

1. WORLD DEVELOPMENT CHALLENGES



The present chapter offers a bird's-eye view of regional and global development challenges based on DCI scores and the evolution of index components over the past two decades. It finds that Sub-Saharan Africa followed by the Arab region and South Asia are the most challenged regions worldwide. A large gap separates them from their nearest neighbours, Latin America and the Caribbean and East Asia and the Pacific.

There are notable global and regional differences in the acuteness of the three challenges captured in the DCI, related to quality-adjusted human development, environmental sustainability and governance. Shortfalls

in governance are quite significant and play a large role in deterring progress globally. This is largely due to high and rising governance challenges in South and Central Asia, Latin America and the Caribbean and the Arab region. Shares of the three challenges are more evenly distributed for Sub-Saharan Africa, but from 2000-2010, the quality of human development was more pressing. In North America, lagging achievement on environmental sustainability is the most notable challenge.

The DCI captures progress in reducing development challenges over the past two decades, with the index falling globally from 0.485 to 0.437. The same pattern has held across most regions. East Asia and the Pacific achieved the highest rate of decline. Since 2010, however, Latin America and the Caribbean and North America have scored higher on the DCI. This is a significant finding as it indicates that development progress, when measured from a broader lens, does not always move in one direction.

Although DCI results are statistically close to other global development indices such as the HDI, SDG Index (SDGI) and Social Progress Index (SPI), discrepancies in results for some countries can be strikingly large.

A. Development Challenges Index

Many debates have centred on issues to consider in measuring development achievements. The present report makes the case for adopting a broad and qualitative framework that focuses on the most developmentally challenged countries. In earlier years, a focus on quantitative achievements was justified because shortfalls in human development were so profound. As countries filled in the gaps, however, the quality of human development has become increasingly important. It is imperative that human development measures go beyond quantitative achievements to capture the quality of progress.

As a first step towards this goal, this report adapts the global HDI to reflect the quality of human development achievements. Such an analytical approach implies an appropriate methodology for discounting HDI achievements by measures of quality. A broader development measurement framework also entails integrating other dimensions. The present report proposes two contextual challenges that are of fundamental importance at all levels,

global, regional or national: environmental sustainability and governance.

The case for integrating these aspects is strong. Environmental sustainability is an important operating condition for human development. Sen and Anand endeavoured to address the integration of sustainability and human development using a theoretical and systematic approach.¹³ They argued that sustainability is essentially intertwined with intergenerational equity. In the context of the environment, sustainability means that “the present generation should strive to preserve the environment in such a fashion as to equitably bequeath comparable human-development benefits to future generations”.¹⁴

Today, the world faces intensified environmental threats in various forms, such as increased extreme weather episodes, prolonged droughts, wildfires and floods. Such natural occurrences pose serious barriers to social and economic well-being, either directly through rising death tolls and financial costs owing to physical damages, or indirectly through an

array of adverse impacts on water stress levels, marine and terrestrial ecological balance, economic growth and poverty alleviation, and so on. Almost all economic sectors incur substantial losses following natural disasters, but agriculture may be more susceptible due to crop destruction or constraints on cultivation that impact crop quality, with negative implications for food security and poverty.

The second and arguably most acute global development challenge is that of good governance. Well-being has largely been the focus of the human development approach and the Human Development Reports over the years. With well-being realized to a certain degree, it has become more important to emphasize agency. That freedom has an independent and intrinsic worth of its own and is instrumental in enhancing well-being. Agency is fundamentally linked to freedom of expression, democratic space and participation. Democratic governance and efficient institutions help ensure the protection of human rights and the creation of democratic space and opportunities for participation. In contrast, as seen from recent history in many Arab countries, deficits in good governance and effective institutions undercut both well-being and agency, ensuring they cannot be guaranteed or sustained.

Realigning the analytical lens of human development implies a measurement adjustment with three aspects. The first entails integrating quality into the HDI measurement framework by discounting achievements to reflect their quality-adjusted levels, such as from income achievements to distribution-adjusted income achievements, from years of schooling to years adjusted by quality of education received, and from life expectancy to healthy life expectancy. The second involves adding two contextual dimensions, good governance and environmental sustainability. A third adjustment is in shifting the focus from achievements to shortfalls in development.

In sum, the proposed DCI measures challenges to three development achievements: basic well-being freedoms (as measured by the quality adjustment of the HDI's three traditional dimensions, health, education and income), environmental sustainability and good governance.¹⁵

Data sources and details on constructing the DCI, including the minimum and maximum levels used for indicators, are detailed in the main methodological background technical paper for this report. It also describes statistical validation and robustness tests.¹⁶

The following principles guided the DCI methodology, including the choice of indicators (table):



- Indicators must make sense, be meaningful and relevant and reflect human development concerns.
- Data availability must be considered. There must be a match between aspiration and reality.*
- The weights of the three challenges should be equal, reflecting a normative stance that all challenge indices are of the same importance, and following the computing formula of the HDI. Weights within dimensions may be adjusted to the relative importance of a component.

* The DCI is not claiming to capture all indicators of development. However, in order to come up with a tool that allows national, sub-regional and regional comparisons to assess and enhance development policies, we try given data availability limitations to capture the essential dimensions of development with the highest possible country coverage.

Constructing the DCI involves two simple steps. The first entails a conversion from achievement indicators to challenge indicators by subtracting the former from 1. The second step is to take the simple average of the indices reflecting the challenges (figure 1). For the present report, all results are presented as shortfalls from a maximum level of achievements. Given the shift from achievements to challenges, plotting the HDI or other achievement indices against the DCI would likely yield a negative correlation.

