Redundancy, Unilateralism and Bias beyond GDP – results of a Global Index Benchmark

Alexander Dill and Nicolas Gebhart

Basel Institute of Commons and Economics, University of Basel

25 September 2016

Redundancy, Unilateralism and Bias beyond GDP – results of a Global Index Benchmark

Abstract

Eight out of ten leading international indices to assess developing countries in aspects beyond GDP are showing strong redundancy, bias and unilateralism. The quantitative comparison gives evidence for the fact that always the same countries lead the ranks with a low standard deviation.
The dependency of the GDP is striking: do the indices only measure indicators that are direct effects of a strong GDP?
While the impact of GDP can be discussed reverse as well, the standard deviation shows a strong bias: only one out of the twenty countries with the highest standard deviation is among the Top-20 countries of the world, but 11 countries among those with the lowest standard deviation.
Let's have a look at the backsides of global statistics and methods to compare their findings.
The article is the result of a pre-study to assess Social Capital for development countries made for the German Federal Ministry for Economic Cooperation and Development. The study leaded to the UN Sustainable Development Goals (UN SDG) project World Social Capital Monitor.

Challenges of indices "beyond GDP"

Indices are visualizing perspectives of assessment in form of rankings. The most recommended Index of the world is the ranking of countries by Gross Domestic Product per Capita (GDP) provided by the International Monetary Fund (IMF 2008). The figures are based on the System of National Accounts (SNA), which has been introduced in 1995. Today there are few reflections on the issues of development economics without considering the GDP per capita. Comparing countries by rankings is a relatively new phenomenon. In the last decades further Indices appeared on the scene in order to allow to looking "beyond GDP" (European Commission 2009). The most recommended is called Human Development Index and has been inspired by Nobel laureate Amartya Sen.
The "Capability Approach" of Amartya Sen (Sen 1999) and Martha Nussbaum (Nussbaum 2011) lead to the concept to assessing a country as well by the average life expectancy and the time spent in school and education. Both indicators are used to assess the amount of Human Development. Further Indices are focussing on Social Progress, Enabling Environment, Prosperity, Competitiveness, Peace, Corruption, Giving and ecological footprint (Happy Planet Index). In 2015 the World Happiness Report appeared.
To comparing these indices requires some important reductions. First the indices are covering between 187 and 109 countries and considering between 3 and 118 variables. Their focus may appear different, but they have three things in common:

- They all rely on aggregated data from external resources
- They all offer a total ranking by country
- They are all produced and provided by recommended Western scholars

By excluding countries that are presented in less than three indices as well as tax heavens such as Liechtenstein, Luxembourg, San Marino, Monaco, Jersey, Bahamas and others we finally achieve a base of 141 countries to be compared in a Global Index Benchmark of nine indices:

Table 1: The nine indices within the Global Index Benchmark

Index Name	Publisher	No. of countries	No. of variables	Percentage of aggregated data*
Human Development Index 2014	United Nations Development Programme, New York, USA	187	4	100% aggregated data
World Giving Index 2014	Charities Aid Foundation, Kings Hill, UK	135	3	100% aggregated data
Happy Planet Index 2014	New Economics Foundation, London, UK	151	3	100% aggregated data
Corruption Perception Index 2014	Transparency International, Berlin, Germany	174	12	100% aggregated data
Global Peace Index 2015	Institute for Economics and Peace, Sydney, Australia	162	23	100% aggregated data
Global Competitiveness Index 2014/2015	World Economic Forum, Geneva, Switzerland	151	118	30.5% aggregated data, 69.5% self - surveyed data
Legatum Prosperity Index 2014	Legatum Institute, London, UK	110	89	100% aggregated data
Social Progress Index 2015	Social Progress Imperative, Washington DC, USA	161	52	100% aggregated data
Enabling Environment Index 2013	CIVICUS, Johannesburg, South Africa	109	53	100% aggregated data

*aggregated data means: the publisher didn't conduct an own survey but used external databases e.g. from Gallup, the World Bank or the World Value Survey

Although we were not to decide on the emphasis of any single index within our benchmark we divided the indices by nine and then got an average ranking. We include the complete Excel for colleagues to proof all the details. (Link on page 9)

In a first step we are now able to overview the Top 20 in our Global Index Benchmark in comparison to the single rankings within the indices and to add GDP PPP as a control indicator:

Table 2: Global Index Benchmark: The top-20-countries in nine global indices and GDP

