



# 7.

## *The PCSDI and other ways of measuring development*

### **7.1. COMPARISONS TO UNDERSTAND COUNTRIES' GLOBAL DEVELOPMENT RESPONSIBILITIES**

In this section we compare the results of the PCSDI with the Human Development Index (HDI), a ranking of countries dating back to 1990 and a consolidated global benchmark on how countries compare to one another in terms of human development. We will then analyse the comparison with the results of the recent SDG Index published by the Sustainable Development Solutions Network (SDSN) that provides a ranking of countries based on their performance and status regarding the 2030 Agenda goals.

We do not compare the different methodologies and inputs used to build each of the three composite indices but limit our scope to comparing some of the results offered by the various country rankings. The aim here is to gain a deeper understanding of what the PCSD approach allows us to see and

to establish relationships between policy coherence, the concept of human development, and analysis of the implementation of the 2030 Agenda.

The PCSD approach's focus on interdependencies and the multidimensional and transnational nature of development processes does not bar important convergent considerations resulting from a comparison with these two indices. But the PCSDI's variations and deviations from the others show its potential to incorporate a more complete vision of countries' performance and a sharper definition of some of the challenges they face.

Very concisely, we will see how PCSDI results shed light on what is generally described as the human development of countries. Yet the PCSDI is more demanding and spotlights countries' transnational and multidimensional responsibilities. Likewise, we will observe the PCSDI's potential to guide policies towards a transformative achievement of the 2030 Agenda.

## 7.2. MOST COUNTRIES IN THE WORLD ARE MORE COHERENT THAN THEIR HUMAN DEVELOPMENT LEVELS INDICATE

In order to compare the results of the PCSDI and HDI, we had to delete 41 countries included in the latter<sup>32</sup>. The PCSDI includes 148 countries while the HDI evaluates 189<sup>33</sup>. The PCSDI does not have enough data on the countries it did not include.

Those countries missing from the PCSDI cannot be considered representative of any geographical group or relative level of development and therefore do not seriously compromise the value of the PCSDI. Some of the countries left out of the PCSDI, such as Syria, Afghanistan, Haiti, Palestine and South Sudan, are of interest for certain development issues due to their geopolitical situation and relative development. However, not enough data were available. On the other hand, most of the countries not included in the PCSDI are small island states, many of which are especially vulnerable to climate change and biodiversity loss, placing them among the geographies most at risk from insufficient policy coherence for sustainable development.

After eliminating the 41 countries mentioned, the ranking of the remaining 148 was adjusted in accordance with the HDI scores published in 2018.

A comparison of the country scores in the PCSDI and the HDI showed a positive correlation of 0.7091. This means that some of the characteristics measured by the two indices are linked. However, this degree of correlation also indicates that there are notable differences between them which are explained by the conceptualisation and approach chosen in their construction.

If we examine the mean values of the two country rankings, we see a very significant difference inasmuch as they offer quantitative assessments of coherence and human development for the set of countries included

in both cases. For the PCSDI, the mean value of the 148 countries is 49.51 on a scale of 0-100. This means that the aggregate of the countries studied barely manages to pass the PCSDI test and therefore stands much room for improvement. The mean value of the HDI for the same countries is 0.73 on a scale of 0 to 1. This appears to indicate that, in aggregate terms, countries are doing quite well in terms of human development.

The same difference can be observed in the maximum and minimum values of each index. Norway ranks first on the HDI with a score of 0.953 out of 1 and Niger is last with 0.354. The PCSDI ranks Denmark number one with a score of 79.02 and India comes in last with 26.76. These significant differences in country rankings may be related to the standardization method chosen to construct each index. According to the HDI, Norway has very little room to improve its level of human development as it is a mere 47 thousandths from the maximum possible score. In the PCSDI, number one Denmark still has an improvement margin of nearly 21%.

The strongly exemplifying function of numerical indexes could indicate that countries should aspire to resemble Norway in order to achieve the desired level of human development. As was brought to light

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**32.** Among the 41 countries for which there is insufficient data to incorporate into the PCSDI, five are very high-ranking HDI countries (Hong Kong, China (SAR), Liechtenstein, Andorra, Brunei and Bahamas); 15 are high-ranking HDI countries (Palau, Seychelles, Antigua and Barbuda, Saint Kitts and Nevis, Grenada, Saint Lucia, Tonga, Saint Vincent and the Grenadines, Suriname, Dominica, Samoa, Marshall Islands, Libya, Turkmenistan and Gabon); 9 are middle HDI countries (Palestine, Micronesia, East Timor, Kiribati, Vanuatu, Laos, Equatorial Guinea, Sao Tome and Principe and Swaziland); and 12 are low ranking HDI countries (Solomon Islands, Papua New Guinea, Syria, Comoros, Afghanistan, Haiti, Djibouti, Guinea-Bissau, Eritrea, Chad, South Sudan and the Central African Republic).