Two main advantages come from computing the DCI this way. First, in line with the guiding criterion of maintaining simplicity, the use of an arithmetic average rather than a geometric one leads to an index that is easy to compute and interpret. Although there are often good reasons to use a geometric average in calculating composite indicators, especially ones with interdependent relationships among dimensions, a geometric average becomes more problematic with indices with many indicators and dimensions. Additionally, arithmetic averages allow relatively easy calculation of the shares of the challenges in the overall index and the shares of the dimensions in each of the three challenges. Furthermore, in this case, DCI robustness tests have shown little difference in country rankings or scores between scenarios using geometric and simple averages.

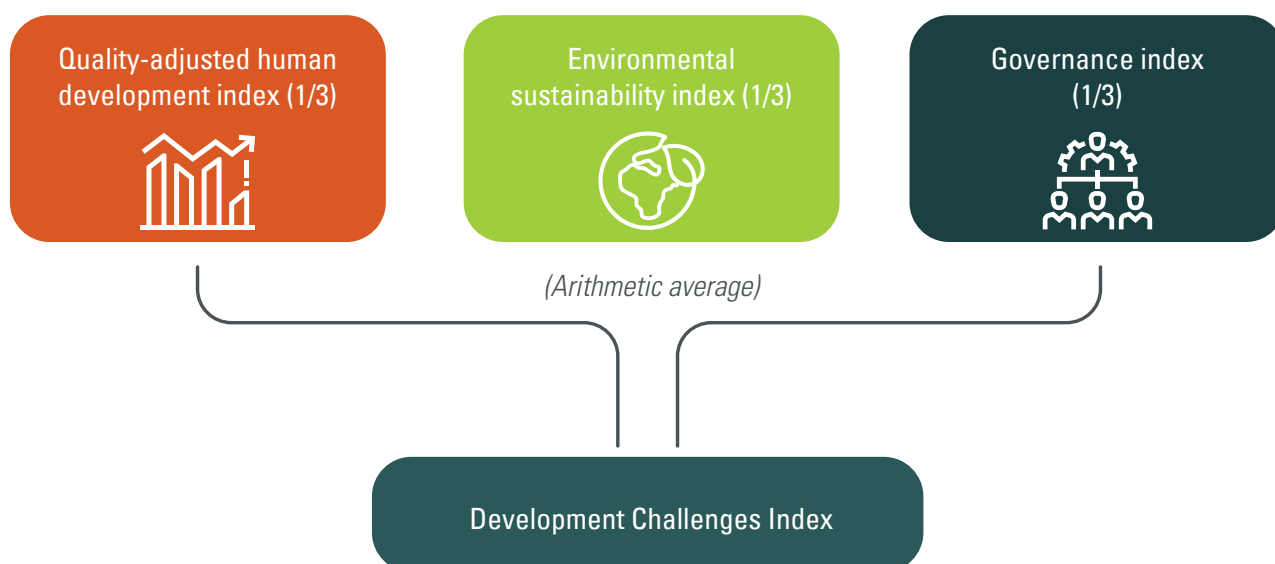
Framework for the DCI's three sets of challenges to development

Challenge index	Dimension	Subdimension	Indicator
 Quality-adjusted human development challenge index	Health challenge index		Healthy life expectancy at birth, years
	Education challenge index		Expected years of schooling
			Mean years of schooling
			Harmonized test scores (discount factor)
	Income challenge index		Gross national income (GNI) per capita
			HDI inequality in income (discount factor)*
 Environmental sustainability challenge index	Climate change and energy efficiency challenge index	Climate change	Carbon dioxide emissions per capita production
			Material footprint per capita
		Energy efficiency	Energy intensity per unit of gross domestic product (GDP)
	Environmental health challenge index	Air quality	PM 2.5 (particulate matter) exposure
			Household solid fuels
			Ozone exposure
		Sanitation and drinking water	Unsafe sanitation
			Unsafe drinking water
		Heavy metals	Lead exposure
		Waste management	Controlled solid waste
 Governance challenge index	Democratic governance challenge index	Rule of law and access to justice	Transparent laws with predictable enforcement
			Access to justice
		Institutional accountability	Executive oversight
			Judicial accountability
			Rigorous and impartial public administration
		Participation	Consultation with civil society organizations
			Civil society participatory environment
	Government effectiveness challenge index		Government effectiveness (quality of infrastructure and public service delivery)

Source: ESCWA.

* The income inequality indicator has been used given its role as a determinant of poverty and due to the lack of comparable poverty data (for instance, fixed poverty lines suffer from several problems and limitations). Therefore, when better poverty data becomes available, it will be used instead of income inequality to discount the income component.

Figure 1. Calculating the DCI



Source: Abu-Ismaïl, Hlasny, Jaafar and others, 2022.

Second, the shift from development achievements to development challenges implies reversing the focus of the narrative. The top scorers will now be countries with the gravest challenges. This shift is imperative to ensure that countries are not left behind in the global discussion on human development and the SDGs.

Scores on the DCI and its components are distributed among five categories: very low, low, medium, high and very high challenges. Countries scoring up to 0.2 are considered to be in the very-low challenge category. Scores from 0.2-0.3 are graded as within the low-challenge category; scores from 0.3-0.45 are within the medium-challenge category; while

scores from 0.45-0.55 are graded as high. Countries that score above 0.55 are within the very high-challenge category.

