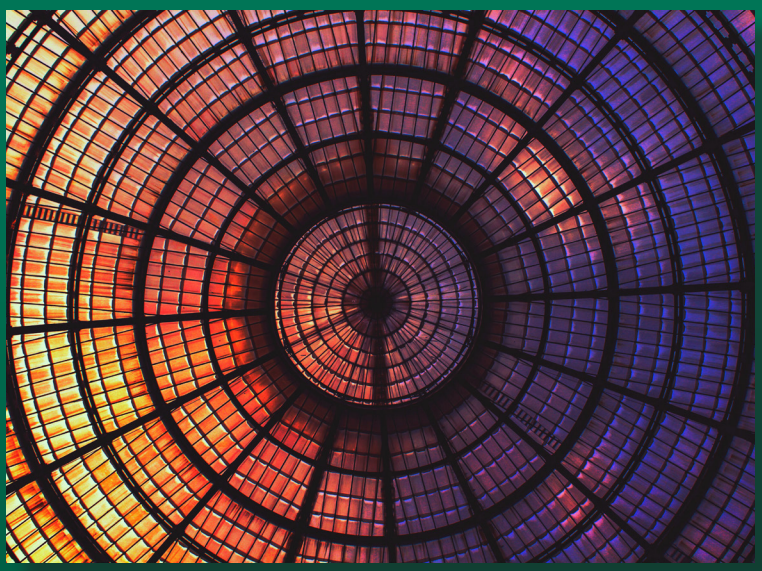
# Striking a Balance Between Well-Being and Growth

## THE 2018 SUSTAINABLE ECONOMIC DEVELOPMENT ASSESSMENT



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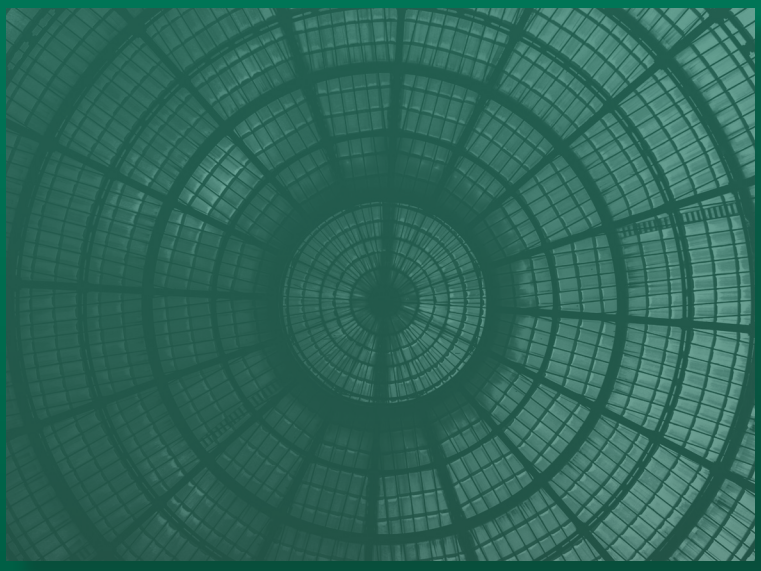

# STRIKING A BALANCE BETWEEN WELL-BEING AND GROWTH

## THE 2018 SUSTAINABLE ECONOMIC DEVELOPMENT ASSESSMENT

JOAO HROTKO

ENRIQUE RUEDA-SABATER

VINCENT CHIN

NIKOLAUS LANG

JULY 2018 | THE BOSTON CONSULTING GROUP

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# WHY WELL-BEING MUST BE A PRIORITY

Promoting the well-being of citizens is widely accepted as the primary goal of national policy and government action—in principle. In practice, however, decision makers face what are generally viewed as competing priorities: improving citizens' well-being or fostering economic growth.

But are those two goals actually in conflict? Do efforts to improve well-being take a toll on economic growth or, to the contrary, promote it?

There is no need to choose between well-being and economic growth.

We have found that there is no need to choose between well-being and growth. BCG's 2018 Sustainable Economic Development Assessment (SEDA) reveals that countries can make the overall welfare of citizens the top priority while promoting sustainable and robust economic growth. SEDA, a tool that we launched in 2012, is designed to provide insight into the relative well-being of a country's citizens and how effectively a country converts wealth, as measured by income levels, into well-being. (See the sidebar "Defining and Measuring Well-Being.") In the 2018 analysis, which included 152 countries and used data from 2007 through 2016, we found that countries that were better at converting wealth into well-being tended to have faster economic growth. They also tended to be more resilient—recovering more quickly from the 2008–2009 financial crisis.

Pursuing the twin objectives of growth and well-being should be the aim of long-term development strategies. This doesn't happen on its own, though—it is the result of thoughtful policy decisions that strike the right balance. This balanced approach is relevant not just under normal circumstances but also during times of crisis. At such times, countries must resist the temptation to prioritize stimulating economic growth or reducing fiscal deficits at the expense of well-being.

This year's analysis reveals how well-being has evolved in the years since the financial crisis. Some Western European countries, for example, have experienced significant declines in well-being relative to others around the world. However, many countries have managed to make progress. Even more encouraging, an analysis of the indicators that constitute SEDA shows that well-being around the world has, in general, improved in absolute terms in the past decade.

## DEFINING AND MEASURING WELL-BEING

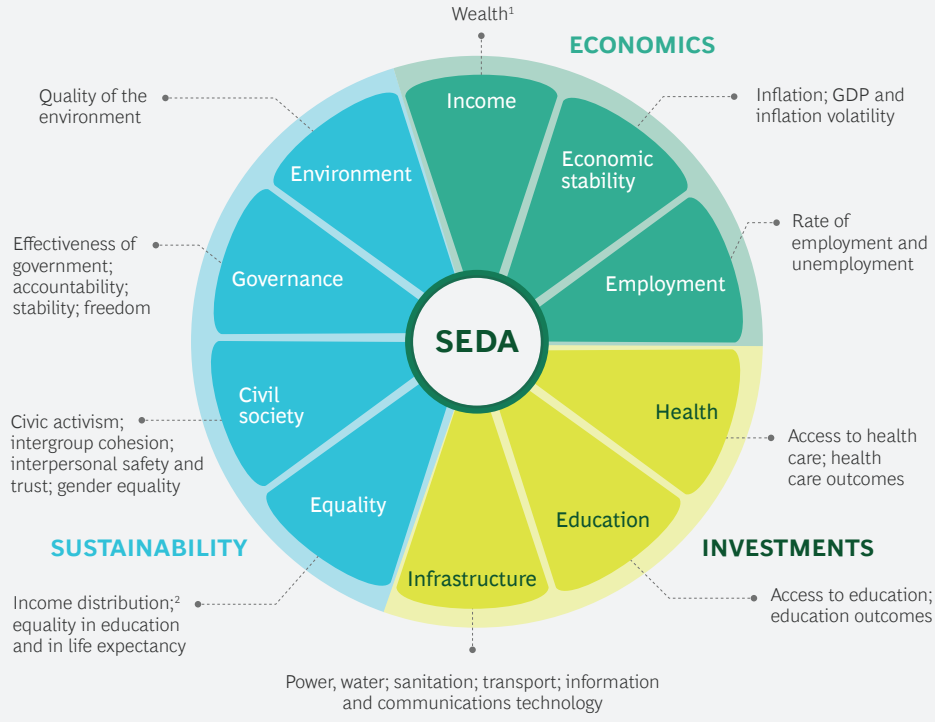
In 2012, The Boston Consulting Group proposed SEDA as a new way to measure well-being. As Economics Nobel Laureate Michael Spence noted in a foreword to the SEDA 2015 report, "Measurement is critical for generating insights and motivating action on the various dimensions of well-being. Knowing we have a problem is a start, but understanding the relative magnitude of the problem is even better. Without a good set of measures of well-being, we will fall back on the conventional yardsticks of per-capita income and growth."

SEDA is primarily an objective measure (combining data on outcomes, such as in health and education, with quasi-objective data, such as on the quality of infrastructure or governance, derived from surveys and expert assessments). It does not include purely subjective perception measures. Other metrics based on subjective measures—such as the ones used in the World Happiness Report—offer complementary, but separate, insights. In fact, we have found a strong overall positive correlation between scores from the World Happiness Report and SEDA scores.

SEDA is also a relative measure; it assesses how a country performs relative to either the entire universe of countries in the data set or to individual peers or groups. SEDA offers a current snapshot as well as a measure of progress over time, and it complements purely economic indicators such as GDP. (See the Appendix for details on the SEDA methodology.)

SEDA defines well-being on the basis of ten dimensions grouped into three categories. (See the exhibit.)

### SEDA Assesses Relative Well-Being Across Ten Dimensions




**Source:** BCG analysis.
[1]Wealth is measured as GDP per capita (purchasing-power parity, current international $).
[2]Income distribution is based on the Gini coefficient.

- **Economics** includes the dimensions of income, economic stability, and employment.
- **Investments** includes the dimensions of education, health, and infrastructure, which reflect the outcomes of policies and programs that account for the bulk of any government's nondefense expenditures.
- **Sustainability** comprises the environment dimension and three that contribute to social inclusion: equality, civil society, and governance.

Using indicators from publicly available sources, we assess country performance for each dimension. The assessment relies on a total of 40 indicators based on the most recently available data. (For our 2018 analysis, this is generally 2016 data—and, hence, it is worth noting that very recent developments will not be reflected in the analysis.) Each indicator's measure is normalized on a scale of 0 (the lowest score) to 100 (the highest). Based on those normalized indicators, a score is calculated for each of the ten dimensions. We can use these scores to look at well-being in three ways:

- **SEDA Score.** We aggregate the scores for the ten SEDA dimensions to provide an overall score for each country. This score can be used to compare a country with any other country or group of countries. In general, wealthier countries tend to have higher scores than less wealthy countries. SEDA's ten dimensions also provide a framework for reviewing priorities for remedial action, since a country's performance relative to the rest of the world or to a group of peers can highlight critical strengths and weaknesses. Armed with such insights, governments can begin to set strategies for addressing the most pressing issues.
- **Change in SEDA Score.** This year, we have changed the way we measure countries' progress in well-being. With ten years of data of comparable SEDA scores, we can track the change in SEDA score over that period. We can also track changes in each dimension of the SEDA score.
- **Wealth-to-Well-Being Coefficient.** On the basis of their SEDA scores, we can examine how effectively countries are able to convert their wealth (as reflected in income per capita) into well-being. We do this using a measure called the wealth-to-well-being coefficient. This coefficient compares a country's SEDA score with the score that would be expected given the country's GNI (gross national income) per capita. The coefficient thus provides a relative indicator of how well a country has converted its wealth into the well-being of its population. Countries with a coefficient of 1.0 are generating well-being in line with what would be expected given their income levels. Countries that have a coefficient greater than 1.0 deliver higher levels of well-being than would be expected given their GNI levels, while those below 1.0 deliver lower levels of well-being than would be expected.

Our analysis also provides guidance on which areas—what we call dimensions—deserve particular attention as countries aim to foster the virtuous cycle between economic growth and well-being:

- For countries that already enjoy a relatively high level of well-being, investments in education and employment can do the most to improve both well-being and economic growth.

- For countries with a relatively low level of well-being, it is not enough to focus only on areas that are key pillars of development, such as health and education. They must also improve governance, a critical foundation for sustainable economic growth, and infrastructure.

- Within infrastructure, digital connectivity has pervasive effects on all dimensions of well-being. It should be front and center for policymakers—particularly in countries with relatively low levels of connectivity.

Countries can—and should—aim to achieve the twin objectives of sustainable economic growth and improved well-being. SEDA can be a valuable tool as governments undertake this journey, shedding light on the impact of past policy decisions and informing strategies for the future.

# UNCOVERING THE VIRTUOUS CYCLE OF WELL-BEING AND GROWTH

Whether there is a tradeoff between efforts to enhance the standard of living for citizens and economic growth is a question central to policy debates. For this report, we set out to test a hypothesis that flies in the face of the conventional wisdom: countries that outperform peers in creating well-being for citizens enjoy more robust economic growth.

To explore the relationship between well-being and growth, we cannot simply rely on measures of current well-being. A country's wealth has a pervasive impact on many of the factors that contribute to well-being. We focus therefore on the performance of countries in converting the wealth they do have into well-being—essentially, controlling for income levels. Our proxy for this conversion performance is SEDA's wealth-to-well-being coefficient.

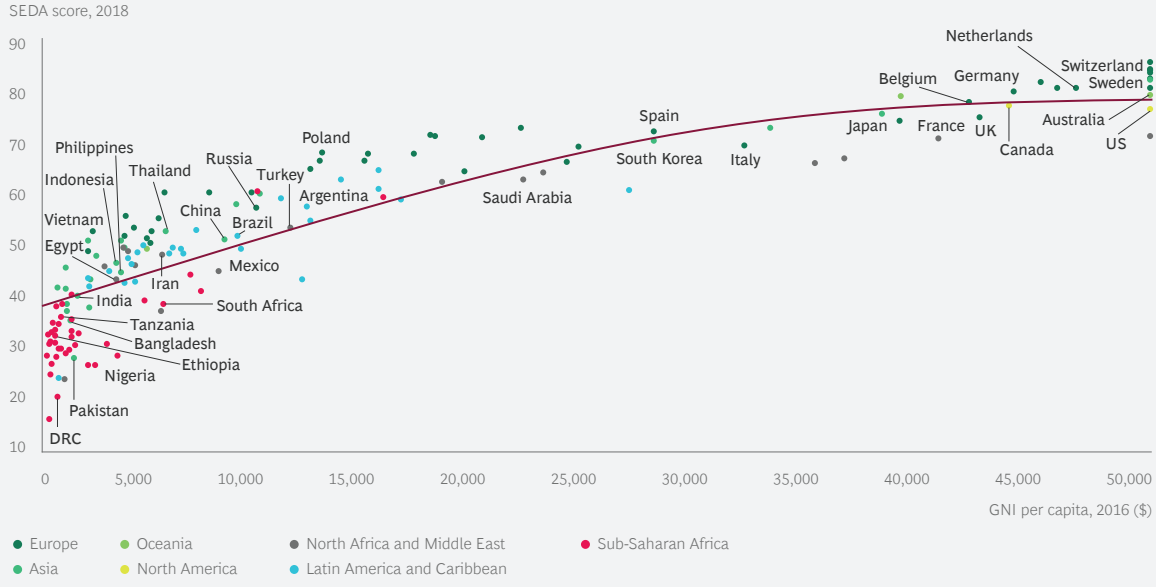
To illustrate what this measure means, it helps to plot SEDA scores against income per capita. (See Exhibit 1.) The red line represents the average relationship between the SEDA scores of 152 countries and their income per capita. An individual country's performance in converting wealth into well-being, its wealth-to-well-being coefficient, can be measured by its position relative to that line. In Exhibit 1, we highlight a subset of countries, those that constitute the 25 biggest economies and the 25 most populous countries. Because some countries fall into both categories, we are left with a total of 36, a group we dub the "global powerhouses." These countries account for 86% of the world's economy (as measured by GDP) and 78% of the world's population.

We tested a hypothesis that flies in the face of conventional wisdom.

We analyzed the relationship between well-being and growth in two ways. First, we did an econometric analysis for all 152 countries of the link between a country's initial wealth-to-well-being coefficient (represented by the average of the coefficients from 2007 through 2009) and its growth rate in the decade that followed. (See Table 3 in the Appendix.) We found a highly significant relationship between the two—a relationship that holds even when we control for variables such as gross fixed capital formation or government expenditure. (For more on the analysis, see the Appendix.)