**33.** We used the 2018 HDI for the analysis.

previously in the ranking analysis section, the PCSDI shows that human development levels in Norway cannot be universally applied to all countries under the current circumstances given the transnational impacts and interdependencies that its level of human development has on other geographies. If we assume that development processes are multidimensional and transnational, then we must incorporate shared but differentiated responsibilities in computing each level of national development as the PCSDI attempts to do. The PCSDI scale helps us to better understand the sustainability of development. This is key if it is to become universal for future generations.

In aggregate terms, country scores are lower for PCSD than for human development. However, most countries have a better relative ranking in the PCSDI than in the HDI. A comparative examination of rankings shows that of the 148 countries, 88 rank better on the PCSDI than on the HDI, while 58 countries rank lower on the PCSDI than on the HDI. Only two countries have the same ranking on the two indices: Botswana and Ethiopia coming in at 87 and 137 respectively. Nearly half (70 countries) show differences of 20 or more positions between one index and the other (28 do worse on the PCSDI and 42 do better), and only 45 countries have a variation of fewer than 10 positions (19 worse and 26 better). Judging by the number and magnitude of the differences, at first glance, these data indicate that countries' performance is assessed very differently by the two indices.

In general terms, a comparison of the two rankings shows that most countries rank higher in terms of coherence with the principles of sustainable development than in terms of human development. However, a more in-depth analysis of the differences is required since as they bring to light numerous elements of interest to better understand countries' performance on coherence and their relative position to other countries in terms of development.

### 7.3. THE 'ODD' CASE OF (SOME OF) THE RICHEST COUNTRIES

Figure 39 showing the ranking dispersion in the two indices will help us to analyse these differences. That figure shows some countries with a very high HDI score (the first 40 positions on the X axis) that, however, are ranked very low on the PCSDI (Y axis). Special mention should be made of Singapore (8, 112), the United States (12, 91) and South Korea (20, 78) among the 20 ranking the highest on the HDI. Also, Israel (20, 75), Qatar (34, 114), United Arab Emirates (32, 139), Bahrain (39, 145) and Saudi Arabia (36, 147) are especially striking since they are among the ten lowest-ranking countries on the PCSDI.



The list of the 15 countries whose variation worsened the most between in the PCSDI when compared to the HDI indicates that some of the countries with the highest human development perform poorly when it comes to coherence. Of the 15, only Lebanon, India and China have a moderate or low ranking on the HDI, 70, 109 and 76 respectively.

This set of countries with the lowest policy coherence compared to their HDI ranking can be characterized by scant responsibility in transnational issues and interdependencies vis-à-vis that which would be required based on their models and levels of development.

Let's take a closer look at ranking on the PCSDI and the HDI for countries with a very high HDI. Here we have a group of 54 countries, 33 of which rank lower on the PCSDI than on the HDI, and 21 of which higher rank higher on the HDI than on the PCSDI. The breadth of the difference in ranking in one direction or the other is also important. As table 17 shows, the countries with a very high HDI score are not only those with the largest gap between the two indices, but the sum of their differences is -1,178 positions, that is, an average decline in the ranking of -35.69 positions on the PCSDI as compared to the HDI for each of the 33 countries. For the 21 countries ranking higher on the PCSDI than on the HDI, the total difference is 296 positions, an average of 14.09.

Two clearly differentiated patterns can be identified among the group of countries with a very high HDI score. Some countries have a very high gaps in the ranking (over 50 positions), all ranking lower on the PCSDI. Arab countries with a productive system based on oil exports and poor performance on gender issues clearly predominate in this pattern. Then there are countries with very low gaps in the ranking (fewer than 5 positions), either in one direction or the other, which are mostly Nordic and European.