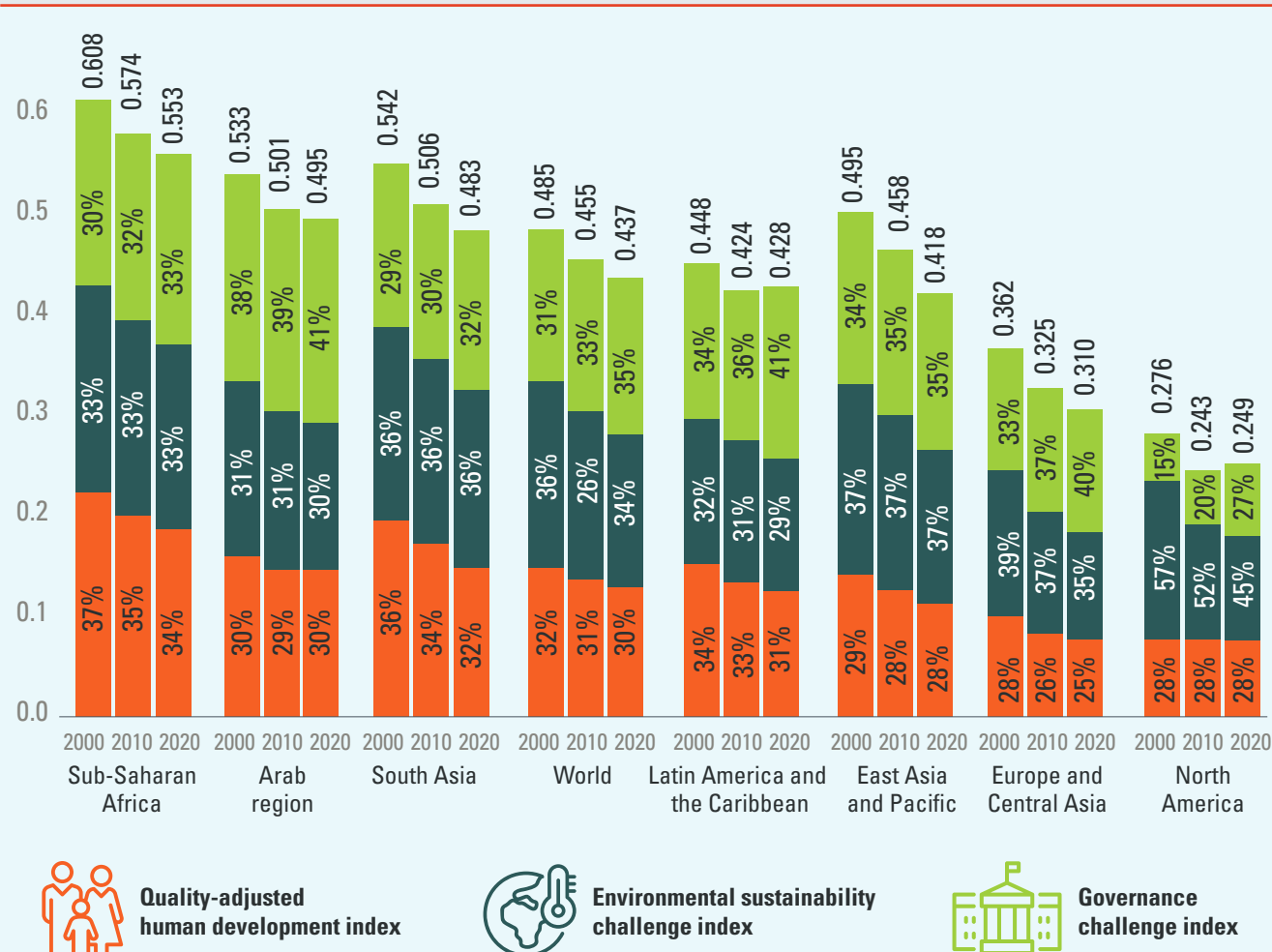
To calculate regional scores, countries were divided into seven regions: the Arab region, East Asia and the Pacific, Europe and Central Asia, Latin America and the Caribbean, North America, South Asia and Sub-Saharan Africa. This followed the global Human Development Report groupings to the extent possible. Some differences exist, however. All members of the League of Arab States with available data are included in the Arab region. North America was added as a group.

B. A modest reduction in global development challenges

Over the past two decades, reductions on the DCI have occurred globally, from 0.485 to 0.437, and in most regions (figure 2). East Asia and the Pacific achieved the highest rate of decline. Since 2010, Latin America and the Caribbean and North America have scored higher on the DCI, although the latter, with a low score of 0.249, is the least challenged region. Consistent with

HDI results, Sub-Saharan Africa is the most challenged region with an average DCI score of 0.553 in 2020. The Arab region and South Asia are high-challenge regions lying well above the world average. There is a conspicuous gap between their DCI levels and those of Latin America and the Caribbean and East Asia and the Pacific.