Average Rank Position Ranked	**Country Name**	**Average Rank**	**Human Development Index 2014 Rank**	**World Giving Index 2014 Rank**	**Happy Planet Index 2012 Rank**	**Corruption Perception Index**	**Global Peace Index 2015 Rank**	**Global Competitiveness**	**Legatum Prosperity Index 2014 Rank**	**Social Progress Index 2015 Rank**	**Enabling Environment Index 2013 Rank**	**IMF GDP per Capita PPP 2014 Rank**
1	Switzerland	7.5	3		34	5	5	1	2	3	7	9
2	New Zealand	8.0	7	5	28	2	4	17	3	5	1	32
3	Norway	8.8	1		29	5	17	11	1	1	5	6
4	Canada	13.4	8	3	65	10	7	15	5	6	2	21
5	Netherlands	15.9	4	12	67	8	20	8	9	9	6	15
6	Australia	16.2	2	6	76	11	9	22	7	10	3	16
7	Sweden	16.4	12	40	52	4	13	10	6	2	9	18
8	Finland	17.6	24	25	70	3	6	4	8	7	11	26
9	United Kingdom	18.1	14	7	41	14	39	9	13	11	15	28
10	Germany	18.4	6	28	46	12	16	5	14	14	25	19
11	Denmark	18.9	10	18	110	1	2	13	4	8	4	22
12	Austria	19.4	21	17	48	23	3	21	15	13	14	17
13	Ireland	19.8	11	4	73	17	12	25	12	12	12	14
14	Iceland	20.1	13	14	88	12	1	30	11	4	8	23
15	Singapore	24.8	9		90	7	24	2	17			3
16	Japan	26.8	17	90	45	15	8	6	18	15		29
17	United States of America	29.0	5	1	105	17	94	3	10	16	10	11
18	Chile	30.1	41	50	19	21	29	33	31	26	21	54
19	Belgium	30.7	21	52	107	15	14	18	16	17	16	24
20	Spain	34.4	27	62	62	37	21	35	24	20	22	33

Source: Global Index Benchmark, Basel Institute of Commons and Economics 2015

We may consider at this point that there is no developing country among the Top 20, neither a country from Africa. Ten out of the 20 countries are even sharing a direct border that would allow to cross them like a domestic country. In column no. 10 we find the ranking by GDP (PPP) and the low figures still show that a correlation may be significant.

Especially the results of one Index, the Happy Planet Index disturb the redundancy of the results by downgrading the U.S., Denmark and Belgium below a rank of 100. The World Giving Index scored Japan with a poor rank of 90. Besides some obvious small exceptions the Global Index Benchmark shows a stunning leadership of always the same countries in almost all aspects.

In the next step we correlated the Index rankings with the ranking by GDP:

Table 3: Indices and their dependency of the GDP per Capita (PPP)

Index	Kendall Tau	Significance Yes or No
Happy Planet Index	0.10701977	No
World Giving Index	0.17571601	small
Global Peace Index	0.40009804	Yes
Corruption Perceptions Index	0.54165111	Yes
Enabling Environment Index	0.64786340	Yes
Global Competitiveness Index	0.65637141	Yes
Legatum Prosperity Index	0.71856815	Yes
Social Progress Index	0.72704488	Yes
Human Development Index	0.80477287	Yes

Source: Basel Institute of Commons and Economics 2015

Seven out of the nine indices now show a significant positive correlation with the ranking by GDP. Of course the dependency of the GDP is a subject of reverse explanations for a while yet. The redundancy of the Human Development Index with the GDP has been recognized in 2005 (Cahill 2005) yet.

One can assume that most of the societal aspects that can be assessed by statistics and aggregated data such as on security, health, education or democracy are influenced by the availability of public goods provided by a strong fiscal state.

Although the GDP per capita is one of the indicators of the Human Development Index and the Social Progress Index, the Global Competitiveness Index as well as the Legatum Prosperity Index are positively reflecting this correlation, the dependency will continue to being a point of discussion, but doesn't question the results in general.

In the next step we compared the average standard deviation per country. Will there be a balance of the distribution of low and high deviations over all deciles?

Table 4: The Top 20 countries with the lowest average standard deviation

1	Country Name	Standard Deviation Rank	Standard Deviation Indices
2	New Zealand	1	8,339997335
3	Norway	2	9,297176991
4	Chile	3	9,608381115
5	Switzerland	4	10,17349497
6	Austria	5	11,5480745
7	United Kingdom	6	11,95774453
8	Germany	7	12,09325901
9	Mauritania	8	14,59661689
10	Egypt	9	15,56349004
11	Spain	10	15,75585331
12	Korea, Republic of	11	16,04853749
13	Sweden	12	16,3985847
14	Malta	13	16,13915184
15	Bosnia and Herzegovina	14	16,64515619
16	Italy	15	16,98873992
17	Cost Rica	16	17,3447256
18	Cyprus	17	17,33087923
19	Gabon	18	17,30767331
20	Netherlands	19	18,56786019

The maximum standard deviation could be found in Myanmar (52.10). The average deviation is 28.49. In theory the maximum to attend is a 70-ranks-deviation in case one index is ranking a country no 1, another no 141.