Table 16. The 15 countries whose position worsened the most as compared to the HDI

Country	PCSDI (ranking)	HDI (ranking)	HDI-PCSDI difference
Saudi Arabia	147	36	-111
Arab Emirates	139	32	-107
Bahrain	145	39	-106
Singapore	112	8	-104
Oman	146	44	-102
Qatar	114	34	-80
United States	91	12	-79
Iran	126	55	-71
Lebanon	135	70	-65
South Korea	78	20	-58
Israel	75	20	-55
Kuwait	105	51	-54
India	148	109	-39
Malaysia	89	52	-37
China	113	76	-37

Table 18, providing the same analysis for the group of 26 countries scoring low on both, the HDI and the PCSDI, indicates that here the relationship is inverted, i.e. 4 countries rank lower on the PCSDI and 21 rank higher. Moreover, those whose ranking drops only

do so by a few positions, an average of -9.5. And those ranking higher on the PCSDI than on the HDI do not exhibit the spectacular differences observed among countries with very high HDI scores amounting to a total of 417 positions, averaging out at 19.85.

Table 17. Differences between PCSDI and HDI positions: countries with a very high HDI

Country	Difference in ranking HDI-PCSDI (worsen)	Country	Difference in ranking HDI-PCSDI (improve)
Saudi Arabia	-111	Austria	1
United Arab Emirates	-107	Lithuania	1
Bahrain	-106	Iceland	4
Singapore	-104	Sweden	4
Oman	-102	Italy	4
Qatar	-80	Finland	6
United States	-79	Montenegro	7
South Korea	-58	Malta	8
Israel	-55	Denmark	9
Kuwait	-54	New Zealand	9
Malaysia	-37	Spain	15
Russia	-34	Greece	15
Netherlands	-29	Slovakia	15
Switzerland	-27	Belarus	15
Luxembourg	-23	Cyprus	17
Belgium	-19	Latvia	19
Poland	-19	Hungary	26
Bulgaria	-17	Uruguay	26
Romania	-17	Argentina	31
Germany	-16	Portugal	32
Canada	-15	Croatia	32
Barbados	-13		
Japan	-8		
Slovenia	-8		
Ireland	-7		
Chile	-7		
France	-6		
Kazakhstan	-6		
Australia	-4		
Norway	-3		
United Kingdom	-3		
Czechia	-2		
Estonia	-2		

## 7.4. SOCIAL DEVELOPMENT COUNTS, A LOT

If we go back and look at the lower right quadrant in figure 39, it is worth noting that none of the countries with the lowest HDI ranking are among the countries with the highest PCSDI ranking.

This shows that the social indicators incorporated into the HDI are in some way reflected in the PCSDI and superficially reflect the general situation of the countries in this regard. In no case can countries that do not offer adequate social policies to their citizens be considered coherent with sustainable development.

Table 19 lists the 15 countries whose ranking improves the most in the 2019 PCSDI ranking when compared to their 2018 HDI ranking. In general terms, the differences are smaller than the ones observed in the list of the 15 countries that worsened the most in the ranking. The maximum deviation was 65 positions for Kyrgyzstan. The most obvious pattern in this group is the predominance of impoverished countries, but no geographical group clearly stands out.

Table 18. Differences between the PCSDI and the HDI positions: countries with a low HDI

Country	Difference in ranking HDI-PCSDI (worsen)	Country	Difference in ranking HDI-PCSDI (improve)
Nigeria	-15	Ethiopia	0
Tanzania	-9	Benin	1
Sudan	-8	Uganda	2
Mauritania	-6	Liberia	5
		DR Congo	6
		Togo	8
		Guinea	10
		Rwanda	11
		Zimbabwe	13
		Madagascar	20
		Malawi	20
		Gambia	20
		Mali	20
		Yemen	22
		Sierra Leone	23
		Lesotho	26
		Niger	26
		Burundi	27
		Ivory Coast	31
		Mozambique	36
		Burkina Faso	38
		Senegal	52

Table 19. The 15 countries whose ranking improves the most in the PCSDI compared to the HDI

Country	PCSDI (ranking)	HDI (ranking)	HDI-PCSDI difference
Kyrgyzstan	36	101	65
Guyana	46	104	58
Senegal	80	132	52
Bolivia	48	98	50
Paraguay	43	91	48
Moldavia	45	92	47
Philippines	55	93	38
Burkina Faso	107	145	38
Serbia	23	60	37
Cape Verde	67	104	37
Honduras	74	110	36
Mozambique	106	142	36
Nicaragua	68	103	35
South Africa	60	93	33
Portugal	5	37	32

## 7.5. THE PCSDI'S MULTI-DIMENSIONAL VIEW SHOWS COUNTRIES' GLOBAL RESPONSIBILITIES AS UPHELD BY THEIR POLICIES

In addition to comparing rankings on these indices, it is worth delving further into the analysis to understand those general deviations that, as we saw, most significantly affect the group of countries scoring very high on the HDI score but low or very low on the PCSDI.