Figure 2. DCI regional scores and shares of the three challenges, 2000, 2010 and 2020



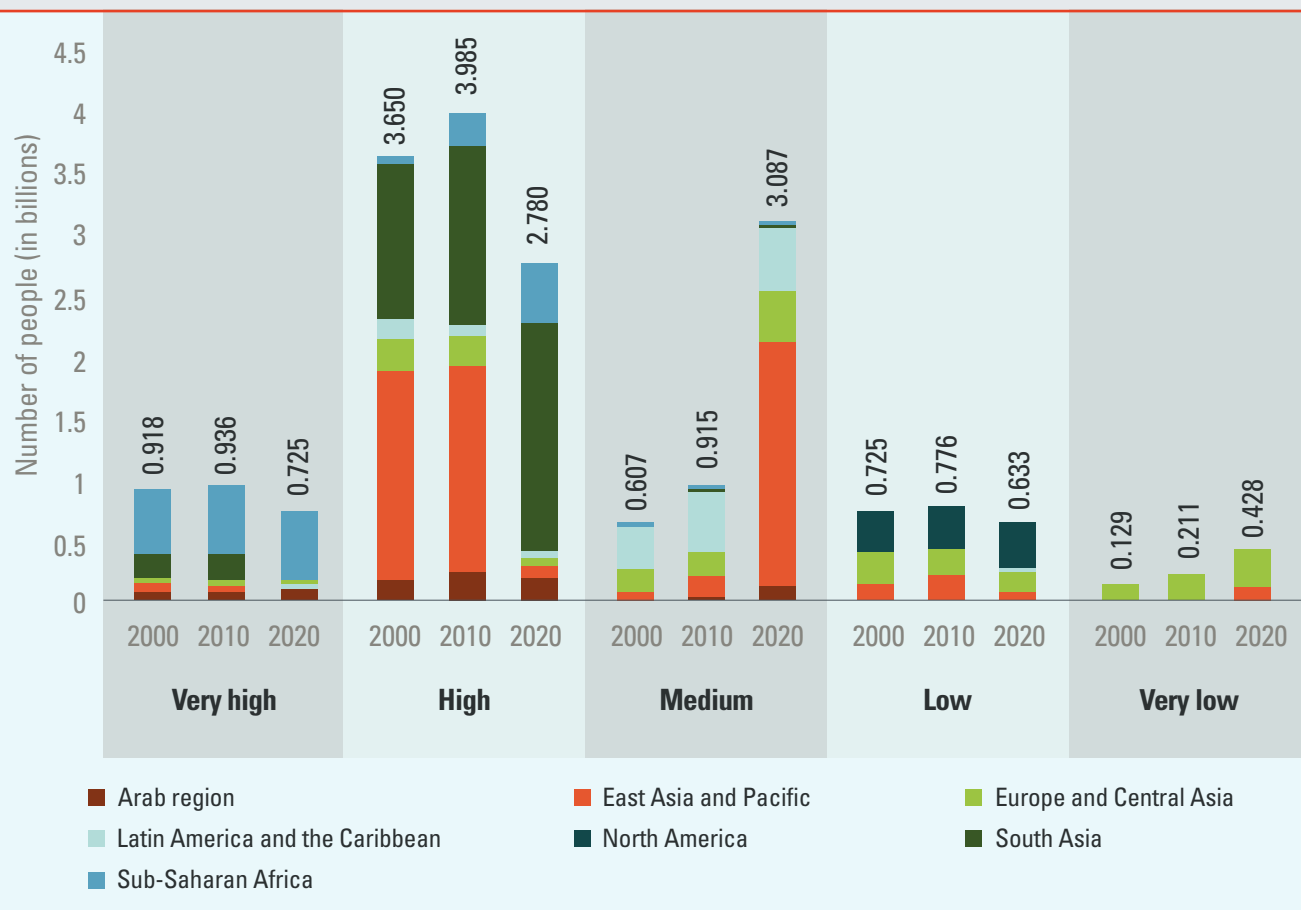
Source: ESCWA calculations.

Globally, governance is the most pressing challenge followed by sustainability. Both hold the largest shares of the global DCI, at 35 per cent and 34 per cent, respectively. Regionally, there are notable differences in the severity of the three challenges. Significant global shortfalls in governance come in part from high and rising governance challenges in the Arab region, Latin America and the Caribbean, and South and Central Asia. Challenge shares are more equally divided for Sub-Saharan Africa but from 2000 to 2010, the quality of human development was a more pressing concern. In North America, lagging achievement on environmental sustainability is the most significant challenge at almost 45 per cent of the DCI score.

The graduation of East Asia and the Pacific from the high- to the medium-challenge group has led to a significant drop

in the share of the world population living with significant challenges, from 60 per cent in 2000 to 36 per cent in 2020. There has been little movement in the very high- to high-challenge group, however (figure 3). The population share living in countries with very low challenges increased from 2 to 5 per cent between 2000 and 2020. These countries are mainly from East Asia and the Pacific and Europe. In the low DCI group, Canada and the United States hold the majority of people. Despite some improvements, nearly 3.5 billion people still live in countries facing serious constraints to development, as indicated by the population shares in the very high- and high-challenge groups. Without the gains made by East Asia and the Pacific, specifically by China, the world's DCI picture in 2020 would look nearly identical to that of 2000.

Figure 3. Population in each DCI category by region, 2000, 2010 and 2020



Source: ESCWA calculations.

Among countries, Haiti scored highest on the DCI worldwide at 0.658. Switzerland was the least challenged country with a score of 0.124 (figure 4). The scores are consistent with the DCI conceptual framework where even the least challenged countries still have development shortfalls to address, while even the most challenged countries have reduced their challenges, albeit at a minimal level. As expected, the most challenged countries are mainly from Sub-Saharan Africa while the least challenged are mainly European.

The largest deteriorations in DCI ranks over 2000-2020 were mainly witnessed in countries in the Arab region and Latin America and the Caribbean. Several countries in these two regions saw a rise in between-country inequalities in human development outcomes, especially since 2010, often related to conflict.