All indices have strong methodological foundations and the database such as the Gallup World Poll (GWP) and the World Value Survey (WVS) explains the country findings in detail. Of course the indices operationalize data from representative panels. So could then significant differences in the distribution of the standard deviation among each of the 141 countries occur?

The result is surprising:

Table 5: Comparing the rankings of 141 countries in 9 indices by their average standard deviation

	Bottom 20 by Standard Deviation	Top 20 by Standard Deviation
Bottom 20 Index Benchmark	**3**	**2**
Top 20 Index Benchmark	**1**	**11**

Source: Global Index Benchmarks 2015, Basel Institute of Commons and Economics

At the end only one out of the bottom 20 countries by standard deviation could be found among the top 20 in the Global Index Benchmark – the United States of America (average standard deviation 38.11) by the way – but 11 countries being as well in the Top 20 of the countries with the lowest standard deviation.

So one explanation for the high redundancy of the Top 20 in the Global Index Benchmark may be the lower standard deviation for the assessment and the identification of the successful leaders.

The fact is, that only one out the nine indices compared within the Global Index Benchmark has been created in a country not being among the top 20. The Civicus Institute that created the Enabling Environment Index was located in Washington D.C. up to the year 2002 and today has its headquarters in Johannesburg, South Africa.

Further Indices with a strong redundancy to these results were not considered on different reasons. The Better Life Index of the OECD (OECD 2014) only covered the 39 countries being associated with the OECD. The Bertelsmann Transformation Index (Bertelsmann 2014) didn’t assess the Western industrial countries but only developing and transition countries.

56 African countries are considered in the Ibrahim Index of Governance (Mo Ibrahim 2014).

In September 2015 the World Happiness Report (Halliwell, Layard, Sachs 2015) has been published by Columbia University New York, London School of Economics and the University of British Columbia.

The Top 10 in their “Ranking of Happiness” compared with the Top 10 in our Global Index Benchmark:

Table 6: World Happiness Report: almost total redundancy

Rank Global Index Benchmark	**Rank World Happiness Report**
1 Switzerland	1
2 New Zealand	9
3 Norway	4
4 Canada	5
5 Netherlands	7
6 Australia	10
7 Sweden	8
8 Finland	6
9 United Kingdom	21
10 Germany	26

Sources: Global Index Benchmark, World Happiness Report 2015, Happiness 2012-2014 (p. 16)

In theory, the maximum standard deviation for assessing a country in an index of 141 countries is 70. With an average standard deviation of only 4.4 for the rankings in the first decile the World Happiness Report shows an almost total redundancy to the Global Index Benchmark, which had a minimum average standard deviation of 8.33 for New Zealand.

Conclusion

Although we only considered indices that included the assessment of developing countries as well, the redundancy of the results is striking. There seems to be no respect “beyond GDP” (except the ecological footprint) that may create a leadership or best practice for any developing country. The first developing country – Indonesia – appears at rank 46.
The redundancy questions the independence of the indicators, e.g. if we would consider indicators such as children per mother, governmental debt per capita or scalable indicators of Social Capital e.g. such as friendliness, helpfulness and hospitality, we would of course have a different ranking. In the end the message of the rankings to all developing countries is: why don’t you copy and paste the societies of Scandinavia and German speaking Middle Europe, of Canada, New Zealand and Australia to developing countries? As if there was a transfer model for best practice countries.
Still using GDP and its direct benefits such as health, democracy and education as a standard to measuring economic performance won’t work anymore after the World’s financial crisis in 2008. Why? Because from that point on we compare the GDP of real agricultural and commodities economies in developing countries with the GDP of countries that can print their GDP growth by governmental bonds.
The supremacy of European standards – that have been the copy to Australia, New Zealand, Canada and the U.S. – lead to unilateralism and bias by providing criteria for international indices. These criteria seem to be easier to meet by the countries they are produced in.

Providing these unilateral indices does not help to enhancing and encouraging the developing countries to achieve the Sustainable Development Goals (UN SDG). The criteria, the agenda has to be changed: what may be the indicators to assess were developing countries and poor people in rural areas are good in ? What are the social and cultural goods they can build on?

In any case the indices should not pretend to measure general societal and anthropological issues such as Human Development, Social Progress, Enabling Environment, Prosperity or even Happiness but only reduce themselves to identifying issues that can be assessed by aggregated data.

About the authors

PhD Alexander Dill, Basel Institute of Commons and Economics, Basel, Switzerland
mail: dill@commons.ch

Alexander Dill is a director of the Basel Institute of Commons and Economics that has been founded in 2010 after Elinor Ostrom became a Nobel laureate in 2009.

In 2007 he published his *Global Freeware Index* in Ostrom's Library of the Commons: https://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/4548/Towards_a_Global_Freeware_Index.pdf?sequence=1

In 2012 his book "*Gemeinsam sind wir reich.* Wie Gemeinschaften Werte ohne Geld schaffen" appeared in the jury's list of the best non-fiction books.