Second, we segmented all countries into four groups according to their initial coefficient and looked at the growth rate for each group over the ten-year period. We found that the

## Exhibit 1 | Countries with Similar Levels of Wealth May Have Different Levels of Well-Being



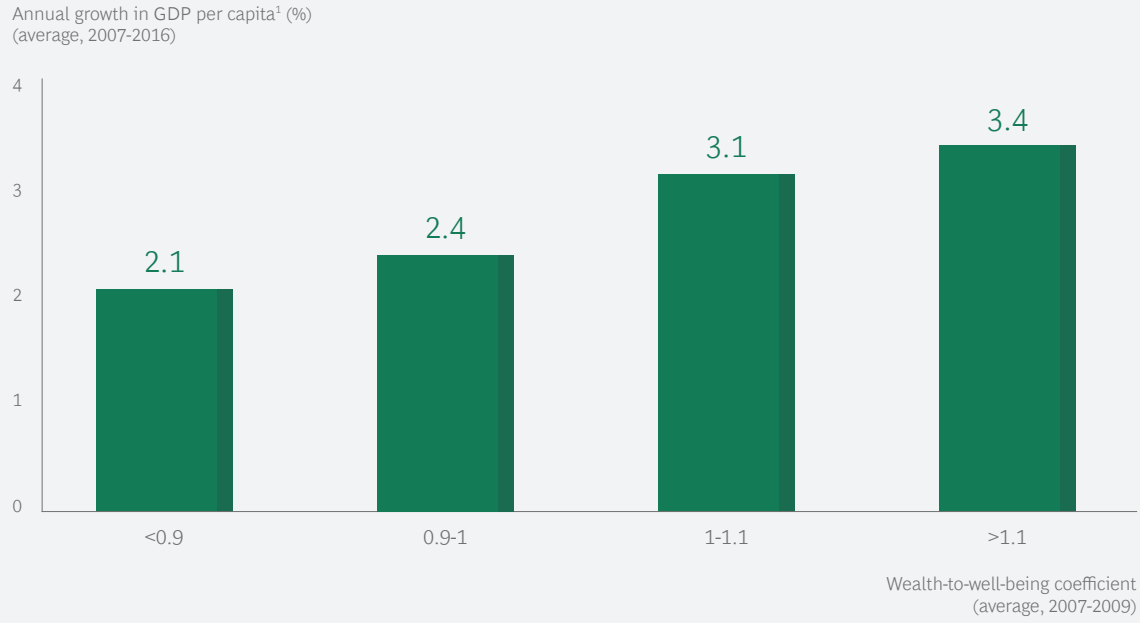

**Source:** 2018 SEDA.
**Note:** The named countries are the 36 "global powerhouses," derived from the 25 countries in our data set with the largest populations and the 25 with the largest economies; some countries are in both categories. GNI (gross national income) per capita was calculated using the Atlas method; it is limited to 50,000 for graphical reasons.

higher a group's initial coefficient, the higher its subsequent growth rate. (See Exhibit 2.)

We also examined the relationship between a country's ability to convert wealth into well-being and its resilience following the financial crisis. Among the 63 countries in our data set that suffered a recession during the crisis, those that had a higher wealth-to-well-being coefficient before the crisis tended to have smaller drops in GDP in the 2008–2009 period. (See Table 4 in the Appendix.) This relationship was stronger once we controlled for national debt. We also found that among the 27 global powerhouses that went into recession, those with a higher coefficient took fewer months to recover to their precrisis GDP levels than those with lower coefficients. (See Table 7 in the Appendix.) The recovery timeline for a number of global powerhouses with a range of coefficients illustrates this link. (See Exhibit 3.)

Taken together, our findings mean that countries that focus on enhancing well-being not only raise the standard of living of their citizens but also set their country up for stronger and more resilient economic growth. Of course, our analysis doesn't answer a number of important questions, such as the extent to which austerity policies like those implemented by some countries in the aftermath of the crisis affect both well-being and growth over the long term. However, it does underscore that policies and institutions promoting well-being have wide-ranging positive effects. Policymakers do not need to choose between boosting near-term economic growth and improving the quality of life for citizens. There is in fact a virtuous cycle at work, in which gains in one lead to progress in the other.

## EXHIBIT 2 | Countries Better at Converting Wealth into Well-Being Grow Faster




**Sources:** The World Bank; SEDA 2018.
**Note:** Intervals in the coefficient are approximate. Each group represents a quartile of the 152 countries, excluding Jordan, Lebanon, and Ukraine because of an international conflict or the extreme impact of refugees.
[1]Analysis accounts for the fact that countries with high GDP per capita are likely to grow more slowly than those with low GDP per capita.

## EXHIBIT 3 | Countries Better at Converting Wealth into Well-Being Recovered Faster from the Economic Crisis


**Sources:** Economist Intelligence Unit; SEDA 2018.
[1]Index 100 corresponds to the peak GDP before the crisis for each country.

# WELL-BEING TRENDS OVER THE PAST DECADE

Given the virtuous cycle between well-being and economic growth, and the economic turmoil in the wake of the financial crisis, it's worth examining overall trends in well-being over the past decade. How did well-being in absolute terms fare? And which countries made the most and the least progress?

## Positive Signs for Global Well-Being

To understand how well-being has changed on an absolute basis, we can look at the metrics that constitute our SEDA scores. Those scores are based on normalized indicators on a scale of 0 to 100 and therefore reflect how countries have performed relative to one another. To understand the trends in absolute well-being levels, we can instead examine changes in the 40 indicators (without any normalization) that we use to derive the overall SEDA scores.

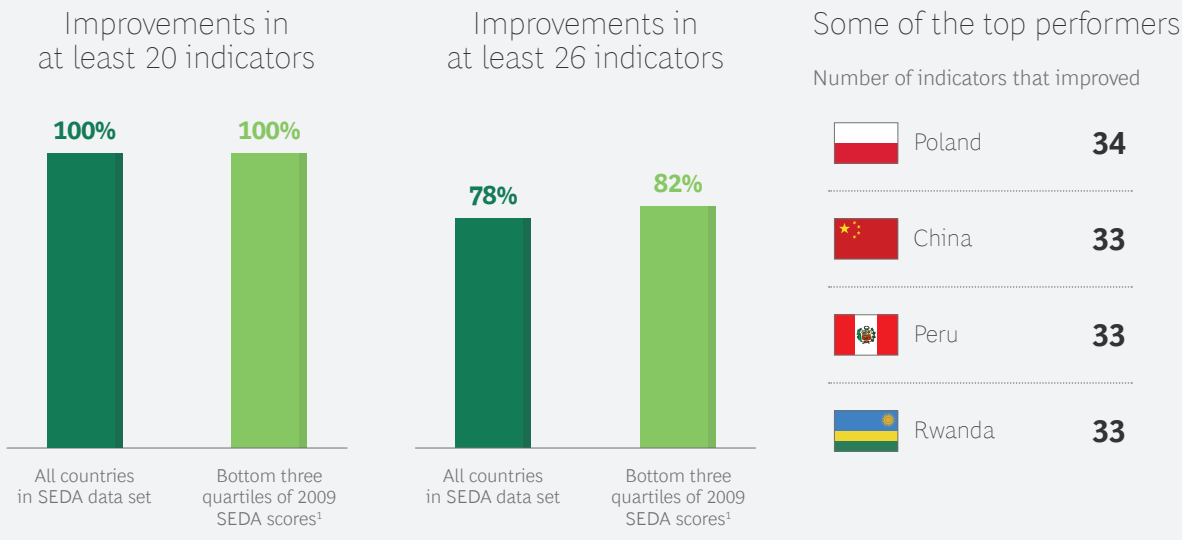
Looking at the indicator performance for all countries in our SEDA database, we see reason for optimism. We found that in every country at least half of SEDA's 40 indicators improved in absolute terms over the ten-year period we analyzed, and in 78% of the 152 countries at least 26 of the indicators (65% of the total) improved. (For more detail on indicator performance, see the Appendix.)

Because countries that start with high well-being levels have less room for improvement, it is particularly useful to look beyond those countries as we examine trends. If we consider only the 114 countries in the bottom three quartiles of 2009 SEDA scores, we find that 82% of them had gains from 2007 to 2016 in at least 26 indicators. Among those that had the biggest gains were Poland, with improvement in 34 indicators, and China, Peru, and Rwanda, with improvement in 33. (See Exhibit 4.)

> The big gains in digital infrastructure are very encouraging.

When we look at the entire set of 152 countries, we see significant gains from 2007 through 2016 in key health outcomes (notably, life expectancy and under-five mortality), in education (notably, school enrollment and years of education), in equality, and in infrastructure. Within infrastructure, the big gains in digital infrastructure are very encouraging—particularly for countries that have relatively low levels of well-being. (See the sidebar "The Digital Imperative.") We also see some improvement in gender equality in most countries, which has a significant effect

EXHIBIT 4 | Every Country Improved in at Least Half of the 40 SEDA Indicators




**Source:** SEDA 2018.
**Note:** 2009 SEDA score based on 2007 data; improvements based on data from 2007 through 2016.
[1]Includes 114 countries.

on overall well-being. (See the sidebar, "Why Everyone Benefits from Gender Equality.") In particular, gender diversity has major implications for a country's economy, boosting productivity and innovation by unlocking the full potential of the nation's talent pool.

In the area of governance, the picture is much more mixed. The only governance indicator that improved in most countries was the protection of property rights; the remaining indicators improved only in a minority of countries. (The three other governance indicators are political stability and absence of violence and terrorism, corruption and rule of law, and voice and accountability.) The picture on the environment is also concerning: air quality and carbon emissions worsened in most countries, with generalized improvement only in the generation of electricity from renewable sources.

## Overview of 2018 SEDA Results

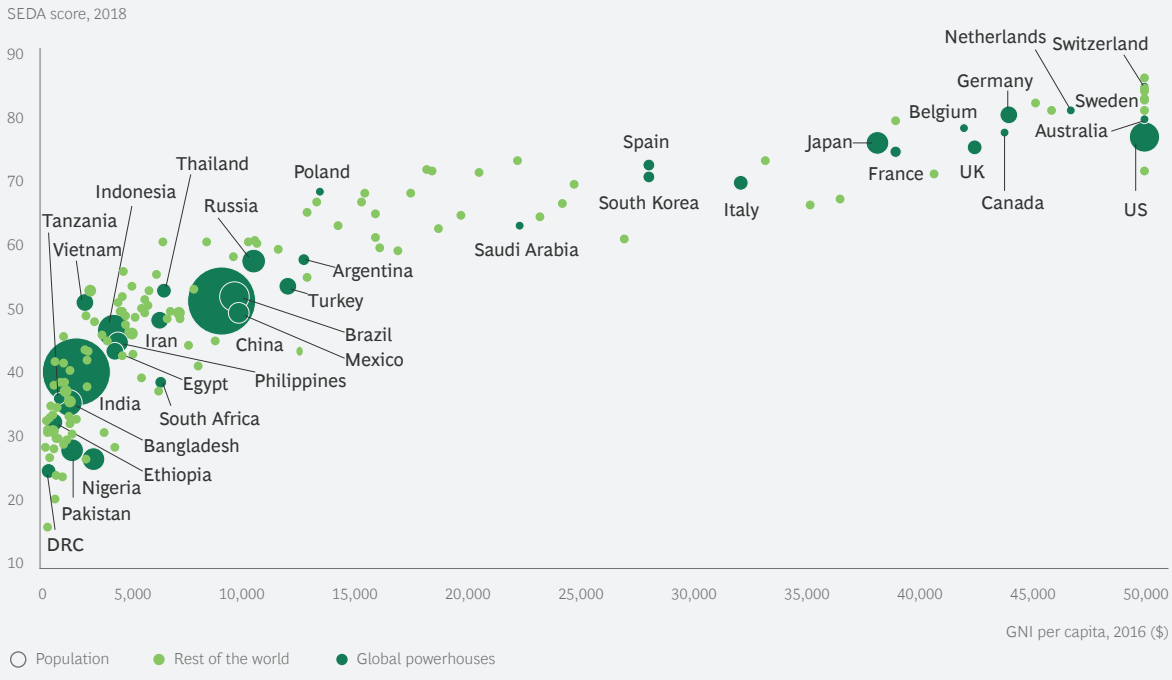
The results from our 2018 analysis reveal that while many of the Western European countries that boast the highest scores also did so in previous analyses, the breadth and depth of the financial crisis took a toll on several of them (especially in the employment dimension). At the same time, many high-growth countries were able to improve their well-being scores despite the powerful global economic headwinds.

**Wealthy countries with strong institutions lead on SEDA scores.** European countries account for 71% of the countries in the top quartile of 2018 SEDA scores. Northern European countries top the list—as they have since we launched SEDA—owing in part to high income levels and a strong commitment to social progress and governance. This year, Norway and Switzerland are SEDA's top-ranked countries, with Iceland, Luxembourg, and Denmark rounding out the top five.

Singapore is the only non-European nation in SEDA 2018's top ten. Australia, Canada, France, Germany, Japan, the UK, and the US are the only G20 countries in the SEDA 2018 top 20.

However, as noted earlier, high income is not a guarantee of high levels of well-being. Consider the 36 global powerhouse countries outlined above. When we look at these countries according to SEDA scores and per-capita incomes, we see that countries with similar incomes can have very different levels of well-being. (See Exhibit 5.) The US and Australia, for example, both have GNI (gross national income) per capita in the mid-$50,000 range—

## Exhibit 5 | Global Powerhouses with Similar Income Levels May Have Different Well-Being Scores




**Source:** SEDA 2018.
**Note:** The named countries are the 36 "global powerhouses," derived from the 25 countries in our data set with the largest populations and the 25 with the largest economies; some countries are in both categories. GNI (gross national income) per capita was calculated using the Atlas method; it is limited to 50,000 for graphical reasons.

but the US's SEDA score is 76, while Australia's is 79. Meanwhile, Germany's GNI per capita is more than 10% below that of both countries, but its SEDA score is on par with Australia's and better than that of the US.

Some countries saw big changes in SEDA scores over ten years. Well-being levels reflect the cumulative effects of policy decisions, institutions, and investments. As a result, we tend not to see big changes in scores from one year to the next. Movement is more visible, however, when we look at ten years of SEDA scores, from 2009 through 2018.

Overall, we see signs of convergence over that period: countries with high SEDA scores tend to show relatively low progress, while those with low SEDA scores tend to show more progress. (See Exhibit 6.) But there are many exceptions. This underscores that there is no natural law driving convergence, a reality reflected in the fact that we see many countries in every quadrant of Exhibit 6. A country's policy decisions and spending priorities are the primary determinants of progress.

Each quadrant tells a different story about performance in well-being over the past decade. Western countries heavily affected by the financial crisis make up most of the *good but losing ground* quadrant. Asia includes several *weak but improving* examples. Performance varied significantly among countries in sub-Saharan Africa, many of which fall in either the *weak but improving* or the *weak and losing ground* quadrant.

Exhibit 7 zooms in on some country trajectories. Take Switzerland and the US, both of which have high levels of well-being. While Switzerland's score has continued to improve, however, the US's has been declining slightly, widening the gap between the two countries. The scores of Italy and Greece show the prolonged effect of the economic crisis, with both countries losing ground over the past ten years. Poland, in contrast, started at a lower level but thanks to steady improvements has nearly caught up to

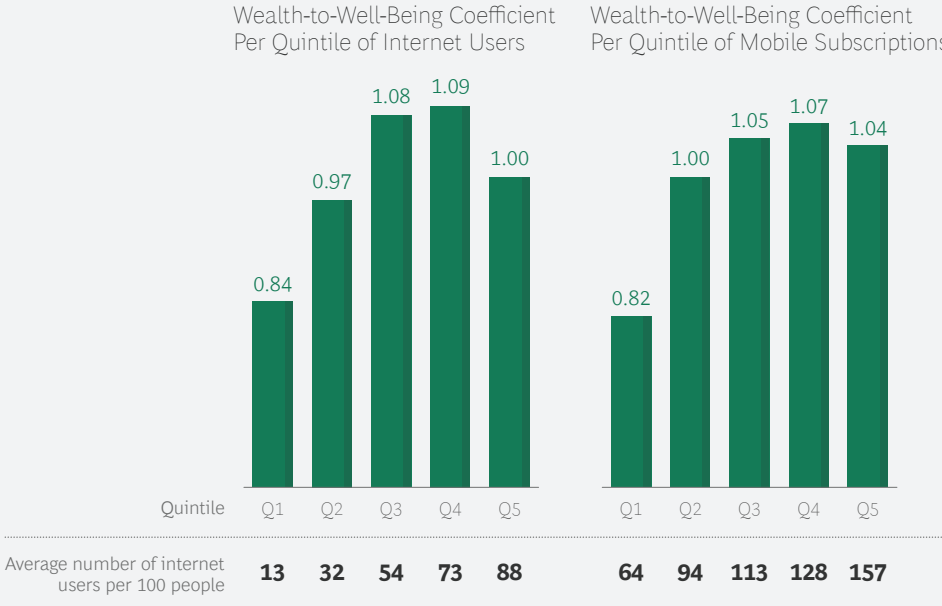
## THE DIGITAL IMPERATIVE

A country's progress in adopting digital technology has big economic implications—for instance, on productivity and the development of a robust private sector. (See *2018 Global Challengers: Digital Leapfrogs*, BCG report, May 2018.) It also has a direct link to well-being.

We found that a country's ability to convert wealth into well-being is clearly associated with its level of digital technology adoption. We saw this, for instance, in analyzing the relationship between SEDA's wealth-to-well-being coefficient and both internet and mobile usage. (See the exhibit.) The relationship is positive and significant at levels of low and middle usage. However, it appears to become negative at higher usage levels: additional investment in digital infrastructure does not seem to boost well-being. We saw a similar relationship between the wealth-to-well-being coefficient and other digital metrics, including the World Economic Forum's Networked Readiness Index.