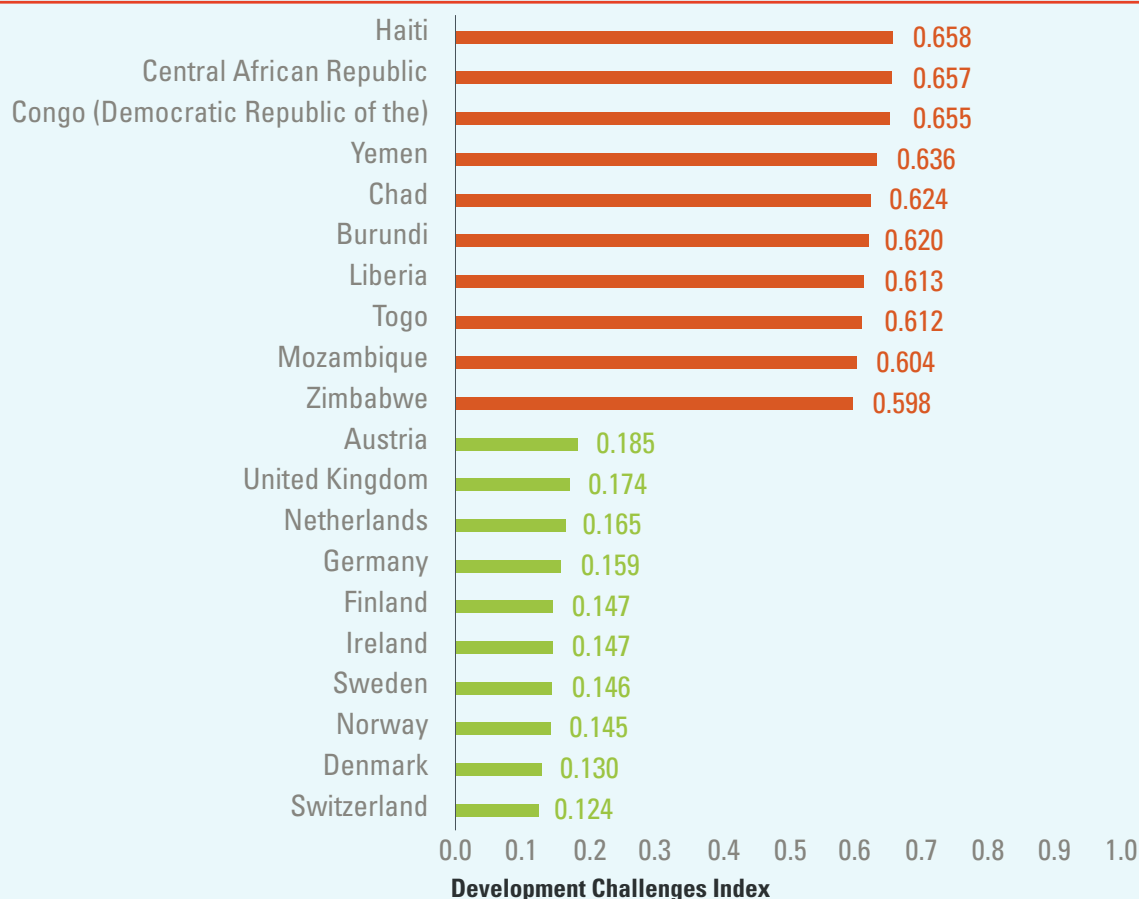
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Among countries, **Haiti** scored
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Figure 4. Least (green) and most (red) challenged countries globally on the DCI, 2020

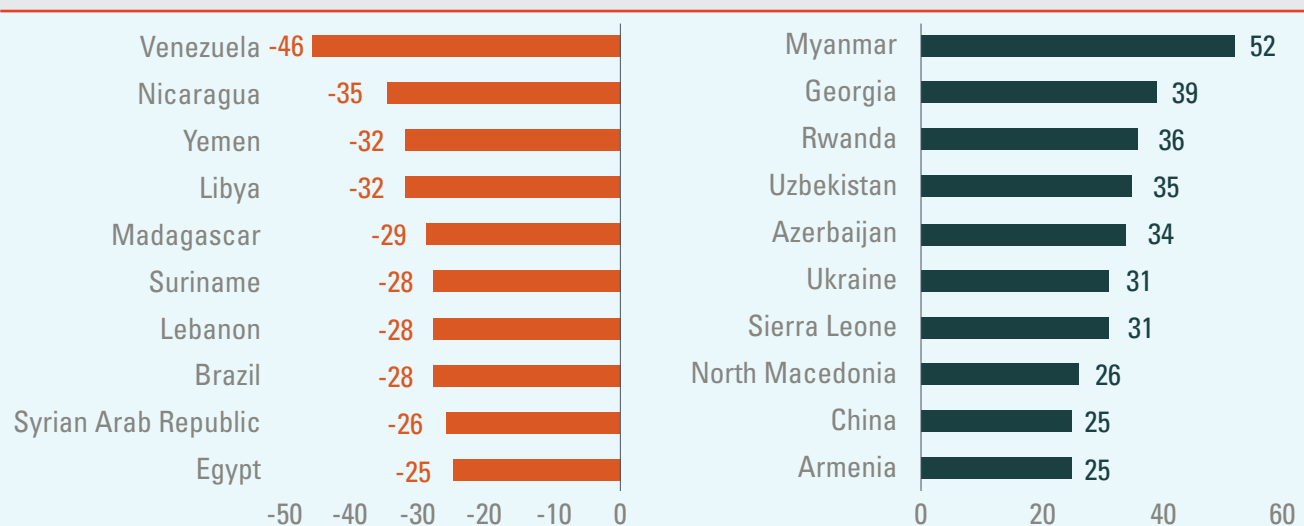


Source: ESCWA calculations.