For this it is useful to examine the various PCSDI components and how they relate to the HDI. First, as noted earlier, countries' relative social situation as measured by the HDI is contained in the PCSDI. This close relationship is confirmed by the correlation coefficient between the HDI and the social component of the PCSDI, (0.9419), higher than the overall correlation between the HDI and the PCSDI (0.7091). The correlation between the productive component and the HDI is also higher than the correlation between the overall HDI and the PCSDI (0.7236). This is because these two components, social and productive, encompass aspects that highly impact the HDI variables. The social components mostly involve issues related to the right to education and health and the productive component involves access to basic infrastructure such as water or sanitation, key to ensuring a long healthy life.

However, the picture changes when analysing the coefficients indicating HDI correlation with the rest of the components. The economic correlation coefficient is 0.5459 and global correlation coefficient is 0.2767. Both are lower than for the social component's correlation coefficient. This owes to the additional elements that the PCSDI includes in these areas as compared to the HDI, for instance taxation, financial opacity, degree of militarization and countries' commitment to international human rights at the international level, to name just a few.



Table 20. Correlations between the PCSDI components with the HDI (values)

PCSDI-HDI	Economic component-HDI	Social component-HDI	Global component-HDI	Environmental component-HDI	Productive component-HDI
0,7091	0,5459	0,9419	0,2767	-0,6572	0,7236

A negative correlation between the HDI and the environmental component (-0.6572) can also be observed. This apparently indicates an inverse relationship between human development and the PCSDI environmental component. In other words, it cannot be concluded that the higher the level of human development, the better key environmental issues are handled. Actually, it is just the opposite.

This negative correlation between the HDI and the environmental component of the PCSDI is particularly illustrative of the fact that the development model that advanced or developed countries have adopted in recent decades is not environmentally sustainable. In fact, all current environmental indicators show how irreparable damage continues to occur and is exacerbating the depletion and fragility of ecosystems. It should come as no surprise that the 2030 Agenda underscores the urgent need to change patterns of commercialization and consumption of goods as current models are unsustainable. The fact that this correlation is negative points to the need to overhaul production and commercialization systems and make them more environmentally sustainable.

Many decades have passed without ever incorporating environmental impact into calculations of wealth, progress or development. A multidimensional view requires us to change the way these

calculations are made and to understand that in their economic statistics, countries are still not adequately taking account of the sustainable use and stewardship of the ecosystems supporting our very existence.

## 7.6. HOW THE PCSD RELATES TO THE SDGS

*The Sustainable Development Report: Transformations to achieve the SDGs*, was just recently published by the Bertelsmann Foundation and the SDSN. It includes a ranking of 162 countries with scores and positions indicating how far countries are from reaching the 2030 Agenda goals. It illustrates the significant effort being made to incorporate multidimensionality and interdependencies underpinning this sustainable development agenda. It starts with the set of indicators established by the international working group on statistics for the SDGs coordinated by the United Nations and deemed most appropriate for monitoring the 169 goals. However, 40% of the 241 indicators proposed were not agreed upon or properly defined and most countries do not publish data on them<sup>34</sup>.

The comparison aims to illustrate the potential contribution the PCSD approach can make to obtain a numerical representation of countries' performance in relation to the global challenges expressed in the new international development agendas.

34. See Martínez Osés (2017).

To establish comparisons, we have eliminated 15 countries from the SDG Index that are not included in the PCSDI<sup>35</sup> and 1 PCSDI country for which no data was available in the SDG Index (Barbados). Hence, the analysis is conducted on the rankings adjusted to 147 countries.

The two rankings have a higher correlation coefficient (0.7967) than the one previously observed with the HDI. This points to a smaller gap between the two indices than between either of them and the HDI.

In figure 40 which compares the ranking of the 147 countries in the two indices, there are only minor differences as there are no countries in the extreme upper left or lower right quadrants of the graph representing the countries that rank the lowest in one and the highest in the other.

However, we once again observe a pattern where some countries score higher on the SDG Index, as they did on the HDI, than on the PCSDI. This holds particularly for some oil producing and exporting countries such as Iran, United Arab Emirates, Oman, Bahrain and Saudi Arabia. South Korea and the United States also rank much lower on the PCSDI than in the SDG Index, as was the case when compared to the HDI.