The positive link makes sense given the impact digital infrastructure can have on other SEDA dimensions. Robust digital infrastructure, for example, has major implications for employment as the rules surrounding global competition evolve. (See "*Why Countries Need New Job Creation Strategies*," BCG article, May 2018.) It improves education by expanding the access of students to new material or instruction, and it strengthens governance by involving citizens more directly in decision making and reducing inequality in access to information. All this makes it critical that governments—in particular in developing countries, where digital infrastructure availability and usage are lower—put the widespread adoption of digital technology at the top of the policy agenda.

### Digital Infrastructure Increases the Ability to Convert Wealth into Well-Being—Up to a Point




**Source:** SEDA 2018.

## WHY EVERYONE BENEFITS FROM GENDER EQUALITY

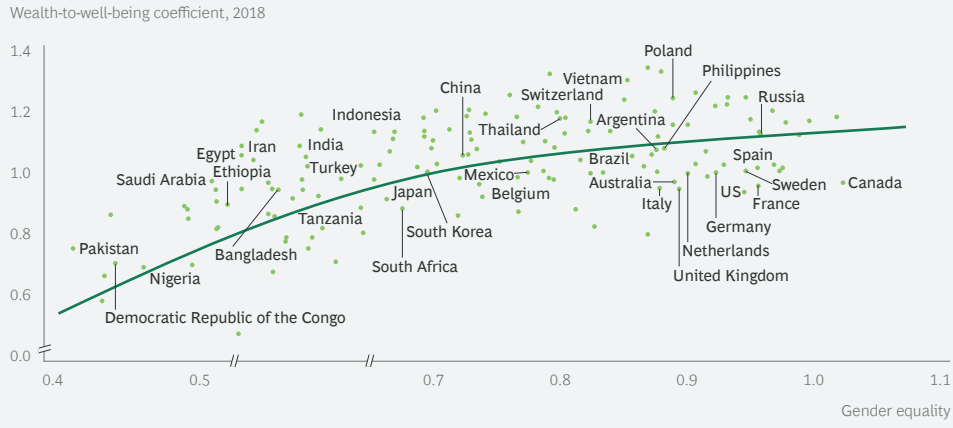
Improving gender equality is widely considered a desirable goal. But it is clear the rewards go beyond better treatment of and opportunities for women—indeed, the positive effects on well-being are pervasive.

No doubt, there are signs of progress when it comes to gender equality. Some 83% of the countries in our data set improved their gender equality ratings (an indicator within our civil society dimension) from 2007 through 2016. The improvements were generally modest, but they were statistically significant and observed across locations and country development levels. We see evidence of this trend in more granular statistics as well, including women's enrollment in education and labor force participation.

These gains have meaningful ripple effects. That's because there is a significant positive relationship between a country's gender equality and how well it converts wealth into well-being. (See the exhibit.) This finding is consistent with research on the socioeconomic benefits of reducing gender inequality. Further, it indicates that higher gender equality has an impact on many aspects of well-being.

Certainly, there is much more work to be done. For example, legal rights, access to education, and labor practices still have much room for improvement in many parts of the world. Nevertheless, if countries take aim at the gender gap in those areas, they may also drive meaningful improvements in both economic growth and well-being.

### A Strong Link Between Gender Equality and the Ability to Convert Wealth into Well-Being



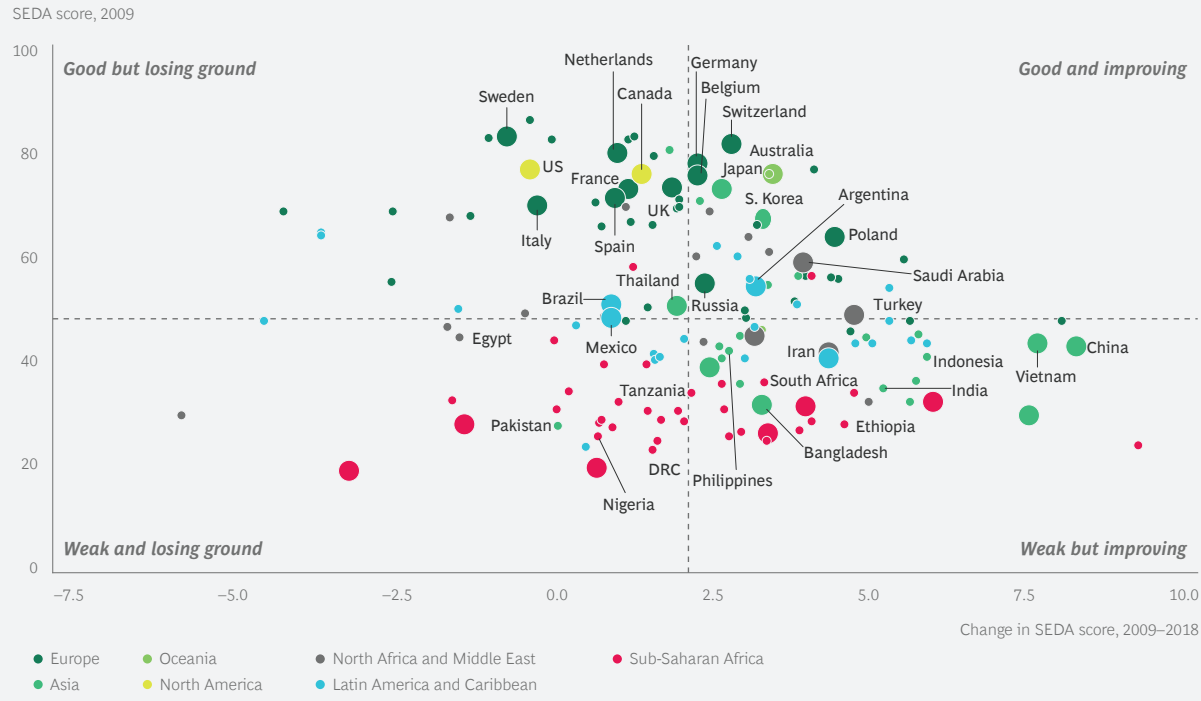

**Sources:** Indices of Social Development; SEDA 2018.

Italy and has surpassed Greece. Colombia and Indonesia, meanwhile, started at similar levels and have both improved, the former at a slightly faster rate. Both have overtaken Egypt and are now approaching Brazil, which improved initially and stagnated more recently. Finally, Ethiopia and Nigeria started the decade at roughly the same level of well-being, but the former has made solid strides while the latter has delivered little improvement in its SEDA score.

It is also useful to look at how SEDA rankings (on a scale of 1, the highest, to 152, the lowest) have changed over the past ten years and which dimensions have contributed to those changes.[1] (See Exhibit 8.)

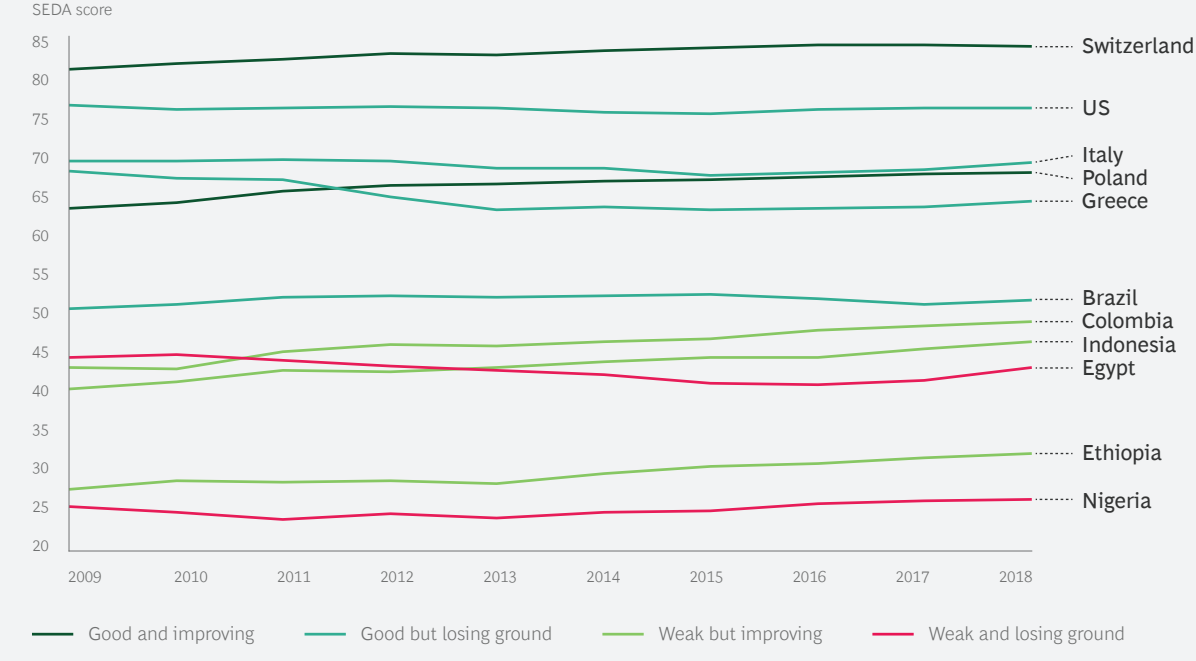
Vietnam has improved across the board, with a particularly strong showing in economic stability, education, governance, and infrastructure. As a result, the country has jumped 20 spots, moving from the third to the second quartile.

## Exhibit 6 | Countries with Low SEDA Scores Tend to Improve More




**Source:** SEDA 2018.
**Note:** The larger circles indicate the "global powerhouse" countries.

## Exhibit 7 | A Decade of SEDA Scores




**Source:** SEDA 2018.

## EXHIBIT 8 | Some Countries Have Seen Big Changes in Their SEDA Ranking

Change in SEDA dimension scores (2009–2018)

| Change in SEDA rank (2009–2018) | | Income | Economic stability | Employ-ment | Education | Health | Governance | Civil society | Equality | Infrastruc-ture | Environ-ment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | China | 9 | 3 | 2 | 16 | 4 | 8 | 2 | 2 | 21 | 3 |
| 20 | Vietnam | 3 | 16 | 4 | 15 | 0 | 14 | 7 | –1 | 18 | 4 |
| 13 | Colombia | 3 | 10 | 15 | 6 | –1 | 13 | 8 | 7 | 4 | 2 |
| 11 | Indonesia | 4 | 28 | 11 | 1 | –1 | 11 | 1 | –1 | 23 | 5 |
| 10 | Poland | 9 | 2 | 12 | –1 | 0 | 0 | 5 | 3 | 16 | 10 |
| 5 | Morocco | 2 | 8 | –2 | 4 | –3 | 8 | 0 | 0 | 16 | 16 |
| –5 | Italy | –3 | –6 | –11 | –8 | –2 | 4 | 4 | 0 | 9 | 12 |
| –11 | Greece | –11 | –14 | –40 | 2 | 1 | –7 | –5 | –7 | 7 | 11 |
| –15 | Jordan | –2 | 9 | –5 | –3 | –2 | –3 | 4 | 2 | 12 | –3 |
| –16 | Egypt | 1 | –1 | 1 | 2 | –12 | –9 | –2 | 5 | 12 | 6 |
| –19 | Yemen | –3 | –18 | 0 | –5 | –8 | –10 | –6 | –5 | –6 | 5 |
| –26 | Venezuela | –2 | –27 | –7 | –8 | –5 | –5 | 3 | –2 | –2 | 3 |

largest decrease — largest increase

**Source:** SEDA 2018.
**Note:** Color gradation is by column and indicates how a country performed in that dimension relative to other countries.

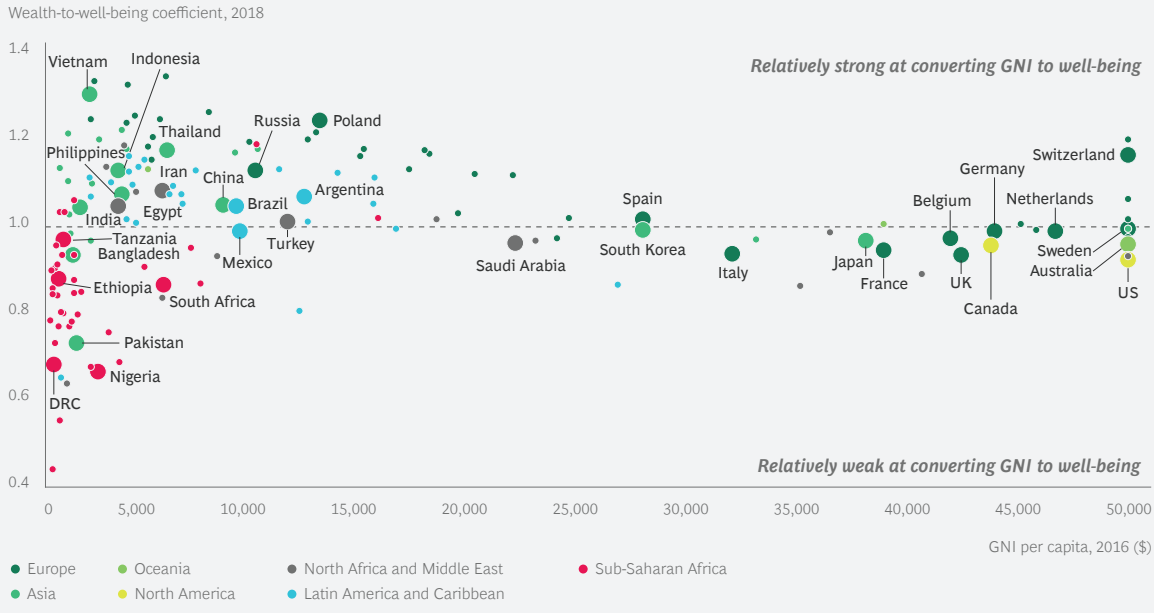
Other countries, such as China, Colombia, and Morocco, also made meaningful gains in our ranking as a result of strong improvement in a variety of areas. For China, which jumped 25 spots, progress stemmed in large part from improvements in education and infrastructure. Colombia, which jumped 13 spots, improved most in employment, governance, and civil society, while Morocco's overall improvement stemmed largely from progress in economic stability, governance, infrastructure, and environment, leading to a gain of five spots.

Certainly, there were big movers on the downside as well. Yemen dropped 19 places in our ranking, hardly surprising given the impact of the country's civil war. Greece also slipped considerably. The country had the worst performance in employment: by 2016, that dimension had barely recovered from the crisis. Egypt and Jordan experienced major setbacks in governance. Meanwhile, Venezuela dropped the most in the ranking (26 places) because of poor performance in all dimensions, in particular in economic stability, education, health, and governance.

**Performance in converting wealth into well-being varies.** As we have found in previous years, the ability to convert wealth into well-being varies even among countries with similar income levels. (See Exhibit 9.) Both the US and Sweden, for example, have per-capita income in the mid-$50,000 range, but the US has a coefficient of .91 while Sweden's is .98. Poland and Argentina also have similar per-capita income levels (roughly $12,000), but Poland's coefficient is 1.22 while Argentina's is 1.05. It is worth noting that small differences in the coefficient can translate into large differences in the absolute level of well-being. As discussed, those variations, in turn, can have a major impact on long-term economic growth.

Three patterns stand out in the 2018 coefficient results. First, many of the countries with the highest coefficients are in Eastern and Central Europe. Second, oil-rich countries tend to perform worse than average in converting wealth into well-being. The oil-exporting countries in the Gulf, for instance, all have coefficients below the global average—although Saudi Arabia's has been close to the average over the past decade, and Qatar's has gradually improved to a similar level. Third, the bulk of countries in sub-Saharan Africa are still lagging in this area, with most post-

## Exhibit 9 | Wealth-to-Well-Being Conversion Varies at Similar Income Levels




**Source:** SEDA 2018.
**Note:** The larger circles indicate the "global powerhouse" countries. GNI (gross national income) per capita was calculated using the Atlas method; it is limited to 50,000 for graphical reasons.

ing coefficient scores below 1—meaning that their ability to convert wealth into well-being is below the global average for countries at their income level. While there are some notable exceptions, including Ghana and Rwanda, the overall pattern is worrisome. Not only do countries in sub-Saharan Africa have limited resources to direct toward areas that bolster well-being, but they are also not effective at converting the wealth they do have.

### Note

1. Because we want to zero in on "inputs" to a country's performance (its policy decisions), we do not focus in our discussion on the income dimension, which is an "output" of those decisions.

# HOW CAN COUNTRIES IMPROVE WELL-BEING?

The positive relationship between well-being and economic growth highlights a critical reality: a country's failure to execute appropriate development strategies can take a major toll on the living standards of its population, both directly through the impact on social sectors and indirectly through reduced growth. To establish these strategies, however, governments face tough decisions about how to balance priorities and allocate limited resources. We looked at the change in SEDA scores over the past ten years—specifically, the dimensions that seem linked to the best improvements in relative performance—to glean information that can begin to inform those decisions. (The 2009–2018 SEDA scores are based on 2007–2016 data.)