The largest improvements in rank often came in countries that in 2000 had severe deprivations in one or more DCI dimensions. Myanmar and Rwanda initially had very high challenges from years of

conflict. Post-Soviet countries such as Azerbaijan, Georgia and Uzbekistan had high challenges in all three dimensions but have made significant improvements in the last two decades (figure 5).

Figure 5. Top 10 deteriorations (left) and improvements (right) on DCI ranks (2020 rank minus 2000 rank)



Source: ESCWA calculations.

Note: A positive change means an improvement in the rank while a negative change means a deterioration.

C. Correlations with other global indices

How does the narrative of development challenges presented in the previous section differ from those offered by other leading global indices of development progress? This section considers this question, focusing on three indices with common conceptual and methodological grounds: the HDI, the SDGI and the SPI.

Nearly all 20 of the highest-performing countries on the HDI are in the least-challenged group of the DCI, with very high rank and score correlation. For the Nordic and most Northern European countries, the DCI will not make much difference. For medium and low HDI country groups, differences in scores and ranks are significant (figure 6).

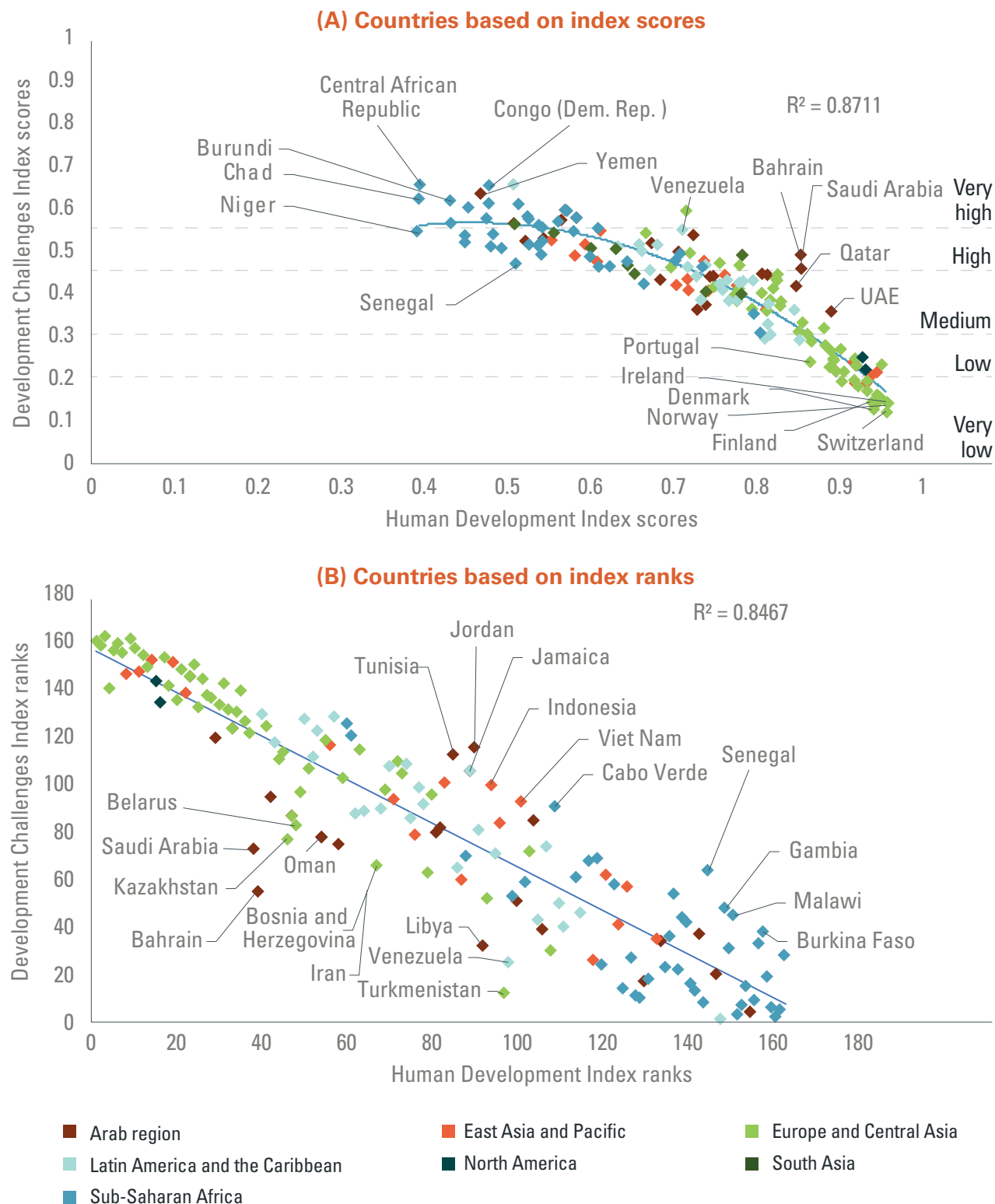
Human development assessments can change dramatically for some countries depending on the index. This is glaringly obvious for the Arab Gulf Cooperation Council (GCC) countries. All belong to the very high HDI group. By shifting from the HDI to the DCI, however, Bahrain, Oman and Saudi Arabia showed enormous losses in rank. So did oil-rich East European and Central Asian countries, such as Belarus and Kazakhstan. Jordan and Tunisia had significant improvements on the

DCI relative to the HDI, underscoring how even within a region, the DCI can significantly change assessment of human development achievements and progress. It effectively penalizes resource-abundant countries that have major governance deficits, have failed to diversify their economies and have substantial environmental sustainability challenges from energy-intensive production and consumption patterns.