As in the previous analysis, we did not find any country with a higher PCSDI ranking than the SDG Index ranking.

The scores that the SDG Index awarded to the 147 countries analysed (on a scale of 0 to 100) ranged from 85.2 (Denmark) to 44.9 (Democratic Republic of the Congo), indicating that even the highest ranking country still had quite a bit of room for improvement on that scale (nearly 15%). The report can thus conclude by asserting that no country in the world is on the right path to achieve the targets of all the sustainable development goals. Even the best ranking countries have serious gaps, particularly in terms of sustainable production and

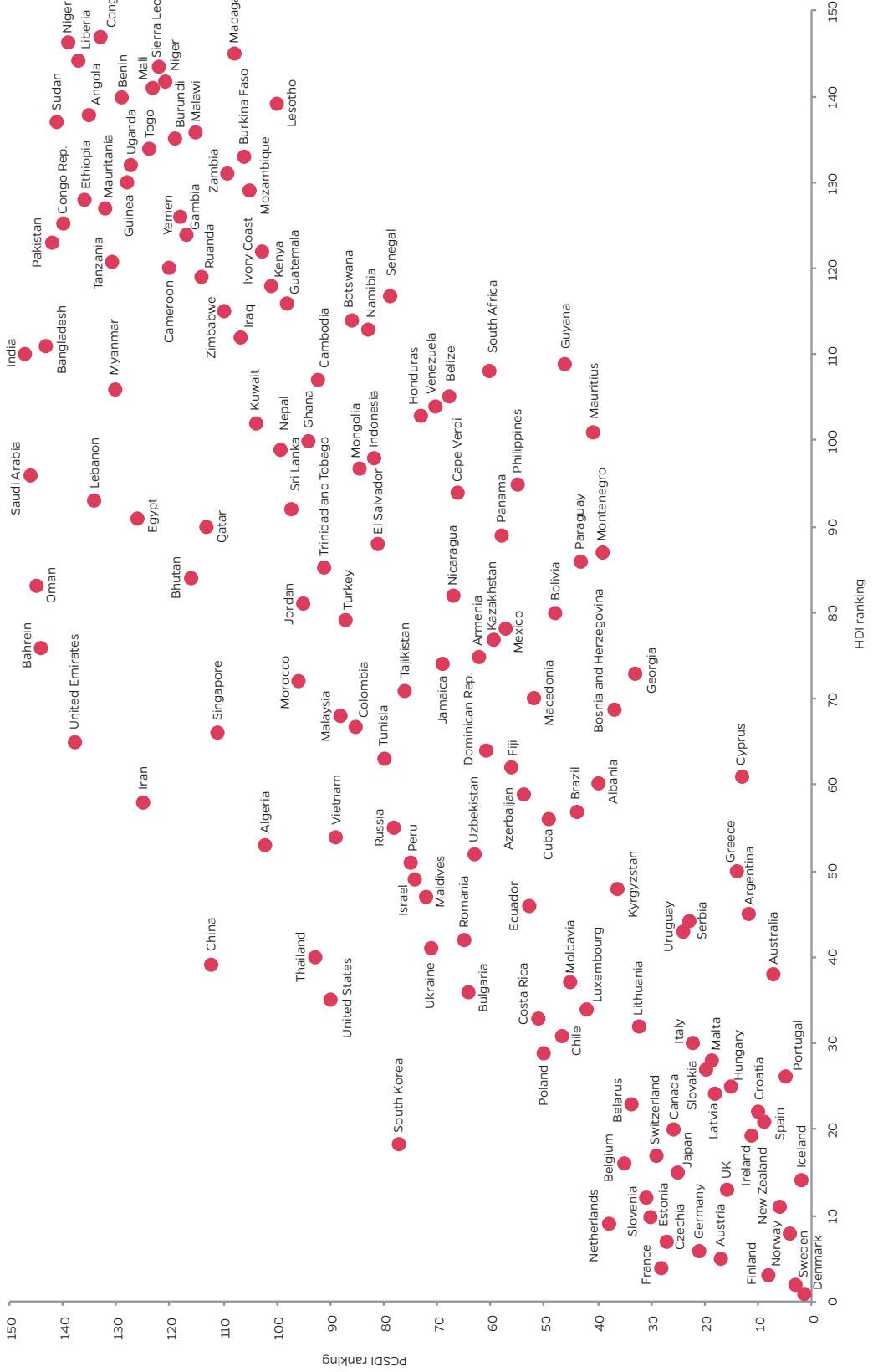
consumption. The analysis highlights worrying trends in all the goals related to the sustainability of ecosystems, such as climate change, land and water use, biodiversity loss and sustainable agriculture. These worrying trends are perfectly reflected in the environmental component of the PCSDI which, as we saw earlier, has a moderately negative correlation with the HDI (-0.65). A negative correlation was also observed between the SDG Index values and those of the PCSDI's environmental component PCSDI, albeit less negative (-0.51).