Good governmental decision making is rarely confined to one policy area.

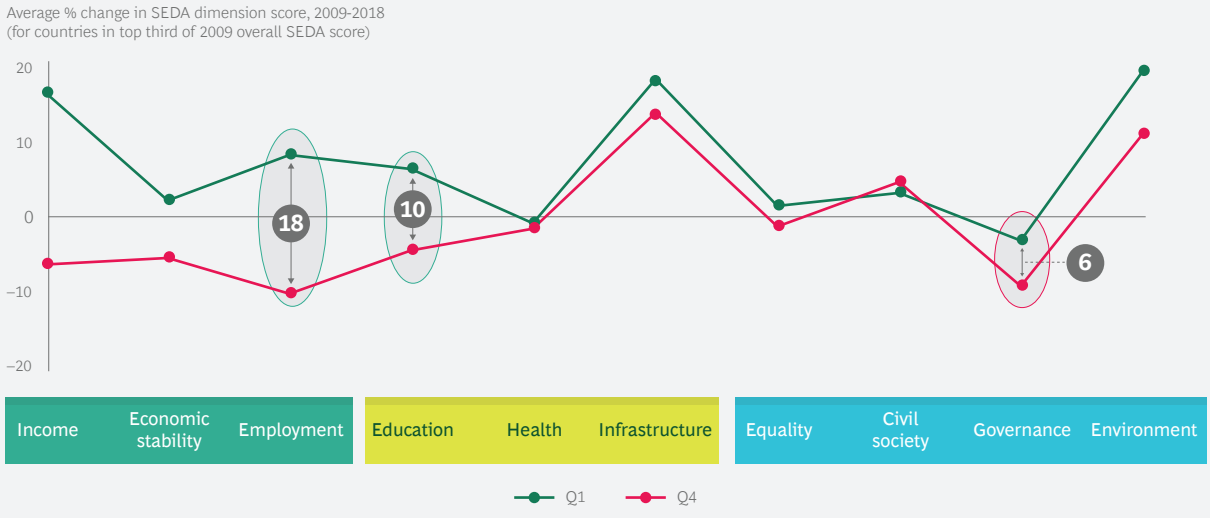
When we look at the performance of our entire data set of countries over the past decade, we see that those that improved their well-being the most—those with the greatest percentage change in their SEDA score—outperformed those with weak progress in nearly every dimension. This likely stems from the fact that good governmental decision making is rarely confined to one policy area. Such effective policymaking will be critical in the future as powerful forces, most notably the rapid pace of technological change, transform societies around the globe. (See "Governing in the Age of Disruption," BCG article, January 2018.)

## Differences in Country Performance Across Dimensions

Does a country's starting point determine which dimensions offer the greatest opportunity to improve well-being relative to peers? To study this, we segmented the 152 countries into three categories according to their 2009 SEDA score and divided each category into quartiles based on SEDA score improvement from 2009 through 2018. For each dimension of SEDA, we then compared how the most-improved countries (those in the top quartile in the dimension) fared against the weakest performers (those in the bottom quartile).

All countries in the top third of 2009 SEDA scores saw big gains in infrastructure and environment as well as a slight weakening of performance in governance, from relatively high levels, stemming from declines in indicators for political stability and absence of violence and terrorism. What distinguishes those that made the most progress from those that

EXHIBIT 10 | Dimensions Where Countries with High Levels of Well-Being Outperform




**Source:** SEDA 2018.
**Note:** Quartiles are by change in the overall SEDA score from 2009 through 2018 (based on 2007-2016 data).

made the least, however, are the employment and education dimensions. (See Exhibit 10.)

We find evidence of this pattern among individual countries in the top third of 2009 SEDA scores. Canada saw steady improvement in its SEDA score over the past decade thanks in part to improvements in education. The country is now on par with leaders in science and math PISA scores such as Singapore, South Korea, and Japan. Meanwhile, the Czech Republic, also in the top third of 2009 SEDA scores, saw both a decrease in unemployment and an increase in employment over the past ten years.

Among countries in the bottom third of 2009 SEDA scores, those that posted the biggest gains by 2018 tended to outperform those showing the least progress in three areas: education, infrastructure, and governance. (See Exhibit 11.)

For example, India, which started with a low SEDA score and was in the top quartile in terms of progress, has made major infrastructure improvements. The country has set an ambitious infrastructure agenda at the city, state, and national level, making major investments in metro rail lines, ports, roads, and airports. For its part, Rwanda has made significant progress in governance. The country has attacked corruption and strengthened property rights through moves such as the establishment of a land ownership registry.

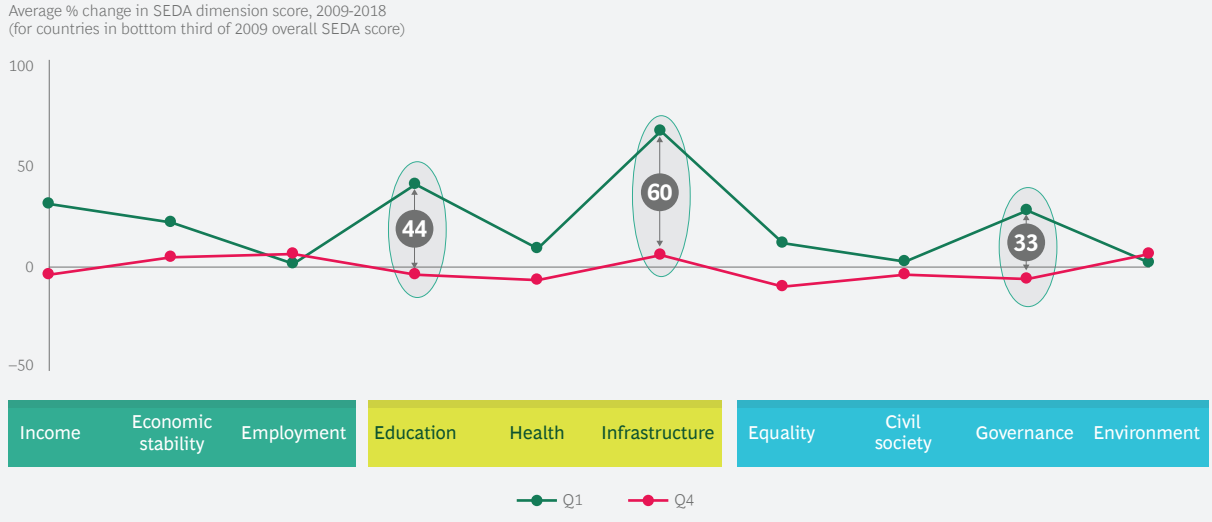
## Takeaways for Government and Other Decision Makers

Our analysis is not meant to imply that there is a formula for improving well-being—even among countries at the same stage of well-being and development. In fact, improving well-being depends on progress in all dimensions. However, the above analysis shines a spotlight on the dimensions where strong performance distinguished the countries that made the most progress. Those dimensions are likely to be key constraints or bottlenecks at various stages of a country's development. To put it another way: if several countries are making good progress in one dimension (say, health), but only a few are able to achieve significant gains in another dimension (say, governance), it probably means that there are larger constraints in achieving sustainable success in the latter.

With that in mind, we offer some insights for government officials, as well as private-sector and civil-society leaders:

- Countries should be wary of initiatives that may come at the expense of improvements in areas such as education and

## EXHIBIT 11 | Dimensions Where Countries with Low Levels of Well-Being Made the Most Progress




**Source:** SEDA 2018.
**Note:** Quartiles are by change in the overall SEDA score from 2009 through 2018 (based on 2007-2016 data).

infrastructure. Besides potentially diminishing well-being, initiatives such as subsidizing industry, investing heavily in defense, or over-prioritizing debt reduction, may hamper the country's long-term growth rate. At the same time, countries should avoid actions that favor quick decision making over the health of the country's system of governance. As our analysis shows, strong governance is an important foundation for long-term economic growth.

- For countries that already enjoy a relatively high level of well-being, our analysis points to the importance of prioritizing education and employment. Progress in these mutually reinforcing areas can better prepare citizens—and therefore society as a whole—for the challenges presented by globalization and relentless technological change.

- Countries with a relatively low level of well-being should bear in mind that it is not enough to focus only on critical areas such as health and education. These countries will reap wide-ranging benefits if they also drive a step change improvement in governance by building sound institutions. At the same time, they should promote the development of their country's infrastructure.

- Within infrastructure, countries, particularly those with relatively low levels of well-being, should make digital infrastructure a high priority. Such an effort has tended to work best as a collaboration between government and the private sector.

# THE ROLE OF WELL-BEING IN THE ECONOMY

Sustainable development is every country's goal, and improving the well-being of citizens is central to that pursuit. A country's wealth is a major factor in determining its well-being. However, as the design of SEDA scores reflects, creating well-being requires a multidimensional approach, one that goes beyond efforts to increase wealth.

The ability to convert wealth into well-being varies widely among countries, reflecting different societal choices, policy decisions, and capacity to execute them. However, as this report makes clear, good performance offers a double reward: countries that outperform their peers in converting wealth into well-being also tend to grow faster. This finding is consistent with recent research showing that inclusive societies tend to grow in a more sustained way over the long term.

What should countries do? It depend on their situation. There are no silver bullets or standard blueprints. What we do know, however, is that the lack of progress in specific dimensions can hamper overall gains in well-being. Further, the dimensions with the best potential to boost well-being change with each new stage in a country's development.

Over the past six years, SEDA has been an important tool for governments and international organizations as they review strategic priorities. It has been used to assess a country's strengths and weaknesses, identify barriers to development, and set priorities and a national strategy for sustainable growth. It has also been a valuable mechanism for tracking the progress and managing the implementation of those strategies.

Focusing on the key success factors for converting wealth into well-being is not just a nice-to-have. Countries that fail to prioritize them will squander valuable opportunities for sustained progress in economic development—and find themselves gradually left behind by peers.

# APPENDIX

SEDA's measure of well-being is based on three categories comprising ten dimensions represented by 40 indicators from publicly available sources. The 2018 data set includes 152 countries and contains ten years of historical data, which comprises more than 60,000 data points.

The choice of indicators was not intended to provide comprehensive coverage of issues in each dimension; such coverage would have required many more indicators, with large overlaps and correlations. Rather, the goal was to include enough indicators to characterize the dimension and capture differences across countries.

The first category, *economics*, comprises three dimensions that include 6 indicators. The second category, *investments*, comprises three dimensions that include 19 indicators. The third category, *sustainability,* comprises four dimensions that include 15 indicators. (See Table 1.)

## Data Gap Treatment

SEDA uses objective, credible, and the most complete data sources available covering the indicators across 152 countries. To deal with data gaps, we developed a matching model. Our 2009–2018 SEDA analysis includes more than 60,500 data points, about 6% of which require use of the matching model. The model first defines subsets of countries according to the dispersion of key indicators and then identifies the best correlations between missing indicators and other indicators for each subset. It uses best-fit linear regression to calculate estimates for the missing data points. To fill in the remaining gaps, the model uses GDP and population, what we call "last resort variables." Values derived by the matching model are used as composite measures in calculating a country's SEDA score but are not meaningful as standalone data points.

## Normalization

As a result of differences in the scales used in the original sources, we normalize the data before feeding it into the SEDA model. Individual indicators are made comparable, while preserving the relative distance among the original data values, with a minmax normalization approach, which subtracts the minimum value of an indicator's raw data set from each country's value in a particular year.

The result is then divided by the range of the indicator (maximum value minus minimum value in the data set). That result is then converted into a scale of 0 (the lowest score among the 152 countries) to 100 (the highest). Based on those normalized indicators, a score is calculated for each of the ten dimensions.

To avoid an outlier bias in the overall SEDA scores, we adjusted the model so that none of the values would exceed a limit of +/-2.5 standard deviations of the mean. In addition, we made manual adjustments for extreme outliers. For SEDA 2018, we manually adjusted Lesotho's carbon dioxide intensity (kg per kg of oil-equivalent energy use) value by bringing down the value to the next in line.

As a result, SEDA scores for a particular country—whether overall or for a dimension—are always relative to those of other countries. A score of zero does not mean that there is no well-being in the country. Rather, it means that the country is the worst performer in the data set.

TABLE 1 | Indicators for SEDA's Dimensions

| Dimension | Indicators | Primary Data Sources |
|---|---|---|
| **ECONOMICS** | | |
| Income | GDP per capita, purchasing-power parity (current international dollars) | The World Bank, DataBank |
| Economic stability | Inflation, average consumer prices (absolute percentage change) | International Monetary Fund, World Economic Outlook database |
| | Inflation-rate volatility (standard deviation)[1] | International Monetary Fund, World Economic Outlook database; BCG analysis |
| | GDP growth volatility (log standard deviation)[1] | The World Bank, DataBank; BCG analysis |
| Employment | Unemployment, total (% total labor force) | The World Bank, DataBank; International Monetary Fund, World Economic Outlook database |
| | Employment rate, population aged 15–64 (%)[1] | The World Bank, DataBank; UN World Population; BCG analysis |
| **INVESTMENTS** | | |
| Health | Life expectancy at birth, total (years)* | The World Bank, DataBank |
| | Mortality rate, under age 5 (per 1,000 live births)* | The World Bank, DataBank |
| | Prevalence of HIV, total (% of population, aged 15–49) | The World Bank, DataBank |
| | Incidence of tuberculosis (per 100,000 people) | The World Bank, DataBank |
| | Prevalence of undernourishment (% of population)[2] | The World Bank, DataBank |
| | Population obesity (% BMI > 30, age-standardized estimate)[2] | World Health Organization, Global Health Observatory |
| | Immunization, diphtheria, pertussis, and tetanus (% of children aged 12–23 months)[3] | The World Bank, DataBank |
| | Immunization, measles (% of children aged 12–23 months)[3] | The World Bank, DataBank |
| | Number of physicians (per 1,000 people) | The World Bank, DataBank |
| | Number of hospital beds (per 1,000 people) | The World Bank, DataBank |
| Education | School enrollment, tertiary (% gross) | The World Bank, DataBank |
| | School life expectancy (years), primary to tertiary | The World Bank, DataBank |
| | Pupil-teacher ratio, primary | The World Bank, DataBank |
| | Average of math and science scores | OECD, Programme for International Student Assessment, Trends in International Mathematics and Science Study (downloaded via The World Bank DataBank) |

## TABLE 1 | Indicators for SEDA's Dimensions *(continued)*

| Dimension | Indicators | Primary Data Sources |
|---|---|---|
| Infrastructure | Internet users (per 100 people) | The World Bank, DataBank |
| | Mobile cellular subscriptions (per 100 people) | The World Bank, DataBank |
| | Quality of roads network (1–7 best) | World Economic Forum, Global Competitiveness reports (and earlier editions) |
| | Quality of railroads infrastructure (1–7 best) | World Economic Forum, Global Competitiveness reports (and earlier editions) |
| | Improved water source (% of population with access) | The World Bank, DataBank |
| | Improved sanitation facilities (% of population with access) | The World Bank, DataBank |
| | Quality of electricity supply (1–7 best) | World Economic Forum, Global Competitiveness reports (and earlier editions) |
| **SUSTAINABILITY** | | |
| Equality | Gini index (0–100)* | The World Bank, DataBank; Eurostat |
| | Inequality in education (%) | United Nations, UN Data |
| | Inequality in life expectancy (%) | United Nations, UN Data |
| Civil society | Civic activism (0–1) | Indices of Social Development |
| | Interpersonal safety and trust (0–1) | Indices of Social Development |
| | Intergroup cohesion (0–1) | Indices of Social Development |
| | Gender equality (0–1) | Indices of Social Development |
| Governance | Control of corruption (–2.5 to 2.5)[4] | Worldwide Governance Indicators |
| | Rule of law (–2.5 to 2.5)[4] | Worldwide Governance Indicators |
| | Political stability and absence of violence and terrorism (–2.5 to 2.5) | Worldwide Governance Indicators |
| | Voice and accountability (–2.5 to 2.5) | Worldwide Governance Indicators |
| | Property rights index (0–100) | Heritage Foundation, Index of Economic Freedom |
| Environment | Air quality index (0-100)* | Environmental Performance Index |
| | Carbon dioxide intensity (kg per kg of oil-equivalent energy use)* | The World Bank, DataBank |
| | Terrestrial and marine protected areas (% total territorial area) | The World Bank, DataBank |
| | Electricity generation from renewable sources, excluding hydro (% of total electricity generated)** | The World Bank, DataBank |

**Source:** SEDA 2018.
**Note:** All indicators in the same dimension were given equal weight except for those marked with an asterisk (*), which were assigned double the weight and double asterisk (**), which were assigned half the weight.
[1]Calculation based on raw data from primary data source.
[2]The SEDA model uses a composite of the undernourished-population and the obese-population indicators.
[3]The SEDA model uses a composite of the indicators for immunization against measles and for immunization against diphtheria, pertussis, and tetanus.
[4]The SEDA model uses a composite of the indicators for corruption and for the rule of law.