The biggest rank improvements were in small resource-poor economies with good governance and sound environmental sustainability performance, such as Cabo Verde, as well as larger economies that have witnessed significant economic structural transformation in recent years, such as Indonesia.

"Nearly all 20 of the highest-performing countries on the HDI are in the least-challenged group of the DCI, with very high rank and score correlation."

Figure 6. Comparing how countries fare on the HDI and DCI



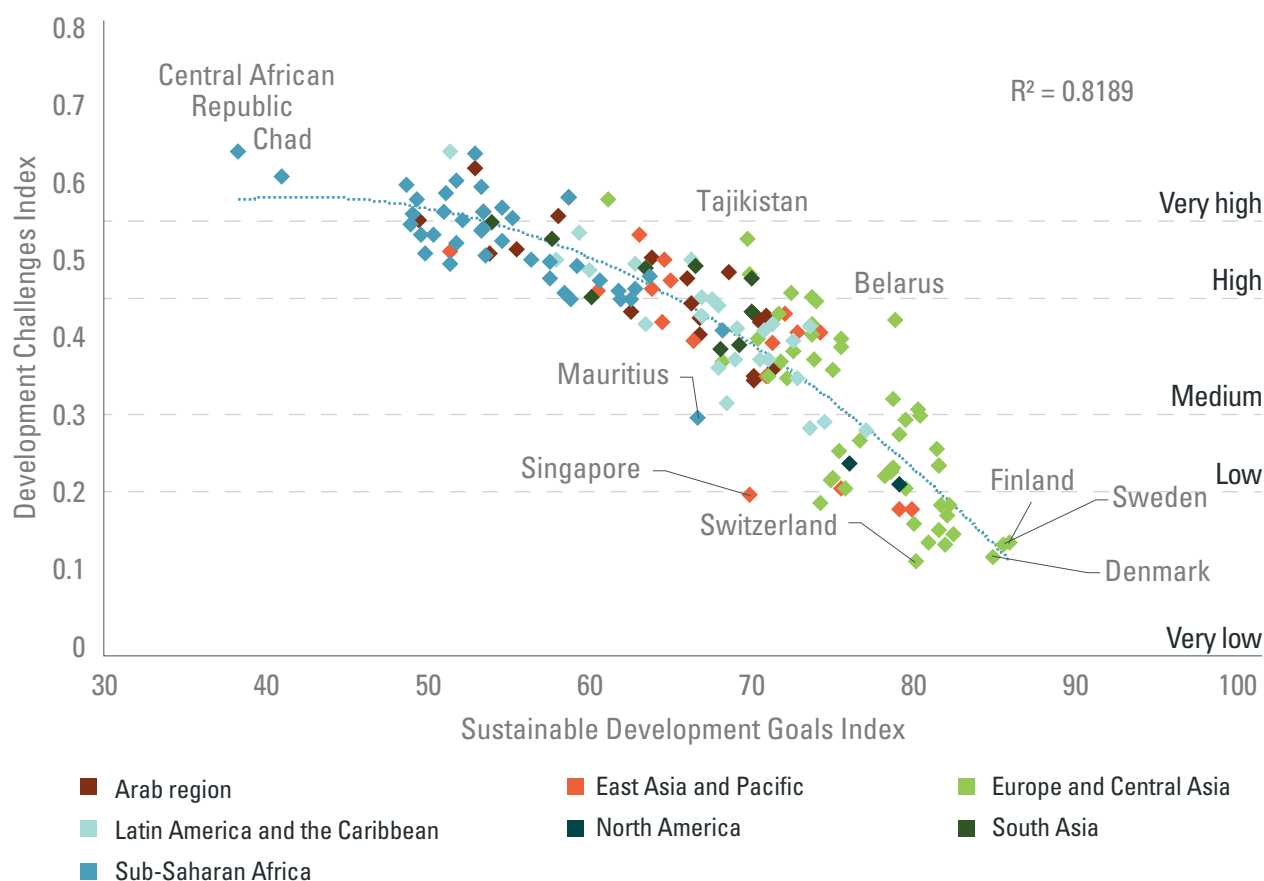
Source: ESCWA calculations.

Although the SDGI's overall correlation with the DCI is quite strong, the relationship diverges from the HDI (figure 7). This is not surprising since the SDGI includes more diverse dimensions and indicators to measure progress on the 17 SDGs. One notable difference is that the dispersion is quite high all over the graph, including on the lower right side, where medium- to high-performing countries on the SDGI and low- and very low-challenge countries on the DCI are located. The higher dispersion indicates that the differences in rank between the SDGI and the DCI will be notable even where broader regional development patterns remain the same. Regional rankings would not be much different. Sub-Saharan Africa would still be the least-performing region and Europe and Central Asia the best-performing region.