The average score for these 147 countries on the SDG Index is 67.1, indicating fairly acceptable performance on the part of countries as a whole. Quite a bit more acceptable than their average score on the PCSDI which, again, was 49.5. An examination of the ranking differences between one index and the other shows that 64 countries rank lower on the PCSDI than on the SDG Index, an average of 25 positions lower, 4 countries have the same ranking (Denmark ranks number one on both indices, Lithuania 32, Nepal 100 and Cameroon 131), and 80 countries do better on the PCSDI than on the SDG Index averaging 20 positions higher.

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**35.** Afghanistan, Comoros, Chad, Gabon, Haiti, Laos, Papua New Guinea, Central African Republic, Sao Tome and Principe, Syria, Swaziland, Suriname, Turkmenistan, Vanuatu, Djibouti.

Figure 40. Country dispersion for PCSDI and SDG Index positions



If we look at the set of 15 countries that moved down the furthest in the PCSDI ranking when compared to the SDG Index (table 21), we find many of the same countries, just as when we compare the PCSDI with the HDI. It should be noted however that the difference in the number of positions is smaller, especially for the Arab countries and the United States. We could therefore conclude that the SDG Index includes some elements related to the multidimensionality of development that concur in explaining countries' high ranking when their relative development is measured in terms of social welfare.

An analysis of the group of 15 countries that moved up the most in the ranking on the PCSDI compared to the SDG Index shows that 5 of them were also among the 15 that improved the most on the PCSDI-HDI comparison. These countries are Guyana, Paraguay, the Philippines and South Africa. This pattern occurs just as often because the SDG Index ranking for some countries is quite a bit more similar than their HDI ranking. Not surprisingly, the two rankings correlate more positively. Their correlation coefficient is (0.7872)<sup>36</sup>. However, this correlation also indicates that there are significant differences between the two indices that can be accounted for by their divergent approaches which, in turn, impact the variables they include. The PCSDI includes issues including countries' commitment to global democratic governance, the defence of LGBTI rights, the legalisation of abortion and the degree of militarization. None of these variables are present in the SDG Index. Furthermore, the SDG index factors in economic growth as positive while the PCSDI omits it in the belief that economic growth does not necessary entail more sustainable development<sup>37</sup>.

Summing up, the comparisons allow us to observe how the PCSDI provides a more comprehensive assessment than the HDI as it distinguishes itself by accounting for both environmental sustainability,

Table 21. The 15 countries whose ranking worsens the most compared to the SDG Index

Country	Difference SDG Index-PCSDI	Difference HDI-PCSDI
China	-73	-37
Arab Emirates	-73	-107
Bahrain	-68	-106
Iran	-67	-71
Oman	-62	-102
South Korea	-59	-58
United States	-55	-79
Thailand	-53	-21
Saudi Arabia	-50	-111
Algeria	-49	-28
Singapore	-45	-104
Lebanon	-41	-65
India	-37	-39
Egypt	-35	-32
Vietnam	-35	6

Table 22. The 15 countries whose ranking improves the most compared to the SDG Index

Country	Difference SDG Index-PCSDI	Difference HDI-PCSDI
Guyana	63	58
Mauritius	60	17
Cyprus	48	17
Montenegro	48	7
South Africa	48	33
Paraguay	43	48
Georgia	40	30
Philippines	40	38
Lesotho	39	26
Senegal	38	52
Belize	37	21
Madagascar	37	20
Greece	36	15
Venezuela	34	-3
Argentina	33	31

36. Calculated from the values of the two indices for the same 147 countries.

37. For more information on the SDG Index, see [www.sdgindex.org](http://www.sdgindex.org)

interdependencies and the transnational nature of development processes. The SDG Index makes noteworthy strides in this direction, though it takes a different approach given that, unlike the PCSDI, it does not cover additional facets but instead chooses certain others such as economic growth.

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