## Weighting

Reflecting that not all dimensions of well-being make equal contributions, the SEDA model utilizes a simple weighting approach: income, health, education, and governance dimensions were assigned a weighting factor of 2; infrastructure, equality, civil society, and environment dimensions were assigned a factor of 1; economic stability and employment dimensions were assigned a factor of 0.5.

We applied a similar approach at the indicator level. All indicators in a dimension were given equal weight except for those marked with asterisks in Table 1.

## SEDA Score and Change in SEDA Score

- **SEDA Score.** This metric is a snapshot resulting from the normalization and weighting process described above, using the most recent data available. In addition to the overall SEDA score, a score for each dimension is also calculated for every country.

- **Change in SEDA Score.** Since SEDA was launched in 2012, we have made modifications and improvements to the methodology. This year, we have gone back and calculated SEDA scores for the past ten years using our current, updated methodology. That allows us to compare SEDA scores over that period on an apples-to-apples basis. We use change in SEDA score to track the evolution of SEDA scores for all countries, something we did in previous years using a measure called "recent progress." The change in SEDA score is analyzed both in percentage increase and in increase in absolute points.

Change in SEDA score covers 2009 through 2018 (mostly based on data from 2007 to 2016), with the exception of two indicators: quality of railroad infrastructure indicator (in the infrastructure dimension), where data was available starting in 2009, and terrestrial and marine protected areas indicator (in the environment dimension), where we use data from 2000, to fill in the missing data in 2001–2013.

For both the SEDA score and the change in SEDA score, we used all the same indicators.

## Wealth-to-Well-Being Coefficient

The coefficient compares a country's SEDA score with the score that would be expected given the country's GNI per capita estimated by the Atlas method (current $). The expected score reflects the average worldwide relationship between well-being and per-capita GNI as estimated by the best-fit regression line, in this case a second-order polynomial regression.

Countries with a coefficient of 1.0 are generating well-being in line with what would be expected given their income levels. Countries that have a coefficient greater than 1.0 deliver higher levels of well-being than would be expected given their GNI levels, while those below 1.0 deliver lower levels of well-being than would be expected. (See Table 2.)

## SEDA Versus the World Happiness Report

As noted, we have found a strong overall positive correlation between scores from the World Happiness Report and SEDA scores. (See Appendix Exhibit 1.)

## Focus on Global Powerhouses

Throughout our analysis, we highlighted "global powerhouses," a subset of countries that constitute the 25 biggest economies and 25 most populous countries. Because some countries fall into both categories, we are left with a subset of 36 global powerhouses. (See Appendix Exhibit 2.)

## Indicator Performance

Because SEDA is a relative measure, we cannot use SEDA scores to assess whether well-being globally is improving or declining on an absolute basis. To do that, we look at the changes in the 40 indicators in the SEDA analysis. (See Appendix Exhibit 3.)

## Table 2 | Overall Country SEDA Scores and Coefficients

| Country | SEDA Score | | | | | | | | | | Change in SEDA Score | Wealth-to-Well-Being Coefficient | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2009–2018 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Albania | 47.46 | 48.28 | 50.01 | 50.34 | 51.09 | 51.26 | 51.41 | 51.61 | 52.22 | 53.08 | 5.62 | 1.15 | 1.15 | 1.18 | 1.20 | 1.23 | 1.23 | 1.24 | 1.24 | 1.23 | 1.23 |
| Algeria | 43.34 | 43.92 | 43.90 | 45.61 | 44.91 | 45.62 | 45.24 | 45.00 | 45.01 | 45.80 | 2.46 | 1.04 | 1.05 | 1.04 | 1.08 | 1.05 | 1.06 | 1.05 | 1.06 | 1.06 | 1.06 |
| Angola | 25.52 | 25.43 | 26.56 | 26.96 | 26.66 | 27.20 | 27.32 | 27.02 | 26.88 | 28.38 | 2.86 | 0.64 | 0.63 | 0.66 | 0.67 | 0.66 | 0.66 | 0.66 | 0.65 | 0.65 | 0.68 |
| Argentina | 54.03 | 53.19 | 54.97 | 55.58 | 55.29 | 55.67 | 55.15 | 55.77 | 56.49 | 57.29 | 3.26 | 1.16 | 1.13 | 1.12 | 1.09 | 1.07 | 1.06 | 1.07 | 1.05 | 1.05 | 1.05 |
| Armenia | 50.05 | 50.28 | 49.94 | 49.31 | 50.21 | 50.26 | 49.83 | 50.02 | 50.17 | 51.66 | 1.61 | 1.22 | 1.24 | 1.22 | 1.21 | 1.23 | 1.22 | 1.21 | 1.21 | 1.20 | 1.22 |
| Australia | 75.40 | 76.90 | 77.84 | 78.33 | 78.65 | 78.97 | 79.25 | 78.88 | 79.40 | 78.92 | 3.52 | 0.96 | 0.96 | 0.96 | 0.95 | 0.94 | 0.94 | 0.94 | 0.94 | 0.95 | 0.94 |
| Austria | 78.61 | 78.48 | 79.43 | 79.84 | 80.48 | 81.10 | 80.74 | 80.83 | 80.55 | 80.32 | 1.71 | 0.97 | 0.97 | 0.97 | 0.97 | 0.98 | 0.99 | 0.99 | 0.99 | 0.98 | 0.98 |
| Azerbaijan | 48.01 | 48.86 | 49.38 | 48.76 | 48.77 | 49.63 | 49.00 | 48.99 | 48.74 | 51.13 | 3.12 | 1.16 | 1.14 | 1.13 | 1.11 | 1.10 | 1.09 | 1.07 | 1.09 | 1.13 | 1.16 |
| Bahamas | 63.76 | 61.88 | 63.17 | 61.87 | 61.95 | 61.47 | 61.57 | 61.29 | 61.81 | 60.38 | –3.38 | 0.97 | 0.95 | 0.98 | 0.97 | 0.96 | 0.94 | 0.92 | 0.90 | 0.88 | 0.85 |
| Bahrain | 60.39 | 60.62 | 60.10 | 61.46 | 61.93 | 61.93 | 62.50 | 63.55 | 63.87 | 63.86 | 3.47 | 0.96 | 0.99 | 0.98 | 1.01 | 1.02 | 1.00 | 1.02 | 0.98 | 0.96 | 0.95 |
| Bangladesh | 32.00 | 32.27 | 32.16 | 33.01 | 32.59 | 32.82 | 33.56 | 33.63 | 34.20 | 35.28 | 3.28 | 0.88 | 0.89 | 0.88 | 0.91 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.92 |
| Barbados | 64.13 | 65.11 | 62.83 | 63.08 | 62.97 | 62.56 | 62.43 | 61.67 | 61.76 | 60.75 | –3.38 | 1.11 | 1.13 | 1.09 | 1.11 | 1.11 | 1.12 | 1.12 | 1.09 | 1.06 | 1.04 |
| Belarus | 55.39 | 55.91 | 56.59 | 56.18 | 56.83 | 56.86 | 56.75 | 57.24 | 57.89 | 59.92 | 4.53 | 1.27 | 1.27 | 1.26 | 1.26 | 1.27 | 1.26 | 1.24 | 1.26 | 1.30 | 1.32 |
| Belgium | 75.13 | 76.16 | 76.08 | 76.55 | 76.38 | 77.16 | 77.18 | 77.38 | 77.55 | 77.51 | 2.38 | 0.93 | 0.95 | 0.93 | 0.94 | 0.95 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Belize | 49.74 | 49.39 | 48.56 | 48.28 | 47.94 | 48.03 | 47.00 | 47.57 | 48.11 | 48.46 | –1.28 | 1.20 | 1.19 | 1.17 | 1.16 | 1.16 | 1.16 | 1.13 | 1.13 | 1.13 | 1.12 |
| Benin | 34.10 | 34.54 | 35.16 | 35.10 | 34.29 | 34.85 | 34.32 | 33.73 | 34.25 | 34.51 | 0.41 | 0.94 | 0.95 | 0.96 | 0.97 | 0.95 | 0.96 | 0.94 | 0.92 | 0.93 | 0.92 |
| Bhutan | 44.65 | 44.20 | 45.49 | 44.93 | 46.32 | 47.15 | 46.38 | 47.17 | 47.75 | 47.67 | 3.02 | 1.17 | 1.16 | 1.18 | 1.17 | 1.21 | 1.23 | 1.20 | 1.22 | 1.21 | 1.18 |
| Bolivia | 40.40 | 41.36 | 42.38 | 43.00 | 43.29 | 43.29 | 42.80 | 43.36 | 43.92 | 44.77 | 4.37 | 1.07 | 1.10 | 1.11 | 1.12 | 1.13 | 1.11 | 1.09 | 1.09 | 1.08 | 1.08 |
| Bosnia and Herzegovina | 45.47 | 45.73 | 46.37 | 48.59 | 49.48 | 50.11 | 49.98 | 49.82 | 49.89 | 50.19 | 4.72 | 1.07 | 1.06 | 1.08 | 1.13 | 1.17 | 1.18 | 1.18 | 1.16 | 1.15 | 1.13 |
| Botswana | 43.87 | 44.32 | 44.00 | 44.20 | 44.72 | 44.77 | 43.92 | 44.17 | 44.30 | 44.06 | 0.19 | 1.00 | 1.02 | 1.00 | 0.97 | 0.98 | 0.98 | 0.97 | 0.98 | 0.96 | 0.94 |
| Brazil | 50.55 | 51.20 | 52.09 | 52.27 | 52.09 | 52.17 | 52.43 | 51.83 | 51.06 | 51.61 | 1.06 | 1.09 | 1.07 | 1.04 | 1.01 | 1.00 | 1.00 | 1.02 | 1.04 | 1.03 | 1.03 |
| Brunei Darussalam | 70.09 | 71.80 | 72.52 | 72.36 | 72.61 | 72.29 | 71.58 | 71.12 | 71.23 | 72.50 | 2.41 | 0.94 | 0.97 | 0.97 | 0.95 | 0.92 | 0.91 | 0.91 | 0.92 | 0.94 | 0.96 |
| Bulgaria | 55.91 | 56.31 | 55.96 | 55.74 | 55.80 | 56.01 | 56.86 | 57.48 | 58.20 | 59.93 | 4.02 | 1.26 | 1.23 | 1.21 | 1.21 | 1.22 | 1.22 | 1.24 | 1.24 | 1.22 | 1.24 |
| Burkina Faso | 30.60 | 31.61 | 32.33 | 31.45 | 31.38 | 31.18 | 31.63 | 31.74 | 32.71 | 33.39 | 2.79 | 0.85 | 0.88 | 0.89 | 0.87 | 0.87 | 0.86 | 0.88 | 0.88 | 0.90 | 0.90 |
| Burundi | 27.26 | 28.84 | 29.43 | 29.14 | 27.52 | 28.18 | 29.53 | 28.13 | 28.24 | 28.33 | 1.07 | 0.77 | 0.82 | 0.83 | 0.82 | 0.78 | 0.79 | 0.83 | 0.79 | 0.79 | 0.77 |
| Cambodia | 35.44 | 36.68 | 36.54 | 36.74 | 37.03 | 36.81 | 36.58 | 37.20 | 37.57 | 38.47 | 3.03 | 0.98 | 1.01 | 1.00 | 1.01 | 1.02 | 1.01 | 1.00 | 1.01 | 1.01 | 1.01 |
| Cameroon | 30.47 | 30.53 | 31.05 | 31.05 | 31.28 | 31.64 | 31.27 | 31.31 | 31.62 | 32.09 | 1.62 | 0.82 | 0.82 | 0.83 | 0.83 | 0.84 | 0.85 | 0.84 | 0.84 | 0.84 | 0.83 |
| Canada | 75.35 | 75.37 | 77.19 | 77.22 | 76.87 | 77.01 | 76.85 | 77.14 | 77.15 | 76.86 | 1.51 | 0.94 | 0.95 | 0.96 | 0.95 | 0.94 | 0.94 | 0.94 | 0.95 | 0.95 | 0.94 |
| Central African Republic | 19.09 | 18.55 | 19.27 | 19.68 | 18.28 | 17.47 | 15.05 | 16.23 | 16.56 | 16.13 | –2.96 | 0.53 | 0.52 | 0.53 | 0.55 | 0.51 | 0.49 | 0.42 | 0.45 | 0.46 | 0.44 |
| Chad | 19.61 | 19.20 | 20.00 | 19.65 | 19.05 | 19.31 | 18.93 | 20.19 | 20.27 | 20.44 | 0.83 | 0.54 | 0.53 | 0.54 | 0.54 | 0.52 | 0.53 | 0.52 | 0.55 | 0.55 | 0.55 |
| Chile | 59.58 | 59.61 | 61.20 | 61.88 | 62.28 | 62.88 | 62.93 | 63.16 | 63.08 | 62.56 | 2.98 | 1.19 | 1.18 | 1.19 | 1.16 | 1.14 | 1.14 | 1.14 | 1.14 | 1.13 | 1.11 |
| China | 42.66 | 46.22 | 46.88 | 47.65 | 47.99 | 48.81 | 48.97 | 49.06 | 49.64 | 50.82 | 8.16 | 1.06 | 1.13 | 1.11 | 1.11 | 1.10 | 1.09 | 1.07 | 1.04 | 1.02 | 1.03 |
| Colombia | 43.17 | 42.98 | 45.09 | 46.14 | 45.97 | 46.50 | 46.81 | 47.93 | 48.37 | 49.05 | 5.88 | 1.02 | 0.99 | 1.02 | 1.03 | 1.01 | 1.01 | 1.01 | 1.04 | 1.06 | 1.06 |
| Costa Rica | 53.62 | 53.19 | 54.90 | 56.02 | 56.61 | 56.81 | 57.22 | 57.93 | 58.73 | 58.92 | 5.30 | 1.19 | 1.17 | 1.18 | 1.18 | 1.17 | 1.17 | 1.16 | 1.14 | 1.12 | 1.11 |
| Cote d'Ivoire | 28.66 | 29.34 | 28.63 | 27.12 | 27.52 | 28.47 | 28.82 | 29.90 | 30.12 | 30.47 | 1.81 | 0.78 | 0.79 | 0.77 | 0.74 | 0.75 | 0.77 | 0.77 | 0.80 | 0.79 | 0.79 |
| Croatia | 58.99 | 59.69 | 61.34 | 61.35 | 61.07 | 61.47 | 62.30 | 62.40 | 63.07 | 64.51 | 5.52 | 1.07 | 1.08 | 1.11 | 1.11 | 1.14 | 1.16 | 1.18 | 1.16 | 1.16 | 1.18 |
| Cyprus | 68.14 | 68.54 | 67.31 | 67.09 | 65.37 | 64.17 | 64.07 | 64.69 | 65.61 | 65.86 | –2.28 | 0.94 | 0.93 | 0.92 | 0.92 | 0.94 | 0.95 | 0.96 | 0.95 | 0.96 | 0.96 |
| Czech Republic | 69.04 | 69.19 | 69.19 | 69.37 | 69.25 | 69.68 | 69.90 | 70.59 | 71.20 | 71.14 | 2.10 | 1.15 | 1.13 | 1.12 | 1.12 | 1.15 | 1.17 | 1.18 | 1.18 | 1.17 | 1.16 |