Comparing the DCI with the SPI is of special interest since the two have the highest correlation. This is not surprising since the SPI measures the extent to which countries meet the social and environmental needs of their citizens. It encompasses many indicators, including on governance and personal freedom, that correspond with the DCI indicators.¹⁷

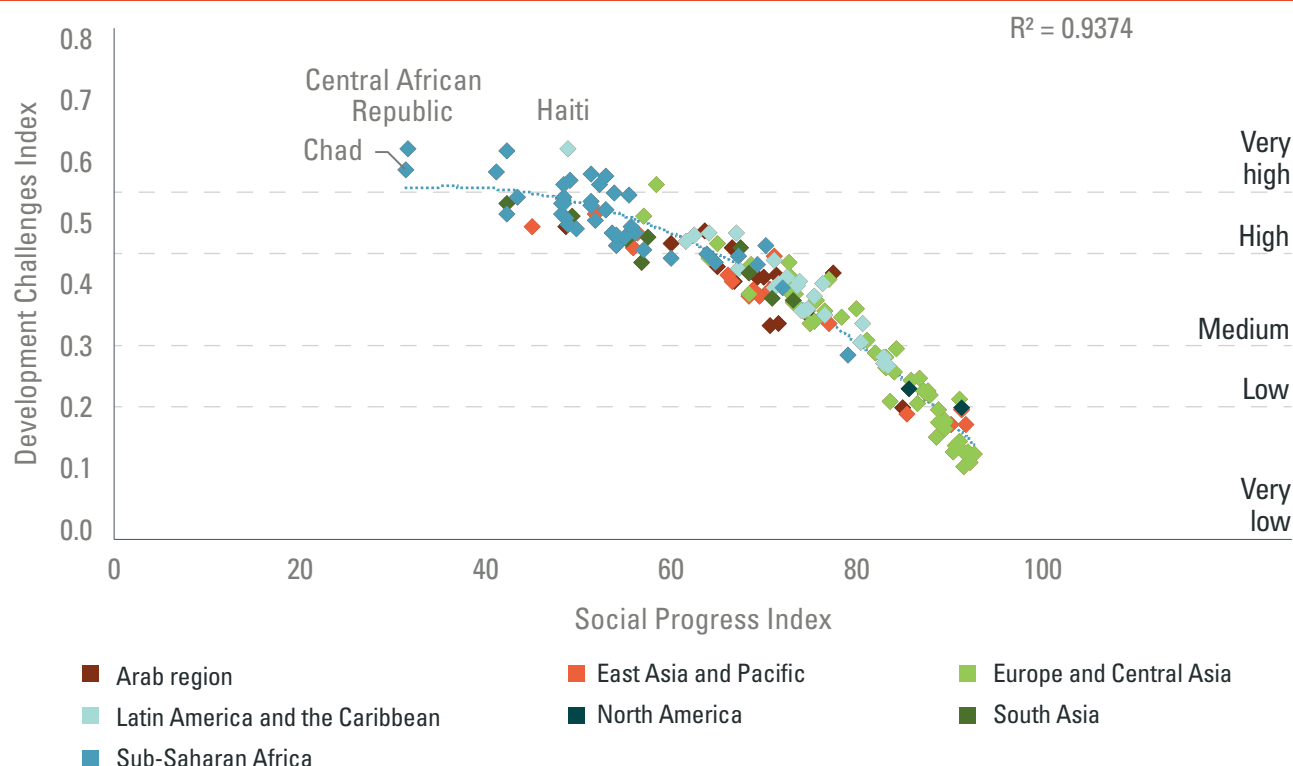
As with the HDI, this correlation is highest for the very low-, low- and medium-challenge countries on the DCI, depicted by low dispersion from the regression line (figure 8). This dispersion starts to increase for high- and very high-challenge countries, which gives the plot a funnel-like shape. Although both the DCI and SPI look at a broader measure of well-being and consider the freedom of choice, an important distinction is that the DCI has half the indicators of the SPI. The SPI, like the HDI, focuses on achievements.

Figure 7. The SDGI and the DCI



Source: ESCWA calculations and United Nations, 2021.

Note: The SDGI is an evaluation of each country's overall performance on the 17 SDGs, weighting each goal equally. The score indicates a country's position between the worst outcome (0) and the desired outcome (100).

Figure 8. The SPI and the DCI, 2020

Source: 2020 Social Progress Index, www.socialprogress.org/index/global.

Finally, clear non-linearity in the relationship between the DCI and SPI is also evident with the SDGI and the HDI. After a certain threshold of development progress, specifically, after reaching a medium level of challenges

on the DCI, the path to further progress becomes easier. This is a compelling justification for an analytical and measurement framework that shifts the focus to the poorest and most challenged countries.

D. Conclusion

The DCI brings a new and interesting angle to the global discussion on human development. Despite progress over 20 years, a significant share of people still lives in difficult conditions and faces serious development deficits. Globally, governance is the most pressing challenge followed by sustainability. Regional and country variations, however, are quite remarkable. Two regions, Latin America and the Caribbean and North America, have witnessed worrisome DCI increases between 2010 and 2020.

Despite strong correlation with other global development indices such as the SPI, HDI and SDGI,

major differences in the DCI's conceptual framework result in shifting development narratives, especially for oil-rich countries, which lose their traditionally high rankings. At the same time, in spotlighting the most developmentally challenged countries, the DCI is a step towards mobilizing more concerted efforts to overcome their destitution and extreme deprivation. As future progress appears much easier after reaching a medium score on the DCI, focusing first on those left behind would mean the world at large will be more likely to realize its common development agenda.