He is director of the United Nations Sustainable Development Goals (UN SDG) project *World Social Capital Monitor*: https://sustainabledevelopment.un.org/partnership/?p=11706

As a member of several international working groups to measuring the SDG within the UN and the German BMZ Dill advocates to switch from the GDP perspective to social and ecological indicators.

Nicolas Gebhart, University of Basel, Department of Sociology, Basel, Switzerland
mail: nicolas.gebhart@unibas.ch

Nicolas Gebhart studied Sociology at the University of Basel. He has been contributing to a first Global Index Benchmark of the Basel Institute of Commons and Economics in 2011 yet.

Credits: The Global Index Benchmark has been supported by the German Federal Ministry for Economic Cooperation and Development (BMZ)

Downloading the source:

Global Index Benchmark 2015:

http://commons.ch/wp-content/uploads/masterfile_benchmark1.xlsx

Contact:

Dr. Alexander Dill

Basel Institute of Commons and Economics

Gerbergasse 30

CH-4001 Basel

Switzerland

phone: ++41 61 261 35 21

mail: dill@commons.ch

Literature

Bertelsmann Stiftung (2014): „Bertelsmann Transformation Index (BTI) 2014“

Cahill, Miles B. (2005): “Is the Human Development Index redundant?”, Eastern Economic Journal: Vol. 31, No. 1, 2005

Charities Aid Foundation (2014): “World Giving Index 2014”, Kings Hill

CIVICUS (2013): “The CIVICUS 2013 Enabling Environment Index”, Johannesburg

Commission of the European Communities (2009): GDP and beyond. “Measuring progress in a changing world”, Communication to the European Council and the European Parliament, Brussels, 08-20-2009

Fioramonti, Lorenzo; Kononykhina, Olga (2015): “Measuring the Enabling Environment of Civil Society: A Global Capability Index”, Voluntas, Berlin, Vol. 26, No. 2 : 466-487

Gallup, Inc. (2008): “World Poll Questions”, Washington DC

Helliwell, John F.; Layard, Richard; Sachs, Jeffrey eds. (2015): “World Happiness Report 2015”, Sustainable Development Solutions Network

Lee, Dan; Jeong, Kap-Young; Chae, Sean (2011): “Measuring Social Capital in East Asia and Other World Regions: Index of Social Capital for 72 Countries”, Global Economic Review, Vol. 40, No. 4: 385-407

International Monetary Fund (2015): “World Economic Outlook”, April 2015 Update

Institute for Economics & Peace (2015): “Global Peace Index 2015”

Legatum Institute (2014): “The 2014 Legatum Prosperity Index”

Legatum Institute (2013): “2013 Methodology and Technical Appendix”

Mo Ibrahim Foundation (2014): “2014 Ibrahim Index of African Governance Data Report”

Mo Ibrahim Foundation (2014): “2014 Ibrahim Index of African Governance Methodology” L

Mo Ibrahim Foundation (2014): “2014 Ibrahim Index of African Governance Imputation Assessments”

Mo Ibrahim Foundation (2014): “2014 Ibrahim Index of African Governance Data Portal”

New Economics Foundation (2012): “The Happy Planet Index: 2012 Report”

Nussbaum, Martha (2011): “Creating Capabilities: The Human Development Approach”, Harvard University Press, Boston

OECD (2013), Scrivens, K. and C. Smith eds: “Four Interpretations of Social Capital: An Agenda for Measurement, OECD Statistics Working Papers”, 2013/06, OECD Publishing

OECD (2015): “Better Life Index Edition 2015”

OECD (2014): “Helping others”, Society at a Glance 2014, OECD Social Indicators, OECD Publishing

Sen, Amartya (1999): “Development as Freedom”, Oxford University Press

Social Progress Imperative (2015): “Social Progress Index 2015”

Social Progress Imperative (2015): “Social Progress Index 2015 Executive Summary”

Social Progress Imperative (2015): “Social Progress Index 2015 Methodological Report”

Stiglitz, Joseph E.; Sen, Amartya; Fitoussi, Jean-Paul (2009): “Report by the Commission on the Measurement of Economic Performance and Social Progress”, September 14th 2009

Transparency International (2014): “Corruption Perceptions Index 2014”

Transparency International (2014): “Corruption Perceptions Index 2014: Technical Methodology Note”

United Nations; European Commission; International Monetary Fund; OECD; World Bank; (2008): “System of National Accounts 2008”

UNDP (2014): “Human Development Report 2014”

UNDP (2014): “Human Development Report 2014 Technical Notes”

World Economic Forum (2014): “The Global Competitiveness Report 2014–2015”

World Values Survey (2012): “World Values Survey Official Questionnaire V.4”