| Country | SEDA Score | | | | | | | | | | Change in SEDA Score | Wealth-to-Well-Being Coefficient | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2009–2018 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Democratic Republic of the Congo | 23.15 | 22.26 | 22.13 | 22.86 | 22.87 | 22.90 | 23.11 | 23.56 | 23.39 | 24.84 | 1.69 | 0.65 | 0.63 | 0.62 | 0.64 | 0.64 | 0.64 | 0.65 | 0.66 | 0.65 | 0.67 |
| Denmark | 81.80 | 81.33 | 81.31 | 81.22 | 81.08 | 81.26 | 81.00 | 82.06 | 82.26 | 81.95 | 0.15 | 0.99 | 1.00 | 0.98 | 0.98 | 0.97 | 0.96 | 0.96 | 0.98 | 0.98 | 0.98 |
| Dominican Republic | 43.29 | 43.62 | 43.52 | 43.30 | 44.62 | 44.31 | 45.90 | 46.00 | 46.63 | 48.08 | 4.79 | 1.02 | 1.02 | 1.00 | 0.99 | 1.03 | 1.02 | 1.05 | 1.03 | 1.02 | 1.03 |
| Ecuador | 43.09 | 43.08 | 44.65 | 45.60 | 46.81 | 47.65 | 47.11 | 46.52 | 47.09 | 48.13 | 5.04 | 1.04 | 1.03 | 1.06 | 1.07 | 1.09 | 1.10 | 1.07 | 1.05 | 1.05 | 1.06 |
| Egypt | 44.39 | 44.74 | 44.04 | 43.28 | 42.86 | 42.24 | 41.11 | 40.99 | 41.63 | 43.12 | –1.27 | 1.16 | 1.16 | 1.13 | 1.11 | 1.09 | 1.07 | 1.03 | 1.02 | 1.01 | 1.03 |
| El Salvador | 46.72 | 46.54 | 46.84 | 46.28 | 46.45 | 46.47 | 46.84 | 46.91 | 46.96 | 47.24 | 0.52 | 1.15 | 1.15 | 1.15 | 1.14 | 1.15 | 1.15 | 1.15 | 1.14 | 1.12 | 1.11 |
| Estonia | 68.79 | 67.56 | 67.05 | 68.26 | 68.63 | 69.33 | 70.03 | 70.38 | 70.92 | 70.84 | 2.05 | 1.22 | 1.20 | 1.19 | 1.18 | 1.19 | 1.18 | 1.18 | 1.17 | 1.16 | 1.15 |
| Ethiopia | 27.70 | 28.86 | 28.63 | 28.89 | 28.58 | 29.83 | 30.71 | 30.99 | 31.68 | 32.31 | 4.61 | 0.78 | 0.81 | 0.80 | 0.81 | 0.80 | 0.83 | 0.85 | 0.86 | 0.87 | 0.87 |
| Fiji | 45.63 | 45.19 | 44.50 | 44.46 | 43.97 | 43.66 | 45.75 | 46.35 | 47.17 | 48.98 | 3.35 | 1.10 | 1.09 | 1.08 | 1.08 | 1.07 | 1.04 | 1.09 | 1.09 | 1.09 | 1.11 |
| Finland | 82.08 | 81.56 | 82.03 | 82.26 | 81.99 | 82.11 | 81.56 | 81.35 | 81.43 | 81.26 | –0.82 | 1.01 | 1.01 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 | 1.00 | 0.99 | 0.99 |
| France | 72.57 | 72.92 | 74.01 | 73.96 | 73.50 | 73.53 | 73.60 | 73.66 | 73.69 | 73.89 | 1.32 | 0.91 | 0.91 | 0.92 | 0.92 | 0.93 | 0.94 | 0.94 | 0.94 | 0.93 | 0.93 |
| Gabon | 39.30 | 38.95 | 39.48 | 39.94 | 41.32 | 40.90 | 40.82 | 41.39 | 41.27 | 40.90 | 1.60 | 0.85 | 0.83 | 0.84 | 0.84 | 0.86 | 0.85 | 0.85 | 0.88 | 0.88 | 0.86 |
| Georgia | 47.42 | 47.88 | 49.68 | 50.03 | 50.91 | 52.56 | 52.82 | 54.20 | 54.79 | 55.36 | 7.94 | 1.20 | 1.21 | 1.24 | 1.24 | 1.25 | 1.27 | 1.27 | 1.31 | 1.31 | 1.30 |
| Germany | 77.17 | 77.85 | 79.01 | 79.42 | 79.57 | 79.41 | 79.86 | 79.81 | 79.97 | 79.55 | 2.38 | 0.97 | 0.98 | 0.98 | 0.97 | 0.99 | 0.99 | 0.99 | 0.98 | 0.98 | 0.97 |
| Ghana | 39.24 | 39.13 | 40.22 | 39.77 | 39.22 | 39.14 | 38.85 | 39.38 | 39.95 | 40.18 | 0.94 | 1.06 | 1.06 | 1.08 | 1.07 | 1.05 | 1.04 | 1.04 | 1.05 | 1.06 | 1.04 |
| Greece | 68.06 | 67.10 | 66.87 | 64.74 | 63.08 | 63.45 | 63.08 | 63.20 | 63.51 | 64.11 | –3.95 | 0.97 | 0.94 | 0.95 | 0.96 | 0.98 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 |
| Guatemala | 40.66 | 40.66 | 41.32 | 40.92 | 40.87 | 40.53 | 40.01 | 40.54 | 41.43 | 42.45 | 1.79 | 1.03 | 1.03 | 1.04 | 1.03 | 1.03 | 1.02 | 1.00 | 0.99 | 0.99 | 1.00 |
| Guinea | 24.84 | 24.91 | 24.00 | 24.66 | 25.21 | 25.24 | 25.96 | 27.37 | 27.85 | 28.27 | 3.43 | 0.69 | 0.69 | 0.66 | 0.68 | 0.70 | 0.70 | 0.72 | 0.76 | 0.76 | 0.76 |
| Guyana | 41.09 | 41.38 | 41.46 | 41.39 | 40.84 | 41.29 | 41.24 | 40.96 | 42.37 | 42.80 | 1.71 | 1.05 | 1.05 | 1.04 | 1.03 | 1.01 | 1.01 | 1.01 | 0.99 | 1.00 | 0.99 |
| Haiti | 23.49 | 24.74 | 23.84 | 23.90 | 23.29 | 23.88 | 23.89 | 23.67 | 24.04 | 24.16 | 0.67 | 0.65 | 0.68 | 0.66 | 0.66 | 0.65 | 0.66 | 0.66 | 0.65 | 0.66 | 0.64 |
| Honduras | 40.13 | 40.37 | 40.35 | 39.94 | 39.22 | 39.26 | 39.31 | 42.56 | 40.91 | 41.85 | 1.72 | 1.06 | 1.07 | 1.06 | 1.05 | 1.03 | 1.03 | 1.03 | 1.11 | 1.05 | 1.05 |
| Hungary | 67.19 | 66.42 | 66.21 | 66.12 | 65.48 | 65.78 | 65.91 | 65.66 | 65.57 | 66.09 | –1.10 | 1.24 | 1.21 | 1.21 | 1.22 | 1.24 | 1.24 | 1.24 | 1.22 | 1.20 | 1.20 |
| Iceland | 82.31 | 81.26 | 81.47 | 81.38 | 81.23 | 81.55 | 81.82 | 82.92 | 84.02 | 83.72 | 1.41 | 1.01 | 1.03 | 1.06 | 1.05 | 1.04 | 1.02 | 1.01 | 1.00 | 1.00 | 1.00 |
| India | 34.78 | 34.71 | 35.57 | 37.18 | 36.87 | 37.36 | 37.98 | 38.92 | 39.57 | 40.00 | 5.22 | 0.94 | 0.94 | 0.95 | 1.00 | 0.99 | 1.00 | 1.02 | 1.03 | 1.04 | 1.03 |
| Indonesia | 40.51 | 41.43 | 42.75 | 42.59 | 43.14 | 43.88 | 44.51 | 44.49 | 45.45 | 46.39 | 5.88 | 1.06 | 1.07 | 1.08 | 1.07 | 1.07 | 1.08 | 1.10 | 1.10 | 1.11 | 1.11 |
| Iran | 44.71 | 44.80 | 44.78 | 45.18 | 44.77 | 44.29 | 44.54 | 45.80 | 46.72 | 47.95 | 3.24 | 1.04 | 1.02 | 1.00 | 0.99 | 0.99 | 0.99 | 1.01 | 1.06 | 1.05 | 1.06 |
| Iraq | 32.01 | 33.08 | 33.27 | 33.46 | 31.85 | 33.56 | 33.84 | 34.38 | 35.30 | 37.00 | 4.99 | 0.78 | 0.80 | 0.79 | 0.78 | 0.72 | 0.75 | 0.76 | 0.78 | 0.80 | 0.82 |
| Ireland | 76.12 | 74.66 | 74.52 | 74.90 | 74.83 | 75.21 | 76.18 | 80.02 | 80.59 | 80.28 | 4.16 | 0.93 | 0.92 | 0.92 | 0.94 | 0.96 | 0.95 | 0.95 | 0.97 | 0.97 | 0.96 |
| Israel | 63.34 | 62.68 | 62.91 | 63.71 | 63.97 | 64.77 | 64.92 | 65.60 | 66.31 | 66.50 | 3.16 | 1.01 | 0.96 | 0.96 | 1.01 | 1.00 | 1.00 | 0.98 | 0.99 | 0.97 | 0.97 |
| Italy | 69.22 | 69.19 | 69.43 | 69.16 | 68.39 | 68.30 | 67.45 | 67.86 | 68.08 | 69.14 | –0.08 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.93 | 0.92 | 0.92 | 0.91 | 0.92 |
| Jamaica | 46.42 | 46.04 | 45.63 | 46.16 | 46.14 | 46.49 | 47.04 | 47.53 | 48.68 | 49.67 | 3.25 | 1.10 | 1.10 | 1.08 | 1.09 | 1.09 | 1.10 | 1.11 | 1.12 | 1.13 | 1.14 |
| Japan | 72.44 | 73.22 | 74.21 | 74.19 | 74.20 | 74.27 | 73.94 | 74.44 | 74.72 | 75.19 | 2.75 | 0.94 | 0.94 | 0.93 | 0.91 | 0.91 | 0.92 | 0.94 | 0.96 | 0.95 | 0.95 |
| Jordan | 49.00 | 48.80 | 48.41 | 48.22 | 48.13 | 48.17 | 47.98 | 48.63 | 48.64 | 48.74 | –0.26 | 1.22 | 1.20 | 1.18 | 1.18 | 1.19 | 1.19 | 1.18 | 1.18 | 1.16 | 1.14 |
| Kazakhstan | 54.21 | 53.46 | 53.96 | 54.54 | 55.34 | 55.58 | 55.43 | 56.04 | 56.29 | 57.66 | 3.45 | 1.21 | 1.17 | 1.15 | 1.14 | 1.13 | 1.09 | 1.08 | 1.08 | 1.14 | 1.15 |
| Kenya | 31.39 | 31.29 | 32.89 | 31.93 | 31.73 | 31.66 | 33.24 | 34.01 | 34.53 | 35.42 | 4.03 | 0.86 | 0.86 | 0.89 | 0.87 | 0.87 | 0.86 | 0.90 | 0.91 | 0.92 | 0.92 |
| Kuwait | 67.15 | 67.05 | 67.23 | 67.58 | 66.66 | 66.70 | 66.42 | 65.23 | 65.32 | 65.73 | –1.42 | 0.82 | 0.83 | 0.84 | 0.84 | 0.82 | 0.81 | 0.82 | 0.83 | 0.85 | 0.85 |
| Kyrgyzstan | 42.69 | 42.96 | 42.63 | 42.36 | 42.87 | 42.82 | 42.99 | 43.45 | 43.96 | 45.40 | 2.71 | 1.17 | 1.18 | 1.16 | 1.16 | 1.17 | 1.16 | 1.16 | 1.17 | 1.18 | 1.19 |
| Lao PDR | 32.20 | 33.97 | 34.96 | 35.75 | 35.64 | 36.99 | 37.40 | 37.28 | 37.55 | 37.82 | 5.62 | 0.88 | 0.93 | 0.95 | 0.97 | 0.96 | 0.99 | 0.99 | 0.97 | 0.96 | 0.95 |
| Latvia | 65.21 | 63.60 | 63.22 | 62.21 | 63.04 | 64.34 | 64.61 | 64.51 | 65.13 | 66.12 | 0.91 | 1.20 | 1.14 | 1.17 | 1.15 | 1.17 | 1.17 | 1.17 | 1.15 | 1.14 | 1.14 |

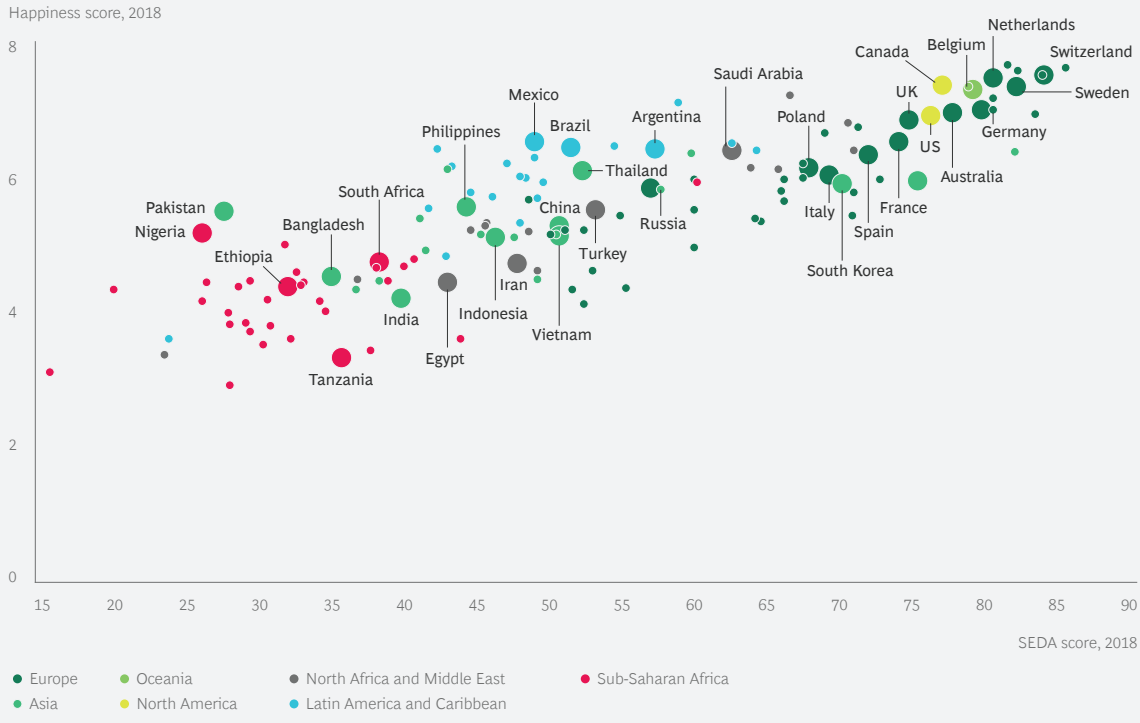
## TABLE 2 | Overall Country SEDA Scores and Coefficients *(continued)*

