hong Kong SAR (China), Isle of Man; Korea, Dem. Rep., Kosovo, Liechtenstein, Macao SAR (China), New Caledonia, Northern Mariana Islands, Puerto Rico, Sint Maarten (Dutch part), Somalia, St. Martin (French Part), Turks and Caicos Islands, Virgin Islands (US), West Bank and Gaza, Zimbabwe.

## Relative Poverty Gap Ratio

**Source:** Income Distribution Database (OECD 2015).

**Last update:** Unknown.

**Date of data retrieval:** 6 December 2015.

Definition: The percentage by which the mean income of the poor falls below the poverty line.  
Year: 2012.

**Notes:** Of the 34 OECD member countries, this indicator is not available for Canada, Chile, Japan, Korea (Rep.).

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Friedrich-Ebert-Stiftung | Global Policy and Development  
Hiroshimastr. 28 | 10785 Berlin | Germany

Responsible:

Dr. Cécilie Schildberg | Social Justice and Gender  
Phone +49-30-269-25-7461 | Fax: +49-30-269-35-9246  
<http://www.fes.de/GPol/en>

To order publications:  
[Christiane.Heun@fes.de](mailto:Christiane.Heun@fes.de)

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