| Country | SEDA Score | | | | | | | | | | Change in SEDA Score | Wealth-to-Well-Being Coefficient | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2009–2018 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Lebanon | 46.23 | 47.60 | 46.15 | 46.27 | 44.76 | 44.55 | 44.24 | 43.67 | 43.79 | 44.78 | –1.45 | 1.01 | 1.00 | 0.95 | 0.96 | 0.95 | 0.95 | 0.95 | 0.92 | 0.91 | 0.92 |
| Lesotho | 26.41 | 27.19 | 30.27 | 29.60 | 29.71 | 29.80 | 29.27 | 28.95 | 28.94 | 29.46 | 3.05 | 0.71 | 0.73 | 0.81 | 0.79 | 0.80 | 0.80 | 0.79 | 0.78 | 0.77 | 0.77 |
| Liberia | 28.43 | 29.64 | 28.74 | 28.86 | 29.67 | 29.12 | 29.11 | 29.32 | 29.91 | 30.59 | 2.16 | 0.80 | 0.84 | 0.81 | 0.81 | 0.84 | 0.82 | 0.82 | 0.82 | 0.83 | 0.83 |
| Lithuania | 66.06 | 64.85 | 65.19 | 65.93 | 66.31 | 66.89 | 66.71 | 66.34 | 67.19 | 67.41 | 1.35 | 1.23 | 1.21 | 1.21 | 1.21 | 1.22 | 1.21 | 1.19 | 1.17 | 1.17 | 1.16 |
| Luxembourg | 81.87 | 81.39 | 82.80 | 83.43 | 83.40 | 83.46 | 83.22 | 83.60 | 83.42 | 83.19 | 1.32 | 1.18 | 1.04 | 1.07 | 1.06 | 1.02 | 1.00 | 1.00 | 1.02 | 1.05 | 1.05 |
| Macedonia | 49.38 | 49.70 | 50.63 | 50.25 | 49.85 | 50.53 | 51.48 | 50.77 | 51.11 | 52.48 | 3.10 | 1.18 | 1.17 | 1.18 | 1.18 | 1.19 | 1.19 | 1.21 | 1.18 | 1.17 | 1.18 |
| Madagascar | 32.44 | 30.68 | 30.27 | 31.44 | 30.72 | 31.09 | 30.98 | 31.21 | 31.90 | 31.07 | –1.37 | 0.90 | 0.86 | 0.84 | 0.88 | 0.86 | 0.87 | 0.87 | 0.87 | 0.89 | 0.84 |
| Malawi | 30.42 | 31.46 | 32.12 | 32.63 | 31.67 | 31.04 | 31.24 | 31.42 | 31.71 | 32.49 | 2.07 | 0.85 | 0.88 | 0.89 | 0.91 | 0.89 | 0.87 | 0.88 | 0.88 | 0.88 | 0.89 |
| Malaysia | 55.89 | 56.02 | 57.18 | 57.43 | 57.68 | 58.23 | 58.00 | 58.63 | 58.59 | 59.80 | 3.91 | 1.20 | 1.19 | 1.19 | 1.18 | 1.17 | 1.17 | 1.16 | 1.16 | 1.15 | 1.16 |
| Mali | 28.77 | 29.33 | 30.84 | 30.45 | 28.10 | 29.00 | 28.60 | 28.63 | 29.10 | 29.68 | 0.91 | 0.79 | 0.81 | 0.85 | 0.84 | 0.78 | 0.80 | 0.79 | 0.79 | 0.79 | 0.79 |
| Malta | 65.55 | 64.90 | 64.77 | 65.60 | 66.58 | 67.70 | 67.98 | 68.78 | 69.10 | 68.83 | 3.28 | 1.06 | 1.04 | 1.02 | 1.03 | 1.06 | 1.07 | 1.05 | 1.03 | 1.01 | 1.00 |
| Mauritania | 28.02 | 28.93 | 28.33 | 28.45 | 28.39 | 28.84 | 29.28 | 29.34 | 29.45 | 28.89 | 0.87 | 0.76 | 0.79 | 0.76 | 0.77 | 0.77 | 0.78 | 0.79 | 0.79 | 0.79 | 0.76 |
| Mauritius | 56.04 | 56.32 | 57.36 | 57.79 | 58.22 | 58.78 | 58.97 | 59.49 | 60.08 | 60.16 | 4.12 | 1.21 | 1.19 | 1.20 | 1.20 | 1.21 | 1.21 | 1.21 | 1.20 | 1.18 | 1.17 |
| Mexico | 48.07 | 48.08 | 48.28 | 48.70 | 48.73 | 48.25 | 48.03 | 48.22 | 48.76 | 49.12 | 1.05 | 0.97 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.98 | 0.97 | 0.98 | 0.97 |
| Moldova | 47.40 | 46.04 | 46.62 | 47.36 | 47.40 | 47.35 | 47.76 | 47.64 | 48.18 | 48.67 | 1.27 | 1.26 | 1.22 | 1.22 | 1.24 | 1.24 | 1.22 | 1.23 | 1.23 | 1.24 | 1.23 |
| Mongolia | 44.84 | 45.47 | 46.58 | 47.05 | 46.44 | 47.15 | 47.65 | 48.53 | 49.39 | 50.59 | 5.75 | 1.18 | 1.20 | 1.21 | 1.20 | 1.15 | 1.14 | 1.16 | 1.18 | 1.19 | 1.20 |
| Morocco | 41.39 | 42.28 | 43.22 | 43.30 | 43.29 | 43.65 | 44.22 | 45.18 | 45.01 | 45.77 | 4.38 | 1.05 | 1.06 | 1.08 | 1.09 | 1.10 | 1.10 | 1.12 | 1.13 | 1.12 | 1.12 |
| Mozambique | 27.91 | 28.33 | 28.00 | 27.97 | 27.97 | 27.28 | 26.54 | 26.71 | 25.92 | 26.72 | –1.19 | 0.78 | 0.79 | 0.78 | 0.78 | 0.78 | 0.76 | 0.74 | 0.74 | 0.72 | 0.72 |
| Myanmar | 29.53 | 29.53 | 29.32 | 30.20 | 31.25 | 31.41 | 31.80 | 32.52 | 36.14 | 36.97 | 7.44 | 0.82 | 0.82 | 0.80 | 0.82 | 0.85 | 0.85 | 0.86 | 0.88 | 0.97 | 0.97 |
| Namibia | 35.73 | 35.52 | 36.75 | 36.77 | 36.44 | 37.43 | 37.21 | 37.79 | 38.10 | 39.13 | 3.40 | 0.85 | 0.85 | 0.87 | 0.86 | 0.85 | 0.86 | 0.86 | 0.87 | 0.88 | 0.89 |
| Nepal | 35.98 | 36.20 | 38.35 | 38.60 | 38.25 | 38.97 | 40.33 | 40.59 | 41.19 | 41.69 | 5.71 | 1.00 | 1.01 | 1.06 | 1.07 | 1.06 | 1.08 | 1.11 | 1.12 | 1.13 | 1.12 |
| Netherlands | 79.15 | 79.68 | 79.74 | 80.44 | 80.69 | 80.38 | 79.90 | 79.84 | 80.28 | 80.30 | 1.15 | 0.97 | 0.97 | 0.96 | 0.97 | 0.98 | 0.98 | 0.98 | 0.97 | 0.97 | 0.97 |
| New Zealand | 75.16 | 76.20 | 76.93 | 76.54 | 75.94 | 76.55 | 77.63 | 78.44 | 78.71 | 78.63 | 3.47 | 1.07 | 1.06 | 1.07 | 1.04 | 1.01 | 1.00 | 1.00 | 1.00 | 0.99 | 0.99 |
| Nicaragua | 40.37 | 41.21 | 41.60 | 41.85 | 42.13 | 42.41 | 42.45 | 42.01 | 42.51 | 43.46 | 3.09 | 1.07 | 1.10 | 1.10 | 1.11 | 1.12 | 1.12 | 1.12 | 1.10 | 1.09 | 1.10 |
| Nigeria | 25.66 | 24.86 | 24.00 | 24.76 | 24.20 | 24.88 | 25.03 | 25.96 | 26.32 | 26.51 | 0.85 | 0.69 | 0.67 | 0.64 | 0.65 | 0.63 | 0.64 | 0.63 | 0.66 | 0.67 | 0.66 |
| Norway | 85.44 | 84.20 | 85.02 | 85.62 | 86.02 | 86.07 | 86.42 | 85.85 | 85.20 | 85.25 | –0.19 | 1.21 | 1.27 | 1.22 | 1.24 | 1.27 | 1.27 | 1.29 | 1.24 | 1.18 | 1.18 |
| Oman | 59.75 | 61.02 | 61.10 | 60.10 | 60.45 | 60.25 | 60.25 | 61.53 | 61.77 | 62.11 | 2.36 | 1.01 | 1.02 | 1.01 | 1.02 | 1.00 | 0.99 | 1.01 | 1.03 | 1.00 | 1.00 |
| Pakistan | 27.68 | 27.16 | 27.57 | 26.52 | 26.10 | 26.58 | 26.76 | 26.84 | 27.18 | 27.92 | 0.24 | 0.75 | 0.74 | 0.74 | 0.72 | 0.71 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Panama | 50.63 | 50.60 | 51.58 | 51.62 | 51.86 | 51.20 | 51.94 | 52.66 | 53.16 | 54.52 | 3.89 | 1.12 | 1.11 | 1.11 | 1.07 | 1.07 | 1.03 | 1.02 | 1.01 | 0.98 | 1.00 |
| Paraguay | 44.04 | 43.52 | 43.87 | 43.58 | 43.88 | 44.17 | 44.20 | 45.21 | 46.10 | 46.21 | 2.17 | 1.13 | 1.11 | 1.10 | 1.08 | 1.09 | 1.07 | 1.07 | 1.09 | 1.09 | 1.08 |
| Peru | 43.69 | 44.13 | 45.87 | 46.91 | 46.41 | 46.25 | 47.04 | 47.87 | 48.56 | 49.32 | 5.63 | 1.06 | 1.07 | 1.09 | 1.10 | 1.07 | 1.05 | 1.07 | 1.07 | 1.08 | 1.08 |
| Philippines | 41.64 | 41.43 | 41.76 | 42.34 | 42.33 | 43.17 | 43.37 | 43.66 | 43.92 | 44.49 | 2.85 | 1.08 | 1.07 | 1.06 | 1.08 | 1.07 | 1.08 | 1.08 | 1.07 | 1.06 | 1.06 |
| Poland | 63.27 | 64.00 | 65.51 | 66.17 | 66.28 | 66.64 | 66.81 | 67.26 | 67.56 | 67.74 | 4.47 | 1.20 | 1.19 | 1.21 | 1.22 | 1.24 | 1.25 | 1.25 | 1.24 | 1.23 | 1.22 |
| Portugal | 69.93 | 70.16 | 70.81 | 70.43 | 69.63 | 69.65 | 69.60 | 70.04 | 70.73 | 70.75 | 0.82 | 1.08 | 1.07 | 1.08 | 1.08 | 1.12 | 1.13 | 1.13 | 1.12 | 1.11 | 1.10 |
| Qatar | 68.25 | 69.91 | 71.10 | 70.80 | 70.97 | 72.21 | 70.52 | 70.25 | 69.85 | 70.81 | 2.56 | 0.84 | 0.86 | 0.87 | 0.87 | 0.87 | 0.89 | 0.87 | 0.87 | 0.90 | 0.92 |
| Republic of the Congo | 28.54 | 29.26 | 29.88 | 30.32 | 30.26 | 30.29 | 31.72 | 31.56 | 31.57 | 32.65 | 4.11 | 0.75 | 0.77 | 0.77 | 0.79 | 0.79 | 0.78 | 0.82 | 0.81 | 0.83 | 0.84 |
| Romania | 55.56 | 56.81 | 56.78 | 56.61 | 56.03 | 56.46 | 57.62 | 58.22 | 58.72 | 59.98 | 4.42 | 1.15 | 1.17 | 1.17 | 1.17 | 1.18 | 1.18 | 1.19 | 1.18 | 1.16 | 1.18 |
| Russia | 54.56 | 54.70 | 54.56 | 54.76 | 55.07 | 55.39 | 54.87 | 55.01 | 55.55 | 57.04 | 2.48 | 1.10 | 1.11 | 1.08 | 1.06 | 1.03 | 1.00 | 1.01 | 1.05 | 1.09 | 1.11 |
| Rwanda | 31.98 | 32.00 | 34.80 | 34.94 | 35.31 | 36.16 | 35.49 | 35.89 | 35.84 | 37.95 | 5.97 | 0.89 | 0.89 | 0.96 | 0.97 | 0.98 | 1.00 | 0.98 | 0.99 | 0.98 | 1.02 |

| Country | SEDA Score | | | | | | | | | | Change in SEDA Score | Wealth-to-Well-Being Coefficient | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2009–2018 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Saudi Arabia | 58.57 | 57.91 | 59.16 | 60.62 | 61.33 | 62.15 | 61.67 | 61.11 | 61.69 | 62.56 | 3.99 | 0.97 | 0.96 | 0.96 | 0.96 | 0.94 | 0.94 | 0.94 | 0.93 | 0.94 | 0.95 |
| Senegal | 35.61 | 36.03 | 35.73 | 35.82 | 36.06 | 36.50 | 36.79 | 37.36 | 38.02 | 38.35 | 2.74 | 0.97 | 0.98 | 0.97 | 0.98 | 0.99 | 1.00 | 1.00 | 1.02 | 1.03 | 1.02 |
| Serbia | 51.04 | 51.31 | 51.07 | 51.56 | 51.53 | 52.46 | 53.26 | 54.15 | 54.70 | 54.89 | 3.85 | 1.16 | 1.15 | 1.15 | 1.16 | 1.19 | 1.20 | 1.23 | 1.24 | 1.24 | 1.22 |
| Seychelles | 57.69 | 56.39 | 59.40 | 57.32 | 57.55 | 56.95 | 56.59 | 57.69 | 58.41 | 59.08 | 1.39 | 1.12 | 1.11 | 1.17 | 1.11 | 1.10 | 1.07 | 1.05 | 1.03 | 1.00 | 1.00 |
| Sierra Leone | 23.78 | 23.84 | 25.17 | 23.61 | 27.86 | 28.46 | 27.58 | 27.65 | 31.92 | 32.89 | 9.11 | 0.66 | 0.67 | 0.70 | 0.66 | 0.78 | 0.79 | 0.76 | 0.77 | 0.88 | 0.89 |
| Singapore | 79.88 | 78.97 | 80.58 | 81.31 | 81.58 | 81.29 | 80.76 | 81.50 | 81.66 | 81.83 | 1.95 | 1.05 | 1.03 | 1.00 | 0.99 | 0.99 | 0.98 | 0.97 | 0.98 | 0.98 | 0.98 |
| Slovakia | 65.74 | 65.33 | 65.96 | 65.47 | 65.15 | 65.04 | 65.69 | 65.87 | 66.54 | 67.42 | 1.68 | 1.11 | 1.10 | 1.11 | 1.10 | 1.12 | 1.11 | 1.12 | 1.11 | 1.11 | 1.11 |
| Slovenia | 70.48 | 70.52 | 70.60 | 70.07 | 69.75 | 69.72 | 70.67 | 71.30 | 72.08 | 72.57 | 2.09 | 1.06 | 1.05 | 1.05 | 1.04 | 1.08 | 1.10 | 1.10 | 1.11 | 1.10 | 1.10 |
| South Africa | 33.74 | 33.90 | 34.43 | 34.71 | 35.99 | 36.64 | 37.37 | 37.69 | 37.63 | 38.50 | 4.76 | 0.76 | 0.77 | 0.77 | 0.76 | 0.78 | 0.81 | 0.84 | 0.85 | 0.85 | 0.85 |
| South Korea | 66.71 | 67.98 | 69.19 | 69.23 | 68.80 | 69.06 | 68.89 | 68.90 | 69.53 | 70.08 | 3.37 | 1.03 | 1.07 | 1.08 | 1.06 | 1.05 | 1.04 | 1.03 | 1.00 | 0.97 | 0.98 |
| Spain | 70.73 | 70.21 | 70.92 | 70.87 | 70.38 | 70.23 | 70.19 | 70.75 | 71.84 | 71.84 | 1.11 | 0.97 | 0.95 | 0.96 | 0.97 | 1.00 | 1.01 | 1.02 | 1.01 | 1.01 | 1.00 |
| Sri Lanka | 44.31 | 45.35 | 46.33 | 46.68 | 46.66 | 46.80 | 47.11 | 48.11 | 49.19 | 49.27 | 4.96 | 1.16 | 1.18 | 1.18 | 1.18 | 1.17 | 1.16 | 1.17 | 1.17 | 1.18 | 1.16 |
| Sudan | 24.75 | 25.64 | 25.73 | 25.51 | 24.15 | 23.99 | 23.24 | 24.77 | 25.37 | 26.51 | 1.76 | 0.67 | 0.69 | 0.69 | 0.68 | 0.64 | 0.65 | 0.61 | 0.65 | 0.65 | 0.67 |
| Suriname | 47.35 | 47.95 | 47.70 | 50.76 | 51.40 | 52.66 | 52.38 | 52.29 | 50.30 | 52.66 | 5.31 | 1.05 | 1.04 | 1.01 | 1.07 | 1.08 | 1.10 | 1.09 | 1.08 | 1.08 | 1.11 |
| Swaziland | 26.74 | 27.49 | 29.56 | 29.83 | 29.47 | 30.25 | 30.03 | 29.84 | 29.98 | 30.68 | 3.94 | 0.67 | 0.69 | 0.73 | 0.73 | 0.72 | 0.74 | 0.74 | 0.74 | 0.74 | 0.75 |
| Sweden | 82.47 | 82.07 | 82.76 | 82.51 | 82.10 | 82.09 | 81.04 | 81.60 | 81.96 | 81.93 | –0.54 | 1.00 | 1.00 | 1.00 | 0.99 | 0.98 | 0.98 | 0.97 | 0.97 | 0.98 | 0.98 |
| Switzerland | 80.92 | 81.65 | 82.10 | 82.74 | 82.65 | 83.27 | 83.54 | 83.87 | 83.86 | 83.81 | 2.89 | 0.99 | 1.04 | 1.06 | 1.07 | 1.06 | 1.06 | 1.05 | 1.10 | 1.15 | 1.14 |
| Tajikistan | 38.75 | 39.20 | 39.25 | 39.27 | 38.48 | 38.49 | 38.93 | 39.03 | 39.51 | 41.30 | 2.55 | 1.07 | 1.09 | 1.07 | 1.07 | 1.05 | 1.04 | 1.05 | 1.05 | 1.06 | 1.09 |
| Tanzania | 33.69 | 33.91 | 35.41 | 35.03 | 34.16 | 34.24 | 34.27 | 34.90 | 35.19 | 35.97 | 2.28 | 0.93 | 0.94 | 0.97 | 0.97 | 0.95 | 0.94 | 0.94 | 0.95 | 0.95 | 0.95 |
| Thailand | 50.34 | 51.18 | 51.45 | 52.08 | 51.89 | 51.97 | 51.95 | 51.70 | 51.95 | 52.40 | 2.06 | 1.21 | 1.23 | 1.21 | 1.22 | 1.20 | 1.20 | 1.20 | 1.18 | 1.16 | 1.16 |
| Togo | 31.52 | 31.37 | 32.43 | 32.52 | 31.74 | 32.14 | 33.12 | 33.77 | 34.58 | 34.88 | 3.36 | 0.88 | 0.88 | 0.90 | 0.91 | 0.89 | 0.90 | 0.92 | 0.94 | 0.95 | 0.94 |
| Trinidad and Tobago | 55.48 | 55.43 | 55.28 | 55.52 | 54.89 | 57.08 | 57.00 | 57.51 | 58.11 | 58.65 | 3.17 | 0.94 | 0.95 | 0.94 | 0.98 | 0.97 | 0.98 | 0.98 | 0.97 | 0.98 | 0.98 |
| Tunisia | 48.38 | 48.85 | 49.10 | 49.16 | 48.22 | 47.86 | 48.28 | 48.47 | 48.97 | 49.33 | 0.95 | 1.17 | 1.17 | 1.17 | 1.19 | 1.17 | 1.17 | 1.18 | 1.18 | 1.18 | 1.17 |
| Turkey | 48.49 | 48.71 | 50.45 | 51.50 | 51.98 | 53.57 | 53.16 | 53.20 | 52.46 | 53.25 | 4.76 | 0.97 | 0.98 | 0.99 | 0.99 | 1.01 | 1.03 | 1.02 | 1.01 | 0.99 | 1.00 |
| Uganda | 30.64 | 30.02 | 30.98 | 30.16 | 30.32 | 29.84 | 30.42 | 29.72 | 30.64 | 30.86 | 0.22 | 0.85 | 0.84 | 0.86 | 0.84 | 0.84 | 0.83 | 0.84 | 0.82 | 0.84 | 0.83 |
| Ukraine | 54.78 | 53.56 | 53.48 | 53.72 | 54.43 | 53.72 | 51.14 | 49.77 | 51.46 | 52.47 | –2.31 | 1.36 | 1.35 | 1.33 | 1.34 | 1.35 | 1.32 | 1.27 | 1.27 | 1.31 | 1.31 |
| United Arab Emirates | 69.12 | 68.14 | 67.81 | 69.03 | 68.97 | 70.06 | 69.75 | 69.42 | 69.40 | 70.40 | 1.28 | 0.88 | 0.90 | 0.90 | 0.91 | 0.89 | 0.89 | 0.88 | 0.87 | 0.87 | 0.88 |
| United Kingdom | 72.60 | 71.71 | 72.17 | 72.31 | 72.84 | 73.37 | 73.62 | 74.48 | 74.51 | 74.59 | 1.99 | 0.90 | 0.90 | 0.91 | 0.92 | 0.93 | 0.94 | 0.94 | 0.93 | 0.92 | 0.92 |
| United States | 76.22 | 75.70 | 75.89 | 76.04 | 75.91 | 75.48 | 75.20 | 75.79 | 75.91 | 76.03 | –0.19 | 0.94 | 0.93 | 0.93 | 0.92 | 0.92 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Uruguay | 61.54 | 61.15 | 62.60 | 62.88 | 62.20 | 62.60 | 63.51 | 63.85 | 64.26 | 64.21 | 2.67 | 1.31 | 1.26 | 1.23 | 1.19 | 1.15 | 1.13 | 1.13 | 1.11 | 1.10 | 1.09 |
| Uzbekistan | 40.38 | 40.16 | 40.97 | 40.93 | 41.11 | 41.02 | 41.35 | 41.08 | 41.67 | 43.13 | 2.75 | 1.10 | 1.09 | 1.09 | 1.09 | 1.09 | 1.08 | 1.08 | 1.07 | 1.07 | 1.08 |
| Venezuela | 47.32 | 46.80 | 45.46 | 44.91 | 44.38 | 44.44 | 43.41 | 43.10 | 42.88 | 43.07 | –4.25 | 0.97 | 0.92 | 0.87 | 0.86 | 0.85 | 0.87 | 0.85 | 0.82 | 0.80 | 0.79 |
| Vietnam | 43.21 | 44.28 | 45.04 | 44.49 | 47.47 | 47.17 | 48.07 | 48.38 | 48.99 | 50.78 | 7.57 | 1.17 | 1.20 | 1.21 | 1.19 | 1.27 | 1.25 | 1.27 | 1.27 | 1.26 | 1.28 |
| Yemen | 29.45 | 28.25 | 27.12 | 26.47 | 25.42 | 25.50 | 24.71 | 22.78 | 23.69 | 23.94 | –5.51 | 0.80 | 0.77 | 0.73 | 0.72 | 0.69 | 0.69 | 0.66 | 0.62 | 0.64 | 0.63 |
| Zambia | 32.03 | 31.50 | 31.98 | 31.13 | 32.15 | 32.28 | 32.14 | 32.17 | 32.08 | 33.19 | 1.16 | 0.86 | 0.85 | 0.85 | 0.83 | 0.86 | 0.86 | 0.85 | 0.86 | 0.85 | 0.86 |
| Zimbabwe | 26.27 | 27.09 | 27.01 | 26.01 | 27.10 | 27.84 | 28.22 | 28.69 | 29.00 | 29.72 | 3.45 | 0.74 | 0.76 | 0.75 | 0.72 | 0.75 | 0.76 | 0.77 | 0.79 | 0.79 | 0.79 |

**Source:** BCG analysis.
**Note:** Change in SEDA score is in absolute points.

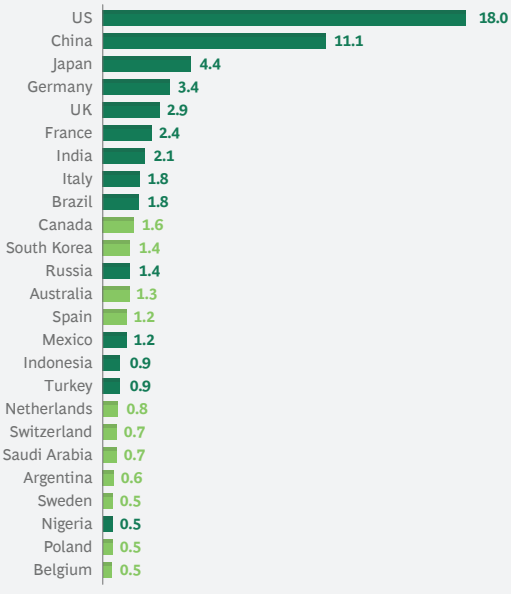
## Appendix Exhibit 1 | Well-Being and Happiness Measures Are Generally Aligned



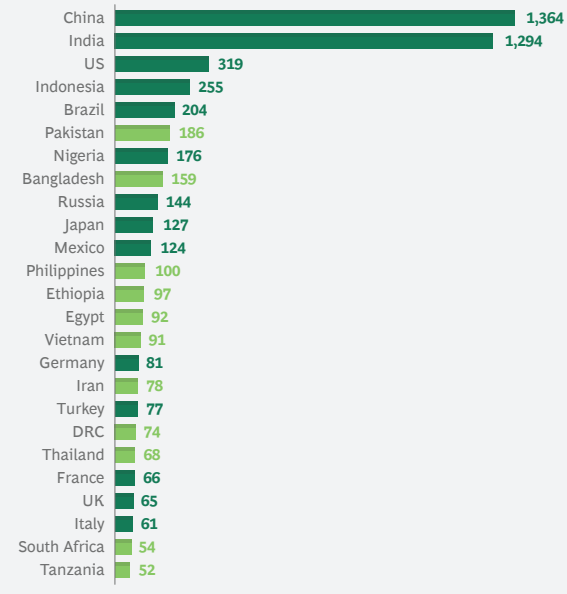

**Sources:** World Happiness Report 2018; SEDA 2018.
**Note:** The named countries are the 36 "global powerhouses," derived from the 25 countries in our data set with the largest populations and the 25 with the largest economies; some countries are in both categories.

## Appendix Exhibit 2 | The Global Powerhouses

### 25 LARGEST ECONOMIES (GDP, $TRILLIONS)




### 25 MOST POPULOUS COUNTRIES (MILLIONS)




**Because some countries fall into both categories, we are left with a subset of 36 global powerhouses**

**Source:** World Bank.

## APPENDIX EXHIBIT 3 | A Majority of Countries Posted Improvements in Most SEDA Indicators


**Source:** SEDA 2018.
**Note:** Change in SEDA score is in absolute points.

# REGRESSION TABLES

## TABLE 3 | Wealth-to-Well-Being Coefficient and GDP Growth

| **Dependent variable: Average annual per-capita GDP growth 2007–2016** | **Regression 1** | **Regression 2** | **Regression 3** |
|---|---|---|---|
| Independent variables | Coefficient | Coefficient | Coefficient |
| Wealth-to-well-being coefficient 2007–2009 | 2.669*** | 3.027*** | 1.726* |
| GDP per capita 2007-2009 | | –0.00005*** | –0.00004*** |
| GFCF average 10y (% of GDP) | | | 0.0964*** |
| Government expenditure average 10y (% GDP) | | | –0.0702** |
| Natural resources average 10y (% of GDP) | | | –0.0281** |
| Observations | 152 | 152 | 150 |
| R Squared (and F-statistic) | 4% (6.9) | 24% (23.9) | 35% (15.7) |

* Significant at 90% level. ** Significant at 95% level. *** Significant at 99% level.

**Source:** BCG analysis.
**Note:** In regression 3, Guinea and Qatar were removed owing to absent values.

# REGRESSION TABLES
*(continued)*

## TABLE 4 | Wealth-to-Well-Being Coefficient and Crisis Resilience: Drop in GDP

| **Dependent variable: GDP growth 2008–2009** | **Regression 1** | **Regression 2** |
|---|---|---|
| Independent variables | Coefficient | Coefficient |
| Wealth-to-well-being coefficient 2007–2009 | 0.084 | 0.116** |
| Public debt (% GDP) 2008 | | 0.001*** |
| Observations | 63 | 63 |
| R Squared (and F-statistic) | 3% (2.1) | 17% (6.3) |
| ** Significant at 95% level. *** Significant at 99% level. | | |

**Source:** BCG analysis.

## TABLE 5 | Wealth-to-Well-Being Coefficient and Crisis Resilience: Post-Crisis Growth

| **Dependent variable: Average annual GDP growth 2011–2016** | **Regression 1** | **Regression 2** |
|---|---|---|
| Independent variables | Coefficient | Coefficient |
| Wealth-to-well-being coefficient 2007–2009 | 6.41*** | 6.312*** |
| Public debt (% GDP) 2008 | | –0.002 |
| Observations | 63 | 63 |
| R Squared (and F-statistic) | 18% (13.4) | 18% (6.6) |
| *** Significant at 99% level. | | |

**Source:** BCG analysis.

## TABLE 6 | Wealth-to-Well-Being Coefficient and Crisis Resilience: Number of Months to Recovery

| **Dependent variable: Number of months to recovery (Ln)** | **Regression 1** | **Regression 2** | **Regression 3** |
|---|---|---|---|
| Independent variables | Coefficient | Coefficient | Coefficient |
| Wealth-to-well-being coefficient 2007–2009 | –0.121 | 0.14 | –1.656 |
| Public debt (% GDP) 2008 | | 0.007* | |
| GFCF average 10y (% of GDP) | | | 0.02 |
| Natural resources average 10y (% of GDP) | | | –0.014 |
| Domestic bank credit to private sector (% of GDP) | | | 0.004* |
| Observations | 63 | 63 | 62 |
| R Squared (and F-statistic) | 0% (0.02) | 5% (1.48) | 12% (1.88) |

* Significant at 90% level.

**Source:** BCG analysis.

## TABLE 7 | Wealth-to-Well-Being Coefficient and Crisis Resilience, Focusing on Global Powerhouses

| **Dependent variable: Number of months to recovery (Ln)** | **Regression 1** | **Regression 2** | **Regression 3** |
|---|---|---|---|
| Independent variables | Coefficient | Coefficient | Coefficient |
| Wealth-to-well-being coefficient 2007–2009 | –4.08** | –3.627* | –2.545 |
| Public debt (% GDP) 2008 | | | 0.008 |
| GFCF average 10y (% of GDP) | | –0.099** | –0.099** |
| Natural resources average 10y (% of GDP) | | | –0.032 |
| Domestic bank credit to private sector (% of GDP) | | 0.01** | 0.013** |
| Observations | 27 | 25 | 25 |
| R Squared (and F-statistic) | 16% (4.8) | 35% (3.72) | 43% (2.89) |

* Significant at 90% level. ** Significant at 95% level.

**Source:** BCG analysis.
**Note:** In regressions 2 and 3, UK and Vietnam were removed owing to absent values.

# FOR FURTHER READING

The Boston Consulting Group has published reports on related subjects that may be of interest to senior executives. Examples include those listed here.

**2018 Global Challengers: Digital Leapfrogs**
A report by The Boston Consulting Group, May 2018

**Why Countries Need New Job Creation Strategies**
An article by The Boston Consulting Group, May 2018

**Governing in the Age of Disruption**
An article by The Boston Consulting Group, January 2018

**The Challenge of Converting Wealth into Well-Being: The 2017 Sustainable Economic Development Assessment**
A report by The Boston Consulting Group, June 2017

**The Private Sector Opportunity to Improve Well-Being: The 2016 Sustainable Economic Development Assessment**
A report by The Boston Consulting Group, July 2016

**Why Well-Being Should Drive Growth Strategies: The 2015 Sustainable Economic Development Assessment**
A report by The Boston Consulting Group, May 2015

**Building Well-Being into National Strategies: The 2014 Sustainable Economic Development Assessment**
A report by The Boston Consulting Group, February 2014

**From Wealth to Well-Being: Introducing the Sustainable Economic Development Assessment**
A report by The Boston Consulting Group, November 2012

# NOTE TO THE READER

## About the Authors

**Joao Hrotko** is a partner and managing director the Luanda office of The Boston Consulting Group. He is a core member of the Energy, Financial Institutions, Global Advantage, and Public Sector practices. Since joining BCG in 2012, he has focused his client work on organization and strategy across an array of sectors, in particular public sector, and oil and gas. Previously, he was a professor at the University of Chicago and the Catholic University in Lisbon.

**Enrique Rueda-Sabater** is a senior advisor in BCG's Washington, DC office. He works with the firm's Public Sector, Global Advantage, and Strategy practices. He had a long career at the World Bank, where his last role was as director of corporate strategy. He also served as director of strategy for emerging markets at Cisco and has been a visiting fellow at the Center for Global Development.

**Vincent Chin** is a senior partner and managing director in the firm's Singapore office. He leads the firm's Public Sector practice globally and has led projects in the economic and social development of countries, including work with their sovereign wealth funds. In the private sector, he specializes in large-scale transformation and business model innovation.

**Nikolaus Lang** is a senior partner and managing director in BCG's Munich office and leader of the firm's Global Advantage practice. He is also the firm's topic leader for mobility, connectivity, and self-driving vehicles; a core member of the firm's Industrial Goods practice and the automotive sector; and a BCG Fellow whose research focuses on collaboration in the digital age.


## Acknowledgments

This report was produced by experts in BCG's economic development topic area, and it represents the continuing collaborative efforts of BCG staff from our offices around the world. The authors would particularly like to acknowledge the contributions of Alexandre Gorito, Suresh Subudhi, Douglas Beal, Christopher Malone, Leila Hoteit, Alexander Türpitz, Tom Lewis, and Stefan Larsson.

They also thank Pedro Marecos for leading the SEDA 2018 research team, Verra Wijaya, Joana Fontoura, Judson Pires, and Doaa Osman for their tireless work on developing the analysis for this report, and Mickey Butts and Thomas McCall for the design and development of the SEDA interactive.

Finally, the authors acknowledge Amy Barrett for writing assistance and Katherine Andrews, Gary Callahan, Kim Friedman, Abby Garland, Amy Halliday, Sean Hourihan, Shannon Nardi, and Deepti Pathak for editing, design, production, and marketing support.


## For Further Contact

Tailored assessments using our SEDA methodology can be produced for specific regions or countries and for specific dimensions of economic development. To discuss SEDA and our findings in greater detail, please contact one of the authors.


**Joao Hrotko**
*Partner and Managing Director*
BCG Luanda
+ 244 932 943 953
hrotko.joao@bcg.com

**Enrique Rueda-Sabater**
*Senior Advisor*
BCG Washington
rueda-sabater.enrique@advisor.bcg.com

**Vincent Chin**
*Senior Partner and Managing Director*
BCG Singapore
+65 6429 2688
chin.vincent@bcg.com

**Nikolaus Lang**
*Senior Partner and Managing Director*
BCG Munich
+49 89 2317 4459
lang.nikolaus@bcg.com

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